

## ANIMALS

### The differences between human beings and other animals

A dramatic way of calling attention to some important property that we share is to assert that it is our possession of this property that distinguishes us from animals. The history of rhetoric thus abounds in claims about the differences between human beings and other animals. But what is it that really differentiates us *morally* from animals? Most of us, if asked this question, would initially respond by citing some psychological capacity or set of psychological capacities: for example, that we, but not other animals, are self-conscious, rational, autonomous, have the ability to use language, have a moral sense or conscience, have free will or are responsible for our acts, and so on. The problem with this response, however, is that, for each capacity that might be cited, there are some human beings who lack it. (Sometimes the claim is that we possess certain capacities to a much higher degree than any animal. The parallel problem with this claim is that, for each such capacity, there are some human beings who possess it only to the extent that certain animals do.)

Some human beings who lack the relevant capacities may nevertheless have the potential to develop them. Many fetuses and infants belong in this category. And other human beings who currently lack the relevant capacities may once have had them. Those who are demented or irreversibly comatose may be in this category. Human beings in these two categories might be thought to be relevantly different from animals by virtue of their past or potential possession of the relevant capacities. But there is a third group – human beings who are congenitally severely cognitively impaired – whose members have never had psychological capacities higher than those of certain animals and also lack the potential to develop them in the future. If it is the possession of certain psychological capacities, or perhaps the possession of such capacities to a high degree, that endows people such as you and me with a higher moral status than animals, it seems that those human beings who lack the capacities, or who possess them to no greater degree than certain animals do, cannot share our high moral status. Their status should instead be comparable to that of animals with similar psychological capacities.

These facts pose a challenge. Most of us are disposed to think that it is by virtue of our psychological nature that we are fundamentally different, morally, from animals. But, as our practices show, we believe that *all* human beings are different from animals in morally important ways. If we are right about that, it cannot be our psychological capacities that distinguish us, since there are some human beings whose psychological capacities can never be higher than those of certain animals. If our beliefs are to be consistent, therefore, we must either find an alternative basis for our superior status or else abandon the view that there is a fundamental moral difference between all human beings and all other animals. The latter option would, as we will see, require drastic changes in our practices.

Let us consider whether there is an alternative foundation for our superior status. There are two possibilities: either the relevant difference is empirically detectable or it is not. Many people embrace the second option. They believe that all human beings have souls but that no animals do. This view is, however, very difficult to defend. According to what seems to be the most common conception, the soul is a nonphysical substance that essentially has the capacity for consciousness and mental activity. If, however, the soul is the subject of consciousness, we must either concede that animals have souls as well or else conclude, implausibly, that they are nonconscious automata.

An alternative conception is that the soul is the “organizing principle” that imparts to the human body the powers of a human person. According to this conception, just as the shape of a statue is not separable from the material of which the statue is made, so the soul is not separable from the body but is, rather, manifest in the ways in which the matter of the body is organized to produce the capacities and powers of a person. If, however, the nature of the soul is revealed in the capacities of the being whose body it informs, we should conclude that a severely retarded human being does not have a “rational soul” (which, according to Aquinas, underlies the capacities of a rational being) but instead has a “sensitive” or “animal” soul similar to that which informs the body of a comparably endowed animal. Again, there is no deep difference between all human beings and all other animals.

Other conceptions of the soul tend to be defined by negation: for example, the soul is neither body nor mind nor the essential union of the two. But once the soul is stripped of all positive features, there ceases to be any reason to suppose that there is such a thing. It is, therefore, necessary to consider whether there is a morally significant difference between all human beings and all animals that is not occult but a matter of natural endowment. Because there are no uniform differences of psychology, any difference in natural properties must be physical. It is reasonable to assume, moreover, that the only physical properties that are possessed by all human beings but not by any other animals and that are likely to be morally significant are those properties that are necessary and sufficient for membership in the human species. How, then, are members of the human species distinguished from the members of other species?

One working criterion for determining whether certain individuals together constitute a species is whether they can potentially interbreed to produce fertile offspring. But this criterion is not only vulnerable to counterexamples (for example, “ring species”); it is also obviously morally insignificant. The same objections apply to the idea that the members of a species all share the same physical phenotype. There are some recognized species – called “polytypic species” – whose members have widely varying phenotypes. More importantly, even if we suppose that all members of the human species share a distinctive gross morphology at the various stages of their development, that can hardly be what distinguishes them *morally* from animals.

A third possibility is that members of the human species are physically distinct by virtue of their possession of a common genome. It is not, of course,

that individual genes come marked as “human;” rather, it is that the structure of the genome as a whole is determinative of membership in the species. In practice, this criterion is genealogical, for as things are a being will have this distinctive genome if, but only if, it is the genetic product of parents identified as human.

This may well be the best way to distinguish human beings from the members of other species. But there are decisive reasons for rejecting the assumption that this criterion for membership in the human species is morally significant. It is very obscure how the features of the genotype itself, independently of their phenotypic manifestations, could be, or be seen to be, morally significant. And, in any case, the genetic differences between human beings and their closest evolutionary relatives – chimpanzees – are proportionately very small: human beings and chimpanzees have approximately 98.4% of their genes in common. In most cases, of course, the 1.6% difference in genotype yields profoundly important differences of phenotype. But these differences are of psychological endowment and, as we have seen, do not distinguish *all* human beings from other animals. For in some cases a genotype that is recognizably human nevertheless lacks the sequence necessary for distinctively human psychological capacities.

To appreciate that the genotype *per se* is morally irrelevant, consider a range of cases made possible by technologies for combining genes from different species. Scientists have already created “transgenic” pigs by inserting a single human gene into the nucleus of a porcine zygote. (Their aim is to create pigs with livers that could be transplanted into human beings without provoking a lethal immune response.) Just as it is possible to produce a pig in which each cell carries a single human gene, so it is possible to produce a chimpanzee with a single human gene – or two human genes, or three, or more. Imagine a spectrum of possibilities. At one end of the spectrum is a chimpanzee with one human gene. Next there is a transgenic chimpanzee with two human genes. And so on, with each individual further on in the spectrum having one less chimpanzee gene but one more human gene than the previous one. Since the overlap between the human and the chimpanzee genomes is high, it may be well beyond the middle range of the imagined spectrum before there are individuals that are part-human, part-chimpanzee, with bizarre blends of human and chimpanzee characteristics. At the far end of the spectrum is an individual grown from a chimpanzee zygote from which all the chimpanzee genes but one were removed and replaced by corresponding human genes.

The point of this spectrum is not just that the species membership of individuals beyond the middle range may be genuinely indeterminate; it is also that it would be implausible to suppose that the moral status of any individual in the spectrum is determined by how many, or what proportion, of its genes were human, or taken from a human being. Rather, it seems that the moral status of each individual is determined by its individual phenotypic characteristics, particularly its psychological capacities. Compare, for example, two possible transgenic individuals. In one, 99.9% of its genes are of human origin, though the genes responsible for the growth and development of its brain are from the

original chimpanzee zygote. If species membership is determined by the genome, this individual is presumably a human being, though its mental capacities are those of a chimpanzee. In a second individual, 99.9% of its genes are of chimpanzee origin, but the genes responsible for the development of its brain have a human source. This is presumably a chimpanzee with human intelligence. If moral status is a matter of species membership, the individual with the mind of a chimpanzee should have a higher moral status than that of the individual with human intelligence. This is highly implausible.

Most people, however, persist in believing that membership in the human species is morally significant. How can this be if the properties that are necessary and sufficient for membership are *not* morally significant? One possibility is that the special moral status that severely retarded human beings are presumed to enjoy derives not from their intrinsic properties but from their relation to us. Just as I owe more to my own children than I do to other children – not because my children are intrinsically more worthy but simply because of the relation I bear to them – so I may owe more to a severely retarded human being than to a comparably endowed animal simply because we are both human – that is, belong to the same species.

Is co-membership in the human species a morally important relation? It seems unlikely that it could be since the relation is just a matter of biology and genealogy and thus is similar to co-membership in the same race, which most people now reject as a legitimate basis for partiality. But suppose, for the sake of argument, that co-membership in the human species is a special relation. Could it be sufficiently important to justify the difference between our treatment of the severely retarded and our treatment of animals with comparable capacities? If there is no relevant intrinsic difference between the severely retarded and comparably endowed animals, and if we are thus required to treat the severely retarded differently only because of our relation to them, then we must accept that it would be permissible for Martians, who are not specially related to the severely retarded, to treat them in the ways that we treat animals, if other things were equal. Most of us will find this difficult to accept. If so, and if we are unable to identify and defend a significant intrinsic difference between the severely retarded and comparably endowed animals, we must revise our beliefs – about the moral status of the severely retarded or the status of animals or both. Consideration of what we believe Martians would be morally required or forbidden to do provides a test for consistency in our beliefs. Other things being equal, we must treat animals at least as well as we believe Martians would be required to treat severely retarded human beings with comparable psychological capacities. If co-membership in our species is a special relation, we may be required to treat the severely retarded somewhat better than Martians would be required to treat them, and therefore somewhat better than we are required to treat animals with comparable capacities.

### **The morality of causing suffering and the morality of killing**

I believe that the proper response to the arguments I have advanced is to modify our moral beliefs both about animals and about the severely retarded.

We should conclude that, in virtually all respects, animals merit better treatment than traditional human practices have accorded them. But we should also accept that, in at least some respects, we are not morally *required* to treat the severely retarded with quite the degree of solicitude that common sense beliefs demand.

I will focus on two particularly important forms of treatment: killing and the infliction of suffering. Consider first the infliction of suffering. Suffering is bad primarily because of its intrinsic nature: it is bad in itself. Suffering of a certain intensity and duration is equally bad, or almost equally bad, wherever it occurs. The wrongness of inflicting it is therefore not appreciably diminished if the victim's cognitive capacities are comparatively low, as in the case of animals and the severely retarded. (Of course, it appears that some lower animals are so rudimentarily developed neurologically that they are incapable of great suffering; in their case, questions about the morality of inflicting great suffering do not arise.) It would therefore be scarcely less objectionable, morally, for a Martian to inflict great suffering on a severely retarded human being than it would be for someone to inflict the same degree of suffering on a person with normal cognitive capacities. And this suggests that the infliction of suffering on an animal should be almost equally wrong, if other things are equal, as the infliction of a comparable degree of suffering on a person.

One has, of course, a stronger reason to prevent one's own suffering, or the suffering of one's child, than one has to prevent the same suffering in an animal. But this is because of the special relations (including identity), not because human suffering has greater intrinsic significance. If co-membership in the human species is a special relation, it follows that we have reason to care at least somewhat more about human suffering than about animal suffering, other things being equal.

There are other reasons for thinking that the suffering of persons matters somewhat more. While suffering is bad primarily because of its intrinsic nature, it may also be bad because it precludes activities or experiences of positive value. Because the activities and experiences of persons are generally more valuable than those of animals, the "opportunity costs" of suffering are in general greater for persons.

Suffering may also have effects that ramify throughout the remainder of a life. The infliction of suffering on a human infant, for example, may have damaging effects on the whole of its subsequent life. Of course, pain or cruelty can have similar effects in the life of an animal. But, because the life of an animal is shorter and contains less of value that can be spoiled by psychic scarring than the life of a person does, these effects are less serious.

Finally, in persons but not animals, the anticipation of suffering may itself be a cause of suffering, and suffering may be intensified by anxiety about its significance – though these facts are partly offset by the fact that a person's suffering may also be mitigated by an understanding of its source or an assurance that it will soon end.

It is important to note that these reasons for thinking animal suffering matters somewhat less also apply to suffering experienced by the severely retarded.

Next consider the morality of killing. Most of us believe that wrongful killings of *persons* – by which I mean individuals who are self-conscious and at least minimally rational – are *equally* wrong, at least in the sense that the wrongness does not vary with differences in the age or quality of life of the victim, or with other factors that affect the degree to which an act of killing harms or is bad for its victim. The morality of killing persons varies only in ways that are compatible with the basic moral equality of persons: thus, for example, the degree of wrongness may vary with the intention of the agent, and some acts of killing may not be wrong at all – for example, if the victim has, through his own wrongful action, made it necessary, as a matter of justice, that he be killed. It is, however, impossible to believe that the killing of animals, regardless of their cognitive and emotional capacities, is equally wrong as the killing of innocent adult persons. While it may be almost as seriously wrong to inflict great pain on a squirrel as it is to inflict a comparable degree of pain on a person, it would clearly be a mistake to suppose that to kill a squirrel is as seriously wrong as it is to kill an innocent person. While the killing of persons is, in general, egregiously and equally wrong, the killing of animals is less seriously wrong, other things being equal.

It is tempting to explain this difference by noting that a person has more to lose, and is therefore harmed to a greater extent by being killed. But the assumption that the wrongness of killing varies with the degree to which the victim is harmed is incompatible with our intuition that killings of persons are equally wrong. An alternative and more plausible explanation is that killing persons and killing animals are wrong for different reasons. It can be argued that, because persons are rational and autonomous, each has exclusive moral authority over his own life – that is, each has the right to determine how his own life should go, provided that he does not encroach upon the equivalent rights of others. Because to kill a person against his will is the ultimate usurpation of his authority over his life, it constitutes the most serious possible violation of his rights. If we assume that the right not to be killed unjustly is one that all persons possess equally, this would explain why all wrongful killings of persons are equally wrong. (Most lesser, nonlethal harms seem to violate lesser rights, ones that vary in strength. These rights seem merely to protect interests, not autonomy. Thus the wrongness of inflicting these lesser harms, even on persons, seems to vary with the magnitude of the harm, other things being equal.)

The explanation of why killing animals is morally objectionable is necessarily different. Because animals (or most animals) are not rational and autonomous, it makes no sense to suppose that they have the same kind of authority to direct or determine how their lives will go. They lack the degree of self-consciousness necessary to conceive of, deliberate about, and plan for their own future lives. Thus to kill an animal cannot be objectionable because it is contrary to its *will*. But it *is* objectionable if it is contrary to its *good* – that is, if its future life would be worth living. Indeed, it seems that an appeal to the loss of

future good that an animal suffers in being killed provides an exhaustive explanation of what is intrinsically objectionable about killing it. Because of this, we should expect that the degree to which the killing of an animal is objectionable varies, if other things are equal, with the extent of its loss (or, in other words, with the degree to which it is thereby harmed). And this expectation is borne out by our intuitions. We believe, for example, that it is worse to kill a dog than to kill a frog.

It seems, then, that we do not have a single, unified understanding of the morality of killing. Instead, our beliefs suggest that killing persons is in general wrong because it is incompatible with respect for their rights as rational and autonomous beings, while killing animals is objectionable when, and to the extent that, it is against their interests. But it is not because of their species membership that persons are protected by different and more stringent moral requirements. It is, instead, because other persons have cognitive and emotional capacities that make them our moral equals and give them, rather than others, authority over their own lives. If this is right, however, severely retarded human beings who lack these capacities that distinguish persons from animals cannot be entitled, by virtue of their intrinsic natures, to the moral protections enjoyed by persons. The morality of killing the severely retarded is governed, for the most part, by the same considerations that govern the killing of animals with comparable capacities.

There is, however, one important difference, which is that virtually every severely retarded human being is importantly specially related to certain persons. Each severely retarded human being is, for example, someone's child. And those who are closely personally related to the severely retarded have special reasons to protect and care for them and are usually motivated by love and compassion to do so. The rest of us must respect these people's feelings and commitments. We therefore have indirect reasons to be specially solicitous about the well-being of severely retarded human beings that we do not have in the case of comparably endowed animals. (We have similar reasons to treat people's pets differently from the way we might treat those same animals if they were unrelated to persons; but these reasons are much weaker because the relation between a person and his or her pet is substantially less significant than the relation between a parent and child, even if the latter's psychological capacities are no higher than those of a pet animal.)

### **Practical issues**

I have suggested that our treatment of animals is governed by a moral requirement to respect their interests. (I have also suggested that we must give as much weight to the interests of an animal as we believe a Martian would be required to give to the similar interests of a severely retarded human being with comparable psychological capacities.) Because our treatment of animals is constrained only by their interests and not by rights, it is appropriate to deliberate about the morality of practices involving the use of animals by weighing their interests against ours or, more generally, against whatever interests conflict with theirs. Although persons may have rights that forbid us to

harm them even if that is necessary to prevent a greater harm to others, there does not appear to be a parallel constraint against sacrificing an animal for the greater good of others, whether human or animal.

The burden of justification for any practice that inflicts suffering on animals, or kills them, or harms them in some other way is, therefore, that the practice must be shown to be necessary in order to prevent even greater harms or to produce benefits that outweigh the harms inflicted. Let us consider whether certain widespread practices can pass this test. Our most common use of animals is to rear and kill them for food. In order for this practice to be justified, the benefits it offers us must outweigh the harms it inflicts on animals. And the harms are substantial. Indeed, despite our vaunted cognitive capacities, we can scarcely comprehend their magnitude. In the US alone, many billions of animals are killed each year for human consumption. The majority of these are raised in "factory farm" conditions in which their well-being is systematically sacrificed in every way that might reduce expenditures and thereby maximize profits. I leave the horrific details of their torment to other writers. [Singer] It is sufficient here to note that our practice of eating meat causes billions of animals to endure lives of continuous misery. The practice also involves billions of killings annually, most of which are carried out in ways that are terrifying and painful to the victim. This dimension of the practice is harder to evaluate, since many of the lives that are ended would not have been worth living if they had continued. Yet it seems obvious that an act of killing cannot be excused on the ground that it spared the victim a future that would have been unendurable *because the killer himself would have made it so*. Killing may be harmful even in these conditions.

What, then, are the benefits we derive that can be weighed against these harms? It would be cheating to say simply "the pleasures we get from eating meat." The proper answer (or part of that answer) is: the *difference* between the pleasure we get from eating meat and the pleasure we *could* get from a wholly vegetarian diet. We must therefore ask how much more pleasure meat-eaters get from their meals than vegetarians get from theirs. Most vegetarians can answer that question, as most were formerly meat-eaters. And most will testify that their quality of life declined only minimally, if at all, when they gave up meat, or animal products generally. Many who become vegetarians in fact find that their quality of life is heightened, as an enhanced sense of health and vitality more than compensates for the narrowed range of dietary options. Indeed, it is clear, even when we factor in any pleasures meat affords that cannot be equaled by the pleasures of a vegetarian or vegan diet, that most affluent westerners, and especially most Americans, would be substantially better off if they ate a vegetarian diet rather than their present diet of choice, which includes large quantities of meat. Soaring rates of obesity, cardiovascular disease, diabetes, and various forms of cancer would drop and people would live longer, with greater vigor and fewer chronic ailments and disabilities attributable to a meat-based diet. In economically developed societies, therefore, there is really *nothing*, on balance, to weigh against the harms inflicted on animals in the course of turning them into meat – apart from opportunities for imprudence in elevating transient pleasures of the palate over health and long-term well-being. (In poorer

societies, meat-eating may still be necessary for adequate nutrition. The case for meat-eating in such conditions is quite strong. But these are not our conditions.)

The obvious reply to this is that, even if the present western diet is unhealthy, a diet with a small amount of lean meat is no less healthy than a vegetarian diet. But the problem with this response is that a diet with only small amounts of lean meat will scarcely differ at all in the pleasures it affords from a wholly vegetarian diet. So, even though the number of animals killed would decline significantly if people ate no more meat than was compatible with good health, the benefits from the practice would still be clearly insufficient to justify the harms.

Advocates of meat-eating have further rejoinders. I will briefly discuss three. First, it can be argued that, even if there would be no case for adopting a practice of meat-eating if no such practice already existed, the costs of abolishing the existing practice would be prohibitive. For the meat industry is extensive. To abolish it would threaten the livelihoods of hundreds of thousands, if not millions, of people in the US alone. The disruption of the economy would be catastrophic. Hence we must go on eating meat, if not because of the benefits of continuing, then because of the harms that many would suffer if the practice were stopped.

The problem with this argument is that it can be advanced on behalf of any large-scale social practice, however iniquitous. The same claim has been made in support of slavery in the South, the sale of tobacco products at home and abroad, and the sale of advanced weapons to tyrannous and illegitimate governments. It is inevitable that there will be resistance to phasing out an immoral practice from those whose livelihoods depend on its continuation. But the solution in all such cases – including the practice of meat-eating – is not a defensive inertia but a creative program for the gradual elimination of the practice in which the government facilitates the process of economic conversion – for example, conversion of arms factories to civilian uses or the conversion of tobacco farms to benign forms of agriculture – perhaps assisting and compensating those who would otherwise be adversely affected.

A second defense of meat-eating operates at the individual level. One may argue as follows: “Even if *we*, as a society, ought not to eat meat, it does not follow that *I* ought not to. For the case against meat-eating is that it inflicts terrible harms on animals; yet if I were to give up meat, that would not prevent the torment or death of a single animal. The market is simply insufficiently sensitive to register and react to changes in my individual pattern of consumption. Therefore my continuing to eat meat will not cause any animal to be harmed. The reason why we ought not to eat meat does not apply to *me* on my own. I ought to give up meat only if most others will do so as well, and that is not going to happen.”

One response to this argument is to claim that, while forgoing meat on a few occasions would make no difference, abstention from meat for the whole of an adult lifetime would be bound to make *some* difference to the number of

animals killed, particularly if one lives in a small community in which meat is locally supplied. Let us assume, for the sake of argument, that this is true. The problem is that, if a lifetime's abstention would reduce by only a few the number of animals with truncated and miserable lives, it may not be morally required. For the net amount of pleasure of which one would be deprived by abstaining over so long a period could well exceed the harm to only a few animals that one would thereby prevent.

A more forceful reply to this defense of individual meat-eating is that it is only if some of us take the initiative in abandoning the practice that enough of us will do so to make a significant difference. This is in part just a matter of logic. But it is also a practical claim. For an individual, the moral reason to be a vegetarian is not so much to avoid harming individual animals as it is to bear public witness to the wrongness of the social practice of meat-eating, to set an example for others, and thereby to provide impetus and momentum to social action that will significantly diminish the harms that we as a society inflict on animals. (There is little doubt that the combined action of all the vegetarians in the US today does make a substantial difference to how many animals are tormented and killed.) Thus even if, for the time being, one's individual sacrifice will not yield a proportionate reduction in the harms we inflict, it may still be required because of its possible long-term impact on the behavior of others. For the importance of eliminating the practice is so great that even a small probability of contributing to that goal may make it morally imperative to accept the comparatively minor sacrifice that may be involved in becoming a vegetarian.

A third and final defense of meat-eating does not attempt to vindicate the present practice but instead claims that a different practice *could* be justified if the animals were treated differently. Suppose that certain animals were bred and reared in conditions in which they would be contented and that they would be painlessly killed for human consumption only after having lived a reasonably full life. If their lives would be at least as good overall as the lives they would have if they lived in the wild, it is hard to see how the animals could be regarded as *victims* of the practice – particularly if they would otherwise not exist at all. If animals were autonomous and had a right to determine how their lives should go, such a practice could not, of course, be justified. But, if only their interests are at issue, it seems that the practice could be justified, for it would enable the animals to fare at least as well as they would under any alternative arrangement we could reasonably be required to provide for them.

It is not implausible to believe that this kind of practice could in principle be permissible. But it is not a realistic possibility outside of small, rural settings. It would not be economically viable on a large scale because the investment required to maintain animals for lengthy periods in conditions suited to their nature would be much greater than that which is required merely to keep them alive until they have grown to full size (as is done at present). In order for producers to recover their investment and make a profit, the cost of meat would have to be correspondingly high – far higher than most people could afford to pay at present rates of consumption. As consumption declined, unit costs might

rise even more. Eventually meat would become a luxury that only the very rich could enjoy with any regularity. The reason this is not realistic possibility is that the meat "industry" (whose interests, unlike those of the tobacco and gun industries, are allied with the *perceived* self-interest – though not the real best interests – of people generally) would oppose it with all the very considerable resources at its disposal. Of course this is true as well of efforts to achieve universal vegetarianism – though, as a utopian goal, universal vegetarianism is, unlike the practice I have described, at least immune to objections on egalitarian grounds.

The conclusions I draw from this discussion are that our practice of eating meat is immoral and that we are hardly more likely to evolve a morally acceptable form of meat-eating than we are to abolish the practice altogether. There are, however, other practices that involve harming and killing animals that are not so glaringly indefensible. Among these are xenotransplantation (the transplantation of organs taken from animals into the bodies of human beings) and various forms of experimentation. The reason that these uses are more likely to be defensible is that the benefits they offer are very significantly greater than those people derive from eating meat. In xenotransplantation (which is not yet effective but is on the horizon), the painless killing of an animal might save a person's life. Since the harm that a person suffers in dying is normally considerably greater than that which an animal suffers, the harm prevented through xenotransplantation would usually greatly outweigh the harm inflicted. Similarly, there are some instances of experimentation that promise very great benefits to human beings and, occasionally, to animals as well. Many such experiments are likely to be morally justifiable, though many instances of experimentation on animals, possibly the majority, do not produce benefits that outweigh the harms they inflict. Many experiments yield comparatively trivial results, uselessly duplicate work already done, are unnecessary because alternative methods of investigation are available, or yield results that cannot be reliably extrapolated to cases involving human beings.

Most experimenters, however, claim that their work is sufficiently important to justify the sacrifice of animals. How can we tell whether their judgment is based on a reasonable and impartial standard? Here is a suggestion. Many of the most important experiments are intended to yield knowledge about human beings: for example, what medicines may benefit us, what substances may harm us, etc. The data obtained would therefore be far more reliable if the experimental subjects were human beings rather than animals. Most human beings with psychological capacities and potentials comparable to those of animals are ruled out as experimental subjects by virtue of their relations to other human beings. But occasionally a severely retarded infant is orphaned at birth and, as a consequence, is not significantly specially related to anyone. Would an experimenter accept that his or her experiment was sufficiently important to justify using such an infant? There have been numerous instances in which the parents of an anencephalic infant (an infant lacking cerebral hemispheres and thus devoid of any capacity for consciousness) have sought, thus far unsuccessfully, to make the organs of their living infant available for transplantation. Would an experimenter be willing to use such an infant,

assuming that the parents could be persuaded to give their consent? If an experimenter would think it wrong to use a human being of one of these sorts but would be willing to experiment on an animal with equivalent or even higher psychological capacities, we would be entitled to demand a compelling explanation of the difference. If, as I argued earlier, this demand could not be met, we should doubt that the experiment would be justified.

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