

ETHICS AND SOCIOBIOLOGY

by *Peter Singer*

Abstract. Sociobiologists make large claims for their subject. Knowing about the genetic underpinnings of human society will, they claim, enable us to understand all of human behavior and even to solve the ancient philosophical questions of how we ought to live. This essay assesses the significance of sociobiology for ethics. It argues that sociobiologists have misunderstood the relevance of facts to values and that their larger ambitions for their subject are bound to remain unfulfilled. Nevertheless, philosophers are wrong to ignore sociobiology. To give a genetic account of the existence of a widely held value does not justify that value, but it does say something of relevance to the ethical issues. The problem is to work out just what difference such an explanation makes.

The highest point of a people's development is the rational consciousness of its life and conditions, the scientific understanding of its laws, its system of justice, its morality.

G. W. F. Hegel, *The Philosophy of History*

Hegel thought that with the unfolding of his own system of philosophy, our civilization had attained rational consciousness of its life and conditions, and hence had reached the highest point of its development. He was wrong. He knew nothing about genes. Edward O. Wilson, Richard Dawkins, David Barash, and others who write in the field now known as sociobiology know a lot about genes. They know more about genes than anyone who lived before them ever knew. They believe that knowing about genes is absolutely essential for a proper understanding of human nature as well as human life and its conditions, laws, justice, and morality. If they are right, the efforts of Plato, Aristotle, Aquinas, Hobbes, Hume, Rousseau, Kant, Hegel, Marx, and all the other great

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figures of the past to achieve this understanding have been built on ignorance. It is only now, with the gains just made in our knowledge of how genes work, that we can truly see ourselves for what we are. It is only now that we have found the right path toward that rational consciousness of our life and conditions that Hegel considered to be the highest point of our development.

Wilson is not coy about the territorial ambitions of the new endeavor he has helped to found. These ambitions go beyond the social sciences and the provision of accurate explanations of human behavior which would follow from an adequate account of human nature. In *Sociobiology* Wilson suggests that perhaps "the time has come for ethics to be removed temporarily from the hands of the philosophers and biologicized" (1975, 562), while in *On Human Nature* he looks forward to the day when sociobiology will "fashion a biology of ethics, which will make possible the selection of a more deeply understood and enduring code of moral values" (1978, 196).

So far, the reaction to sociobiology has not been as uniformly grateful as might be expected by those who finally answer such ancient and difficult questions. "It is not surprising," says the Sociobiology Study Group of Science for the People, "that the model of society that turns out to be 'natural' bears a remarkable resemblance to the institutions of modern market society, since the theorists who produce these models are themselves privileged members of just such a society" (1977, 133). Far from accepting it as the science it claims to be, critics have seen sociobiology as part of the ideological underpinning of the resurgence of the political Right, and as a means of justifying individualism, ethical egoism, hierarchy, inequality, male dominance, double standards in sexual morality, the nuclear family, the dismantling of social welfare programs, nationalism, xenophobia, and war.

The debate between those who regard sociobiology as the first real science of human nature and those who regard it as the latest fad of capitalist ideologues is continuing. Books by sociobiologists flow from the presses, greeted by critical reviews written by social scientists, philosophers, or left-wing biologists. Arthur Caplan's *The Sociobiology Debate*, a collection of readings that appeared in 1978, is already in need of a second edition to bring it up to date.

This essay is intended to offer some thoughts on the aspects of sociobiology mostly likely to be of interest. Three questions shape the following survey. First, what is sociobiology? Second, what is its significance for ethics in general? Finally, what relevance does it have to specific social and political issues like sexual morality, economic distribution, and feminism?

WHAT IS SOCIOBIOLOGY?

The key to the sociobiological approach is the belief that all social behavior, including that of humans, has a biological basis and is the outcome of an evolutionary process that selects some genes or groups of genes in preference to others. If the evidence and arguments supporting this belief were not strong, there would be no point in looking further into sociobiology; but once we abandon Divine Creation and accept that *Homo sapiens* is one among several species of social mammals, the key tenet of sociobiology must be taken seriously.

We can, of course, immediately add that although human beings are social animals, they are different from other animals in several crucially important respects. Even so, we have conceded enough to the sociobiologists to require us to take their views seriously. Whatever the differences between humans and other animals may turn out to be, once we have recognized that we *are* social animals (which, as Mary Midgley points out in her splendid book *Beast and Man: The Roots of Human Nature*, is saying more than that we are *like* animals [1978, xiii]) it becomes an open question *how much* of human social life can be explained in biological terms and how much is resistant to this form of explanation, requiring to be accounted for in terms of, say, the particular culture of the group we are investigating. If this is accepted as a question open for scientific investigation, the legitimacy of seeking sociobiological explanations can scarcely be denied, even by those prepared to bet that no such explanations will prove credible in the long run.

On this basis it is worth approaching sociobiology with an open mind and attempting to assess its implications. I trust it will be obvious that in saying this I am not committed to accepting the detailed explanations of various social phenomena offered by sociobiologists. Nor am I committed to the general thesis that human social behavior can be adequately explained in biological terms. My position is only that here we have a new discipline, or rather a multidisciplinary form of enquiry, trying to answer some of the most fundamental questions about human affairs. As long as we continue to study and cite Hobbes, Rousseau, and Marx—none of whose views of human nature can today be ranked as scientific—it would be perversely backward-looking to refuse even to consider sociobiology and what follows from it.¹

THE SIGNIFICANCE OF SOCIOBIOLOGY FOR ETHICS

Does sociobiology have anything to tell us about ethics? Leaving aside for the moment any implications sociobiology may have for specific

practical ethical issues, does it tell us anything new and significant about the nature of the entire field of ethical thought and action?

As we have already seen, Wilson thinks it does. *Sociobiology* begins with the following passage:

The biologist, who is concerned with questions of physiology and evolutionary history, realizes that self-knowledge is constrained and shaped by the emotional control centers in the hypothalamus and limbic system of the brain. These centers flood our consciousness with all the emotions—hate, love, guilt, fear and others—that are consulted by ethical philosophers who wish to intuit the standards of good and evil. What, we are then compelled to ask, made the hypothalamus and limbic system? They evolved by natural selection. That simple biological statement must be pursued to explain ethics and ethical philosophers, if not epistemology and epistemologists, at all depths.

The way to an understanding of ethics, Wilson believes, is through an understanding of the origins of altruism. Altruism is, Wilson says, “the central theoretical problem of sociobiology.” If altruism benefits others at some cost to oneself, why hasn’t it been weeded out in the evolutionary struggle for survival?

When a hawk flies overhead, blackbirds utter warning cries, thereby risking attracting the predator’s attention to themselves. Why? The popular answer is that it is for the good of the species. Though the individual blackbird may fall, the species itself survives because of such selfless behavior.

But think about this for a moment. If behavior evolves by natural selection, how could such selfless activity endure? Though it might be good for the species, the altruistic individual would, on average, die younger and leave fewer descendents. In competition within the species, altruism would be selected out; the fact that it might help the species in competition with other species would be of no avail to individual altruistic blackbirds, since individuals come in and out of existence so much more frequently than does the species.

The idea that altruistic behavior can spread by group selection was given its fullest statement in V. C. Wynne-Edwards’s *Animal Dispersion in Relation to Social Behavior* (1962), and was defended by the popular writer Robert Ardrey in his best-selling book *The Social Contract* (1972, 192-98). Wynne-Edwards’s book was cogently attacked by W. D. Hamilton in a number of articles in scientific journals, and by George C. Williams in *Adaptation and Natural Selection* (1966). The current crop of sociobiologists is united in rejecting group selection, though some allow that in small, closely knit, isolated groups (not whole species) it could play some role.

If altruism could not have evolved because it benefits the group, how is it that we are not all ruthless individual egoists? The sociobiologists’ answer is that it is not the individual, either, that is the unit of selection.

The individual cannot survive more than a few years anyway. It is the genes the individual possesses that are immortal. (Here "gene" does not mean the particular bits of DNA in our bodies, but the type of gene.) Those genes that are best able to replicate themselves in subsequent generations will be selected by the evolutionary process; the others will disappear. Thus the title of Dawkins's book, though misleading insofar as it implies that genes can have motivations, is apt to the extent that it forces us to see evolution in terms of the survival or disappearance of kinds of genes.

Our kin share many of our genes with us. Here lies the clue to one important form of altruism. My children bear half of my genes; my full siblings on average have a similar share; my nieces and nephews have a quarter, and my first cousins one-eighth. Hence there is no puzzle in the survival and spread of a set of genes that leads me to make sacrifices to benefit my kin, in rough proportion to their closeness to me. J. B. S. Haldane once joked that he would be ready to lay down his life for two of his brothers, four of his nephews, or eight of his first cousins. In doing so, he would have been doing no harm to his genes' prospects of survival.

Yet altruism seems to extend beyond the circle of kinship. In a paper often quoted by sociobiologists, Robert L. Trivers suggested that altruistic behavior could develop in circumstances in which it was likely to be reciprocated, with gains for both parties. If monkeys cannot scratch the lice out of their own backs, they will be better off if they scratch each other. Of course, they would be *best* off if they could get others to scratch them without having to waste time on the chore of picking the lice out of another monkey's back; therefore reciprocal altruism can only be expected to occur among animals capable of recognizing each other and refusing to do unto others what those others will not do unto them (Trivers 1971, 35-57).

Kin altruism plus reciprocal altruism, with perhaps a little group altruism too, seems a slender basis on which to explain human ethics. Any sociobiologist who did not allow for a major cultural component would be a dogmatic fool. Still, obligations to kin and obligations of reciprocity are quite central among ethical obligations in virtually all human societies. In *The Origin and Development of the Moral Ideas*, published in 1906 but still the most comprehensive collection of anthropological data on morality, Edward Westermarck notes the near universal prevalence among human societies of recognized obligations to kin, and notes that the obligations weaken as the degree of kinship becomes less close (1908, chap. 23). More recently the anthropologist Marshall Sahlins has said: "Kinship is the dominant structure of many of the peoples anthropologists have studied, the prevailing code not

only in the domestic sphere but generally of economic, political and ritual action." This quotation comes from *The Use and Abuse of Biology*, a slim volume devoted to attacking sociobiology; Sahlins goes on to deny that the dominance of kinship supports sociobiology. His argument rests on the claim that what is recognized as kinship in different societies does not always follow strict degrees of genetic proximity. Sahlins's argument could only succeed, however, against a doctrinaire sociobiologist who denied culture any role at all. Sahlins's own examples show a high correlation between genetic relationship and what various human societies regard as kinship (1976, 18). The correlation is presumably not accidental.

Reciprocal altruism can also be linked plausibly with central features of human ethics. Here too Westermarck finds that "to requite a benefit, or to be grateful to him who bestows it, is probably everywhere, at least under certain circumstances, regarded as a duty" (1908, 2: 155). Anthropologists from Mauss to Levi-Strauss have written at length of the importance of reciprocity, and the sociologist Alvin Gouldner concluded a survey of several recent studies by suggesting that "contrary to some cultural relativists, it can be hypothesized that a norm of reciprocity is universal" (1960, 171).

So perhaps sociobiological theories about altruism do tell us something about the origin of human ethics, or at least some central features of it. But how does this enhance our understanding of ethics as it now is?

Though Wilson clearly thinks that the light thrown on ethics by sociobiology is tremendously important, he is less clear about why it is so important. In *Sociobiology* the only contemporary moral philosopher he mentions is John Rawls, whom he describes as an "intuitionist." About this position, Wilson writes: "The Achilles heel of the intuitionist position is that it relies on the emotive judgment of the brain as though that organ must be treated as a black box. While few will disagree that justice as fairness is an ideal state for disembodied spirits, the conception is in no way explanatory or predictive with reference to human beings. Consequently it does not consider the ultimate ecological or genetic consequences of the rigorous prosecution of its conclusions" (Wilson 1975, 562).

Though defending Rawls is not a role that comes easily to me, it has to be said that Wilson's criticisms are a mess. The first sentence assumes without argument that Rawls's position is based on "emotive judgment" rather than rational considerations. The antecedent clause of the second sentence is false, because utilitarians, for example, would not agree that "justice as fairness" is an ideal state for disembodied spirits or for more normal beings. The remainder of the second sentence implies

that Rawls's conception is somehow intended to be or should be "explanatory or predictive" for human beings. No reason is given for this suggestion, which seems quite out of keeping with the aim of Rawls's theory of justice, or of normative theories of ethics in general. The last sentence is false, because what Rawls's theory directs us to do will depend upon the information we have available about the consequences of our actions, and this will include information about ecological or genetic consequences.

Thus sociobiological criticism of contemporary moral philosophy did not get off to a promising start. But what, more positively, does Wilson hope to do for ethics? In *Sociobiology* there are only brief hints, such as the following: "In the first chapter of this book I argued that ethical philosophers intuit the deontological canons of morality by consulting the emotive centers of their own hypothalamic-limbic system. . . . Only by interpreting the activity of the emotive centers as a biological adaptation can the meaning of the canons be deciphered" (Wilson 1975, 563).

Then comes a sketch of an interpretation of the activity of the emotional centers as a biological adaptation. Some emotional activity will be, Wilson suggests, an outdated relic of earlier forms of tribal life. In other ways our emotions may be in the process of adapting to urban life. Impulses arising from altruistic genes established by group selection will be opposed by more egoistic impulses arising from genes favored by individual selection. Age and sex differences may cause further moral ambivalence. Evolution selects more strongly against altruism in young children than it does in older people who have already reproduced. Females who must bear, and in the past had to feed, the infants have a stronger genetic interest in a durable relationship with a sexual partner than do males.

All this Wilson sees as leading to a theory of "innate moral pluralism" according to which no single set of moral standards is applicable either to all human populations or to all the different age and sex groups within each population. It is also supposed to show that "the requirement for an evolutionary approach to ethics is self-evident" (1975, 564).

In *On Human Nature* Wilson is more explicit about the ethical conclusions to be drawn from biology. In the final chapter he anticipates "a biology of ethics, which will make possible the selection of a more deeply understood and enduring code of moral values." Although Wilson does not think we have quite reached the day when we can deduce all our moral values from our knowledge of the biological facts, he thinks he can already discern three values that the coming biology of ethics will lead us to embrace. These are the cardinal value of the entire human gene pool, the value of diversity in the gene pool, and universal human rights.

Taken together, the two books by Wilson seem to be saying three things about what sociobiology can do for ethics. First, it can provide information about the ultimate genetic consequences of putting ethical ideas into practice. Second, it can explain why we have certain ethical ideas by relating them to our evolutionary history. And third, it can establish certain moral values.

Of these three points, the first makes no difference to the way in which philosophers study ethics since philosophers who hold consequentialist theories of ethics have always been aware of the need to have the best possible information about the consequences of actions. Philosophers who are not consequentialists, on the other hand, have generally been indifferent to information about the consequences of what they consider to be morally right, and no doubt they will continue to be indifferent to such information even when it comes from sociobiology.

I shall postpone discussion of the second point, the explanation of our ethical ideas, in order to deal beforehand with the third and most fundamental challenge to accepted tenets of contemporary moral philosophy, the idea that biology can lead us to, in Wilson's phrase, "ethical premises inherent in man's biological nature" (1978, 5).

Although many people have claimed the gulf between facts and values can be bridged, few have given concrete examples of how it is to be done. Wilson is one of the few; we should therefore look at how he does it. I shall take as an example the most far-reaching of the values that he believes can be supported by our new biological knowledge, that of universal human rights. Here, complete and unabridged, is the passage in which Wilson defends this value:

Universal human rights might properly be regarded as a third primary value. The idea is not general; it is largely the invention of recent European-American civilization. I suggest that we will want to give it primary status not because it is a divine ordinance (kings used to rule by divine right) or through obedience to an abstract principle of unknown extraneous origin, but because we are mammals. Our societies are based on the mammalian plan: the individual strives for personal reproductive success foremost and that of his immediate kin secondarily; further grudging cooperation represents a compromise struck in order to enjoy the benefits of group membership. A rational ant—let us imagine for a moment that ants and other social insects had succeeded in evolving high intelligence—would find such an arrangement biologically unsound and the very concept of individual freedom intrinsically evil. We will accede to universal rights because power is too fluid in advanced technological societies to circumvent this mammalian imperative; the long-term consequences of inequity will always be visibly dangerous to its temporary beneficiaries. I suggest that this is the true reason for the universal rights movement and that an understanding of its raw biological causation will be more compelling in the end than any rationalization contrived by culture to reinforce and euphemize it (1978, 198-99).

Wilson's argument here is not as clear as it might be. In part he seems to be explaining why the idea of universal human rights is popular among humans, and in part he seems to be saying that we ought to adopt the idea of universal human rights to avoid the dangers of a less equitable system. Yet neither of these lines of argument sits comfortably with the opening sentences of the paragraph in which Wilson suggests that we should give universal human rights "primary status." An explanation of why a value is popular is not a reason for adopting it—slavery has also been popular—and to say that we should adopt an idea to avoid the dangers of not adopting it is to give the avoidance of those dangers primary status, and only a secondary or derivative status to the idea we adopt as a means of avoiding them.

Whichever way we take it, the argument fails. It fails as an explanation of the popularity of universal human rights. Human beings have been mammals at all times and in all places. The "recent European-American civilization" which, as Wilson says, has invented the idea of universal human rights amounts to only a minute fraction of all these eons of human existence; hence the present popularity of the idea can hardly be explained by our mammalian nature. Nor is the argument any more successful if taken as a moral justification of human rights. It is, as I noted, a justification which makes universal rights a means to some ultimate end, rather than rights which are intrinsic to autonomous or rational beings simply because of what they are. Since I am a consequentialist, that does not disturb me, though it would cost Wilson the support of many advocates of human rights. But even as a consequentialist justification, what Wilson says is peculiar. The "long-term consequences of inequity," he states, "will always be visibly dangerous to its temporary beneficiaries." This is a factual claim that would seem to be refuted by the existence of advanced technological societies in which the "temporary beneficiaries" of inequity do not see the dangers of denying universal human rights. (Choose your own example, according to your political slant, from the following advanced technological societies which have been accused of violating universal human rights: Argentina, Uruguay, East Germany, South Africa, the Soviet Union, the United States). In any case the factual claim, even if true, would not provide a moral justification of universal human rights; it would provide grounds on which those who believe that it would pay them to deny human rights to others might be made to think again. It becomes clear that it is not a moral justification Wilson is offering once we recognize that there are two possible responses that could be made by those interested in denying human rights to some underprivileged group: they might give up the attempt because of the dangers Wilson points out, or they might find some new scheme, unforeseen by Wilson,

of controlling power so as to eliminate the dangers—to them—of denying rights to others. The fact that Wilson's argument is equally well met by either response shows that Wilson is not putting up a moral case at all.

Wilson might reply—and it would be in keeping with a common line of sociobiological thinking if he did—that what we call “morality” can never be more than a pragmatic compromise between groups with different interests, and it is therefore a mistake to look for any “higher” justification of human rights than one in terms of the self-interest of the dominant group. (Readers of Plato's *Republic* will recognize that this attitude predates sociobiology.) Wilson does not argue for this view. Nor do other sociobiologists, but in their writings they often appear to assume it without considering alternatives. From the opening paragraph of *Sociobiology*, for instance, Wilson assumes that moral standards are “intuited” and these intuitions flow from the “emotional control centers” in the hypothalamus and limbic system of the brain. This means that although at first glance Wilson seems to be an ethical naturalist who is attempting to deduce moral values from biological facts, it is equally possible to see him as a moral subjectivist or skeptic who offers pragmatic justifications for action instead of moral ones. There is, however, no systematic argument for moral subjectivism or moral skepticism to be found in the work of Wilson or any other sociobiologist I have read. There is a real need for sociobiologists to show how they would reply to the arguments of philosophers, from Plato to R. M. Hare or Thomas Nagel, who claim that reason has an important role to play in ethics (Hare 1963, Nagel 1970). Perhaps sociobiologists can do this. They might begin by studying J. L. Mackie's *Ethics*, since Mackie's form of moral skepticism would fit neatly with evolutionary explanations of morality, as he himself suggests (1977, chap. 5 and p. 113). Moral skepticism that combined philosophically sophisticated argument with a sociobiological explanation of morality would need to be taken seriously; but thoroughgoing moral skepticism is not a very palatable position, and it would be interesting to see to what extent sociobiologists themselves would be prepared to accept the conclusions of their argument, once ethical naturalism is rejected and the skeptical implications of what they are saying become clear.

With that challenge I conclude my discussion of sociobiology's attempt to reveal new moral values. But before I finish surveying what sociobiology has to say about ethics in general, I still need to return to a point that was left aside earlier: the claim that sociobiology can provide explanations for certain ethical ideas by relating them to our evolutionary history. This may seem a minor claim, certainly much less dramatic than the attempt to bridge the gap between “is” and “ought”; yet there

is, I think, something important here that no one with an interest in ethics should ignore.

I have already quoted Wilson's claim that "the Achilles heel of the intuitionist position is that it relies on the emotive judgment of the brain as though that organ must be treated as a black box." Though this is unfair to those philosophers Wilson calls intuitionists, since they do try to eliminate intuitions resulting from obvious cultural prejudices or self-interested biases, there is a serious point here. Philosophers in the analytic tradition have not made any systematic investigation into the origins of our common moral convictions. They have regarded that as a task for historians rather than philosophers. As a result analytic philosophy has been regarded as naively uncritical by many Continental thinkers, who have been more concerned with the social origins of our ideas. Now the sociobiologists have added a further perspective from which our common moral convictions may be scrutinized—the perspective of evolutionary theory. If our common moral convictions can be shown to have a biological basis we may have to think again about accepting them at face value as the self-evident starting points of moral inquiry.

Take, for example, the preference for our kin that leads us to pay less attention to the sufferings of strangers than to those of our relatives. Most of us, of course, simply care more about the welfare of our relatives than we do about the welfare of strangers. That may be a brute fact which cannot be altered by new insights into human nature. But many people also think that it is morally right to give priority to our families and to those close to us, and it would be wrong, whatever our feelings might be, to allow the welfare of strangers equal weight. Indeed this is, as we saw earlier, the accepted moral view in most human societies. It might therefore appear to be a moral conviction which, not being the result of any specific cultural prejudices, has some claim to acceptance as a self-evident principle of morality. A biological explanation of the prevalence of kin preference undermines this claim. If the moral conviction that it is right to give priority to our families rather than to strangers derives from the evolutionary process of gene selection, it loses whatever credence it seemed to possess as a self-evident moral truth. It might, of course, still be a desirable way of living; but that is now a question open for debate.

A demonstration that a specific form of behavior has a biological basis can thus have the opposite effect of that which many expect. Far from justifying principles that are shown to be "natural," a biological explanation can be a way of debunking what seemed to be eternal moral axioms. When a widely accepted moral principle is given a convincing biological explanation, we need to think again about

whether we should accept the principle. In this way sociobiology could have major repercussions for our thinking about ethics.

Where does this debunking stop? I said earlier that there is no systematic argument for moral skepticism to be found in the writings of Wilson or other sociobiologists. We have now seen that there are arguments for skepticism about specific moral principles. What if all our moral judgments could thus be shown to be biologically explicable? Would they then all be equally discredited? Wouldn't we then have a general argument for moral skepticism?

Perhaps in this manner a general case for moral skepticism could after all be drawn out of the sociobiological program. For this case to succeed, however, it would need to do what, as I have already said, no sociobiologist tries to do: it would need to show that no moral judgments can be given a rational foundation.

THE SOCIAL AND POLITICAL RELEVANCE OF SOCIOBIOLOGY

Sociobiology, then, does have something to contribute to the study of ethics in general, although the effect of its contribution is not quite what it is usually taken to be. All this, however, will strike some readers as tame stuff. It is not, after all, for its attempt to link facts and values that sociobiology has been denounced as a pseudoscientific attempt to justify the inequalities of our sexist, elitist, capitalist society.

The political case against sociobiology can be found vehemently stated in "Sociobiology: A New Biological Determinism," written in a suitably collective manner by the Sociobiology Study Group of Science for the People, and included in *Biology as a Social Weapon*, edited by The Ann Arbor Science for the People Editorial Collective. The paper is also included in Arthur Caplan's *The Sociobiology Debate*, along with a reply by Wilson and comments by several others. The charges are of two distinct kinds: that sociobiology is bad science, and that it is politically reactionary. The two charges come together in the overall claim that sociobiology has gained so much attention—a cover story in *Time* being the crowning achievement—not because it is a genuine scientific breakthrough, but because sociobiology suits the conservative interests that rule our society.

It is not the purpose of this essay to evaluate the scientific merits of sociobiology, although obviously this is something that everyone interested in the subject should make an effort to do. Instead I shall consider the charge that sociobiology supports sexist prejudices and an unequal distribution of wealth and power.

Sociobiology's critics begin by pointing out that the forms of behavior said by sociobiology to be natural or innate resemble closely those forms of behavior central to modern capitalist society. Aggres-

sion, male dominance, competition, self-interested striving, battles over territory, a division of society into the few who struggle for leadership and the many who are led, double standards of sexual morality are all said to be, at least by some sociobiologists, the natural outcome of genetic selection. The implication is, their critics charge, that we should accept the world as it is rather than struggle in vain for peace, women's rights, participatory democracy, or a more equal distribution of wealth. Sociobiology is, therefore, "a new biological determinism" which threatens to persuade the public that our society cannot be improved.

To see what the implications of sociobiology in these controversial areas really are, I shall examine one example in detail. The example I have chosen is the intriguing claim that there is a biological basis for the double standard by which conventional sexual morality judges the extramarital sexual activity of males much more leniently than similar acts by females. One reason for selecting this example is that the argument presented by sociobiologists such as Dawkins and Freedman is easy to grasp (Dawkins 1976, chap. 6; Freedman 1979, chap. 2). Another reason is that the conventional double standard seems as obvious a piece of sexism as any; the sociobiological claim therefore threatens feminist views not in their wilder flights of Amazonian fantasy but on the solid ground that most progressively minded people no longer question.

Sociobiologists start by asking: how can human beings maximize the number of their descendants in future generations? It becomes apparent immediately that the strategy that would work best for a male would not necessarily work best for a female. The number of children a male can have is virtually limitless (Freedman quotes the *Guinness Book of World Records* as putting the highest number recorded at 886, but that could no doubt be exceeded). The number of children a female can have, on the other hand, is strictly limited by the duration of the pregnancy and the number of childbearing years (the *Guinness Book of World Records* puts the record at 69, which included several multiple births). Thus a female will have more grandchildren if she ensures that the chances of each of her children surviving to maturity are as high as possible. Where it requires effort to raise children, their chances of survival will be increased if the females mate only with a male who will assist in providing for their offspring. Hence a female can be expected to prefer a lasting relationship rather than a casual sexual encounter. A male, on the other hand, may have more descendants if, like a fish releasing millions of eggs, he places his sperm in the maximum possible number of females, without waiting around to care for any offspring that might result. Each of his children will have a lower chance of survival than they would have had if he had helped raise them, but the total number of his descendants could still be greater.

I have chosen this example because it illustrates nicely both the strengths and the limits of sociobiology. On the one hand, it provides us with a neat and plausible explanation of a widespread observable phenomenon, namely the greater proclivity of males for casual sexual encounters with a variety of partners, and the greater social acceptance of this practice in a wide variety of cultures. Of course, alternative explanations could be offered. It might be said that males have used their superior power to suppress female sexual appetites, which otherwise would be as indiscriminate as their own. Certainly there is evidence that in some cultures males have tried to suppress female sexuality, sometimes by physical means like clitorectomies and sometimes by social attitudes that are only a little more subtle. Yet it is doubtful if these cultural explanations can bear the full weight of explaining the observed facts. Why is it, for instance, that even in the most sexually liberated societies, female prostitutes have no difficulty obtaining male clients, whereas male heterosexual prostitution is rare? The existence of the market shows where the demand is greater than the freely available supply. One explanation would be that in the most sexually liberated societies females are still not so free of traditional social attitudes that they are prepared to buy sex; but my own guess is that even in the absence of such attitudes, males would be more interested in sex outside any lasting relationship than would females. An appreciation of the different ways in which the two sexes can pass on their genes removes the need for an explanation in terms of social attitudes.

Not everyone will share my views about the plausibility of the sociobiological explanation in this area. But suppose the sociobiologists are right. What follows? In particular, what follows for the traditional double standard of sexual morality, which viewed sexually promiscuous females as sluts or worse and similarly inclined males as just "sowing their wild oats"?

From what was said in the previous section of this essay, it should be clear that assuming the sociobiological explanation to be true does not do anything to justify the existence of the double standard. The fact, if it is a fact, that females generally prefer lasting sexual relationships to casual ones does not carry with it any implication that individual females who have many casual sexual relationships are doing anything wrong. Indeed, following on what I have said earlier about the debunking effect of a biological explanation, we might argue that by explaining the widespread acceptance of the double standard, we also remove any lingering idea that this standard is some sort of self-evident moral truth. Instead it can be seen as merely the result of the blind evolutionary process and, as such, something about which we should make a more deliberate decision, now that we have understood it.

In making decisions about sexual conduct it is commonplace to recognize that sex and reproduction are distinct. They always were distinct, but by developing modern contraceptives we have sharpened the distinction. In so doing we have thwarted the biological mechanisms that have evolved over the centuries as a means of passing on our genes. From the perspective of evolutionary history, the pleasure associated with sex is a means to the end of reproduction, not an end in itself. In this area evolution works by an indirect route. Humans do not desire to reproduce as much as they desire to have sex. Evolution might, of course, have produced beings with desires to reproduce but no desire for sex as such. These beings would then have regarded sex merely as a means to a desired end, much as we regard peeling an orange as a means to eating it. But, as it happened, evolution did not take that route, presumably because we have evolved out of creatures incapable of foreseeing consequences that lie so far in the future. We desire sex for its own sake at least partly because we evolved from creatures who saw no connection between sex and reproduction. The frequency of our use of contraception is an expression of the degree to which we desire sex rather than reproduction. It enables us to enjoy as an end in itself something that from an evolutionary perspective is merely a means. I take this to be a good thing.

Thus sociobiology does not necessarily lead to biological determinism. On the contrary, because we are beings capable of knowing the consequences of our actions and choosing accordingly, we can play tricks on evolution. Sociobiology can contribute to the success of our trickery by telling us more about what evolution is up to; the better we understand evolution, the better we can outfox it. This point was made long ago by T. H. Huxley in his Romanes Lecture "Ethics and Evolution" and has been reiterated by several sociobiologists (Huxley 1947, 82; Dawkins 1976, 3; Alexander 1977, 276-77).

Can the same general point be made in respect of other areas in which sociobiology has been thought to justify existing injustices? It will not always be so easy to circumvent the consequences of satisfying our desires, because the desires may be more directly related to their evolutionary function. For instance, assuming that sociobiologists are right to believe that aggression is at least partly a result of genetic factors, can we satisfy aggressive desires without some of us becoming victims of aggression? Maybe we can find other outlets for aggression, like competitive sports; but maybe these quasi-aggressive pastimes do more to reinforce aggression than to reduce it. We don't really know. On the other hand, it is obvious that sociobiological explanations of aggression do not justify it. Nor do they imply that we ought to sit back and accept it as inevitable. Wilson, for instance, suggests that the promotion of cultural ties may reduce aggression between nations

(1978, 120). He may or may not be right, but he surely is right to suggest that the more we know about aggression, the better our prospects of controlling it.

Finally, what does sociobiology have to say about equality—both equality between the sexes and equality of power and wealth throughout society? Here the case for saying that sociobiology favors the status quo is stronger, but it is still not entirely accurate. What is true is that sociobiology is in opposition to the long line of political thought that regards human beings as naturally equal and all inequalities as the result of the corrupting effect of social conditions. Sociobiologists find hierarchies in virtually all social mammals, including humans. So when egalitarians like Rousseau or Marx or Bakunin tell us that all we have to do is destroy the old society and a new kind of egalitarian human being will emerge from the wreckage, sociobiologists warn us not to be so sure. They predict that we will find the old inequalities reappearing, as they have reappeared in the Soviet Union, and China, and in Israeli kibbutzim.

This does not mean that existing inequalities are inevitable and should be accepted; what it does suggest is that any move toward greater equality will have its price. The sociobiological argument is really a restatement of the old right-wing claim that equality and liberty are at odds with each other. Equality is not the natural condition of human society; hence it can only be achieved and, once achieved, maintained by stringent supervision and constant rectifying of inequalities as they crop up.

That claim is a factual one. It says nothing about whether the price of equality is worth paying. It is also a claim that takes “liberty” in a *laissez-faire* or anarchist sense, as the absence of state interference. It is certainly possible to argue, without raising the issue of the truth or falsity of the factual claim, that this is not the most important sense of liberty, and that there are other senses in which more liberty is lost by existing inequalities than would be lost by the controls needed to eliminate them (Cohen 1979, Taylor 1979). On that view there would not be a simple trade-off between equality and liberty, but rather a more complicated situation in which equality and the aspects of liberty that go with equality would have to be balanced against the loss of liberty in the *laissez-faire* or anarchist sense.

This conclusion holds for equality between the sexes as well as for equality in a society as a whole. Just as, if the sociobiologists are right, destroying the unequal class structure of the old society will not in itself ensure the birth of a new egalitarian society, so—if the sociobiologists are right—destroying the male chauvinist traditions and social attitudes of the old society and providing full equality of opportunity

between the sexes will not in themselves ensure that power and wealth are equally distributed between males and females. After all the old prejudices have been cleared away, we may still find that males seek power and status more aggressively and more persistently than do females. Should this turn out to be the case, we can still pursue equality, but we shall have to do so by different methods.

This conclusion does have an implication for one controversial issue in applied ethics, the issue of reverse discrimination. The implication is that we are not justified in concluding from the mere fact that the government or a large corporation has more males than females at the top of its hierarchy that there has been overt discrimination against females. There may have been, of course; but it may also be the case that males have, on average, tried harder to reach the top than females. Hence one argument for reverse discrimination—that an imbalance is *ipso facto* evidence of discrimination—fails. There are, however, better arguments for reverse discrimination (Singer 1979, 40-47; Goldman 1979).

I conclude that of the standard positions in applied ethics and political philosophy, very few are directly attacked by sociobiology: the egalitarian form of anarchism is one of the few, but neither egalitarians who are prepared to use the state to achieve equality nor anarchists who are prepared to allow some to have more than others need abandon their positions, no matter how solid the evidence for a sociobiological approach to human behavior should become. Nevertheless if sociobiological theories do become firmly grounded, those of us who value equality will have to begin to face up to some hard questions about the best means of bringing about a more equitable society at the least cost in terms of our other values. Speculative as sociobiological theories now are, it may not be premature to start thinking about these issues. The worst thing that egalitarians could do would be to turn away from a sociobiological approach to human nature without even examining the evidence for it. As Mary Midgley writes in the introduction to *Beast and Man*: “For every political purpose, but particularly for reforming and revolutionary ones, we need to understand our genetic constitution. The notion that reformers can do without this understanding is a bizarre tactical aberration, closely comparable to that of the Christian church in the nineteenth century when it rejected the doctrine of evolution . . .” (1978, xix).

NOTE

1. Readers who know little or nothing of sociobiology could begin to acquaint themselves with it in three possible ways. They could read the big book by Edward O. Wilson, *Sociobiology, The New Synthesis* (1975). They could read one of the many books presenting a sociobiological approach that have appeared since Wilson's, for instance, David Barash,

Sociobiology and Behavior (1977); Richard Dawkins, *The Selfish Gene* (1976); Dan Freedman, *Human Sociobiology* (1979); or Richard Alexander, *Darwinism and Human Affairs* (1977). Or they could read a book that attempts to assess the arguments for and against sociobiology, like Arthur Caplan, *The Sociobiology Debate* (1978); Michael Gregory, Anita Silvers, and Diane Sutch, eds., *Sociobiology and Human Nature* (1979); or Michael Ruse, *Sociobiology: Sense or Nonsense?* (1979).

Since Wilson's original scientific work on sociobiology, he has authored or coauthored three others on this subject: the more technical *Genes, Mind, and Culture* (1981) with Charles J. Lumsden; and two more philosophical works, *On Human Nature* (1978), and *Promethean Fire* (1983), the latter also with Charles J. Lumsden.

REFERENCES

- Alexander, Richard. 1977. *Darwinism and Human Affairs*. Seattle: Univ. of Washington Press.
- Arday, Robert. 1972. *The Social Contract*. London: Fontana.
- Barash, David. 1977. *Sociobiology and Behavior*. New York: Elsevier.
- Caplan, Arthur. 1978. *The Sociobiology Debate*. New York: Harper & Row.
- Cohen, G. A. 1979. "Capitalism, Freedom and the Proletariat." In *The Idea of Freedom*, ed. Alan Ryan. Oxford: Univ. Press.
- Dawkins, Richard. 1976. *The Selfish Gene*. Oxford: Univ. Press.
- Freedman, Dan. 1979. *Human Sociobiology*. New York: Free Press.
- Goldman, Alan H. 1979. *Justice and Reverse Discrimination*. Princeton, N.J.: Univ. Press.
- Gouldner, Alvin. 1960. "The Norm of Reciprocity." *American Sociological Review* 25.
- Gregory, Michael, Anita Silvers, and Diane Sutch, eds. 1979. *Sociobiology and Human Nature*. San Francisco: Jossey-Bass.
- Hare, R. M. 1963. *Freedom and Reason*. Oxford: Univ. Press.
- Huxley, T. H. 1947. "Ethics and Evolution." In *Evolution and Ethics*, ed. J. S. Huxley and T. H. Huxley. London: Pilot Press.
- Mackie, J. L. 1977. *Ethics*. Harmondsworth, England: Penguin.
- Midgley, Mary. 1978. *Beast and Man: The Roots of Human Nature*. Ithaca, N.Y.: Cornell Univ. Press.
- Nagel, Thomas. 1970. *The Possibility of Altruism*. Oxford: Univ. Press.
- Ruse, Michael. 1979. *Sociobiology: Sense or Nonsense?* Dordrecht, Holland: Reidel.
- Sahlins, Marshall. 1976. *The Use and Abuse of Biology*. Ann Arbor: Univ. of Michigan.
- Singer, Peter. 1979. *Practical Ethics*. Cambridge: Univ. Press.
- Sociobiology Study Group. 1977. "Sociobiology: A New Biological Determinism." In *Biology as a Social Weapon*, ed. Ann Arbor Science for the People Editorial Collective. Minneapolis: Burgess Publishing.
- Taylor, Charles. 1979. "What's Wrong with Negative Liberty?" In *The Idea of Freedom*, ed. Alan Ryan. Oxford: Univ. Press.
- Trivers, Robert L. 1971. "The Evolution of Reciprocal Altruism." *Quarterly Review of Biology* 46:35-57.
- Westermarck, Edward. 1908. *The Origin and Development of the Moral Ideas*. London: Macmillan.
- Williams, George C. 1966. *Adaptation and Natural Selection*. Princeton, N.J.: Univ. Press.
- Wilson, Edward O. 1975. *Sociobiology, The New Synthesis*. Cambridge, Mass.: Harvard Univ. Press.
- . 1978. *On Human Nature*. Cambridge, Mass.: Harvard Univ. Press.
- Wilson, Edward O. and Charles J. Lumsden. 1981. *Genes, Mind, and Culture: The Coevolutionary Process*. Cambridge, Mass.: Harvard Univ. Press.
- . 1983. *Promethean Fire: Reflections on the Origin of Mind*. Cambridge, Mass.: Harvard Univ. Press.
- Wynne-Edwards, V. C. 1962. *Animal Dispersion in Relation to Social Behavior*. Edinburgh: Oliver & Boyd.