Human Uniqueness as a Guide to Resolving Conflicts Between Animal and Human Interests

While it is by no means clear whether we should speak of animals as rights-bearers, in any literal sense, or simply as creatures to whom we have certain responsibilities, it is reasonably clear that animals are proper objects of moral concern. Granting animals moral standing, however, need not result in attempts to promote animal welfare. Imagine yourself in the following situation. You are a biochemist, isolated on a desert island with your daughter Jill, your pet dog Philo and a small but well-equipped laboratory. One day your daught falls ill; her health fails rapidly and it seems evident she will die unless something is done. You synthesize what may be a cure but you are not sure; it may also be a poison. What should you do? The obvious answer is that you test the potion on Philo. To do otherwise would be morally unjustifiable. The fact that you test the possible cure on Philo does not show that you do not care about him or take him to be a proper object of moral concern. It is just that in this case Philo’s interests are outweighed by Jill’s.

Conflicts like the above demonstrate that moral concern is not a sufficient guide for our treatment of animals. Donald VanDeVeer has posed the problem well:

The troublesome and difficult question which arises, once one is convinced that both human beings (or many) and animals (or many) have at least some morally relevant interests, concerns how to weigh their respective interests in general and how to adjudicate conflicts of interest which arise between humans and animals.

What needs to be shown is how moral concern ought to be manifest with respect to animals. Not even the establishment of animal rights, a very strong conclusion, would resolve this problem. If animal interests are protected by rights, we still must ask to what extent, if any, they are protected against human interests.

A just resolution of the above problem will have to take account of both similarities and differences between humans and animals. Recent studies of animal behavior have shown that behavior to be significantly more complex and, consequently, more similar to human behavior than previously assumed. Among other things, animals have been found to use complicated
communication systems and to modify objects for use as tools, two activities once deemed the exclusive property of human beings. Such sophisticated behavior has led a number of scientists to conclude that at least some animals have a fairly substantial mental life. Needless to say, this conclusion has marked implications for the weighing of animal interests. An animal with a high level of awareness is vulnerable in more ways than one with a low level and, consequently, places a greater demand on our moral consideration. 

Excitement over these discoveries, however, should not lead us to forget the remaining, significant differences between animal and human behavior. Recently discovered similarities, significant though they be, are not great enough to bridge that divide. Nor is it likely that future research will do so. Barring the discovery of presently unknown life-forms, human uniqueness appears a fact to be lived with. To those concerned about animal welfare such a conclusion may seem unfortunate and even distressing. Traditionally, human uniqueness has been taken to justify a rather cavalier attitude toward animal welfare. Whether one spoke of souls, minds, intrinsic value, or divine commands, the well-being of animals was felt to be insignificant compared to that of human beings. The result is well-known: the most trivial of human interests allows the most thorough disregard for animal interests. It is no wonder, then, that advocates of animal welfare have preferred to emphasize similarities while downplaying differences between animal and human behavior.

In what follows, I want to re-examine the role of human uniqueness in adjudicating conflicts between animal and human interests. My conclusion will be that for the most part this role has been misunderstood. Properly understood, human uniqueness is a vital component in the case for animal welfare. My argument will proceed in two stages. To begin, I will sketch a system of moral principles for adjudicating conflicts between animal and human interests. While granting some moral consideration to animal interests, these principles both recognize human uniqueness and grant high priority to human interests. Having outlined this system, I will use it to address questions regarding the morality of animal experimentation. After distinguishing two distinct ways in which the system can be applied to such questions, I will argue that resolution of the debate over animal experimentation depends to a great extent on fundamental assumptions about human nature. It is here that human uniqueness lends a hand to animal welfare.

What needs to be shown with respect to animals is not only that their welfare is a matter of moral concern but equally important how much weight animal interests ought to carry whenever they conflict with human interests. One plausible approach to this problem has been labeled by VanDeVeer "two-factor egalitarianism." As its name suggests, two-factor egalitarianism focuses on two factors: these are, extent of interest and psychological complexity. Once these are determined, various principles inform the moral agent how much weight each deserves, allowing in general that significance varies directly with extent of interest and degree of psychological complexity. Such a system has intuitive appeal. By focusing on the extent of interest involved two-factor egalitarianism allows us to take into account relative cost and benefit. Underlying each decision will be a cost-benefit analysis. At the same time, two-factor egalitarianism ascribes greater weight to the interests of our own kind, a position many persons find morally appealing. Moreover, it does so on the non-discriminatory, or, egalitarian grounds of psychological complexity. All this is not to say there are no problems regarding the acceptability of two-factor egalitarianism as a guide to moral deliberation. For purposes of this paper, however, I will ignore whatever difficulties there may be and work within the framework provided by two-factor egalitarianism. My intention is to sketch a somewhat plausible system in terms of which the role of human uniqueness can be evaluated, not to argue that two-factor egalitarianism provides an adequate context for resolving conflicts between animal and human interests. Let me begin with extent of interest.

A continuum of interests is not difficult to envision. With respect to myself, I know that some things count more for my well-being than others. The extent of this counting is, of course, not a matter of my apprehension alone; it is a reflection of the world and my place therein. In many cases, I am aware of and correctly apprehend the relative importance of my interests. In other cases, I do not. Unlike normal, adult humans, the knowledge animals have of their own interests will be extremely vague or entirely intuitive. On our part, the determination and weighing of animal interests requires careful, prolonged observation, with special care taken to avoid anthropomorphic distortions. Recent
studies of wolves, chimpanzees and gorillas indicate that such distortions can be avoided and animal interests assessed from an objective, scientific standpoint.  

Interests, both human and animal, can be divided up in several ways. For purposes of this paper, I want to distinguish between three levels of importance, which I call 'basic,' 'serious' and 'peripheral.' Peripheral interests are goods the absence of which results in some loss but whose presence is not essential to well-being. In this sense, satisfactions of peripheral interests are luxuries, pleasures that could be done without. Basic interests lie at the other extreme of the continuum. A basic interest is a good, the absence of which results either in death or a life not worth living. For purposes of convenience, let me refer to a basic interest whose frustration results in death as a B₁-interest. A basic interest whose frustration results in a life not worth living I will refer to as a B₂-interest. An example of a B₂-interest is the absence of intense, prolonged suffering. An example of a B₁-interest is food, the consumption of which is necessary for life.

Serious interests lie near the middle of the continuum. While counting heavily toward the quality of existence, they are not so basic that their frustration results in death or an intolerable life. What their frustration results in is, quite simply, a bad life. What makes a life good or bad will vary from kind to kind, as well as from individual to individual. For our purposes, we can regard a life as bad if a significant number of natural tendencies are frustrated. A bad life is a life without fulfillment. An example of a serious interest for wolves is membership in a pack. A solitary wolf lacks opportunity to satisfy its strong social instincts. An example of a serious interest for human beings (as well as many animals) is being loved or appreciated by others of their kind. While life may not cease to be worth living without such fulfillment, it is hard to imagine a truly happy person whose life is empty of affection.

Just as interests lie on a continuum with respect to importance, so animals and humans lie on a continuum with respect to psychological complexity. At one end of this continuum are beings barely sentient, having no more than a primitive capacity to feel pain or pleasure. Here, the organism's drive for homeostasis has become externalized in a non-reflective awareness. The value of such awareness, limited as it is, is that it allows for greater adaptability: a painful course will be avoided, a pleasurable one pursued. In this way bare awareness of pain and pleasure allows an organism to unthinkingly anticipate the future and react accordingly. One characteristic of non-reflective awareness is that patterns of response must be built into the organism, a product of evolutionary selection.

At some point on the continuum, bare awareness of pain and pleasure is filled out with a capacity to learn from experience, resulting in more flexible patterns of behavior. Closed instincts, a matter of rigid, genetic programming, become supplemented and, in some cases, supplanted by open instincts. Unlike closed instincts, open instincts specify general patterns of response, leaving details to be filled in by individual and communal experience. Internally, animals which can learn from experience will have more highly developed nervous systems. Externally, animals which can learn from experience will tend to be social animals. There are good reasons for this. Whether limited or prolonged, the effect of communal life is to shield individual animals from deficiencies in their own experience and/or capacities: the community as a whole provides an ongoing reservoir of adaptive response. Utilization of this reservoir requires highly developed means of communication. Accordingly, animals with a capacity to learn will have significant capacities for expression, whether in the form of gesture, sound, posture, or facial expression.

Associated with plasticity of behavior is the having of a unified life. For animals near the bottom of the continuum, life is no more than a series of discrete experiences, some good, other bad. With increasing psychological complexity it becomes necessary that life be unified over time not only in a biological but also in a "biographical" sense. Past, present and future are thereby bound together in a way previously unknown. The past remains present in memory and capacity while the future anticipates itself in long and short term goals. One measure of the extent to which life becomes an animal's own in more than a numerical sense is the development of individual personalities. For our purposes, we can think of personality as "unified complexity." Not only is the behavior of animals having a life in the biographical sense complex, it is also unified in a distinctive manner.
It is not hard to run the continuum on from here. In human beings we see a much greater capacity to learn, brought about by neurological and social changes. Closed instincts have receded further while open instincts have become even more open. Along with human culture and language has come increased individuality. Most important, humans have acquired the capacity to conceptualize their lives as wholes and, subsequently, direct them according to rational and moral norms. Here, awareness becomes fully reflective. Although recent studies indicate that some primates other than man are self-conscious—at least to the extent that they can identify themselves in mirrors and pictures—there is good reason to believe their conceptual abilities are quite limited and virtually no reason to regard them as moral agents. So far, human beings stand alone at their end of the continuum.

I will call animals which are barely sentient "level-I beings." Such beings have no more than a primitive capacity to feel pain and pleasure. Animals which have a life in the biographical sense, I will refer to as "level-II beings." The increasing complexity of these animals allows their lives to be unified over time in ways not previously possible. Humans and whatever other beings have the capacity to direct the lives they have in accord with rational and moral norms, I will refer to as "level-III beings." Here, personality reaches its fulfillment in agency, made possible by the apprehension of external standards for behavior. Combining these three levels of psychological complexity with our four kinds of interests, we can now demarcate twelve, distinct categories of interests. These are listed in the following table:

<table>
<thead>
<tr>
<th>categories of interest</th>
<th>$B_1$-interests</th>
<th>$B_2$-interests</th>
<th>S-interests</th>
<th>P-interests</th>
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<tbody>
<tr>
<td>level-III beings</td>
<td>III $B_1$</td>
<td>III $B_2$</td>
<td>III S</td>
<td>III P</td>
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<tr>
<td>level-II beings</td>
<td>II $B_1$</td>
<td>II $B_2$</td>
<td>II S</td>
<td>II P</td>
</tr>
<tr>
<td>level-I beings</td>
<td>I $B_1$</td>
<td>I $B_2$</td>
<td>I S</td>
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Each interest involved in a conflict can be placed, more-or-less determinately, in one of these categories. What are needed now are principles ranking these categories with respect to moral significance.

One way to proceed at this point would be to raise a general question regarding guidelines for moral judgment. Granted that we need "ranking principles," how are we to decide what is and what is not an acceptable principle? While this is an important issue which must eventually be faced, I am going to sidestep it for purposes of this paper. Rather than raising a general question about the nature of morality, I will present six principles for adjudicating conflicts between animal and human interests. Which, if any, of these principles are morally justifiable I will leave, in this paper, to the reader's judgment. My purpose in presenting these six principles is to outline a minimal, non-speciesist system with respect to animal welfare. In order to distinguish this system from other systems falling under the rubric of two-factor egalitarianism I will call it "the c-system." The c-system is a minimal system with respect to animal welfare because in every kind of conflict save one priority is granted to the interests of higher beings. The c-system is non-speciesist in that it does not grant special status to humans simply on the grounds that they are human. The source of human priority lies in human capacity. An animal belonging to level-III would deserve greater consideration than a human belonging to level-II. It is in this sense that the c-system is an egalitarian system.

The first three principles are common to all systems falling under the rubric of two-factor egalitarianism. These are the left-right, the top-bottom and the cross-over principle. The left-right principle concerns interests in a particular row, that is, interests of the same level of beings. It reads,

leaving aside the difference between $B_1$ and $B_2$ interests and staying within a given row, interests trump, i.e., take moral precedence, from left to right.
(In a moment, we will consider the relative weight of $B_1$ and $B_2$ interests.) The top-bottom principle concerns interests in a given column, that is, similar interests held by beings of different levels. It reads,

within each column, interests trump from top to bottom.\(^1\)

The cross-over principle is needed for completeness. It reads,

trumps are transitive.

Together the left-right, top-bottom and cross-over principles resolve numerous conflicts. Apart from the difference between $B_1$ and $B_2$ interests, they handle every conflict going down and/or to the right on our table of interests. The remaining three principles deal with cases "cutting against the grain," that is, where the lesser interests of higher beings trump the greater interests of lower beings, or conversely, the greater interests of lower beings trump the lesser interests of higher beings. These three principles are the $B_1$, SB and $B_2$ principles. The $B_1$ principle reads,

a $P$ interest of a level-III being trumps an $B_1$ interest of a level-I or level-II being.

This controversial principle tells us that (normal) humans are justified in killing (normal) animals for the sake of any interest whatever.\(^2\)

The last two principles concern the extent to which animals ought to suffer for the sake of human interests. In stating them as well as the $B_1$ principle, I am proceeding on the assumption that animals have a stronger interest in avoiding extreme suffering than in staying alive.\(^3\) According to the SB principle,

the $S$ interests of level-III beings trump the $B_2$ interests of level-I and level-II beings while the $P$ interests of level-III beings trump the $S$ interests of level-I and level-II beings.

The SB principle allows you to inflict any amount of suffering on an animal for the sake of human fulfillment. It also allows you to sacrifice the wellbeing of an animal for the sake of any interest whatever.

The only principle contained in the c-system which rules in favor of animal interest is the $B_2$ principle. The $B_2$ principle reads,

the $B_2$ interests of level-I and level-II beings trump the $P$ interests of level-III beings.

According to the $B_2$ principle, it is wrong to make the life of any animal unbearably horrible, that is, so bad that the animal is better off dead, for the sake of peripheral interests. To reject this principle would effect be to disregard animal interests all together.

II

Together the left-right, top-bottom, cross-over, $B_1$, SB and $B_2$ principles define the c-system. As noted, the c-system is a minimal system with respect to animal welfare. Given the nature of this system it might well be expected to justify in a rather straightforward manner present practices involving animal suffering. What I hope to show in the following is that this is an illusion. Even a system granting minimal standing to animals may impose forceful restrictions on the way in which and the extent to which animals can justifiably be made to suffer or die. In order to show this I want to concentrate not on highly questionable practices, such as the use of rabbits for cosmetic testing or the raising of veal calves in small, wooden crates, but rather on a practice which most people feel is justified even if unfortunate, namely, the use of animals in scientific experimentation. What I want to argue is that even on the c-system there are serious questions about the justifiability of this practice.

Let me begin by narrowing down my focus of interest. A striking characteristic of the use of animals in science is its great diversity. One problem with the old debate between "vivisectors and antivivisectionists" is that it radically oversimplifies the issues involved. Animals are used in many different ways in science; they are not just "cut up." Accordingly, the extent to which animal interests are sacrificed varies widely. On the one hand, field studies such as those of Goodall and Schaller need not involve any serious disruption of animal interests. On the other hand, studies such as the well-known deprivation experiments of Harlow and colleagues involve an extreme sacrifice of animal interest. Most situations involving the use of animals in science lie somewhere between these two extremes. In this paper my concern is with those cases where signi-
significant suffering is inflicted on an animal. That there are numerous cases where what we have called B2 and S interests are sacrificed is clear. The person who doubts this need only refer to the relevant literature. 19 Simply calling attention to these instances of significant suffering, of course, is not to pass judgment on them either pro or con. The question of justification is one to which we now turn.

According to the c-system we are justified in inflicting significant suffering on an animal so long as that suffering is necessary for the satisfaction of significant human interests. Such a view has at present a wide constituency. Animal advocates work to eliminate instances of unnecessary suffering. Scientists themselves are trying increasingly hard to eradicate instances of superfluous suffering, whether these stem from poor experimental design, sloppy technique or inadequate housing and care.20 Granted that so many agree that no more suffering should be inflicted than necessary, why is it that scientists and animal advocates often disagree about what is and what is not necessary suffering? This is especially puzzling in light of the apparent fact that in cases such as that involving Jill and Philo almost everyone will agree that the animal's interests ought to be sacrificed. Of course, part of the reason may be that some animal advocates are unformed sentimentalists or even that some scientists allow egoistic desires for publication and public esteem to interfere with their moral judgment. Be this as it may, a deeper source of disagreement lies in the use by scientists and their critics of two radically different ideals concerning how superfluous suffering is to be detected. Unfortunately, the resulting difference in the way cost-benefit analyses are derived is almost invariably overlooked. What I want to do now is to discuss this difference in approach. In the process of so doing, I will suggest that another source of disagreement is a difference about what constitutes the most significant human interests.

The great humanitarian Albert Schweitzer once posed the following as an ideal for science:

Those who test operations or drugs on animals, or who inoculate them with diseases so that they may be able to help human beings by means of the results thus obtained, ought never to rest satisfied with the general idea that their dreadful doings are performed in pursuit of a worthy aim. It is their duty to ponder in every separate case whether it is really and truly necessary thus to sacrifice an animal for humanity.21

Put in our terms, Schweitzer is suggesting that the scientist treat each sacrifice of animal interest as analogous to the sacrifice of Philo's interests. To do so, the scientist must in each case compute animal loss and human gain and, then, weigh the respective interests on some system such as the c-system. The justified operations will be those in which the gain outweighs the loss. Let us refer to this ideal as "the Schweitzerian ideal." The Schweitzerian ideal requires a strict comparison of interests frustrated and satisfied at an individual level. This accords well with our feeling that no animal should have to suffer without good reason.

The Schweitzerian ideal embodies a strong concern for animal welfare and it is not unusual to hear scientists citing this ideal with approval. However, scientists rarely if ever shape and direct their own work according to the dictates of the Schweitzerian ideal. By this I do not mean that scientists cease to be concerned with animal welfare when they actually engage in scientific inquiry, as though their apparent acceptance of the Schweitzerian ideal were a matter of hypocrisy. My point is simply that in practice they operate, sometimes without recognizing it, according to the dictates of another ideal, an ideal I will refer to as "the worthy practice ideal." By way of saying what this ideal is let me offer an explanation for the general neglect of the Schweitzerian ideal.

Application of the Schweitzerian ideal requires a "cost/benefit" analysis for each particular case. It demands, in other words, that we perceive a direct relation between interests frustrated and interests satisfied. The problem is that in science as actually practiced particular instances of animal suffering rarely coordinate directly with contributions to human welfare. In a recent study of alternatives to animal experimentation, the British scientist D. H. Smyth argues, attempts to base legislation on such issues as whether the experiments are directly useful in the alleviation of suffering are not likely to be successful. It is impossible to make any dis-
tinction between fundamental, medical, veterinary and commercial research which could be useful in deciding which particular piece of biomedical research will contribute to the alleviation of suffering.22

Smyth's point is a telling one. The absence of direct correlations between suffering and payoff is not happenstance. Rather, it stems from the very nature of science. Scientific inquiry is not a linear process, laid out in advance and checked by a few crucial experiments. While science is also not a matter of trial and error, there is a marked element of serendipity. Setting this factor of chance in a social endeavor exceeding the grasp of any one person virtually entails that the impact of many experiments cannot be foreseen. This, unfortunately, is as true for animal experimentation as it is for atom-smashing. The fact that in the former case we are dealing with sentient creatures is, as far as scientific method is concerned, simply irrelevant. None of this is to deny that good or promising experimental design can be distinguished from bad. These kinds of decisions allow morally sensitive scientists to weigh out some animal work on the basis of low promise. More often, individual cases elude assessment on any moral system. The projected payoff is too complexly related to the suffering inflicted to be divided up or anticipated in the manner required.

The worthy practice ideal affirms that scientists should inflict no more suffering than is necessary for the pursuit of scientific knowledge. Unlike the Schweitzerian ideal, which focuses on individual cases, this ideal focuses on the general practice of animal experimentation. According to it, particular instances of animal suffering are justified if they occur as a consequence of responsible, methodologically sound scientific practice. If it is then asked why this connection justifies animal suffering the answer is that the general practice of science contributes significantly to the alleviation of human suffering. Instances of animal suffering which result from improper methodology or insignificant projects will not be justified on the worthy practice ideal.

Most scientists, I suggest, operate according to the worthy practice and not the Schweitzerian ideal. One way to see this is to consider the practical consequences of each ideal. The worthy practice ideal allows for an open-ended justification of animal experimentation. It says: here is a worthy goal; pursue it. Whatever suffering occurs in the pursuit of that goal is justified so long as the reasonably anticipated benefits are sufficiently great. Consequently, it is not necessary to show in each individual case that animal loss is balanced by human gain; only that such loss as does occur occurs in the practice of a responsible science. The Schweitzerian ideal takes a very different approach. To begin, it shifts the burden of proof to the scientist with respect to each individual case. It is not enough, in other words, to show that animal suffering occurs in the "pursuit of a worthy aim." "Every separate case" must be weighed and whatever suffering occurs shown to be compensated for by a significantly greater good. Assuming that Smyth is correct in his claim that present such direct correlations cannot be demonstrated for most instances of animal research, it follows that the present use of animals in science cannot be justified on the Schweitzerian ideal. Acceptance of that ideal would result in quite significant restrictions being placed on the range and extent of animal experimentation.

The worthy practice ideal has a strong appeal, the basis of which lies in two convictions: first, that science is in general a worthy activity and, second, that scientific progress can be maximized by minimizing non-methodological restrictions on scientific work. The worthy practice ideal is attractive because it gives scientists a great deal of freedom to pursue as they see best what we all see as worthy goals. Anyone who wants to reject this ideal in favor of the Schweitzerian ideal will need to show either that animals deserve more consideration than the worthy practice ideal allows and/or that the benefits derived from a science operating under the worthy practice ideal are not that much greater and perhaps even less than those derived from a science operating under the more restrictive Schweitzerian ideal. Let me say a few words about how each line of argument may be pursued.

Advocates of the Schweitzerian ideal will want to argue that in the case of animal experimentation we ought to sacrifice methodology for morality, that is, that we ought to place non-methodological, moral restrictions on what scientists do to animals even when we accept as worthy, practices which might be pursued more effectively without such restrictions. Success in this regard depends upon showing that our moral obligations to animals are stronger than normally perceived. If these obligations are strong
enough, questions about animal experimentation will parallel those about human experimentation. There is no doubt that we could pursue some worthy goals more effectively than we do if we gave free rein to the practice of human experimentation. For instance, our understanding of brain disorders could be advanced greatly by studying the development of children on which we have inflicted various kinds of cerebral lesions. Yet, despite the worthiness of this end, we do not engage in such a practice because we quite properly regard it as morally repugnant. The animal advocate who pursues this line will argue, as many have, that the same considerations which prevent us from giving free rein to the practice of human experimentation ought to prevent us from giving free rein to the practice of animal experimentation.23

Arguments such as the above are extremely important. We cannot get a grip on the moral issues without them. One problem with such arguments, though, is that taken by themselves they may give the impression that the debate over animal welfare is entirely a matter of weighing animal interests against human interests. This is a mistake. A large component of the debate concerns determining what is in our own best interests. If the extensive sacrifice of animal interests is not in our own interest, it will not be justified even on the c-system. Acceptance of the worthy practice ideal as a justified norm depends upon the presupposition that the general practice of animal experimentation is a worthy practice. Although this presupposition is often accepted without pause, it strikes me as highly questionable. In a moment, I will suggest several reasons for believing that the general practice of animal experimentation is not a worthy practice whatever weight we assign animal interests. Prior to doing this, however, let me set the stage by pointing out three crucial differences between the individual act and the general practice of sacrificing animal interests.

Unlike the Schweitzerian ideal, which assesses individual sacrifices of animal interests one by one, the worthy practice ideal assesses individual sacrifices as components of a general practice. Ultimately, it is the general practice which must be justified on the worthy practice ideal. In attempting to so justify a general practice it is crucial that we avoid a common confusion. Attempts to justify the general practice of animal experimentation often incorporate an emotional appeal to our intuitions about particular cases: if you were forced to choose between the interests of Philo and Jill, wouldn't you feel morally obligated to sacrifice Philo's interests? My answer is, "Yes, I would." The act sacrificing Philo's interests for the sake of Jill's is morally justified. It does not follow from this, however, that the general practice of sacrificing animal interests is justified. As I will now point out, there are important differences between the individual act and the general practice.

Consider for a moment, a difference with respect to necessity. In the case of Jill and Philo the father is forced to make a difficult decision by extraordinary circumstances; unless he acts his daughter will very likely die. In addition to a clearly perceived and quite specific connection between Philo's (possible) loss and Jill's (possible) gain, there is an element of real necessity. The situation is quite different with respect to the general practice of animal experimentation. Here, there is no parallel to the necessity confronting the father. While there is no question that some persons will suffer more and die sooner if the general practice is terminated, society itself would not be placed in any danger. There is at present no overwhelming threat to the existence or well-being of society the staying off of which depends upon the general practice of animal experimentation. Instead of being forced upon us by an unpleasant necessity, animal experimentation is pursued as an apparent means to a better life.

There are other, equally important differences between the individual case and the general practice. One concerns the link between suffering and payoff. There is a good chance that much suffering incurred in the general course of research will never result in the alleviation of either human or animal suffering. Unlike those individual cases where there is a direct connection between suffering and payoff, benefits derived from scientific research follow a circuitous route. In some cases, knowledge gained may never "pay off" due to a lack of technology or will. On the darker side, there is every reason to believe knowledge gained has and will be used by some humans to violate the basic and serious interests of other humans; governments are not loving fathers.

Another difference has to do with the extent of animal suffering. Unlike the Jill/Philo case, there is no limit to the extent of animal suffering which may be brought about by the general practice of animal experimentation. In the latter case, as opposed
to the former, we have an open-ended or "blank-check" justification. Given that we are unlikely to resolve all medical problems confronting us, there will always be more methodologically sound experiments which may result in beneficial knowledge. By linking the practice of animal experimentation to such vaguely apprehended promises rather than directly perceived necessities, an open-ended justification is provided for the sacrifice not of one, two, or even hundreds but quite literally for that of many billions.

The general practice of animal experimentation involves much more than and cannot be justified in the same terms as the sacrifice of Philo's interests for Jill's. Crucial differences with respect to necessity, payoff, and extent of suffering drive a wedge between our intuitions regarding particular cases and our judgment about general practices. In the latter case we must ask not only whether animal interests should ever be sacrificed for human interests—that is clear—but also whether benefits derived from the general practice outweigh losses resulting therefrom. In raising this question I want to put aside consideration of the extensive losses animals suffer. Let us assume that animal interests count for very little and ask, given this assumption, whether the general practice of methodologically-unrestricted animal experimentation is in the best interests of human society.

In a paper describing some of the benefits derived from animal experimentation, Orland Soave concludes,

Animal research constitutes one of the primary reasons for the high standard of living and health enjoyed today by citizens of the United States.24

If correct, Soave's claim provides strong support for the belief that animal experimentation is a worthy practice. It is, of course, undeniable that the practice of animal experimentation has resulted in a number of contributions to human (and animal) welfare. Insulin, open-heart surgery, the control of infection, the development of powerful anesthetics and other wonder-drugs are only some of the benefits derived from or in conjunction with animal experimentation. These and other contributions, striking as they are, have led many persons and especially scientists to conclude with Soave that human society has a great stake in animal experimentation. Despite its surface appeal, such a claim is mistaken. Not only is it not the case that present standards of living and health are dependent on the general practice of animal experimentation, it is also the case that that practice for various reasons decreases the value of life in any society wherein it occurs.

By way of assessing Soave's claim we must once again avoid confusing the particular and the general. It does not follow from the fact that particular individuals have profited from animal research that society as a whole has profited from such work. While it is clear that some individuals have profited greatly from the practice of animal experimentation, there is good reason to believe that present standards of living and health are not a consequence of nor dependent upon that practice. The major contributions of animal experimentation to health lie in the area of recovery from illness. The major determinates of health, however, lie in the area of prevention. A thorough study of documentary evidence regarding causes of death in England and Wales during the past three centuries led Thomas McKeown to the following conclusion,

The appraisal of influences on health in the past three centuries suggested that we owe the improvement, not to what happens when we are ill, but to the fact that we do not so often become ill; and we remain well, not because of specific measures such as vaccination and immunization, but because we enjoy a higher standard of nutrition and live in a healthier environment.25

McKeown reaches the following conclusion regarding the contribution of medical research to improved health,

The direction of medical research has been determined by the belief that improvement in health depends essentially on knowledge of the body and its diseases, applied mainly through personal medical intervention in the form of immunization and therapy... (T)his interpretation is not in accord with past experience: the modern improvement in health was initiated and carried quite a long way with little assistance from science and technology.... 26

Is McKeown right? This is a difficult and important question into which we can go no further here.27 McKeown's research is of such a quality as to indicate that claims about the indispensability of animal research to public health are highly suspect.28 While McKeown himself favors increased medical research, he observes that "in advanced countries health is still determined mainly by personal behavior and the environment."29
If animal research does not make an important and indispensable contribution to public health, questions must also be raised about its economic feasibility. Animal research is expensive and as such places strain on an already overstrained national budget. Perhaps money used in support of animal research could be better used elsewhere. Rather than pursue this line of criticism, however, I want to turn the discussion in another direction. I have suggested that the general practice of animal experimentation does not make a significant contribution to public health. I want now to argue that in various ways that practice undermines the value of life in modern society. The charges I will make are controversial not least because they have to do with what might be called "intangible factors." How one views them will depend in large measure on how one views human life. At bottom they have to do with questions about what constitutes a truly "good life" and as such are liable to lively debate. Nevertheless, they are important and we overlook them at our own peril.

Richard Ryder has argued in his book, Victims of Science, that the most horrible feature of animal experimentation as presently practiced is its "terrible ordinarness." What in the case of Jill and Philo is a tragedy, forced on the father by extraordinary circumstances, becomes in science a way of life. In the process animals utilized cease to be seen as creatures with lives and purposes of their own and become instead "animal tools," instruments for the purpose of man. That such desensitization occurs is quite plausible on general psychological grounds. The routine infliction of misery exerts a strong pressure toward desensitization. Evidence that such desensitization occurs can be found in the terminology used when speaking of animals, the range of uses to which animals are put, the minimal conditions under which animals are kept and the growth of an "animal industry" promoting the use of animals. All of this, of course, is not to deny that individual scientists may be very sensitive to the horrors of animal suffering. Some scientists, of whom I have been fortunate to meet more than a few, care enough that they refuse to participate in practices common to others. The problem I want to note here is not one of individual cruelty but rather that posed by an institutionalized thoughtlessness, a widespread and socially condoned failure to realize just what it is that is being done. The mere fact that so many defenders of animal experimentation regard critics thereof as overly-emotional sentimentalists is itself an indication that desensitization has occurred.

Desensitization to animal suffering is in itself a terrible thing. R.D. Laing has rightly observed, "We become less human to the extent that we treat any living beings as things." Another related concern has to do with the long-term effects of desensitization. The English philosopher John Locke once argued that we should discourage cruelty in children on the grounds that "the custom of tormenting and killing beasts, will, by degrees, harden their minds even towards men." If Locke is correct there is clearly a danger that desensitization concerning animal suffering will result in desensitization concerning human suffering. While I suspect there is something to this correlation I am not prepared to affirm it. One reason is that Locke overlooks the extent to which human beings are capable of arbitrarily restricting their sphere of concern: the fact, if it were a fact, that I am not disturbed by black men dying in the streets of South Africa does not show that I am not seriously concerned with the sufferings of friends and neighbors; a society which routinely inflicts pain on animals (or barbarians, for that matter) may strenuously resist harming any person who is a member of that society. However, while this capacity to draw arbitrary distinctions protects the general practice of animal experimentation from what we might call "Locke's objection," it opens it up to another, more serious objection. C.S. Lewis put the problem this way:

Once the old Christian idea of a total difference in kind between man and beast has been abandoned, then no argument for experiments on animals can be found which is not also an argument for experiments on inferior men.

Given the discovery that some animals not only construct tools but also have highly developed systems of communication, Lewis' point is not a trivial one. If Washoe and her relatives have greater psychological capacities than severely retarded humans, why should we inflict terrible suffering on chimpanzees but not on less capable humans? According to the c-system one is morally obligated to give preference to more highly developed creatures. My point is not to advocate using retarded persons in research. It is simply that a society which inflicts extreme suffering on higher animals ought to have good reasons for not inflicting it on "lower humans." If they don't, that society ceases to be a rational society and I, for one, regard that as most undesirable. If Lewis' point is to be set aside, we need some good, morally relevant reasons for treating all animals differently than all humans. To my knowl-
edge, the defenders of animal experimentation have yet to come up with any such reasons.

Another concern has to do with the desirability of life in a society which routinely sacrifices animal interests. By way of making this point, let me step back a moment from questions of right and wrong and call attention to just how sad it is that so many animals live such horrible lives. In order to do so let me make reference to an intriguing little story by Desmond Stewart. In this story the earth is invaded and conquered by an alien race, the Troogs. The Troogs proceed to treat humans no better nor worse than we have treated the animals. In this they feel completely justified since they are without doubt vastly superior to human beings. Yet for all their unquestioned superiority we cannot help but feel that the Troogs are lacking something, some basic trait which would raise them above the brutal level at which they act. We might even be tempted to call the trait they lack 'humanity,' that is, humanity, the having of compassion, sympathy, and consideration for other creatures. Whether or not the Troogs are morally justified in what they do, we feel it is beneath their dignity as superior creatures to so callously and routinely use inferior creatures for their own purposes.

Finally, we must reckon with the possibility that in pursuing benefits to be gained from animal experimentation we are, almost paradoxically, cutting ourselves off from a deeper source of happiness. In the final analysis, human happiness does not stem from a longer life or even good health but from the sense of a life well lived. Even if the practice of animal experimentation makes a significant contribution to longer life or better health—something which I doubt—we still must ask whether in so doing it contributes to human happiness. My own conviction is that on the whole it does not. An integral part of a truly good life is a sense of having contributed to the well-being of others. In this respect, the wise person willingly sacrifices elements of his/her well-being for the well-being of others. A life built around the suffering of others can only be happy in the most restricted of senses. Correspondingly, a society which promotes the welfare of a few at the cost of inflicting on all responsibility for the massive suffering of animals is not a desirable society from the standpoint of human happiness. The person who doubts this need only ask whether increased health and life-span, whatever their source, have resulted in increased happiness. So far as I can see, they have not.

This completes my discussion of reasons for believing that the general practice of animal experimentation is not a worthy practice. Together they suggest that not only is that practice not necessary for human health or survival but further, that it has a baneful effect on the overall well-being of society. If successful, these reasons indicate that present scientific practices involving animal suffering cannot be justified even on the c-system. This conclusion, I note, is not a consequence of assigning greater weight to animal interests but of asking seriously whether the institution in question is in the best interests of human society. One nice effect of this approach is that the issue of animal welfare becomes part and parcel of a larger issue concerning the nature and goals of social organization: what constitutes a truly good life for humans and how should society be structured so as to allow maximal realization of that life. Reflection on the moral status of animals will not resolve that issue. Until it is dealt with, however, we cannot say whether the general practice of animal experimentation is in the best interests of (normal) human beings.

III

Historically, human uniqueness has been taken to justify exploitation of animals. We have just seen reason to question any such attempt. Even if animal life and suffering is inconsequential compared to ours, it does not follow that animals exist only for us, nor for themselves. It may be that what makes us unique—what raises us so far above the level of brutes—is a capacity to appreciate the value each sentient creature's life has for it itself. Our examination of the c-system, a minimal morality according high priority to human interests, suggests that granting any value to animal well-being places serious limitations on the human use of animals. Our own unique life as moral and rational agents picks up this value, incorporates it into our own quest for fulfillment and, thereby, multiplies its significance.

Advocates of animal welfare have no intrinsic reason for fearing human uniqueness. As long as uniqueness is linked to responsibility as well as privilege it provides a buffer for animal interests. We have seen this to be the case with the c-system. Granting humans the privilege of violating animal interests for
the sake of their own interests provides no license for excess once it is realized that human interests are tied to animal welfare. That human interests are so tied follows from the very uniqueness of humans. Given this, though, we need not give up the quest for a stronger system than the c-system. One weakness in the above line of argument is that it trades too heavily on human interests; it sounds as though treating animals well is not something that should be done for its own sake. This is a just criticism. Although the c-system does accord moral standing to animals, that standing is so low as to require multiplication by human interest to protect animal welfare. Whatever the status of the c-system, however, the accessibility of such reinforcement is itself heartening.

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1 I use the term 'animal' as short for 'non-human animal.' Earlier versions of this paper were given at the Conference on Medicine, Animals and Man held at the University of Illinois Medical Center (Chicago Circle), Lake Forest College, the University of Illinois (Urbana) and Yale University. The paper which now appears is both clearer and stronger as a result of ensuing discussion. Special thanks are due Charlotte Brown, David Keppler, Paul Langner, Ruth Barcan Marcus, Sally Moran, Mary Morgan, Mike Nelson, Don Scheid and Jim Wallace.

2 "One restriction on the absolutism of man's rule over Nature is now generally accepted; moral philosophers and public opinion agree that it is morally impermissible to be cruel to animals. And by this they mean...that it is wrong to cause them to suffer unnecessarily." John Passmore, "The Treatment of Animals," Journal of the History of Ideas, XXXVI (1975), p.195. Moral philosophers, of course, differ as to whether our moral responsibility to animals is direct or indirect. For more on this issue, see Tom Regan's introduction to Animal Rights and Human Obligations, ed. by Rom Regan and Peter Singer (Prentice-Hall, 1976).


5 Lawrence Haworth argues not only that animals have rights but that these rights are extremely weak and easily overridden by human interests. Cf. "Rights, Wrongs and Animals," Ethics, vol. 88 (1978).


7 For example, Donald Griffin, The Question of Animal Awareness (Rockefeller University Press, 1976).

8 VanDeVeer.

9 Robert Nozick makes a similar suggestion in Anarchy, State and Utopia (Basic, 1974), p. 40.

10 Cf. VanDeVeer, pp. 74ff, for a discussion of several objections to two-factor egalitarianism.

11 H. J. McCloskey has argued that only beings who ought to be concerned about their interests have interests. If this were so, it follows that animals, of whom it cannot be said that they ought to do anything, do not have interests. Tom Regan has replied, correctly I believe, that while interests are the sorts of things moral agents ought to be concerned about, it is not true that only moral agents have interests. Here, as elsewhere, Regan draws parallels between the status of animals and "marginal humans" such as infants and severely retarded persons. Cf. McCloskey, "Rights," Philosophical Quarterly, vol. 15 (1965) and Regan, Philosophical Quarterly, vol. 26 (1979), pp. 251-7.


13 VanDeVeer also distinguishes between basic, serious and peripheral interests; his distinctions are somewhat different from mine.

14 It does not follow, of course, that all social animals have a marked capacity to learn from experience.

15 James Rachels develops the notion of "having a life in a biographical sense" in a talk, "Do Animals Have a Right to Life?" given at the 1979 Blacksburg conference on Ethics and Animals, Virginia Polytechnic Institute and State University.
Cf. Nozick, p. 42; also, VanDeVeer, p.70. The justification of this principle lies at the heart of two-factor egalitarianism.

Given that various humans, present and future, have interests in keeping (some) animals alive, the $B_i$-principle will not justify wholesale slaughter of animals.

A similar claim is made by Peter Singer, Animal Liberation (Avon, 1975), p.6 and p.22; also, VanDeVeer, pp. 70f.

For examples of such suffering, see Singer; also Richard Ryder, Victims of Science (London, 1975) and Jeff Diner, Physical and Mental Suffering of Experimental Animals (Animal Welfare Institute, 1979).

Excellent work has been done in this regard by the Scientists' Center for Animal Welfare. For some suggestions as to how suffering may be reduced see Russell and Burch's discussion of the three "r's"—reduction, refinement and replacement—in W.M.S. Russell and R.J. Burch, The Principles of Humane Experimental Technique (Methuen, 1959).


Recently, Tom Regan, James Rachels, Joel Feinberg and others have followed Henry Salt (Animal Rights, MacMillan, 1894) in arguing that if humans have rights, so do animals. Each argues that if all humans have moral rights then, given the existence of so-called "marginal humans" there are no good reasons for claiming that only humans have moral rights. Presentations of these arguments can be found in the Regan/Singer anthology. A recent attempt at rebuttal can be found in R.C. Frey's book, Interests and Rights: the Case Against Animals (Oxford, 1980). Other writers, for whom the notion of moral rights has little appeal, have argued in a similar manner from different bases. In his book, The Moral Status of Animals (Oxford, 1977), Stephen Clark argues in a Human sense that the moral sentiment applies to both humans and animals. A much better known argument is that of Peter Singer. Singer has argued along classical utilitarian lines that the only reason we feel justified in giving free rein to the practice of animal experimentation is that we arbitrarily choose to regard animal suffering as less important than human suffering. This view, which Singer (following Ryder) has labeled "speciesism," is argued by him to be a bare prejudice, a flat violation of the basic moral principle that equal amounts of suffering are equally bad regardless of who or what is the subject of such suffering.

American Journal of Public Health, vol.57, no. 9, September, 1967; p. 1626. Published as one of 4 articles jointly titled "Vivisection—Vivistudy: The Facts and the Benefits to Animal and Human Health." Reprints of these articles are available from The National Society for Medical Research.

Thomas McKeown, The Role of Medicine: Dream, Mirage or Nemesis? Princeton University Press, 1979, p. 79. McKeown is Emeritus Professor of Social Medicine at the University of Birmingham.

McKeown, p.10.

One area in which animal research has bearing on the prevention of disease is that of nutrition. Since it might be felt that such research vitiates the negative implications of McKeown's work, I include the following comment:

The first and most important reason for the decline of infectious diseases was an improvement in nutrition. It resulted from advances in agriculture which spread throughout the western world from about the end of the seventeenth century. Although incidental to our theme, it is of great interest that the advance was due initially to the introduction of new crops such as the potato and maize, and to more effective application of traditional methods—increased land use, manuring, winter feeding, rotation of crops, etc.—rather than to mechanical or chemical methods associated with industrialization." (McKeown, p.75)

It is also worth noting in light of recent controversies that extensive research has not led to agreement regarding acceptable levels of cholesterol.

In pressing this question, it should not be forgotten that numerous persons have, as a consequence of medical innovations, suffered more than they would have otherwise. This includes persons undergoing unnecessary and/or unsuccessful operations as well as terminally ill patients who are forced often against their will to continue a life full of pain. A useful discussion of some of these problems relative to coronary bypass surgery can be found in The New York Times, November 18, 1980, p. 15f. Not only does this article suggest
that bypass surgery is a "mixed blessing," it also indicates that reduction of risk factors
such as cigarette smoking, hypertension, hypercholesterolemia, obesity and sedentary living
makes a far greater contribution to the elimination of atherosclerosis.

29McKeown, p. 9.

30According to the National Institute of Health Publication No. 80-2091, approximately
$800 million was spent on research using laboratory animals by nonprofit organizations in
1978 alone. Of this amount, a larger percentage
was paid for through grants and contracts from
NIH. The amount spent is not going down. A re-
cent article in The New York Times of December
7, 1980, estimates that it will cost as much
as 3 billion dollars just to test presently ex-
isting chemicals as required by the Toxic Sub-
stances Control Act of 1976. While such work
may be methodologically sound, one wonders
whether the economy would be better off if less
expensive alternatives were pursued. In a recent
letter to The Beast, Andrew Iovan of the Insti-
tute for the Study of Animal Problems and a
noted authority on the topic of "alternatives,"
claims, "perhaps 50% of all animals used in
safety evaluation and toxicity testing could be
stopped immediately without jeopardizing human
health or safety." (The Beast, no. 8, Winter
1980-81; p. 56.)

31I use 'good' here in a non-moral sense.

32Ryder, Victims of Science, p. 18.

33A recent article in The New York Times (De-
cember 7, 1980), entitled "A Company that Thrives
on Regulation," gave the following figures for
sales and profits of two companies supplying
animals for research: Charles River Breeding
Laboratories sold 18 million animals for $30
million and a profit of $3 million; Hazelton
Laboratories did $43.7 million worth of busi-
ness for a profit of $2 million. Figures are
for the year ending June 30, 1980.

34R. D. Laing. Quoted in Stanley Godlovitch,
"Utilities," Godlovitch and Harris, p. 173. An
insightful albeit controversial analysis of
problems associated with desensitization can be
found in T.L.S.Sprigge, "Metaphysics, Physical-
1-2, pp. 101-43.

35Quoted in Robert S. Brumbaugh, "Of Man,
Animals, and Morals: A Brief History," On the
Fifth Day: Animal Rights and Human Ethics, ed.
by Richard Knowles Martin and Michael W. Fox

36C.S.Lewis, God in the Dock: Essays on Theol-
ogy and Ethics, ed. by Walter Hooper. W. B.

37Desmond Stewart, "The Limits of Trooghaft,"
in Regan and Singer, pp. 238-45.

38T.L.S.Sprigge has raised a question as to
whether truly enlightened people would even want
to survive "at the cost of massive suffering to
other sentient creatures." Sprigge, p. 130.
After reflecting on this question, proceed to
reflect on how little our own well-being, let
alone survival, depends on the massive suffer-
ing we inflict on animals.

39"What is man without the beasts? If all
the beasts were gone, man would die from great
loneliness of spirit, for whatever happens to
the beasts also happens to man. All things are
connected," Remark attributed to the Suquamish
Indian Chief Sealth, 1855. Cited in National
Geographic, vol. 159, no. 2, p. 159.

40Numerous persons, including Lawrence Haworth
(Haworth, p.109), Philip Devine ("The Moral
Basis of Vegetarianism," Philosophy, vol. 53
(1978), p.493), and Maurice Visscher (Journal
of the American Medical Association, vol.199, no.
9 (1967), p.129) have suggested that concern
for animal welfare takes the place of concern
for human welfare. While this may be true for
some, there is no necessary trade-off. Indeed,
the two concerns have often come together.
According to Passmore, "The attack on slavery,
at the hands of evangelicals and of Bentham,
rang hand-in-hand with the attack on cruelty to
animals," (Passmore, p.217). Animal welfare
advocates have tended to overlook how deep the
abuse of animals runs in our society and, con-
sequently, have failed to see how truly radical
their proposals are in a political and social
sense. For some enlightening remarks in this
regard, see Carleton Dallery, "Thinking and Be-
ing with Beasts," On the Fifth Day, ed. by
Richard Morris and Michael W. Fox (Acropolis
Books, 1978), esp. p.87. My own belief is that
significant improvements in animal welfare will
only come about through the development of more
equitable social systems. Animals occupy a spe-
cial place in such change simply because they are
politically helpless. When animals are
-treated fairly, it will be a matter of princi-
ple, not of expediency.

41It appears then, that in the final analysis
some conflicts between interests can only be
resolved by appeal to non-moral values. For a
careful and enlightening discussion of such
appeals relative to moral consistency, see Ruth
Barcan Marcus, "Moral Dilemmas and Consistency,"
"Brutes are as things in our regard: so far as they are useful to us, they exist for us, not for themselves; and we do right in using them unsparingly for our need and convenience, though not for our wantonness." Father Joseph Rickaby, Moral Philosophy (1901); extract reprinted in Regan and Singer, p. 180.