EVOLUTIONARY THEORY AND CHRISTIAN ETHICS: ARE THEY IN HARMONY?

by Michael Ruse

Abstract. Does modern evolutionary theory (specifically Darwinism) pose a problem for the Christian's thinking about morality? It certainly poses threats for those who would argue that certain practices are wrong because they are "unnatural." Liberal Christians can probably get around these questions. But at a deeper level, despite superficial similarities between its conclusions and the Love Commandment, Darwinism points to an essential relativism about morality, thereby striking at the very core of all Christian thought on moral behavior. Thus, those who are worried about the clash between science and religion have good reasons for their worries.

Keywords: evolutionary ethics; love commandment; natural law.

Thanks to the unflagging efforts of the creationists, the oft-times troubled relationship between science and religion has again been brought to the fore. It is argued that you cannot subscribe to the modern theory of evolution through natural selection and at the same time be a sincere practicing Christian (Morris 1974; Gish 1973). However, the opinion of reflective thinkers, in both science and religion, is that this charge is quite mistaken (Montagu 1984). To quote the nineteenth-century philosopher/scientist John F.W. Herschel: "Truth cannot be opposed to truth." If God created through an evolutionary process, then this is for practicing Christians to recognize and appreciate, not deny (Ruse 1979; Durant 1985).

As one who has labored long in the field of evolutionism, I do not at all disagree with the spirit of this general conclusion. I would regard it as a blasphemous denial of God-given powers of sense and reason to pretend that salvation requires the taking literally of ancient

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Jewish myths about beginnings. Yet, as one who is concerned to push our thinking up to and beyond present limits—especially in the field of social behavior ("sociobiology")—I fear that there are again growing problems, stemming from evolutionism, standing in the way of the would-be believer. In particular, I suspect that hitherto-unappreciated implications of evolutionism for ethics cast grave doubts on certain claims the Christian is obligated to make.

I begin with some scientific background, moving then to ethics (morality) and to possible tensions with true religion. Human beings are animals and as such are the end product of a long, natural process of evolution, which began some three and one-half billion years ago. This process is primarily that first fully articulated by Charles Darwin in his *Origin of Species* in 1859. More organisms are born than can possibly survive and reproduce, and there is consequently an ongoing "struggle" for limited resources and mates. Because organisms vary for various reasons, the survivors (the "fit") tend to have features not possessed by the losers. There is consequently a "natural selection," which, given enough time, results in full-blown evolution. As Darwin and his successors have always emphasized, the evolved features of organisms work or function. They are "adaptations," helping their possessors in life's struggles. Darwin's selective mechanism, therefore, is the naturalistic answer to the designing god of Archdeacon Paley (Ruse 1979; 1982).

What evolution demands is that there be an ever-replenishable supply of new variation and that successful features be preserved down through the generations. Darwin himself had little idea about the underlying causes of heredity; but now, in this century, we have a full-blown theory. It is realized that the units of heredity, the "genes," are generally transmitted unchanged from generation to generation; that occasionally, for natural reasons, the genes do alter (they "mutate"); that (as Darwin always emphasized) there are no non-natural teleological forces guiding change; and, thanks to the work of molecular biologists, that ultimately everything relates back to the molecules. This is not some sinister antireligious materialism but, simply, the recognition that modern science has neither place nor need for mysterious life forces like "entelechies" (Ayala 1984).

Important here is the fact that, in essential respects, humans are typical products of evolution. Of course, we are unique. But, then, so is *Drosophila melanogaster* (a species of fruit fly). The point is that, considered biologically, we humans work in much the same way that every other organism does. Our physical features are controlled by the genes, within our bodily cells, and all the evidence

is that they result from the pressures of natural selection, as is true of other animals and plants. We now know that it was a mere six or seven million years ago that our ancestors broke from the great apes. Even today, at the biochemical level, we are more closely related to the chimpanzees than the chimpanzees are to the gorillas (Pilbeam 1984).

These facts are not truisms; nevertheless, although probably most people do not recognize the closeness of our links with the brutes, they embody claims that are not particularly controversial. But most people would still argue for human distinctiveness on the grounds of our culture or our social behavior. Where is the baboon Shakespeare or the chimpanzee Mozart? Or, for that matter, where is the gorilla Hitler?

That humans do have a distinctive culture is incontrovertible. Nor would anyone, least of all me, claim that this culture is *purely* a result of the genes—anymore than is height, weight, or health. However, the evidence is strong that the genes, as promoted by natural selection, do have a significant causal input into human social behavior, and consequently into culture. This is a fact with massive empirical backing. To the Darwinian, it is hardly a surprise, for clearly an organism's behavior is as crucial to its reproductive well-being as is any physical feature. Humans need their eyes and mouths and feet and digestive systems to survive successfully. Why should their behavior be an exception?

The exact ways in which genes control behavior is still under intensive investigation (Lumsden and Wilson 1981; Boyd and Richerson 1985; Cavalli-Sforza and Feldman 1981). Most revealing is what happens when things go wrong. Medical researchers have compiled an increasingly long list of quite bizarre behaviors, due to relatively minor changes down at the level of the units of heredity. Lesh-Nyman's syndrome, for instance, is a genetically caused ailment leading to compulsive self-mutilation. The unfortunate afflicted have to be physically constrained all their lives (Hilton et al. 1973). However, their tragedy is science's gain, for through such aberrations we are able to trace the usually beneficial behavioral effects resulting from our basic biology.

I shall not labor the point. If we were not *Homo sapiens,* and thus with a peculiar interest in this species' nature, there would be far less reason than is presently shown for picking out our species for special attention. Humans were produced by the natural selection of nondirected variations, and they reveal this legacy in their behavior as well as in their physical attributes.

SEXUAL MORALITY

Already, even with but the bare bones of our scientific position laid out, it is possible to make some comments about morality. In particular—and not surprisingly, given the central role that reproduction plays in the Darwinian evolutionary process—one can make comments about some of the sexual prescriptions and prohibitions that have been made in the name of Christianity.

I shall go right to the heart of the matter, looking at the Christian position on the value of sex in itself. Jesus, in fact, had comparatively little to say on the matter (although there is the famous comment in the Sermon on the Mount about lusting and adultery in one's heart), but Saint Paul certainly repaired the omission. "It is good for a man not to touch a woman" (1 Corinthians 7:6). It is undoubtedly true that many sincere Christians have felt that the apostle's views are somewhat less than binding. Nevertheless, the attitude is rather negative: "it is better to marry than to burn" (1 Corinthians 7:9), and undoubtedly the views have had great influence. One has only to think of the Catholic Church's attitude toward sexuality, even today. If sex is such a good thing, why is the Pope not married?

As an evolutionist, looking at a morality infused by this attitude toward sexuality, one must tread carefully. I recognize that you cannot deduce moral dictates (sex is good and should be cherished) from factual claims (sex is important in evolution). To assume otherwise is illicitly to cross the "is/ought" barrier: to commit what G. E. Moore (1903) called the "naturalistic fallacy." For this reason, whatever the facts, whether sex be essential or irrelevant to the evolutionary process, one can still mount an argument in favor of chastity or continence of some form or another. Nevertheless, assuming that a loving God does exist, I think it improbable that God would have put in motion an evolutionary process that centers so directly on sexuality, and then, in some way, have declared the sexually active life as less than ideal. God may well make demands on us as Christians, for instance to behave lovingly, within and without sexual encounters. I shall speak more of these matters shortly. The point is that, to the evolutionist, recognizing the central place of reproduction, a priori declarations about the inherent worth of sexual abstention ring false.

Turning now to more specific sexual dictates, let me take the norm which, although widely ignored in North America, still has major effects in the world at large. I refer to the Roman Catholic prohibition against birth control, reaffirmed in 1968 in the encyclical *Humanae Vitae,* by Pope Paul VI.

> It is in fact justly observed that a conjugal act imposed upon one's partner without regard for his or her condition and lawful desires is not a true act of love, and therefore denies an exigency of right moral order in the relationships between husband and wife. Hence, one who reflects well must also recognize that a reciprocal act of love, which jeopardizes the responsibility to transmit life which God the Creator, according to particular laws, inserted therein is in contradiction with the design constitutive of marriage, and with the will of the Author of life. To use this divine gift destroying, even if only partially, its meaning and its purpose is to contradict the nature both of man and of woman and of their most intimate relationship, and therefore, it is to contradict also the plan of God and His will. (Reprinted in Baker and Elliston 1984, 173)

Again, one must tread carefully. Note that the late Pope's condemnation of artificial means of birth control does not stem solely from the way that we are. It stems from a judgment of what is "natural" for human beings, combined with the claims that this was God's plan or design and that this is what He wants us to follow. Given these additional premises, then, if God wants us to stand on our heads during sex, this is final, no matter what the facts of evolution may be.

However, I would challenge the claim that the immorality of artificial birth control is (in part) a consequence of its unnaturalness. At least, I would challenge the claim that the only true biological purpose of sexual intercourse is to lay open the possibility of conception at any time (or even, only during the so-called fertile periods) and that, consequently, without such possibility we have entered the realm of the unnatural. To argue in this way is to show a gross misconception of the nature of the evolutionary process. What must be recognized is that natural selection is opportunistic. What works, succeeds. If some feature can serve a new purpose, or two purposes at once, then so be it (Futuyma 1979). If God works through the medium of natural selection, then you can no longer say that God had one and only one purpose in mind for any particular characteristic.

Undoubtedly, sexual intercourse, involving pleasurable sensations for both male and female, evolved for the direct purpose of fertilization. But, this is not to deny that it may also have taken on other biological virtues, in their way equally valid—equally "natural" (Symons 1979). The bird's forelimbs started as fish's fins. Is flying unnatural in a sense that swimming is not? Specifically: lungs evolved for breathing, and they are still used in this way. Is talking unnatural (and, hence, immoral)?

In the case of human sexual intercourse all the evidence is that, direct reproduction apart, it plays a vital role in pair-bonding, something absolutely crucial in *Homo sapiens,* where the young require so much attention, preferably from both parents. Indeed, it is highly

plausible that many of the more pleasurable aspects of intercourse stem from this factor alone. If fertilization were all that counted, we could couple fleetingly, like other mammals.

In other words, sex for sex's sake is quite natural, and if God stands behind the evolutionary process, then according to Roman Catholic theology He ought to cherish such activity—perhaps with the proviso that it occur within the bonds of ongoing relationships. And if, through our technology we have made less pressing the need for continuous fertilization (because, for example, of improved child care), the case for the moral virtues of the pill or of condoms is made complete. (I emphasize that, as an evolutionist, I am not necessarily a sexual radical, preaching the virtues of promiscuity. Sex, like all human activity, is subject to general laws of morality: see also Ruse 1988).

Finally, let me turn to the highly contentious issue of homosexuality. Historically speaking, it turns out that in practice the Church has had a variable attitude toward homosexual activity, and, today, even conservative churchmen generally realize that homosexual orientation is not something over which people have much control. Nevertheless, homosexuals have frequently suffered in the name of the Lord, and many Christians continue to condemn homosexual behavior. Again, Saint Paul is the authority.

> For this cause God gave them up unto vile affections: for even their women did change the natural use into that which is against nature: And likewise also the men, leaving the natural use of the woman, burned in their lust one toward another. (Romans 1: 26–27)

This position did not originate with Saint Paul. It goes back to the Holiness Code of Leviticus, and indeed can be found in Plato (in the *Laws*). Coming toward the present, Aquinas was succint and unambiguous. He thought homosexuality was worse even than rape. The latter is just a violation of a human being. The former violates God.

> The developed plan of living, according to reason, comes from man; the plan of nature comes from God, and therefore a violation of this plan, as by our natural sins, is an affront to God, the ordainer of nature. (Aquinas, *Summa Theologica* 2 $_2$2ae, 154: 12)

But the question remains! Is homosexuality biologically unnatural? Modern evolutionary theory suggests that this claim is highly questionable. Certainly, we can say with some confidence that homosexual activity is not (as everyone from Plato on down seems to have assumed) a phenomenon exclusively restricted to humans. Indeed,

it is no exaggeration to say that *every* animal species studied with care shows some such behavior (Weinrich 1982).

Moreover, there are plausible theoretical reasons as to why such behavior might have evolved (referring now to human behavior, in particular). For instance, one hypothesis focuses on the so-called mechanism of kin selection. Ultimately, the only thing that counts in evolution is transmitting your genes or, rather, *copies* of your genes. But close relatives share copies of the same genes. Hence, inasmuch as one's relatives reproduce, one is reproduced oneself, vicariously, as it were. Thus natural selection can (and does) promote features whereby relatives are led to aid each other in the cause of reproduction. In this context, it has been suggested (with significant empirical backing) that homosexual orientation might be part of a (selectively caused) reproductive strategy whereby individuals are turned away from their own direct ends, thus being freed to aid relatives in various ways. Because their brothers and sisters and cousins and others reproduce, the homosexuals "reproduce" (Ruse 1981, 1988).

I do not say that this, or related suggestions, is necessarily correct. But we are clearly at the point when only the ignorant can claim confidently that homosexuality (orientation or behavior) is unnatural. And this being so, the major ground for Christian (and Jewish) condemnation of such sexuality crumbles. As in the case of birth control, I recognize that the Church has never opposed homosexuality solely because it is unnatural. Prohibitions have been backed by claims about God's wishes; Aquinas makes this most clear. And, as before, whatever its biological status, one could, possibly, continue to condemn homosexuality. But the traditional arguments must be changed.

Three points are enough. Modern evolutionary theory clearly throws important light on many moral claims about sexuality that have been made in the name of Christianity. Although I suspect that many (particularly if they are more liberal thinkers) will find what has been said, thus far, neither surprising nor dreadfully upsetting. What they will feel, nevertheless, is that I am just skimming over or around the really important questions. True Christian morality deals with sexuality only incidentally, as part of the larger questions. Real Christian practice centers on the love commandment: "Thou shalt love thy neighbor as thyself" (Matthew 22:39).

Here, surely, we have the starkest of contrasts with everything the evolutionist holds dear. If evolution, supposedly, stems from natural selection brought about by a struggle for existence, then surely, ultimately, we are left with combat and selfishness. Evolution makes us tune in on our own ends, hostile and suspicious of everyone else.

Christ's message, consequently, is one which is opposed to our brute nature, calling us to higher things. In fact, it is precisely because we are naturally self-serving that Jesus came to preach His message. This was why His sacrifice was necessary. Here, then, the Christian agrees with the evolutionist that there is no morality to be derived from the study of human nature; but perhaps to the annoyance of the evolutionist, the Christian concludes, therefore, that this ends all interesting discussion (Trigg 1982).[1]

I believe that this conclusion is altogether too quick. I have agreed that you cannot use an understanding of human nature as a conventional foundation for moral dictates; but I would argue that there is more to the question than this. To make the case, I turn again to science.

EPIGENETIC RULES

I would like to pick up the thread with that which is distinctive about human beings, namely our (comparatively) large brains and the associated thinking power. There is little debate that this feature (or features) has come about conventionally, namely through the forces of natural selection making toward adaptive ends. The fossil record demonstrates clearly that the past four million years has seen a steady increase in brain size, and this has been accompanied by an equally steady increase in tool use and sophistication. That humans today succeed, in great measure because of their intelligences, hardly needs comment (Isaac 1983).

But let us think for a moment about how the human "behavioral control box" works and how it leads to and influences behavior. In theory, there are a number of possible options. At one extreme, the brain and mind (if such there be associated with it) might rigidly predetermine all action (Ruse 1986a, 1987). Everything is done purely automatically. Ants work in this way, and there is much to recommend their system. No time is wasted on decisions, and a comparatively simple mental apparatus is all that is needed. At the other extreme, the brain would be like a super-powerful computer, where every problem is weighed and assessed rationally. An animal takes no actions until it has determined fully what would be the optimum path in order to promote its own reproductive interests.

For fairly obvious reasons, neither of these options was particularly attractive to organisms like humans, and equally obviously we have taken neither. The trouble with being locked rigidly into behavior is that one has no recourse when things go wrong. At the slightest environmental disruption, organisms begin to die wholesale. From

the perspective of an ant parent, this does not matter desperately, for it can always produce lots more. From a human perspective, such rigidity is terrible. Each organism requires so much care that a parent just cannot risk losing it at the merest situational tremor.

The super-brain route is not much better. Each human would require more resources and care than it does now. And we would be forever making up our minds. Our situation would be rather like that of those early chess-playing computers, which surveyed every possible move, but which were totally useless. Their task was so great, they could never get to a decision.

In fact humans seem to have taken a middle course, and the new, much more successful generation of chess computers tells us about this course. Now, such computers are programmed to follow certain proven-successful strategies, reacting according to their human opponents' moves and abilities. The computers sometimes lose; but more often than not they win. Similarly with humans. Our minds are not *tabulae rasae.* Rather, they are structured according to various innate dispositions, which have proven their worth in the past struggles of proto-humans. These dispositions do not yield fully explicit, innate ideas (of the kind attacked by John Locke, in his *Essay Concerning Human Understanding*); but, as we grow, triggered and informed by life's experiences, the dispositions incline us to think and act in various tried and trustworthy patterns.

Such dispositions or propensities are known, technically, as "epigenetic rules" (Lumsden and Wilson 1981). There is growing empirical evidence both as to their nature and of their widespread importance. One of the best-studied rules concerns fears and phobias. Clearly there is nothing absolutely rigid going on here. Certainly, with respect to strangers, the actual content of fears and prejudices requires environmental input—else, why did the Nazis go to such lengths to indoctrinate their children against the Jews? One can see also precisely why an epigenetic rule (or rules) of this type would be cherished by selection. The protohuman who learned at a very early age to avoid potentially dangerous things, inanimate or animate, nonhuman or human, was much better prepared for life's struggles than the protohuman who did not. I say this notwithstanding the fact that in modern technological society such a rule (or rules) might be dated. We would do better to learn to fear light sockets than snakes, and with our horrifying powers of destruction the fear of strangers is a mixed blessing.

THE EVOLUTION OF MORALITY

What has all of this to do with morality? Still staying with science, one of the most important findings of evolutionists—forecast by Darwin in the *Origin* and confirmed fully in recent years—is that the best path to reproductive success is not necessarily one of bloody combat: "nature red in tooth and claw." More particularly, we get much further ahead by cooperating. A cake shared is far preferable to no cake at all, or even to the whole cake if the cost is serious personal injury. Given that we are all, at times, liable to be at a disadvantage—through youth, or illness, or plain bad luck—there is much to recommend the evolution of features and inclinations driving organisms to cooperate one with another (Trivers 1971).

Technically, this cooperation is known as "altruism." Although this is obviously a term derived metaphorically from the human world, for today's biologists it refers simply to features and behavior involving effort on behalf of or to the benefit of others, ending in increased chances of personal reproduction. It does not, as such, imply or demand the conscious intention covered by (literal) altruism. "Altruism" to altruism has the same relation that the physicist's notion of "work" has to what we call work.

Nevertheless, just as when we work—say, mowing the lawn—we do "work," so also the claim is that (literal) altruism and (biological) "altruism" are connected. In particular, it is argued that, in the case of humans, in order to make us perform "altruistically," because we do indeed (for good biological reasons) have selfish feelings, we have laid over us (literal) altruistic inclinations. And, as you might imagine, given what we have just seen, the claim is that our altruistic dispositions are mediated through the epigenetic rules.

Note that it is a crucial part of the biological explanation of morality that it exists in order to get us away from the literally selfish or otherwise unpleasant motives that we might have from the other epigenetic rules. There is therefore no simple identification of the good with that which has evolved as mediated through the rules. I am *not* justifying the killing of Jews through a claim that the Nazis were motivated by a rule for prejudice and fear. Quite apart from the fact that the Holocaust clearly involved many nonbiological factors, the whole point of morality is to act against other emotions, because humans have more ends than one. We must look after ourselves, but we must get on with others.

The position of the modern evolutionist, therefore, is that humans have an awareness of morality—a sense of right and wrong and a feeling of obligation to be thus governed—because such an awareness

is of biological worth. Morality is a biological adaptation no less than are hands and feet and teeth (Mackie 1978; Murphy 1982; Ruse and Wilson 1985).

THE LOVE COMMANDMENT

What has all of this to do with Christianity? Let us move back to the love commandment: "Thou shalt love thy neighbor as thyself." If modern biology can yield us something like this, then we might be on the road toward a happy relationship between evolutionary theory and Christianity—otherwise not. As biblical scholars know full well, however, part of the difficulty one faces now is that the commandment appears in somewhat different settings—in the Old Testament and in the New, in the Gospels and in Saint Paul's writings—and there are various traditions within Christianity as to the commandment's proper interpretation and full import.

For brevity, I will content myself by responding to two fairly basic interpretations, which I will refer to as "weaker" and "stronger." In the weaker understanding, as one interpreter has put it, "neighbor love is identified with the core of natural morality" (Wallwork 1982, 302). One's obligations are to be a good family man or woman, to be decent and kind to one's friends and acquaintances, to "render unto Caesar that which is Caesar's" (not forgetting the second half of this command), and to be prepared to lend a hand to a stranger in need (shades of the good Samaritan). There are no extreme expectations or obligations in this weak interpretation. One is certainly not expected to make a martyr of oneself with enemies.

As you might expect by now, this kind of morality causes no problems at all for the evolutionist. Indeed, it is basically just what he or she argues emerges from the selective process. As we have seen, altruism is put in place to promote "altruism." We are better off if we work together and cooperate than if we lead selfish, hostile, lonely existences. So we have evolved sentiments of friendliness and obligation—the very "natural morality" of the weaker interpretation. We should help our neighbors, because they in turn will help us, and so we will all benefit. But, there is neither cause nor good evolutionary reason to make a (dead) fool out of yourself in the name of morality.

Yet can the evolutionist claim even this much fellow sympathy with the Christian? Even the weaker interpretation of the love commandment demands a genuine moral effort. You must love your neighbors because it is right to do so, not because you hope for some personal gains. There is nothing wrong with a straight business

transaction—if you scratch my back, I'll scratch yours—but it is not morality. And this is all that the evolutionist seems to concede.

However, this objection is to miss the full force of the evolutionist's case. It is true that, causally, what is at work is a process aiming ultimately for individual reproductive benefit; but there is no implication that at the conscious level people will be scheming how best they can maximize personal benefits from any transaction. Rather, indeed, the opposite is the case. We are selfish brutes, it is true. But, laid on this is a genuine sense of morality. We do good because we think it is good. The evolutionist's case is that, precisely because we think the good is good, we function a lot better as co-operators than if we were always looking for personal gain (Wilson 1978). And, in any case, no evolutionist thinks that for every kind act you expect immediate return. Morality is like an insurance scheme. You throw your policy into the general pool and then can draw on it as needed.

I turn now to the stronger interpretation of the love commandment. Here, the need is to read the Sermon on the Mount (and related passages) rather literally.

> The love commandment is considerably heightened beyond natural morality when theological attention shifts to the issues of human sinfulness and the need for redemption. Then, the commandment is commonly interpreted as demanding the purity of heart insisted upon in the Sermon on the Mount. As Rudolf Bultmann (1951, 1, pp. 13–18) observes, the meaning of the antitheses of the Sermon on the Mount—which are introduced with the words 'You have heard that it was said to the men of old. . . . But I say to you . . . !'—is this:
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> > What God forbids is not simply the overt acts of murder, adultery, and perjury, with which law can deal, but their antecedents: anger and name-calling, evil desire and insincerity (Mt. 5:21f., 27f., 33–37). What counts before God is not simply the substantial, verifiable deed that is done, but how a man is disposed, what his intent is. . . . *God demands the whole will of man* and knows no abatement in His demand . . . What, positively, is the will of God? *The demand of love.* "You shall love your neighbor as yourself!" . . . The demand for love surpasses every legal demand; it knows no boundary or limit; it holds even in regard to one's enemy (Mt. 5:43–48). The question, "How often must I forgive my brother when he sins against me? Is seven times enough?" is answered: "I tell you: not seven times, but seventy times seven." (Mt. 18:21f.par.Bit.)
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> Calvin ([1559] 1962, 354) further illustrates the radicalness of this second usage when he argues that we are totally condemned, whatever our intentions, if any "thought be permitted to insinuate itself into our minds, and inflame them with a noxious concupiscence tending to our neighbor's loss." (Wallwork 1982, 302–3)

I am aware that today's students of the New Testament warn that passages such as these should not necessarily be taken at face value.

The Sermon on the Mount, for instance, is probably not the verbatim report of a speech by Jesus, but something put together by one group of followers, radical Jewish thinkers facing hostility, in the early years of the Christian movement, from their fellow Jews (Betz 1985). "Enemies" in this context refers to immediate opponents and should not therefore (to move to a modern context) at once be generalized to include the Russians or Iranians. Nevertheless, many Christians have taken the love commandment in this strong way, and some still do—Quakers, for instance. So comparing it against the implications of evolutionary theory is more than a purely academic exercise.

I need hardly say that the modern biologist looks somewhat critically on this strong interpretation. The exhortation is to love everyone: family, friend, nodding acquaintance, and enemy, and apparently no distinctions are to be drawn. Indeed, one is positively to forgive enemies, virtually without limit. In at least two respects, the evolutionist sees the ethics emerging from his or her theory as breaking with this command.

First, there is the (intentional) lack of discrimination. Who is your neighbor? Everyone! The unknown child in Ethiopia has as much a moral claim on you as your own child. This is unacceptable to the evolutionist, and the reason becomes apparent as soon as we delve a little more deeply into the actual mechanisms which are thought to produce altruism (and subsequent "altruism"). Two such mechanisms stand out. We have encountered one already, namely kin selection. Because it is biologically advantageous that our relatives reproduce, we have evolved features and behaviors inclining us to help such reproduction. The reward comes, not in material gains, but in vicarious reproduction. The other supposed mechanism (for which there is sound empirical support) operates between nonrelatives and is known as "reciprocal altruism." As the name implies, the supposition is that altruism evolves as the result of a kind of exchange mechanism where we gain more from receiving the help of others than it costs us in giving help in return. Here, material return to us (or our relatives) is important.

I think it highly improbable that the kinds of altruism produced by these two mechanisms would not (in some degree) reflect the differences between the mechanisms. In particular, one would expect to find stronger kinds of obligation between relatives than between nonrelatives—"blood is thicker than water"—because the biological benefits are surely stronger, or at least more certain. A gene reproduced has a definite biological cash value. And as one encounters people further from one's immediate circle one would expect the

sense of obligation to fall away. The possibilities of reciprocation begin to fade. (Wilson [1978] discusses this point in some detail.)

I must emphasize (to anticipate criticism) that I am now talking *moral* obligation. No one denies that, for obvious biological reasons, you love your own children more than those of others. My claim is that these feelings will be backed by different degrees of moral sentiment. Nor should you let all of the talk of reciprocation delude you into thinking morality is impossible. I believe that the reciprocation is enforced by morality! A person can ask help of another, not return for help offered, but because it is right that the other extend help. You have an obligation to help me, and if you do not, then (in the name of morality) I and others regard you as beyond the pale, in some sense.

Furthermore, do note that I am not saying, callously, that we have no obligations at all to the Third World. Of course we have. It is just that most people feel that charity begins at home: the obligations of Americans are greater to the children of the ghetto than to the children of the desert, because the former are in the American community to a degree that the latter are not.

The evolutionist breaks from the stronger version of the love commandment in another way, also. While there are undoubted biological virtues in not hastily pressing for instant retribution against every slight, real and imagined, the reciprocation demanded by biology surely rules out an unlimited willingness to turn the other cheek (Mackie 1978). Nor is it likely that the moral sense produced by evolution would demand this of you. Such obviously maladaptive behavior could never have been produced and cherished by natural selection. There would have to be some early point at which abuse could be frustrated and barred. And one rather expects morality to back this frustration, rather than permitting ongoing personal attack.

My claim, therefore, is that if the Christian ethic is understood as being based on the stronger version of the love commandment, then there is conflict with the implications of modern evolutionary thought. It is not my intention here to decide between the opposing claims. Ultimately, that is for others to decide. However, apart from noting the above-mentioned doubts by scholars as to the status of the stronger interpretation, I would point out also that, independently, there are good reasons for opting for the evolutionist's position.

Most important, the minimum point for accepting a moral dictate has to be its inherent appeal or plausibility to the individual. "Be kind to cabbages on Friday" would never be accepted because it seems so ridiculous. More than that, it is inconsistent with the attitudes that we have in other moral matters. At the most trivial

level, for instance, morality is not the sort of thing that seems to come in and out of force on different days of the week. (What I am doing here is suggesting that one must, at a minimum, get one's moral beliefs into some reasonably harmonious set—what John Rawls [1971] describes as a state of "reflective equilibrium.")

In like fashion, I suggest that the evolutionist's understanding of morality accords much more with common intuitions and practices than does the strong interpretation. People do think that they have a special obligation to their families, and they likewise usually think that their first duties are to the poor of their own lands. People are far less likely to demand returns, even in the name of morality, of their children than of others. ("All you owe to me is that you do as much for your children as I have done for you.")

Furthermore, most people would think it quite irresponsible to let someone else sin against them 490 times. Long before this, the transgressor would have to be stopped. But, note how the very stopping itself would (as before) be done in the name of morality. You may well go on loving the sinner (even saying, you have an obligation to love the sinner); but you would claim that "for their own good, as well as that of society, they ought to be constrained." To think otherwise would be an abrogation of your moral duties.

At this point, perhaps, the response by the would-be strong interpreter is one invoking a rather extreme version of the divine command theory of ethics. It will be argued that our everyday moral intuitions are relatively limited. But, thanks to the words of Jesus, we now know that God demands of us very much more. Hence, our obligation as practicing, believing Christians is to follow God's will—blindly, if necessary. We have forced upon us what Kierkegaard (in discussing Abraham's preparedness to sacrifice Isaac) called "a teleological suspension of the ethical" (Green 1982).

In company with many Christians, I feel uncomfortable with a god who demands of us (what our nature leads us to regard as) the morally perverse. However, this response does point to the major area of ethical inquiry which yet remains to be discussed, namely that pertaining to foundations. Accordingly, to end this inquiry, I turn now to this topic.

ULTIMATE FOUNDATIONS

I have been looking at the kinds of ethical claims made on the bases of evolution and Christianity, respectively. (This is known as "substantive" or "normative" ethics.) It is necessary now to look at the grounds on which such claims are made: so-called "metaethics."

I suspect that many would argue that, if the evolutionist attempts to say anything interesting or significant, he or she runs into immediate problems. Allowing that the ethical sense has evolved in the way sketched above, supposedly (that is, in the eyes of the critic) this says nothing of reasoned justification. Grant that it is true (in either weaker or stronger sense) that we should love our neighbors as ourselves. The supposition that this is supported by the evolutionary process does indeed commit the naturalistic fallacy with a vengeance (Singer 1981).

I am sensitive to comments such as these; but I maintain that they miss the full import of evolutionism. Darwinian theory does speak to foundations, albeit in a negative sense. My claim is that the recognition of morality as merely a biological adaptation shows that there can be no foundation of the kind traditionally sought, whether by evolutionists, Christians, or others! I do not mean that ethics is a total chimera, for it obviously exists in some sense. But I do claim that, considered as a rationally justifiable set of claims about an objective something, it is illusory (Ruse 1986b). I appreciate that when somebody says "Love thy neighbor as thyself," they think they are referring above and beyond themselves. It is a binding commandment, unlike a mere subjective claim (like "I like spinach and I hope you do too"). Nevertheless, to a Darwinian evolutionist it can be seen that such reference is truly without foundation. Morality is just an aid to survival and reproduction and has no being beyond or without this.

Why should humans be thus deceived about the presumed objectivity of moral claims? The answer is easy to see. Unless we think morality is objectively true—a function of something outside of and higher than ourselves—it would not work. If I think I should help you when and only when I want to, I shall probably help you relatively infrequently. But, because I think I *ought* to help you—because I have no choice about my obligation, it being imposed upon me—I am much more likely, in fact, to help you. And, conversely (Mackie 1978, 1979). Hence, by its very nature, ethics is and has to be something which is, apparently, objective, even though we now know that, truly, it is not.

Clearly, here, the evolutionist and the Christian part company. Admittedly, there is no unanimity among Christians as to the true foundations of morality. While some subscribe to a divine command theory, others (no doubt impressed by arguments which go back to Plato's *Euthyphro*) would argue that there are independent standards of right and wrong to which even God subscribes. But, be this as it may, the Christian is surely committed to an independent,

objective, moral code—a code which, ultimately, is unchanging, and not dependent on the contingencies of human nature. (Of course, like any moralist, the Christian appreciates that different times and different places call for different applications of this code.)

This independence is expressly denied by the Darwinian evolutionist. Morality is an ephemeral product of the evolutionary process, just as are other adaptations. It has no existence or being beyond this, and any deeper meaning is illusory (although put on us for good biological reasons). Yet is this not too quick a conclusion? Consider an analogy. We see the moving train with our sense organs, which clearly show their adaptive value as we step smartly out of the train's path. But no one would deny that the train genuinely exists, whether we see it or not. Perhaps, therefore, the same can and should be said of morality. It is true that our awareness of right and wrong depends on evolved organs, and that such awareness has adaptive value, but this is not to deny the independent existence of moral standards (Nozick 1981).

Unfortunately, however, the analogy breaks down. Consider two separate worlds, identical except that one has an objective morality and the other does not. Humans could have evolved in both worlds to believe in exactly the same things! The two identical species could share thoughts about right and wrong. To suppose otherwise, that is, to suppose that only the world of objective morality could have humans believing in it, is to suppose an extrascientific channeling of events—a channeling which is quite antithetical to modern evolutionism. In short, therefore, in a sense, the objective morality is redundant. Its existence is irrelevant to human thought and action. (Things are quite otherwise with the moving train. I can imagine two worlds, different in that one of them does not contain large, fast-moving, life-threatening objects. Human evolution might have been quite different in the two cases.)

The paradoxical nature of this conclusion hardly needs stressing. God wants you to be good; but God's wishes and the existence of an independent morality are quite irrelevant to whether you will think you should be good and whether you are good. In fact, the situation is even worse than this. Suppose we had evolved in a rather different way. Suppose, to take an extreme example, we had evolved from termite-like creatures, rather than from savannah-dwelling primates. Termites need to eat each other's feces in order to regain certain parasites used in digestion, which are lost during the termites' periodic molts. With such a background as this, our highest ethical imperatives might be very strange indeed. We would live our lives in blissful ignorance of what God or objective morality truly willed.

Nor can the Christian save the day by taking a Kantian approach, arguing that objectivity in ethics does not imply something "out there" but is rather the condition which obtains when rational beings interact socially. Under this conception, ethics is regarded as a necessarily emerging relational product, rather as the truth of Pythagoras' theorem emerges as a property of right-angled triangles. Such a position might seem to save the day for the believer, for there is now no claim about independent standards, beyond and apart from actual, existing humans (Kant 1959; Rawls 1980).

Nevertheless, although I appreciate moves in this direction, I doubt the Kantian approach will do all that is required. Given social animals and the laws of nature, no doubt some form of reciprocation is demanded. Unfortunately, this reciprocation does not necessarily require morality as we know it. We have seen that "altruism" does not presuppose altruism. Suppose, for instance, we all thought like the so-called superpowers. One side dislikes and distrusts the other, feeling that it has an *obligation* to behave this way and to like only its own side. A way of existing together is thereby achieved, in itself no less rational than our present state. You might even say that it is more rational. Yet nothing resembling Christian morality is to be found. John Foster Dulles might have been very efficient at dealing with the Russians. He did not love them as himself.

Clearly, something has gone badly wrong, particularly when you reflect that, already, our evolution might have taken us away from the supposed true nature of morality. Perhaps we really ought to hate our neighbors, but we, poor fools, think otherwise! This consequence is absurd—to evolutionist and Christian alike.

CONCLUSION

Right at the end, therefore, I am forced to conclude that the following-through of the implications of modern evolutionary theory causes severe problems for the practicing Christian. I agree that most of the supposed roadblocks to faith are less than troublesome. Indeed, in many respects I believe that a full understanding of modern evolutionary theory even helps to solve problems which still worry many Christians considerably. I refer, particularly, to the realm of sexual behavior. Furthermore, even with the Christian's central love commandment, I suggest that there is much in evolutionism acceptable to the majority of believers, although, of course, I would not pretend that everyone would be happy with my conclusions. (But, what position would be willingly embraced by all Christians?)

However, when it comes to ultimate foundations, the evolutionist

and the Christian part company. For the evolutionist, morality—that which yields standards of right and wrong—rests in the contingencies of human nature. In an important sense, therefore, there are no ultimate foundations, just a biological illusion of objectivity. For the Christian, morality simply has to be something more than this, even though the precise nature of "more" would be unpacked differently by different people.

This gap between evolutionist and Christian should not be minimized. If the Christian points out that it just so happens that what he or she believes by relevation ("Love thy neighbor") coincides with what the evolutionist finds emerging from the natural process ("Love thy neighbor"), the evolutionist protests that this is altogether too much of a coincidence to be shrugged off. That we humans should just so have happened to have evolved to that very morality which is endorsed by God imputes a teleological flavor to the course of evolution which is alien to modern science.

I do not say that no reconciliation could or should be sought. One might, for instance, argue that God so arranged natural laws and the initial ordering of matter that the correct morality was bound to emerge. However, this kind of predetermination is certainly not acceptable to all Christians. To say the least, such a view puts in shadow the effectiveness of human freedom, not to mention its making God directly responsible for the ongoing cruelties which accompany the struggle for existence.

But I say nothing now that has not been discussed by Christians for generations. I simply conclude by reiterating the tensions I see between the evolutionist's understanding of morality and the claims of the Christian. That troublesome relationship between science and faith seems still to be with us.

NOTE

1. The point is not that there is a contradiction between evolution and Christianity, but that—evolution giving us no moral rules—Christianity calls upon us to rise above our brute natures.

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