SOCIOBIOLOGY, DOGMA, AND ETHICS

by Pierre L. van den Berghe

Sociobiology applies natural selection theory to behavior. It asserts that the behavior of an animal, like its anatomy, is the product of a process of biological evolution through natural selection. Any behavioral phenotype is the result of the interaction between genotype and environmental conditions (which include other members of the same species and, in the case of man, his material and symbolic culture). For man, culture is indeed a whole new evolutionary ball game; cultural evolution is far more rapid than Darwinian, genetic evolution. However, human culture does not stand apart from biological evolution; it grew out of it and remains inextricably intertwined with it.

One would think that the above statements are by now uncontroversial, at least since the Scopes trial of 1925. Yet, sociobiology has been attacked as a pernicious, racist, reactionary doctrine, much as the proponents of Darwinism at the time of the Scopes trial were accused of being communists, anarchists, and revolutionaries. The New Left of "Science for the People" has joined hands with backwoods fundamentalism in denying the relevance of natural selection for the evolution of human social behavior. No sociobiologist that I know denies the importance of culture in humans—or of "tradition" in many higher vertebrates—but many people, especially social scientists, still deny the relevance of Darwinian evolution to the social behavior of man.

What is at stake is not the uniqueness of man. Every species is unique in some of its aspects, otherwise it would not be a separate species. Nor is it arguable that humans possess a set of capabilities (such as symbolic language, rational choice, conspiratorial behavior, productive and destructive technology, environmental control) that make their evolution, in some important respects, different from that of other species. What sociobiologists refuse to accept is the dogma shared by many

social scientists that human behavior is infinitely plastic and subject to *no* genetic constraints.

What, if any, are the ethical implications of sociobiology? Certainly, no ethical conclusions logically follow from a sociobiological view of human behavior. Sociobiology is not a moral philosophy. It contains no teleology. It does not assume that evolution—or survival, or reproduction, or anything else—is good, or even that it serves any purpose. Sociobiology and the theory of natural selection that underlies it help to explain why organisms change over time.

Sociobiology as Ideology

Strictly speaking, natural selection is not a theory but a tautology: reproductive success is merely the definition of adaptation. Thus, natural selection is the simplest and most general description of how living things change, in both their morphology and their behavior. The specific mechanisms through which this happens (sexual selection and reproduction, meiosis, mutation, recombination through chromosomal crossovers) are still only superficially understood. In any case, one is no more justified in ascribing an intrinsic morality, ideology, or teleology to sociobiology than to astronomy or biochemistry.

The critics of sociobiology come principally from self-styled leftist circles who fear that sociobiology will become an ideology of racism and conservatism, as a strain of Social Darwinism did in the late 19th century. Others fear the specter of eugenics and genetic engineering. It is possible, for instance, that significant genetic differences may be found in behavioral traits between human groups and, if found, highly probable that they may serve to justify many human prejudices. The fact that males and females of our species, and of other sexually reproducing species as well, behave differently, in part because of genetic and biochemical differences, has spawned a multitude of ideologies and moralities.

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Sociobiology is hardly to blame. We can just as well expect sociobiology to have a liberating, liberalizing, even revolutionizing influence. By stressing how fundamentally alike humans are beneath their cultural differences, for instance, sociobiology could be a powerful antidote to racism. Or by using our knowledge of the causes of sex differences, we could engineer the reduction of sexual dimorphism in humans and strike a blow for androgyny. The possibilities are endless. Because of our recent experiences with racism and genocide, we are especially sensitive to critics from the left, but in the 19th century religious fundamentalists saw Darwinism as a threateningly radical ideology. Our *use* of knowledge bears only accidental resemblance to the content of scientific theories. Perhaps the safest conclusion is that knowledge is commonly used for self-serving purposes and that, since it is often most effectively used by those in power, it generally serves conservative ends.

It is true that scientists, whether of the left or the right, have ideological biases like the rest of mankind, and these privately held values inevitably intrude on, and bias, scientific inquiry. It is also true that in social science, the borderline between would-be scientific theory and ideology is frequently fuzzy, and therefore the practice of questioning one's motives and values is a sound corrective to the intrusion of values in scientific inquiry.

Sociobiologists cover approximately the same political spectrum as academics in other disciplines, with a center of gravity that is clearly left of center on the American political scene. Some of the people whom critics of sociobiology have sought to identify with sociobiology are entirely outside the current of sociobiological thinking. Arthur Jensen, for instance, makes meaningless statements (e.g., on proportions of IQ variance attributable to heredity rather than the environment) to which few if any sociobiologists or population geneticists, aware of the complexity of the relationship between phenotype and genotype in intelligence, would subscribe.

Could there not be a sociobiological basis to some of our moral and ethical precepts? Some evidence suggests that, within broad limits, moral injunctions are congruent with evolutionary strategies of fitness maximization. Consider the double standard of sexual morality found in a wide variety of cultures. To put it briefly: To the extent that females of practically all sexually reproducing species produce far fewer, bigger, and therefore more valuable, gametes than males, they can be expected to be more selective than males in the choice of mating partners and

to appreciate quality rather than quantity of offspring. The argument applies even more to mammals, where the number of offspring is limited, where gestation is long, and where lactation further increases maternal, as opposed to paternal, investment in the young. It is not only human females who play coy—and are left holding the babies.

Our own society in the last couple of decades seems to be moving toward a sexual morality that rejects the double standard. My argument is clearly not that we have a gene for the double standard and that our behavior in this respect is so rigidly programmed that our culture cannot modify it. Rather, I suggest that the double standard of sexual morality in humans is a *cultural codification* of differential reproductive strategies of males and females. So far as we know, moral standards are unique to humans, but differential parental investment of males and females in offspring is general to sexually reproducing species, including our own. Our recent technology of contraception, in effect, dissociates sexual and reproductive behavior. The risk of conception, even with an unfit partner, is reduced dramatically for females, and, lo and behold, sexual morality changes.

Culture and Genes

This example is instructive because it suggests that the linkages between culture and genes are anything but simple or mechanically deterministic. We certainly have the capability to alter drastically the course of our evolution, culturally and even genetically. This is not to say that our behavior ceases completely to be biologically predisposed. It will be interesting to see whether the technology of contraception will have a feedback effect on the physiology of sexual arousal. Assuming that slower female arousal was an adaptive response to greater female cost of reproduction, the new culturally created conditions should over a few generations reduce sexual differences in speed of arousal. Culture not only acts on genes, but genes act on culture. It works both ways.

A second illustration of a possible sociobiological basis for ethics is far broader in scope. It concerns the complex set of social norms that underlies social existence itself and is present in varying degrees in all human societies. At a minimum, moral rules enjoin us to honor our father and mother and cherish our children, but almost invariably morality extends beyond the nuclear family to kin groups (lineages, clans) and to still larger groups ("racial," ethnic, linguistic, religious, national). A few

ethical systems have encompassed, at least in theory, our entire species: Hinduism, Buddhism, and Jainism go so far as to extend moral precepts to all living things. Generally, however, the more sweeping the scope of moral precepts, the less well they work in practice. When morality is extended beyond the nuclear or extended family, it frequently uses the idiom of kinship: Members of a race or of a religious sect are "brothers" and "sisters" to each other; the emperor is the "father" of his subjects; it is for the "fatherland" or the "mother country" that we allow ourselves to be slaughtered in time of war; and so on.

Enlightened Self-Interest

Insofar as these moralities are effective in eliciting "altruistic" behavior—beneficial to "alter" at some cost to "ego"—they parallel in their effects what sociobiologists call "kin selection," "inclusive fitness," and, rather misleadingly, "altruism." Altruism is a misnomer because it refers in fact to the ultimate form of genetic selfishness. Kin-selection theory says in effect that our altruism is proportional to the number of genes we share with the beneficiaries of our altruism. By increasing the reproductive fitness of those who share some of our genes, we indirectly, and to the extent that we are related, enhance our own fitness or, more precisely, that of our genes.

There is no need to postulate any genes for altruism. All the theory says is that those genes carried in organisms that contribute to their own fitness *and* to that of related organisms will, by definition, increase their representation in the gene pool of the next generation—as compared to the competing alleles of the same genes in organisms that, say, cannibalize their siblings or favor strangers over their own children. The more distant the relationship—and, hence, the lower the probability of shared genes—the weaker are the fitness benefits of altruism and the less effective its operation. General philanthropy cuts little ice; charity, we all know, begins at home. A man can be expected to help his children, his siblings, his parents, and in a pinch his cousins, uncles, aunts, nephews, and nieces. To a more limited extent, he will extend his altruism to other members of his tribe, "race," or religion, whom he vaguely considers to be distant kin.

The moral precepts of most human societies are, in general, what biological kin selection would lead us to expect. Of course, human altruism cannot be reduced to a blind, unconscious drive for genetic fitness. Man is capable not only of blind, genetic

selfishness but also of enlightened selfishness. We consciously do others good turns on the expectation of being repaid, because we are able to distinguish the cheaters from those who play the game our way. Again, we find that cooperative behavior in man is a complex blend of genetic predispositions and cultural arrangements.

Inevitably, the charge will be made that sociobiology is the same old ethic of enlightened self-interest in a new garb. It will do little good to disclaim any advocacy of selfishness, for many people are simply incapable of dissociating a description of reality from advocacy. The fact remains that the social behavior of an organism is such that consciously, or more often unconsciously, it will act so as to increase its fitness. That is what it has been selected to do. The seeming exceptions to that rule turn out on closer analysis to be easily explainable in terms of inclusive fitness through kin selection or "reciprocal altruism"—for which read "enlightened self-interest over a sequence of interactions."

Sociobiology is not a new ethic, but it can, perhaps, throw some light on the study of ethics. If social scientists want to achieve a well-rounded understanding of human behavior, they will have to abandon the dogma that man is purely a product of his upbringing and his culture. The most lowly organism is the result of both its ontogeny and its phylogeny. This is also true of man. Ethics are, so far as we know, a human monopoly and a cultural development, but they do not exist in a biological vacuum.

We are not disembodied spirits. We are a very special kind of self-conscious animal, but an animal all the same. And we run the risk of making asses of ourselves if we should forget that at some very fundamental level we are mortal conglomerations of billions of cells that evolved as carnal envelopes for the transmission of potentially immortal genes.