DARWIN, SPECIES, AND MORALITY

I

"Man in his arrogance thinks himself a great work worthy the interposition of a deity. More humble and I think truer to consider him created from animals."¹ Thus wrote Darwin in his notebooks for 1838, twenty-one years before he was to publish The Origin of Species. He would go on, of course, to support this idea with overwhelming evidence, and it is commonly said that, in doing so, he brought about a profound change in our conception of ourselves. After Darwin, we can no longer think of ourselves as occupying a special place in creation—instead, we must realize that we are products of the same evolutionary forces that shaped the rest of the animal kingdom. We are not a great work. We were created from animals. And this, it is said, has deep philosophical significance.

Curiously, though, it is not philosophers who say such things. Anthropologists, journalists, and poets might believe that there is a big philosophical lesson to be learned from Darwin, but by and large the philosophers themselves have not agreed. If we examine the most influential works of philosophy written in this century, we find little discussion of Darwin or his theory. When the subject is broached, it is usually to explain that Darwinism does not have some philosophical implication it is popularly thought to have. The philosophers seem to agree with Wittgenstein's assessment: "The Darwinian theory," he said, "has no more to do with philosophy than any other hypothesis of natural science."²

Why are philosophers so indifferent to Darwin? Among moral philosophers, it may be in part a reaction to the exaggerated character of claims that once were made. When he first read The Origin, Karl Marx declared that "Darwin's book is very important and serves me as a basis in natural selection for the class struggle in history."³ Later socialists made similar judgments, often claiming to find in Darwinism the "scientific basis" of their political views. Meanwhile, capitalists were also claiming Darwin: the idea of "the survival of the fittest" was invoked time and again to justify competitive economic systems.⁴ Exasperation with such nonsense might very well provoke a reaction like Wittgenstein's.

There is another, more general reason for scepticism about drawing philosophical conclusions from Darwinism. That is the old problem of the
relation of fact and value, of ‘is’ and ‘ought’. Darwin’s theory, if it is correct, tells us what is the case with respect to the evolution of species; and so, strictly speaking, no conclusion follows from it regarding any matter of value. It does not follow, merely because we are descended from apes, that we ought to think less of ourselves, that our lives are less important, or that human beings are “merely” one kind of animal among others. Nor does it follow that the main tenets of religion are false. As has often been observed, natural selection could be the means chosen by God for the purpose of making man. If so, man could still be regarded as the divinely-blessed crown of creation.

Nevertheless, the nagging thought remains that Darwinism does have unsettling consequences. The feeling that Darwin’s discovery undermines traditional religion, and some parts of traditional morality, will not go away, despite the nice logical points about what follows from what. I believe this feeling is justified. There is a connection between Darwin’s theory and these larger matters, but the connection is more subtle than a straightforward logical implication. Darwin himself had a good sense of this. In 1880, two years before he died, he wrote—wisely, in my opinion:

Though I am a strong advocate for free thought on all subjects, yet it appears to me (whether rightly or wrongly) that direct arguments against Christianity and Theism produce hardly any effect on the public; and freedom of thought is best promoted by the gradual illumination of men’s minds, which follows from the advancement of science. It has, therefore, been always my object to avoid writing on religion, and I have confined myself to science.

Thus, even if Darwin’s theory is not a “direct argument” against Christianity and theism, he saw it as having a clear long-range influence on such beliefs.

The idea that Darwinism undermines religion is, of course, familiar, even though it is by no means obvious how it does so. I will not discuss the relation between Darwinism and religion. Instead I will focus on the other, less well-explored idea: that Darwinism also undermines some aspects of traditional morality. Traditional morality depends, at crucial points, on the assumption that there is something morally special about being human—the fact that a being is human, rather than, say, canine or bovine, makes a big difference, according to traditional morality, in how it may be treated. My thesis is that “the gradual illumination of mens’ minds,” of the sort provided by Darwin’s theory, must lead inevitably to the conclusion that this assumption is false.
II

When he wrote *The Origin of Species*, Darwin studiously avoided the question of whether human beings have evolved. There was resistance enough to the idea that any species might be transformed into another, and he did not want to complicate matters needlessly by considering the emotionally charged question of human origins. He did, however, issue a warning. At the very end of the book, after having discussed dozens of other species for over 450 pages, Darwin predicted that, as a result of his investigations, "Much light will be thrown on the origin of man and his history.”6

That light was to come in two later works, *The Descent of Man* (1871) and *The Expression of the Emotions in Man and Animals* (1872), in which Darwin considered the specific question of human origins. He was convinced, of course, that man is subject to the same laws that govern the rest of nature, and that we, like the other animals, are descended from more primitive forms. But the most impressive evidence of this—the fossil remains of early hominids—had not yet been discovered. Therefore, Darwin had to argue for this conclusion indirectly, by stressing the similarities between humans and the other animals. We are so much like them, he said, that if they have evolved, then it is only reasonable to think that we have evolved also.

What were those similarities? First, like the other animals, man is subject to slight variations from individual to individual (no two people are exactly alike), and these variations are heritable. Man also reproduces in greater numbers than can survive. These facts alone would be enough to clinch the case, in Darwin’s view, for these are just the facts that enable natural selection to operate. But there is more. Any species with an extended range will tend to diversify; individualized, geographically separated varieties will appear. This happens with man: Africans, Eskimos, and Japanese are, to the biologist’s trained eye, distinct varietal forms. Moreover, as biologists had always known, it is easy to fit man into the great classificatory scheme: he is a primate, a mammal, and so on. Once these classifications are seen as related to lines of evolutionary descent, it is clear that man also belongs to a particular line of descent.

Darwin was aware, however, that this sort of evidence would not be enough to convince the sceptics. From ancient times man has thought himself special because of his higher intellectual capacities. Man is the rational animal. How could that be explained on evolutionary grounds? Even some evolutionists, such as Alfred Russel Wallace, thought this was impossible. Wallace, who had independently formulated the theory of natural selection, held that the theory did not apply to humans. Darwin disagreed,
and sought to explain even man’s proudest characteristics as the products of natural selection. Once again, he tried to make this plausible by emphasizing the similarities between human and nonhuman animals.

What makes man rational? One popular answer is that it is his linguistic ability. Because we are masters of a complex language, we can formulate thoughts, draw inferences, and in general understand ourselves and what is going on around us in a sophisticated way. Darwin argues, however, that our use of language differs in degree, not in kind, from the systems of signals used by other animals. Our language, he thought, is probably just the natural extension of some such primitive system:

I cannot doubt that language owes its origin to the imitation and modification of various natural sounds, the voices of other animals, and man’s own instinctive cries, aided by signs and gestures... we may conclude from a widely-spread analogy, that this power would have been especially exerted during the courtship of the sexes,—would have expressed various emotions, such as love, jealousy, triumph,—and would have served as a challenge to rivals. It is, therefore, probable that the imitation of musical cries by articulate sounds may have given rise to words expressive of various complex emotions... may not some unusually wise ape-like animal have imitated the growl of a beast of prey, and thus told his fellow-monkeys the nature of the expected danger? This would have been a first step in the formation of a language.9

Although he thought language could be explained thusly, Darwin was sceptical about its importance. Even if other animals do not have a language as impressive as man’s, this does not prevent them from being rational. In his early notebooks, Darwin makes a note to himself: “Forget the use of language and judge only by what you see.”9 When we look at the behavior of nonhuman animals, it seems to show reason, regardless of whether the use of language is involved:

The orang in the Eastern islands, and the chimpanzee in Africa, build platforms on which they sleep; and as both species follow the same habit, it might be argued that this was due to instinct, but we cannot feel sure that it is not the result of both animals having similar wants and possessing similar powers of reasoning.9

Today we might make the same point in somewhat different terms: our best theory of animal behavior involves attributing to them desires and beliefs. Desires and beliefs, taken together, form reasons for action. Thus, when we explain the animal’s behavior like this (the animal wants certain benefits, and realizes that by building a platform it can obtain those benefits, etc.) we are seeing its conduct as rational.

Now I do not wish to defend, or even to discuss in any detail, Darwin’s specific ideas about language or rationality. But I do want to call attention to the moral implications of his way of thinking. Darwin’s strategy of argu-
ment brings him into direct conflict with traditional morality, which holds that humans and nonhumans are in separate moral categories. The traditional moral view is expressed by another nineteenth-century thinker, the Jesuit Joseph Rickaby, when he writes that we have no duties to mere animals because they are not the kind of beings toward whom we could have duties: "Brute beasts ... are of the order of things ... We have then no duties of charity, nor duties of any kind, to the lower animals, as neither to sticks nor stones."10 Darwin, however, could never regard nonhuman animals as mere things. His strategy leads him at every point to stress their similarities to human beings. He even goes so far as to assert: "There is no fundamental difference between man and the higher mammals in their mental faculties."11 (He did admit that there are differences of degree, but stressed that these were only matters of degree.) But if man and animal are so much alike, how can it be right to treat them so differently? How can it be right to place them in different moral categories? Why shouldn't the same moral rules that determine how we should be treated also determine how they should be treated?

Darwin himself may have been aware of this implication. His personal feelings about the mistreatment of animals were unusually strong, and matched in some ways his feelings about the mistreatment of humans. Reflecting on his father's character, one of Darwin's sons wrote: "The two subjects which moved my father perhaps more strongly than any others were cruelty to animals and slavery. His detestation of both was intense, and his indignation was overpowering in case of any levity or want of feeling on these matters."12 It is surprising that a man of science—especially a naturalist who had killed countless animals for specimens—should have such feelings about cruelty to animals. What of the uses of animals for research? Darwin wrote in a letter,

You ask my opinion on vivisection. I quite agree that it is justifiable for real investigations on physiology; but not for mere damnable and detestable curiosity. It is a subject which makes me sick with horror, so I will not say another word about it, else I shall not sleep tonight.13

It would be wrong to count Darwin as an advocate of "animal rights"; his feelings were far too ambiguous for that. He was sickened by vivisection—and at times visitors to the Darwin home were forbidden to bring up the subject—but he also thought it justifiable "for real investigations." Once he supported an effort to secure legislative controls on the use of animals in research, but later he refused to support another such effort.14 Regardless of such wavering, however, it seems clear that he was troubled by prevailing attitudes toward animals.
Darwin seems to have connected his feelings about animals with his more general biological view about the kinship of species (although I do not wish to make too strong a claim about this). There are hints of a connection in passages such as this one from an early notebook:

If we choose to let conjecture run wild then animals our fellow brethren in pain, disease, death, suffering and famine, our slaves in the most laborious works, our companions in our amusements, they may partake from our origin in one common ancestor, we may be all netted together.\textsuperscript{15}

However, if Darwin was ambiguous, others close to him were not. Asa Gray, the Harvard professor of botany who was Darwin’s friend and defender in America, made the connection between biology and ethics explicit. In a lecture at the Yale Theological School, delivered less than a decade after publication of \textit{The Descent of Man}, he said:

We are sharers not only of animal but of vegetable life, sharers with the higher brute animals in common instincts and feelings and affections. It seems to me that there is a sort of meanness in the wish to ignore the tie. I fancy that human beings may be more humane when they realize that, as their dependent associates live a life in which man has a share, so they have rights which man is bound to respect.\textsuperscript{16}

III

Asa Gray’s address raised the fundamental moral issue: Is the fact that a being is a member of a certain species, in and of itself, a morally good reason for treating it in a certain way? Is the fact that a being is \textit{human} a reason for treating it with greater consideration than is given members of other species? There are (at least) three possible answers.

1. \textit{Unqualified Speciesism}. First, it might be held that mere species alone is morally important. On this view, the bare fact that an individual is a member of a certain species, unsupplemented by any other consideration, is enough to make a difference in how that individual should be treated.

This is not a very plausible way of understanding the relation between species and morality, and generally it is not accepted even by those who are sympathetic to what I am calling “traditional morality.” Consider, for example, the old science-fiction story “The Teacher from Mars” by Eando Binder.\textsuperscript{17} The main character is a Martian who has come to earth to teach in a school for boys. Because he is “different”—seven feet tall, thin, with tentacles and leathery skin—he is taunted and abused by the students until he is almost driven out. Then, however, an act of heroism makes the boys realize they have been wrong, and the story ends happily with the ring-leader of the bullies vowing to mend his ways.
Written in 1941, the story is a not-so-thinly-disguised morality tale about racism. But the explicit point concerns species, not race. The teacher from Mars is portrayed as being, psychologically, exactly like a human: he is equally as intelligent, and equally as sensitive, with just the same cares and interests as anyone else. The only difference is that he has a different kind of body. And surely that does not justify treating him with less respect. Having appreciated this point, the reader is then expected to draw the obvious conclusion: the fact that there are physical differences between whites and blacks—skin color, for example—should make no moral difference either.

However, it has been suggested by some philosophers that species alone can make a difference in our moral duties toward a being. In his review of Tom Regan's The Case for Animal Rights, Robert Nozick speculates that, in a satisfactory moral scheme,

... perhaps it will turn out that the bare species characteristic of simply being human... will command special respect only from other humans—this is an instance of the general principle that the members of any species may legitimately give their fellows more weight than they give members of other species (or at least more weight than a neutral view would grant them). Lions, too, if they were moral agents, could not then be criticized for putting other lions first.

Nozick illustrates the point with his own science-fiction example: "denizens of Alpha Centauri" would be justified in giving greater weight to the interests of other such Alpha Centaurians than they give to our interests, he says, even if we were like them in all other relevant respects. But this isn't at all obvious—in fact, it seems wrong on its face. If we substitute an Alpha Centaurian for a Martian in Binder's story, it makes no difference. Treating him less well because he is "different" (in this case, a member of a different species) still seems like unjustified discrimination.

What of the "general principle" Nozick suggests? It seems to be an expanded version of something that most people find plausible, namely, that one is justified in giving special weight to the interests of one's family or neighbors. If it is permissible to have special regard for family or neighbors, why not one's fellow species-members? The problem with this way of thinking is that there are lots of groups to which one naturally belongs, and these group-memberships are not always (if they are ever) morally significant. The progression from family to neighbor to species passes through other boundaries on the way—through the boundary of race, for example. Suppose it were suggested that we are justified in giving the interests of our own race greater weight than the interests of other races? ("Blacks, too," it might be said, "could not then be criticized for putting other blacks first.") This would rightly be resisted, but the case for distinguishing by species
alone is little better. As Binder’s story suggests, Unqualified Speciesism and racism are twin doctrines.

2. Qualified Speciesism. But there is a more sophisticated view of the relation between morality and species, and it is this view that defenders of traditional morality most often adopt. On this view, species alone is not regarded as morally significant. However, species-membership is correlated with other differences that are significant. Humans, it might be said, are in a special moral category because they are rational, autonomous agents. (Other special human qualities are sometimes mentioned, but, at least since Kant, this one has been most popular.) It is this fact, rather than the “mere” fact that they are human, that qualifies them for special consideration. This is why their interests are more important, morally speaking, than the interests of other species, although, presumably, if the members of any other species were rational, autonomous agents, they would also go into the special moral category, and would qualify for the favored treatment. However, defenders of traditional morality insist that, as a matter of fact, no other species has this characteristic. So humans alone are entitled to full moral consideration

Darwin, as we have seen, resisted the idea that humans have characteristics that are not shared by other animals. Instead he emphasized the continuities between species: if man is more rational than the apes, it is only a matter of degree, not of kind. But let us set this point aside, and grant for the purpose of argument that humans are the only fully rational, autonomous agents. What would follow from this assumption? I want to make two comments.

(a) The first comment has to do with the logical structure of Qualified Speciesism. It is important to see exactly what function the reference to man’s rationality is supposed to serve. The reference to rationality comes at a certain point in the discussion of morality and species, and has a certain purpose. Let us see what that purpose is.

The discussion begins with the observation that we use nonhuman animals in a variety of ways: to name a few, we raise and eat them as food; we use them in laboratories, not only for medical and psychological experiments, but to test products such as soap and cosmetics; we dissect them in classrooms for educational purposes; we use their skins as clothing, rugs, and wall decorations; we make them objects of our amusement in zoos, circuses, and rodeos; we use them as work animals on farms; we keep them as pets; and we have a popular sport that consists of tracking them down and killing them for the pleasure of it.

Next, it is noted that we would think it deeply immoral if humans were used in any of these ways. But this leads to a problem. Ever since Aristotle it has been recognized as a fundamental rule of moral reasoning that:
When individuals are treated differently, we need to be able to point to a difference between them that justifies the difference in treatment.

Thus we have to face this question: what is the difference between humans and nonhumans that justifies us in treating nonhumans so differently?

This is where the reference to rationality comes in. Qualified Speciesism attempts to answer this question by pointing to the fact that humans are rational autonomous agents, while the other animals are not—*that* is what is supposed to justify treating nonhumans differently.

But now notice this crucial point: we treat nonhumans in a *variety* of ways in which we think it would be wrong to treat humans. In the attempt to justify this, Qualified Speciesism mentions *one* difference between humans and nonhumans. Will this work? Is the fact that humans are rational, while other animals are not, relevant to *all* the differences in treatment?

As a general rule, relevant differences vary with the different kinds of treatment. A difference between individuals that justifies *one* sort of difference in treatment might be completely irrelevant to justifying *another* difference in treatment. Suppose, for example, the admissions committee of a law school accepts one applicant but rejects another. Asked to justify this, they might explain that the first applicant had excellent college grades and test scores, while the second applicant had a miserable record. Or, to take a different sort of example, suppose a doctor treats two patients differently: he gives one a shot of penicillin, and puts the other's arm in a plaster cast. Again, this can be justified by pointing to a relevant difference between them: the first patient had an infection while the second had a broken arm.

Now, suppose we switch things around. Suppose the law school admissions committee is asked to justify admitting A while rejecting B, and replies that A had an infection but B had a broken arm. Or suppose the doctor is asked to justify giving A a shot of penicillin, while putting B's arm in a cast, and replies that A had better college grades and test scores. Both replies are, of course, silly, for it is clear that what is relevant in the one context is irrelevant in the other.

We might express this point in a general principle:

*Whether a difference between individuals justifies a difference in treatment depends on the kind of treatment that is in question. A difference that justifies one kind of difference in treatment need not justify another.*

Once this is made explicit, this principle seems obvious and indisputable. But once it is accepted, Qualified Speciesism is seen to be untenable.

Does the fact that someone is a rational, autonomous agent make a difference in how he should be treated? Certainly it may. For such a being, the
self-direction of his own life is a great good, valued not only for its instrumental worth but for its own sake. Thus paternalistic interference may be seen as an evil. To take a simple example: a woman might have a certain conception of how she wants to live her life. This conception might involve taking risks that we think are foolish. We might therefore try to change her mind; we might call attention to the risks and argue that they are not worth it. But suppose she does not accept our arguments: are we then justified in forcibly preventing her from living her life as she chooses? It may be argued that we are not justified, for she is, after all, a rational, autonomous agent. But suppose we contrast this with how we may treat someone who is not a fully rational being—a small child, for example. Then we feel perfectly justified in interfering with his conduct, to prevent him from taking foolish risks. The fact that the child is not (yet, anyway) a fully rational agent justifies us in treating him differently than we would treat someone who is a fully rational agent.

The same would be true if the comparison was between a (normal adult) human being and a nonhuman animal. If we forcibly intervened to protect the animal from danger, but did not do so for the human, we might justify this by pointing to the fact that the human is a rational autonomous being, who knew what she was doing and who had the right to make her own choice, while this was not true of the animal. But this difference is not relevant to justifying just any kind of difference in treatment. Suppose what is in question is not paternalistic interference, but putting chemicals in rabbits' eyes to test the "safety" of a new shampoo. Why, it might be asked, is it all right to treat rabbits in this way, when we would not treat humans similarly? To reply that humans are rational agents, while rabbits are not, is comparable to noting that the rejected law-school applicant had a broken arm rather than an infection.

Therefore, the observation that humans are rational agents cannot justify the whole range of differences between our treatment of humans and our treatment of nonhumans. It can (at best) justify some differences in treatment, but not others. So, as a justification of our general practice of treating nonhumans "differently," Qualified Speciesism fails.

It might be thought that Qualified Speciesism could be saved by mentioning a bigger set of differences between humans and nonhumans. Rickaby, for example, points out that "Man alone speaks, man alone worships, man alone hopes to contemplate for ever," and so on.21 Couldn't a combination of such unique characteristics justify placing man in a special moral category? The logical problem, however, would remain: we would have to ask, for each kind of treatment, whether man's ability to speak, to worship, or to hope for eternal contemplation, is really relevant. What do
these things have to do with putting chemicals in a rabbit’s eyes? Just as there is no one difference between the species that can justify all the differences in treatment, there is no reason to think that a list of such differences could do the job, either.

(b) A different sort of problem is raised by humans who lack the characteristics that supposedly place man in a privileged moral position. Qualified Speciesism says that the interests of humans count for more because they are rational agents. But some humans, perhaps because they have suffered brain damage, are not rational agents. Granting this, the natural conclusion would be that their status is the status of mere animals, and that they may be used as nonhuman animals are used (perhaps as laboratory subjects, or as food?).

Of course, traditional moralists do not accept any such conclusion. The interests of humans are regarded as important no matter what their “handicaps” might be. The traditional view is, apparently, that moral status is determined by what is normal for the species. Therefore, because rationality is the norm, even nonrational humans are to be treated with the respect due to the members of a rational species.

This idea—that how individuals should be treated is determined by what is normal for their species—has a certain appeal, because it does seem to express our moral intuition about defective humans. “We should not treat a person worse merely because he has been so unfortunate,” we might say about someone who has suffered brain damage. But the idea will not bear close inspection. Suppose (what is probably impossible) that a chimpanzee learned to read and speak English. And suppose he eventually was able to converse about science, literature, and morals. Finally he wants to attend university classes. Now there might be various arguments about whether to permit this, but suppose someone argued as follows: “Only humans should be allowed to attend these classes. Humans can read, talk, and understand science. Chimps cannot.” But this chimp can do those things. “Yes, but normal chimps cannot, and that is what matters.” Is this a good argument? Regardless of what other arguments might be persuasive, this one is weak. It assumes that we should determine how an individual is to be treated, not on the basis of its qualities, but on the basis of other individual’s qualities. This chimp is not permitted to do something that requires reading, despite the fact that he can read, because other chimps cannot. That seems not only unfair, but irrational.

3. Moral Individualism. All this argues for a quite different approach, one that abandons the whole project of trying to justify a “separate moral category” for humans. On this approach, how an individual may be treated is determined, not by considering his group memberships, but by consider-
ing his own particular characteristics. If A is to be treated differently than B, the justification must be in terms of A’s individual characteristics and B’s individual characteristics. Treating them differently cannot be justified by pointing out that one or the other is a member of some preferred group.

Where does this leave the relation between species and morality? What of the important differences between humans and other animals? Are they now to be considered irrelevant? The picture that emerges is more complex, but also more true to the facts, than traditional morality. The fact is that human beings are not simply “different” from other animals. In reality, there is a complex pattern of similarities and differences. The matching moral idea is that insofar as a human and a member of another species are similar, they should be treated similarly, while to the extent that they are different, they should be treated differently. This will allow the human to assert a right to better treatment whenever there is some difference between him and other animals (or other humans!) that justifies treating him better. But it will not permit him to claim greater rights simply because he is human, or because humans in general have some quality that he lacks, or because he has some characteristic that is irrelevant to the particular type of treatment in question.

There is a striking parallel between this Moral Individualism and Darwin’s view about the nature of species. Before Darwin, when species were thought to be immutable, naturalists believed that membership in a species was determined by whether the organism possessed the qualities that defined the essence of the species. This essence was something real and determinate, fixed by nature itself, and the systems of classification devised by biologists were viewed as accurate or inaccurate depending on how well they corresponded to this fixed order of nature. Evolutionary biology implies a very different view. Darwin argued that there are no fixed essences; there is only a multitude of organisms that resemble one another in some ways but differ in others. The only reality is the individual.22 How those individuals are grouped—into species, varieties, and so on—is more or less arbitrary. In The Origin of Species he wrote:

I look at the term species, as one arbitrarily given for the sake of convenience to a set of individuals closely resembling each other, and that it does not essentially differ from the term variety, which is given to less distinct and more fluctuating forms. The term variety, again, in comparison with mere individual differences, is also applied arbitrarily, and for mere convenience sake.23

Thus Darwinian biology substitutes individual organisms, with their profusion of similarities and differences, for the old idea of determinate species; while Moral Individualism substitutes the view that our treatment of those
organisms must be sensitive to those similarities and differences, for the old view that what matters is the species to which the organism belongs.

IV

How does "the gradual illumination of men's minds," of the sort provided by Darwin's theory, lead to the rejection of speciesism? We might think of it as a historical process that has four stages.

In the first stage, traditional morality is comfortably accepted because it is supported by a world-view in which everyone (or, so nearly everyone as makes no difference) has confidence. The moral view is simple. Human beings, as Kant put it, have "an intrinsic worth, i.e., dignity," which makes them valuable "above all price"; while other animals "... are there merely as means to and end. That end is man." The world-view that supported this ethical doctrine had several familiar elements: The universe, with the earth at its center, was seen as created by God primarily to provide a home for humans, who were made in his image. The other animals were created by God for their use. Humans, therefore, are set apart from other animals and have a radically different nature. This justifies their special moral standing.

In the second stage, the world-view begins to break up. This had begun to happen, of course, long before Darwin—it was already known, for example, that the earth is not the center of the cosmos, and indeed, that considered as a celestial body it seems to be nothing special. But Darwin completed the job, by showing that humans, far from being set apart from the other animals, are part of the same natural order, and indeed, are actually kin to them. By the time Darwin was done, the old world-view was virtually demolished.

This did not mean, however, that the associated moral view would be immediately abandoned. Firmly established moral doctrines do not lose their grip overnight, sometimes not even overcentury. As Peter Singer observed, "If the foundations of an ideological position are knocked out from under it, new foundations will be found, or else the ideological position will just hang there, defying the logical equivalent of the law of gravity." The world-view that supported this ethical doctrine had several familiar elements: The universe, with the earth at its center, was seen as created by God primarily to provide a home for humans, who were made in his image. The other animals were created by God for their use. Humans, therefore, are set apart from other animals and have a radically different nature. This justifies their special moral standing.

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We are now in the third stage, which comes when people realize that, having lost its foundations, the old moral view needs to be reexamined. In his review of Regan's book Nozick remarked that "Nothing much should be inferred from our not presently having a theory of the moral importance of species membership that no one has spent much time trying to formulate because the issue hasn't seemed pressing." The issue hasn't seemed press-
ing because philosophers have not yet fully assimilated the implications of the collapse of the old world view.

It still might turn out that traditional morality is defensible, if new support can be found for it. Nozick, and a host of others, think this is likely. Philosophers such as Singer and Regan take a different view: "the gradual illumination of men's minds" must lead to a new ethic, in which species membership is seen as relatively unimportant. For the reasons given above, I think that on this broad issue the revisionists are right. The most defensible view seems to be some form of Moral Individualism, according to which what matters is the individual characteristics of organisms, and not the classes to which they are assigned. Whatever the outcome of the debate, the issue can no longer be avoided. What has made it "pressing" is not simply a faddish interest taken by some philosophers in animal welfare; rather, it is an issue pressed upon us by the disintegration of the pre-Darwinian way of understanding nature. The fourth and final stage of the historical process will be reached if and when a new equilibrium is found in which our morality can once again comfortably co-exist with our understanding of the world and our place in it.

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at Birmingham

NOTES


5. Quoted in Erhard Lucas, "Marx and Engels: Auseinandersetzung mit Darwin zur Differenz zwischen Marx und Engels," International Review of Social History, vol. 9 (1964), pp. 433–69. The quotation is from a letter written by Darwin, supposedly to Marx. However, there is now some reason to believe the letter was actually written to Edward Aveling, Marx's son-in-law.


10. Joseph Rickaby, S.J., *Moral Philosophy* (London, 1892); reprinted in Tom Regan and Peter Singer, eds., *Animal Rights and Human Obligations* (Englewood Cliffs, NJ: Prentice-Hall, 1976), p. 179. According to such figures as Aquinas, Descartes, Kant, and Rickaby the so-called interests of nonhumans count for nothing, morally speaking; if it is sometimes wrong to “mistreat” them it is only because the interests of humans are somehow involved. There is another, less radical view, taken by most contemporary defenders of traditional morality, namely that while the interests of nonhumans count for something, they count for much less than the interests of humans. In the present context this difference is unimportant; the arguments given here apply equally to both.


12. Quoted in Clark, p. 76. For more about Darwin’s attitude toward animals, see Clark, pp. 76–77.


15. Darwin’s ‘B’ Notebook, in the Darwin papers held at Cambridge University Library, p. 121. Quoted in Clark, p. 76.

16. Asa Gray, *Natural Science and Religion: Two Lectures Delivered to the Theological School of Yale College* (New York: Charles Scribner’s Sons, 1880), p. 54. Gray’s view contrasts sharply with that of another of Darwin’s champions, T. H. Huxley. In reply to the charge that Darwin was undermining human dignity, Huxley declared: “... no-one is more strongly convinced than I am of the vastness of the gulf between civilized man and the brutes... our reverence for the nobility of mankind will not be lessened by the knowledge that man is, in substance and in structure, one with the brutes.” T. H. Huxley, *Evidence as to Man’s Place in Nature* (London: Williams and Norgate, 1863), ch. 2. Darwin, who was in close contact with both men, must have been aware of their different views of the moral implications of his theory. But we do not know what he himself made of this.


18. It’s an interesting twist: today, writers such as Singer take it for granted that racism is wrong, and argue by analogy that speciesism is wrong also; whereas in 1941 Binder took it as obvious that speciesism was wrong, and expected his readers to get the point that racism was wrong. See Peter Singer, *Animal Liberation* (New York: New York Review of Books, 1975), ch. 1.


22. For the pre-Darwinian naturalist, variations were of little interest, except as curiosities. It was, after all, the “standard” specimen that best represented the ete-
nal essence of the species, which the naturalist was trying to learn about. But for the evolutionary biologist, variation is the very stuff of nature—it is what makes natural selection possible.

23. *The Origin of Species*, p. 52. For a recent defense of the idea that there are several equally valid ways species might be identified, each serving a different legitimate need of biologists, see Philip Kitcher, “Species,” *Philosophy of Science*, vol. 51 (1984), pp. 308–33.

