

# **Sociobiology: The New Religion**

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In 1971 E.O. Wilson, a prominent entomologist at Harvard, published a book entitled *The Insect Societies*. In the last chapter of that book Wilson suggested that it may be fruitful to attempt to extend to the world of vertebrate animals the set of principles which he had found to be operative in the intricate behaviors of social insects. Following his own advice, he published four years later his enormous study entitled *Sociobiology: The New Synthesis*. The twenty-seventh and last chapter of that book recommended the further extension of these same principles to the human species. The result was a third book, *On Human Nature*, which appeared in 1978.

The last two books in this trilogy<sup>1</sup> have caused a storm of controversy of an extent rarely seen in scientific circles. There is a special reason for this, which we wish to explore in this paper. Briefly, in the pursuit of his scientific investigations Wilson gradually came to confront the bed-rock questions of what is the meaning of human life and what values should govern it, which, to say the least, are delicate issues. Moreover, Wilson's efforts to answer these questions touched an extremely raw nerve which has been implicit in the fabric of scientific culture since its inception in the Seventeenth Century. In short, Wilson has argued that, if we relentlessly pursue science as the only avenue to the understanding of reality, then man must be reduced in significance to a point far below what most of us, including most scientists, would like to see. To make matters more challenging, Wilson writes with an engaging style and with an over-abundance of fascinating accounts of aspects of animal and human life-styles which seem to make his analysis compelling. How should we evaluate his view of human nature?

The first and most strident wave of criticism came from the academic political left. Wilson was accused of elitism, racism, sexism, anti-feminism, a denigration of the powers of institutional and social change, and in general of being a reactionary advocate of the social and political status quo.<sup>2</sup> Wilson's reply to these critics is that they have not understood his message, and also that they in turn are wrong in thinking that environmental factors alone, independently of genetics, determine social behavior. There are limitations imposed by our genetic inheritance outside of which manipulation of the social and political environment is really useless as a lasting tool for social betterment. Wilson clearly rejects a purely environmental model of the causes of human behavior, in which category he places his political opposition.

It might be mentioned in passing that this exchange is the most recent instance of a long history of using extra-scientific political, social, or religious norms to judge the correctness of a scientific theory. It also seems from this exchange that the present American academic climate is much more tolerant of external, environmental determinism for man (e.g., Skinner) than of internal, genetic determinism (e.g., Wilson). In neither case is there any genuine human freedom; Wilson is closer to some of his critics on this point than appears on first sight.

A second, and more technical, criticism of Wilson has come from various scientists and philosophers of science who charge that his argumentation is frequently subject to the fallacy of equivocations.<sup>3</sup> The reason for this is that the primary tool of investigation in sociobiology is detailed comparison of social behaviors in a wide range of animal species, including man.

In the process the same term is often used by Wilson to refer to behaviors which are at least as different as they are similar. To mention only the most famous case, altruism or self-sacrifice in the behavior of termites or ants is quite different in basic ways from altruism or self-sacrifice in human relations. Lacking a developed theory of analogous predication, Wilson's version of sociobiology is fatally flawed in its most basic methods of comparison and inference patterns between highly diverse animal species.

Another version of this same objection applies to Wilson's program for the unity of the sciences. The ideal to be approached here is an absorption by biology of the social sciences and eventually the humanities, including religion, as the ultimate goal. The name 'sociobiology' was coined to reflect the first stage of this reduction. During the past generation philosophers of science have shown<sup>4</sup> rather conclusively that, for one discipline B to be reduced to a more basic discipline A, two requirements are necessary. First the descriptive terms used in the laws and theories of B must be translated without remainder into the descriptive terms used in the laws and theories of A. Secondly the laws and theories of B must be deducible from those of A. Translatability and deducibility, in that order, are the necessary conditions. For sociobiology this would mean the translation of

terms referring to social behavior in animals into terms referring to the basic microbiological categories of genes, DNA, proteins, enzymes, etc. It is clear from reading Wilson's books that he is a very long way away from such a translation, and as a result his remarks about the reductive unity of the various sciences and humanities are at present very premature and at best state only an abstract and hoped-for goal.

Considering Wilson's reply, mentioned above, to his critics on the left, should one conclude that he is arguing for the notion that human behavior is determined solely by our genes? Certainly not; although there are some stray passages which give this impression. For example, Wilson states:

The central idea of the philosophy of behaviorism, that behavior and the mind have an entirely materialist basis subject to experimental analysis, is fundamentally sound. . . The learning potential of each species appears to be fully programmed by the structure of its brain, the sequence of release of its hormones, and, ultimately, its genes.<sup>5</sup> (emphasis added)

However the overwhelming majority of comments in Wilson's writings make it quite clear that his view is that human behavior is the joint product of both internal genetic causes and external environmental influences. He offers neither a purely genetic nor a purely environmental model of behavior. Rather he argues quite reasonably that human genetic structure imposes constraints on our behavior. Outside of these constraints we either cannot act at all (e.g., we cannot fly like the birds on our own) or we cannot sustain an action successfully (e.g., a human slavery system modeled after insect societies must ultimately fail of its own weight). Within these constraints our genes determine various genuine capacities or potentialities for behavior, and which of these possibilities become actuated is determined by the added influence of the physical and social environment. Thus the biological evolution of our genetic make-up, which occurs according to Darwinian principles, is complemented by the cultural evolution in our social environment, which is governed by Lamarckian principles. The former is much slower, lasting over millions of years up through the present, while the latter is much faster and has occurred primarily over only the latest phases of the history of the human species. To quote Wilson:

I do not for a moment ascribe the relative performances of modern societies to genetic differences, but the point must be made: there is a limit, perhaps closer to the practices of contemporary societies than we have had the wit to grasp, beyond which biological evolution will begin to pull cultural evolution back to itself.<sup>6</sup>

In short, human social behavior is the shared product of both genetic and environmental causes. This seems quite reasonable in itself, and there is an enormous amount of scientific evidence, gathered by Wilson, to support this view. So if we leave aside the political and methodological objections to sociobiology and focus on its conceptual context, why should this view of human nature and human behavior have caused so much controversy? This brings us to the crux of the problem, the raw nerve mentioned earlier.

Sociobiology unequivocally claims to be a scientific study of human behavior. As such it is destined to conclude that man is a machine. Rightly or wrongly, when modern science came into existence in the Seventeenth Century, it consciously adopted the machine model for its fundamental mode of understanding. This has been pursued relentlessly and successfully ever since through a wide range of physical and chemical phenomena. But as time passed, it became more and more feasible to extend the methods of scientific investigation to human behavior, to the social sciences, and ultimately the humanities. Sociobiology is the latest and most sophisticated version of this thrust, which extends back through Comte and the French Encyclopedists to Hobbes and to Cartesian biology. The scientific image of man, to use a helpful phrase from Sellars, is that man is a machine, a physical, chemical, genetic mechanism. If we add the further restriction that only scientific knowledge is genuine knowledge, the claim of scientism, then man is no more than a machine.

This is where the most basic controversy over sociobiology lies. As a machine, man is determined and his behavior is predictable in principle, it making little difference in the last analysis whether the causal determination is all external (environmentalism) or internal (geneticism) or some combination of the two (Wilson's version of sociobiology). In all these cases human freedom and the conscious self are unreal; they

are vestigial notions from our pre-scientific days. If Wilson were to pursue the logic of his position to its full limits, he should advocate sociophysics, not sociobiology. For why should we carry the analysis of our behavior only down to the level of human genes when we know that they in turn are complexes of more basic chemical and physical units? To focus so sharply on human genes is to be guilty of anthropocentrism in science, a charge which Wilson frequently brings against the social sciences and the humanities.

Now of course there are images of man other than the machine model. Of primary interest here as an alternative is what we will call the “active agent” model of man. This view agrees with sociobiology that causal influences are exerted on human behavior by both genetic and environmental factors. That point is not in dispute. But the active agent model goes further to add a third irreducible factor in the analysis, namely, an assertive and self-initiating agent acting within the constraints of the genetics and the environment in which it finds itself. This raises the critical question of the status to be assigned to the human mind and the human will. It is worth quoting Wilson on this at length.

The great paradox of determinism and free will which has held the attention of the wisest of philosophers and psychologists for generations, can be phrased in more biological terms as follows: if our genes are inherited and our environment is a train of physical events set in motion before we were born, how can there be a truly independent agent within the brain? The agent itself is created by the interaction of the genes and the environment. It would appear that our freedom is only a self-delusion. In fact, this may be so.<sup>7</sup>

Of course, if the agent is an effect produced by the interaction of genes and environment, then it has no independent status, and the “active agent” model has been rejected. “The mind will be more precisely explained as an epiphenomenon of the neuronal machinery of the brain,” as Wilson says later. In Chapter IV of *On Human Nature* Wilson is noticeably hesitant to affirm the machine model of mind unequivocally. We read such phrases as “this *may* be so,” “schemata within the brain *could* serve as the physical basis of will,” “the mind *could* be a republic of such schemata,” “will *might* be the outcome of the competition, requiring the action of neither a ‘little man’ nor any other external agent. There is no proof that the mind works in just this way.”<sup>9</sup> (emphases added)

Why this hesitation? The last phrase explains why. “There is no proof.” The limits of scientific decidability have been reached. In many places Wilson makes it quite clear that he considers an hypothesis to be scientific only if it has competitors and if each member of the set is verifiable or at least falsifiable by empirical testing.<sup>10</sup> Does the machine model of mind fit these requirements? According to Wilson apparently it does not. If we add to this the doctrine of scientism, i.e., that science is the only genuine mode of knowing, then we have passed beyond knowledge into faith. As a result Wilson’s advocacy of and commitment to what he calls the “mythology of scientific materialism” is in the last analysis an act of faith. Why this belief rather than belief in the “active agent” hypothesis which apparently is equally beyond scientific decidability? Of course, no reason can be given to conclusively settle this issue, but the machine model of mind is clearly more congenial to the scientific frame of reference. So at the critical juncture of dealing with the presence of mind and will in human behavior, sociobiology must abandon reason for faith. It has evolved into a belief system, into a form of religion, the religion of scientism, the religion of reductionistic scientific materialism.

Wilson even formulates the credo of the new religion for us as follows:

The core of scientific materialism is the evolutionary epic. Let me repeat its minimum claims: that the laws of the physical sciences are consistent with those of the biological and social sciences and can be linked in chains of causal explanation; that life and mind have a physical basis; that the world as we know it has evolved from earlier worlds obedient to the same laws; and that the visible universe today is everywhere subject to these materialist explanations. The epic can be indefinitely strengthened up and down the line, but its most sweeping assertions cannot be proved with finality.

What I am suggesting, in the end, is that the evolutionary epic is probably the best myth we will ever have. It can be adjusted until it comes as close to truth as the human mind is constructed to judge the truth.<sup>11</sup>

The characterization of sociobiology as a form of religion can be made more specific by looking at Wilson's comments about traditional religions.<sup>12</sup> He begins by remarking that religions constitute a critical challenge to sociobiology because human religious behavior has no analogue in the animal kingdom. Nevertheless a biological account of religion is still in order. According to Wilson human beings have a strong susceptibility for indoctrination which has become genetically ingrained in us because of its clear adaptational advantage for both the individual and the group. The reason for this is that stability of social structures is greatly enhanced if individuals are selected who tend to act in traditional, uniform ways. The specification of this tendency for indoctrination takes on a myriad of actual forms as various mythologies are culturally evolved to deal with the fundamental human concerns of the meaning of creation and life, of human suffering, of death, of personal identity and survival. At any rate various religions originate from the interaction of a genetically selected indoctrinability and culturally evolving mythological traditions. For example, the Judeo-Christian tradition shows all the characteristics of its origins in our Ice Age ancestors of the middle East who lived in a hunter-gatherer social structure. Such societies are "highly mobile, tightly organized, and often militant, all features that tip the balance toward male authority."<sup>13</sup> So God is male, the pastoral imagery of the Bible is derivative from the herding habits of these ancient people, etc.

But what is more important for our concerns is that if Wilson's argument be granted, then the net effect is a naturalistic account of traditional religions, and the consequent installation of sociobiology as a sort of meta-religion since it can explain, and thus explain away, traditional religious behavior. As Wilson puts it:

If this interpretation is correct, the final decisive edge enjoyed by scientific naturalism will come from its capacity to explain traditional religion, its chief competitor, as a wholly material phenomenon. Theology is not likely to survive as an independent intellectual discipline. But religion itself will endure for a long time as a vital force in society.<sup>14</sup>

Wilson's concession in this last sentence is significant. It is not based only on the biological claim that the religious tendency is deeply ingrained in our genetic baggage. More importantly he sees traditional religion as more energetic than the belief system of scientific materialism since the latter has nothing to compare to the power of the idea of a creating and caring God and the idea of personal immortality. For the near future at least he sees sociobiology as parasitic on this vitality.

Like other religions sociobiology also has a distinctive moral code. In analogy to traditional natural law ethics, Wilson enunciates three primary moral precepts.<sup>15</sup> The first ethical imperative is "the survival of human genes in the form of a common pool over generations."<sup>16</sup> The second is the maintenance of diversity in the gene pool to ensure adaptability to changes in the environment. The third imperative is universal human rights, not because of its intrinsic worthiness, but because of its long range genetic advantage. All other values are classified as secondary and instrumental to the attainment of these primary moral standards. The ethics of sociobiology, in short, is a utilitarian calculus of genetic advantage. If Wilson follows his recent pattern of writing his next book on themes suggested at the end of the last one, the next topic for research should be the fleshing out of this ethics to prepare man to take over the direction of his own biological evolution through a program of eugenics.<sup>17</sup>

In characterizing sociobiology as a form of religion, we in no way mean to belittle its significance. Actually, just the opposite is the case. Religions have always been prominent and powerful elements in human culture. Sociobiology as a religion has many faithful followers and converts; it cannot be ignored. Moreover Wilson has performed an important service in carrying the implications of reductionistic scientific materialism and scientism far beyond the point where many of its adherents are content to leave it. What are the consequences for the meaning of human life if one makes a serious commitment to the belief system of scientific naturalism? Wilson has spelled them out in uncomfortable detail. The individual human person is reduced to, and is not

more than, a temporary and ultimately insignificant way station serving merely as a transitory conduit for a portion of the gene pool. It is a stark picture. The individual human person has only an instrumental value and is ultimately insignificant. Only the genes really count. Sociobiology as a religion involves an enormous act of faith, little room for charity, and no personal hope for survival. It is not accidental that Wilson's major book begins and ends with foreboding quotations from Camus on suicide and human alienation. In the very first paragraph of *Sociobiology: The New Synthesis* he states his view of life in quite unequivocally reductionistic terms as follows:

In a Darwinian sense the organism does not live for itself. Its primary function is not even to reproduce other organisms; it reproduces genes, and it serves as their temporary carrier... Samuel Butler's famous aphorism, that the chicken is only an egg's way of making another egg, has been modernized: The organism is only DNA's way of making more DNA.<sup>18</sup>

To conclude on a more positive note, we should point out that, whatever the ultimate fate of sociobiology as a science or as a religion, its primary thrust is a redrawing of the lines between genetics and culture, between emotion and reason, between the various sciences, between science and religion, between man and the other animals. Its constant message is that there is a much larger biological component in these divisions than we have allowed ourselves to admit in the past. And this is probably quite true. It is certainly a point worthy of careful thought and reflection.

### ***Endnotes***

1. All three of these volumes were published by Harvard University Press.
2. For a convenient anthology containing these political objections and Wilson's reply to them, cf. Arthur L. Caplan (ed.), *The Sociobiology Debate* (New York: Harper and Row, Publishers, 1978), Part V.
3. For example, cf. Richard Lowentín, "Sociobiology -A Caricature of Darwinism," in P. Asquith and F. Suppe (eds.), *PSA 1976* (East Lansing, Michigan: The Philosophy of Science Association, 1977), Vol. 2, pp. 22-31.
4. For an introduction to this literature, cf. Ernest Nagel, *The Structure of Science* (New York: Harcourt, Brace and World, 1961), Chapter 11; Robert L. Causey, *Unity of Science* (Dordrecht, Holland Boston, U.S.A.: D. Reidel Publishing Co., 1977); David Hull, *Philosophy of Biological Science* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1974), Chapter 1. Hull argues that even within biology the attempt to reduce Mendelian genetics to molecular genetics is so massively complex as to be unworthy of the effort; it is a case of replacement rather than reduction (p. 44).
5. Edward O. Wilson, *On Human Nature* (Cambridge, Mass.: Harvard University Press, 1978), p. 65.
6. *Ibid.*, p. 80.
7. *Ibid.*, p. 71.
8. *Ibid.*, p. 195.
9. *Ibid.*, p. 71; pp. 76-77.
10. For Wilson's most direct statement on this, cf. *Sociobiology: The New Synthesis* (Cambridge, Mass.: Harvard University Press, 1975), pp. 27-31.
11. *On Human Nature*, p. 201.
12. *Ibid.*, Chapter 8.

13. *Ibid.*, p. 190.
14. *Ibid.*, p. 192.
15. *Ibid.*, Chapter 9.
16. *Ibid.*, pp. 196-197.
17. cf. *Ibid.*, p. 208.
18. *Sociobiology: The New Synthesis*, p. 3.