Justification Through Biological Faith: A Rejoinder

ROBERT J. RICHARDS

Committee on the Conceptual Foundations of Science The University of Chicago, IL 60637 U.S.A.

A philosopher is often more fortunate in his critics than in his supporters. Though I have not found enough of the latter to test out this bromide, I am sensible of the value bestowed by colleagues who have taken such exacting care in analyzing my arguments. While their incisive observation and hard objections threaten to leave an extinct theory, I hope the reader will rather judge it one strengthened by adversity.

Let me initially expose the heart of my argument so as to make obvious the shocks it must endure. I ask the reader to grant that altruistic behavior can be empirically justified, that is, to allow that we have evolved under the aegis of kin and group selection (or comparably effective mechanisms) to heed the community welfare, to be moved to aid the distressed even at cost to ourselves, and to approve of altruistic behavior in others. Granted this empirical account, I then attempt to show how ethical propositions, that is moral 'ought'-propositions and appraisals, can be justified without committing any fallacy. My strategy is to reveal that any ethical framework that might be urged on us depends on a variety of empirical assumptions. I attempt to show, for instance, that philosophers who argue for the adoption of any normative framework — even that of modern logic employ a common strategy, namely to justify the adoption by showing that the framework sanctions certain empirical descriptions that are deemed well confirmed. This leads me to reject the common belief that inferring values from facts is ipso facto fallacious.

I then mount several justifications, moral justifications, for the conclusion that one ought to act altruistically. The first justification, which William Hughes has correctly isolated, is suggested in my discussion of the role of empirical considerations in ethical reasoning. There I illustrate how individuals might validly derive moral conclusions from factual premises. That argument can be further elaborated. First, it must be granted that human beings have evolved not only to reason theoretically according to certain logical rules (e.g., modus ponens), but also to reason practically according to certain moral rules (e.g., "From 'Action x enhances the community good,' conclude 'I ought to perform x'"). If that is so, then no fallacy is committed when someone reasons from the fact that a child is drowning to the conclusion "I ought to try saving this child." The rule of

altruism (in one of its forms) justifies the perfectly valid deduction. Hence, the supposed naturalistic fallacy is no fallacy. One might, of course, refuse to grant my evolutionary story; then we simply must wait to determine whether advancing evolutionary theory can empirically justify it.

My two further moral justifications come into play when the basic rule of altruism is disputed. Here, too, I ask the reader to grant certain empirical facts, namely that we have evolved in the way suggested. The justifications (in slightly varying form) then run: because we have evolved to be moral creatures, to act altruistically, we ought to heed the community welfare. The rule justifying this argument is not a moral precept, but a general rule of concept deployment: it has the form "From 'y is fundamentally x,' conclude 'y ought to act in x-fashion.'" Further justifications again might be sought for both the major premise of the argument and the rule itself. The justification for the premise would be supplied (or not) by advancing evolutionary biology; the rule would be ultimately justified by the methods philosophers usually employ — by showing that it preserves the validity of certain fundamental aspects of experience. A final moral justification simply points out that my strategy renders effective other classic justifications in moral philosophy.

The aim of this defense of evolutionary ethics, which often gets lost in the critical shuffle, is not to demonstrate the adequacy of the evolutionary explanation of the moral sentiments, rather to argue about the logic of moral discourse. My intention has been to show that if certain facts are true, they can justify moral judgments, to show that the supposed naturalistic fallacy describes no fallacy.

CELA-CONDE

Camilo Cela-Conde fingers Edward Wilson as the notorious contemporary advocate of evolutionary ethics. Wilson spins out a speculative evolutionary anthropology that depicts reciprocal altruism as the heart of the ethical attitude. Even Mother Theresa, he supposes (1978, p. 167), acts to secure heavenly recompense for earthly good deeds. Michael Ruse (1984) philosophically endorses Wilson's vision in a kind of gleeful Benthamism: he too discovers a selfish motive lurking behind every 'good' deed. Ruse agrees with most moral philosophers that no facts can logically justify normative propositions; but unlike his colleagues, he happily declares that moral precepts have no justification at all. Evolutionary biology reveals the healthy greed that supports our self-deluding altruistic sentiments.

Contrary to Cela-Conde's suggestion, RV (my revised version of evolutionary ethics) does not attempt to "complete" Wilson's theory, but rather to compete with it and Ruse's defense. (In conceptual evolution, as

in biological, similarity fosters competitive exclusion.) My own speculative story proposes a different foundation for the moral sense, namely a kind of selection that would shape a feeling for the common good, and not just for one's own good. In this effort I am on the side of the angels. Darwin himself (I cannot help but add) believed that the power of his theory of community selection resided precisely in its ability to explain the purely altruistic character of moral behavior. Though Wilson and Cela-Conde may try to recruit Darwin to validate their version of biological morality, they obviously cannot share their patriarch's consolation in that theory of moral evolution which removed "the reproach of laying the foundation of the most noble part of our nature in the base principle of selfishness" (1871, p. 98).

My own approach to evolutionary ethics, fortunately, does not depend, as Wilson's does, on the truth of a particular speculative anthropology. Its success does depend, however, on demonstrating that *if* the speculative part of RV is approximately true, then normative conclusions can be drawn from the supposed facts. This conclusion puts me in conflict with Ruse as well.

Cela-Conde believes that Darwin — and presumably Wilson — have wisely avoided what I unwittingly do not: namely, introducing an intentional component into the moral equation. Here again, I can seek historical protection. In the Descent of Man, Darwin recognized that we commonly assume that "a moral being is one who is capable of comparing his past and future actions or motives, and approving or disapproving them" (1871, p. 88). When an individual lapses morally, according to Darwin, he "will then feel dissatisfied with himself, and will resolve with more or less force to act differently for the future" (1871, p. 91). Now a conscious resolve that follows deliberation and permits defense of action, I take to be an intention. But whether or not my inclusion of the concept of intention can be historically supported, I offer several non-historical reasons in my essay for factoring intentions into moral evaluations. That we cannot easily assess intentions even in our own case should not preclude appeal to them in rendering a satisfactory ethical theory. After all, Darwin's theory required assumption of some transmitted hereditary material, but he had no way of empirically pinning it down.

Commenting on the last part of my essay, Cela-Conde remarks approvingly on my analysis of the moral term "ought," but thinks I have set my sights too often on a windmill — the naturalistic fallacy — that R. M. Hare has already disarmed. Actually, Hare too sees it as a giant, and cautiously submits to "Hume's Law ('No "ought" from an "is")" (1981, p. 16). But I remain stubbornly in the saddle. Cela-Conde is right to suggest, however, that a successful tilt against the naturalistic fallacy will have faint impact on moral behavior, even on that of philosophers.

GEWIRTH

Alan Gewirth tests my revised version of evolutionary ethics with the cold steel of his own moral theory. It is a formidable instrument that has gained the admiration and healthy respect of most moral philosophers, and my own debt to his theory is uncomfortably obvious. In brief form, Gewirth argues that moral rules have obligatory status because they conform to rational criteria, such as universalizability and consistency, which logically require of an agent recognition of certain basic rights of freedom and well-being for oneself and any other agent. The fundamental difference between Gewirth's view and mine is that for him, moral justification comes sole ratione, whereas I believe we are morally justified through the good works of natural selection and cultural evolution.

In a typically clean and chiselled way, Gewirth brings into relief the structure of the generalized moral analysis: Who does What to Whom, and Why? This directive question isolates four essential elements of the moral situation — the agent, the action, the recipient, and the explanation for the agent's action. When Gewirth searches for the four correspondents in my essay, he finds, not a classically sharp delineation, but something more akin to a Braque cubist sketch. Yet even in Braque, below the apparent blurred and shifting surface, definite patterns emerge.

According to RV, the agent of moral action is the individual, not the community or group. The community acts as an evolutionary force, via natural selection, in the evolution of the moral motives of its members. A moral act is denominated such because two conditions obtain: the act is motivated by regard for the community welfare; and the agent intends to act on the motive. (These criteria imply the agent can justify the act.) Many instrumentally different kinds of acts can meet these two criterial conditions; the acts may be as various as there are ways to promote the community good. The recipient of the act may be any individual or group of individuals recognized by the agent as a member of the moral community. In explaining the agent's behavior, two accounts can be given, two justifications offered. First, an observer (or the agent) might causally explain the behavior by referring to the evolutionary development of the agent's moral sentiments and to the state of the agent's beliefs and intentions. Gewirth is right about one aspect of this sort of explanation: I do not argue for the truth of the evolutionary scenario. But then, I am not an evolutionary anthropologist. I simply ask the reader to accept my evolutionary story and that is enough for my purpose. The second kind of account that can be offered by an observer (or the agent) is moral. Here one argues that the agent's conduct was indeed virtuous because he or she acted from the motive of community welfare and had intended to do so. This latter account concludes that the action occurred because it was the right thing to do in the situation. Now slipping back a step, we might say that RV

explains or makes intelligible these two types of explanation of moral behavior, and other features of the moral situation as well. So Gewirth has caught me out. I do have shifting answers to his directive question; but those answers, I believe, form a deep pattern of responsible analysis.

Gewirth hones the cutting edge of his contrary theory with another question: How do humans recognize and approve of moral behavior? He credits me with holding that human beings recognize and approve of moral behavior "by reference to moral rules and ultimately by reference to a general principle or principles from which the rules follow." His kind acknowledgement, however, obscures a profound division between us: we interpret "by reference to" very differently. Gewirth believes that moral behavior is justified 'by reference to' rules that have a certain character — they have rational qualities that logically require the agent to accede rights of freedom and well-being to self and others. Thus what makes behavior moral is that it *conforms to* moral rules; and what makes rules moral is that they have the rational qualities of universalizability and consistency, and that they have certain logical implications. In this analysis "by reference to" only seems to mean "conform to."

I believe Gewirth imports an excessive rationalism into the moral situation. An observer, such as Gewirth himself, might be able to bring an agent's behavior under a moral rule and demonstrate that the rule has adequate consistency. This does not mean, though Gewirth suggests it does, that the agent could formulate the rule or justify it in those logical terms. Yet an agent who acted to help another in distress and intended only that (i.e., did not intended to act for a reward, knew no logic, thought rules existed only in baseball, etc.) would, I think, be commonly regarded as having acted morally. Moreover, the rule an observer detected in the act might not be universalizable or consistent in that abstract logical way Gewirth suggests: thus, the Inca priest who sacrifices a virgin a year for the community's sake would appear to act on a rule that in the abstract could not be justified; after all, the rule on its face does not promote the virgin's freedom and well-being or really that of the community. Yet just as the ancient Inca, we often act from motives - with the best of intentions that cannot be logically formulated into rules that are consistent, universalizable, or actually promote the well-being of others. Natural selection has fitted us out only to be fairly consistent and modestly rational, vet we can nonetheless be very good (as I tried to illustrate with examples of Hippocratic physicians and Inca priests).

An inquisitor might ask of the Gewirthian moralist: "Just because your rules have a certain logical quality, why does that make them moral rules?" The Gewirthian moralist does not have an effective strategy for answering this most fundamental request for a moral justification. He has no telling argument to justify the connection between logical character and morally insistent character (but see Gewirth, 1978, pp. 190–98). It is

at this juncture, however, that the evolutionary ethician can look to common descent to explain the share all men have in a causally insistent moral attitude.

Let me now concentrate on what seems to be Gewirth's principal objection to RV. He observes (and I certainly admit in my essay) that evolutionary processes can also account for immoral acts — e.g., when someone gives in to murderous impulses that natural selection has also instilled. But since I refer to evolutionary processes to help explain both immoral and moral acts, Gewirth charges that my account lacks the necessary specificity. In short, if appeal is made to the same cause to explain two quite contrary events, then the cause really explains neither. Further, Gewirth is not sure just what the evolutionary account adds "if 'careful ethical deliberation' may come to the moral principle that the community welfare ought to be promoted." The evolutionary explanation seems superfluous, if an *a priori* rational account can also be given.

Concerning the charge of lack of specificity, I have sketched in my essay what I take to be the specific causes of moral action: moral motives of altruism formed by kin and group selection; beliefs derived from cultural resources and improvable reason about what advances community welfare; and intentions to act on altruistic motives in light of these beliefs. These causes cannot — logically cannot — produce immoral acts. Immoral acts, though, may also receive an evolutionary account, but one which specifies different evolutionary conditions, different evolutionary selection pressures, different resulting motives, as well as different beliefs and intentions. What the evolutionary scenario adds, in addition to explaining the origin of altruistic motives and man's constitution as a moral being, is precisely an account of why it is that "careful ethical deliberation" might arrive at the fundamental moral principle of altruism.

If the evolutionary scenario is true, then man indeed is "ineluctably a moral being." Gewirth thinks this conclusion involves me in a contradiction, since I also admit that men act immorally. But this is no more contradictory than Aristotle's classification of man as a rational animal and then condemning Gorgias for making a logical blunder. The claim that man is ineluctably a moral creature means that by virtue of specific evolutionary processes, he has the *capacity* for acting morally. Aristotle meant no more when he classified man as rational, as well as a political-moral creature. (Incidentally, just as the evolutionary perspective does not require nature to be rational in order to have produced a creature with a rational nature, so it does not require nature to be moral in order to have efficiently — and thus contingently — caused a being with a moral nature.)

At the conclusion of his vigorous scrutiny, Gewirth touches on an issue that does cut deeply to divide the rationalistic from the evolutionary approach to ethics. He believes that reason can determine our ultimate moral ends. The evolutionary ethician, by contrast, conceives reason as

instrumental only; natural selection determines our ends. Thomas Huxley expressed the appropriate evolutionary attitude (when denying the inheritance of the consequences of circumcision): "There is a divinity that shapes our ends, rough hew them how we will."

HUGHES

In his careful and uncomfortably pointed critical analysis, William Hughes urges a logical scruple upon which he believes my arguments will founder: namely, that a conclusion validly drawn from true premises must be trivial. Since it would not seem that any fundamental moral propositions that I attempt to derive from the facts of evolutionary biology would be trivial, my arguments would appear to be invalid. I believe, however, that we can take this little calculus and add it to the charm of RV. In one clear sense, most of the moral judgments that individuals typically make, day in and out, are trivial. Indeed, all but philosophers would think it degenerate to doubt that the hundreds of examples of crimes and wholesale slaughter that assault our sensibilities from the newspapers, television, and radio justifiably deserve our moral condemnation. Even in cases where debate rages, say on the morality of abortion, it is usually not the moral principles so much as the facts that are in dispute: for example, Has the fetus attained such a degree of humanity that its rights have equal standing with those of the mother?

As Hughes recognizes, the germane sense of "trivial" here is logical: namely, a conclusion will be trivial if it validly flows from premises. Triviality in this sense does not mean "unimportant," "commonplace," or "generally accepted," though Hughes is right to suggest that substantial doubt about a conclusion indicates that the argument *may be* faulty. There is, though, a logical factor other than invalidity that would make a conclusion non-trivial, namely if the premises of the argument are either false or not known to be true. In themselves my premises (i.e., my evolutionary story) are at least contested, so my conclusion might be regarded as non-trivial. However, I attempt to guard against this by stipulation (i.e., granting the truth of the premises) or, equivalently, by making the premises conditional. So my general rejoinder to this objection simply is that *if* certain facts of evolution are true, then particular moral imperatives are indeed trivial, though only in the logical sense.

For the bulk of his reply, Hughes casts up many hard objections, hoping thereby to cause my arguments to stumble. He wants to suggest that my conclusions are non-trivial. I now have the chagrining and oxymoronic task of demonstrating that, after all, I have come to completely trivial conclusions.

Hughes first stops to consider how I provide empirical meaning for

certain terms of the theory. He urges that to pump life into words like "good," "beneficial," "aid," etc. by referring to the cultural traditions of a society, renders RV either perversely conformist — yea, fascistic — or spineless and vacuous. If there is unanimity in a community as to what are goods, then RV projects a society of complacent automatons. If members of a community harbor different notions about what is good, then any translation of value terms must be equivocal.

The first step in response to this objection must be to distinguish two sources, according to RV, of meaning for terms in moral propositions: the evolutionary structures, the moral syntax as it were, that impels men to protect and advance the well-being and life of the community; and the cultural traditions and rational acquisitions that fill in the content, that supply the moral semantics. These latter define exactly who constitutes the community and what the means are to preserve the life and well-being of its members. If there are other sources for the meaning of such terms, what might they be? I suppose one might appeal to some sort of Divine inspiration or rational intuition, but evidence and prudential reflection would seem to make these unlikely bets. The second step in response must be simply to recognize that even in primitive societies, whose members have been formed to heed the community good, individuals will interpret that good differently. Depending on the vagaries of their situations, they will utilize different semantic resources of the culture to give content to the common urge to advance the community good. Some individuals, for instance, will take the fetus as a full-fledged member of the community, whose welfare must be protected; others will exclude the fetus from membership. In this case, RV has two distinct advantages: it makes comprehensible such moral disputes; but it does not require us to regard either party to the dispute as immoral in their consequent action, since both will be guided by the moral motive of altruism. These advantages are hardly vacuous. Hughes complains that in a pluralistic society injunctions to altruism "will give rise to a host of inconsistent judgments which means that it can no longer serve as a guide to action." But this complaint simply misunderstands the aims of a moral theory, or at least the one I propose. RV does not intend to provide a list of specific do's and don'ts. That is the job of the casuist, who constructs such a list on the basis of moral theory and particular circumstances. Each of us, of course, is a casuist; and each of us attempts to illuminate our moral impulses in the pale light of our intelligence and the received wisdom of our culture. Where else can we turn?

Hughes finally strikes directly at my several justification of RV. He first attempts to undermine the analogy between the empirical foundations of logical theory and the empirical foundations of moral theory. He agrees that we can look to the beliefs of rational men for support of basic logical principles, but only because no rational creatures (save perhaps college

sophomores) have been found to dispute them. He denies that this is the case for basic moral principles. So my analogy, he says, fails. In advancing this objection, however, Hughes loses sight of a principal and necessary condition of my argument: that we have evolved in the way I suggest. This condition implies that we can count on moral men acquiescing in the general moral principle of altruism — for men are made that way. Hughes's counter-example, therefore, strikes no damaging blow.

But let me drop this condition for a moment. We know as a matter of experimental fact that those individuals who make reasonable action their business, that is, scientists, frequently enough deny a sound logical principle even when it stares them right in the face (just as moral men will sometimes deny a sound moral principle). Kern, Mirels, and Hinshaw (1983) found that of scientists (psychologists, biologists, and physicists) who had no formal training in logic, 11% failed to recognize, when presented schematically, modus ponens as a valid rule of inference and almost 60% failed to recognize the validity of modus tolens. Natural selection may instill certain propensities in us — to act in accord with simple logical and moral principles — but we must be enculturated into recognizing instances of these principles. Even then, both rational and moral men lapse, as every instructor of college sophomores surely knows.

The enculturation process, at least in our society, typically involves teaching children that they are members of a community and that as such their wants and needs have no higher value than those of others — but no lower value either. We learn (or should learn) that to be a member of a community of ends entails obligations to both others and self. Consider Hughes's case of the wife in thrall. From our enlightened perspective, we would recognize her as a member of the community and that as a moral person she ought to protect the rights of an abused community member, namely herself. If she adopts this attitude and walks out on her husband, this would be a moral, altruistic act. But perhaps she is not as morally refined as we. Perhaps she simply gets tired of being a slave and abandons her master. If her own preservation were a motive, she would not have acted morally, but not immorally either. As a casuist might put it motivated by self-preservation, she would have performed a materially moral act, though not a formally moral one.

Hughes attempts to make my arguments falter in yet another way. He observes that it would be surprising if the meaning of moral terms did not evolve over time. Hence the principle of altruism, even if it had originally been established in the human species through evolution, need not forever determine the meaning of moral action. After all, it might be that our higher culture now encourages moral evaluations of a radically different kind: James Thurber has one of his very civilized characters judge that a good sonnet is worth any number of old ladies.

There are two ways in which the meaning for "moral action" might

change. First, as I urge in my essay, specific actions once deemed moral (e.g., the sacrifice of virgins) might come to be regarded as no longer such. These changes would be due to cultural evolution: we would come to see that certain acts were not really conducive to the community welfare. But it might also happen that most people begin to take seriously the Southern California 'moral' code. That is, the last vestige of altruism might atrophy and people commonly might not only act according to the principle "if it feels good, do it," but they might also learn to call that the "highest moral principle." I believe this latter occurrence would be as probable as people generally and upon due consideration adopting as logically valid the principle "if A, then B, but B, therefore A." We would, I think, regard these as cases in which men have become rational and moral in name only. I certainly believe that early in our evolutionary history, those proto-men, our ancestors, were neither moral nor rational in our sense (which is to say, they simply were not moral or rational at all). The future course of evolution — perhaps punctuated by the bomb — may lead us back to our past condition. Who knows? I am warmed, however, by the wisdom of natural selection, which will likely forestall the evolution of homo californensis.

THOMAS

Laurence Thomas ascribes to me the assumption that "the canons of rationality and the precepts of morality have roughly equal survival value." He then sets out to undercut this assumption and draw from his counter proposal some apparently lethal conclusions for my version of evolutionary ethics.

Thomas shows that an ingenious philosopher can imagine situations in which it would be to an individual's benefit (i.e., his biological advantage) not to follow the precepts of altruistic morality. For instance, when the person generally cannot trust others in the society to act as altruists, he and his seed might suffer greatly diminished fitness as others take advantage of his selfless acts. In general, Thomas points out, an altruist will have biological advantage in the long run, only if most others in the society also adhere to the moral code; for in that desired consummation, the individual might expect reciprocity for good deeds rendered. By contrast, following the canons of rationality almost always confers benefit, regardless of how others act. As against what he takes to be my assumption, he drives home the principle that it is generally better to be smart than dumb, a principle he suspects that nature recognizes and I do not.

Thomas suggests that my erroneous conclusion has resulted from an elementary mistake in logic, a kind of slipped *dictum de omni*. He supposes that I have argued in this way: because altruistic morality has

survival value for the group — when nearly all members act altruistically — therefore altruistic morality confers survival value on each individual — even if others do not act altruistically.

In short, Thomas complains that I cannot give an *empirical* justification of altruistic behavior and thereby concludes that I cannot give any justification at all. Or as he succinctly puts it: "it is reasonable for individuals to follow the precepts of altruistic morality only if they can count on others to do so; and evolution offers no assurances to this effect."

Before getting to what I believe is a fundamental confusion upon which Thomas has based his objection — namely between empirical justification and moral justification — let me dispose of his initial accusation, which abets the basic confusion. He alleges that I assume moral and rational dispositions to have equal survival value. Emphatically I do not. Simply because I take both the rational and moral sentiments to have evolved. does not mean I assume them to confer equivalent benefits. Both the human thumb and heart have evolved, but I suspect they confer different degrees of advantage. Further, I presumed - and asked my reader to grant — that the unit of selection in the case of moral behavior differed from the unit of selection for other behaviors, and thus that the units receiving benefit differed. If group selection has produced the moral sentiments, then the recipient of advantage when these sentiments are exercised must be the group (or other community members), not immediately the individual agent. Certainly the individual who chooses to act altruistically could not justify his or her behavior on the basis that it conferred a biological benefit to self — he or she could not justify it on those empirical grounds, since by definition the altruistic act benefits the recipient. But such an individual might justify altruistic behavior morally. And that is the kind of justification I defend in the last part of my essay.

Thomas, I believe, has confused the two kinds of justification that must be kept distinct: empirical justification and moral justification. I asked the reader to grant that altruistic behavior can be empirically justified, to allow that we have evolved under kin and group selection to heed the community welfare, to be moved to act altruistically. By stipulation, therefore, such selection must redound to the biological advantage — on average — of each member of the group, though the behavior selected for will always be directed away from self toward others. The possibility Thomas suggests (i.e., the lonely altruist in a community of egoists) is thus precluded by stipulation. Ultimately, of course, this stipulation may be unjustifiable, though I think there is evidence to support it. When Thomas convicts me of the logical error of inferring individual advantage from group advantage, it is his amphibological reconstruction that yields the misbegotten conclusion. He moves silently from the empirical justification — that is, the stipulation — to the moral justification. In respect to this latter, my

argument is from the presumed fact of group biological advantage (on average) for each act of altruism to individual moral (not biological) advantage for each such actor. My concern was to show that if we have evolved in the way suggested (despite the problems of the sort that Thomas mentions), then I could show how altruistic behavior could be morally justified.

Thomas's confusion of the two kinds of justification leads to an insidious contradiction, and thus demonstrates the real danger in not keeping them distinct. Let me quickly bear the spine of the danger. In my essay, I defined altruistic behavior in the common way, as action "directed to the welfare of the recipient and [that] costs the agent some good for which reciprocation would not normally be expected." Now Thomas assumes that I should be able to justify altruistic behavior by showing that it gives the individual a biological advantage comparable to that conferred by rational behavior — that is, to show altruistic behavior bestows benefit on the agent. He wishes that I had demonstrated altruistic behavior to be non-altruistic, which I confess I am unable to do.

TRIGG

Roger Trigg shares with the other respondents an attitude that marks a distinct turning point in modern ethics: he and his colleagues sympathize with the effort to allocate biology a larger role in the formation of moral theory. Like the others, though, Trigg refuses to go the whole orang. His reluctance stems largely from doubts whether evolutionary selective mechanisms can produce the appropriate sensitivity and scope that we associate with the moral attitude. He believes, in accord especially with Gewirth, that I have reserved too small a place for reason in ethical judgments. Nonetheless, Trigg does not directly deny the conclusion of my basic argument: namely, that *if* the facts of evolution are roughly as I have depicted them, then moral imperatives can be validly drawn from premises stating those alleged facts. At this point, then, I might simply accept a plea of *nolo contendere* and terminate my rejoinder.

But closer inspection reveals a subtle strategy, which must be confronted. Trigg attempts to show that it would be unreasonable to grant my evolutionary story. If he could demonstrate this, he could graciously allow me the hollow victory of validly deriving true moral imperatives — from false premises. In constructing his demonstration, he might have tried to pack away my evolutionary scenario by arguing that evolutionary theory itself logically prohibits the tale I tell. But he does not suggest quite this. He rather urges that it is highly improbable that evolutionary processes could produce the refinements we believe *ought* to characterize moral conscience. I will try to reduce the implausibility of my story, so as to restore at least

neutral doubt on the empirical questions, which from the arm-chair must suffice.

Trigg first raises several challenges to the *empirical* assumption that we have all evolved to abide the community good. He notes, for instance, that benevolence directed beyond the immediate family "could become positively harmful from the point of view of biological fitness." For "people who care for others who are unrelated, without any hope of return, instead of their family, are significantly *decreasing* the possibility of spreading their genes." He advances the same objection a little later in asserting that "no motivation could conceivably be developed in us by evolution to offer help to those who are not related and who, we know, can never help us in return." The point of these objections is that evolution could not establish in us traits (such as moral feeling) that did not benefit us or our genetic representatives. Three observations may be made here to assuage the sting of this objection.

First, there is no evidence that the many acts of kindness toward non-kin which individuals actually perform every day impair "significantly" their reproductive capacities. Recall, it was Scrooge, not Cratchit, that came to a genetic dead end. Wade (1978) has shown that we need not assume that group and individual selection work at cross purposes. Generally, being altrustic costs genetically very little; but for small tribal clans (the presumed society of our forebears), these thin strings of charity would bind a strong hand against competing tribes.

The second observation is that Trigg's phrases "without any hope of return" and "who, we know, can never help us" are (or should be) ambiguous. Is it nature or the reflective individual who does the hoping and knowing? From a biological point of view, what the individual hopes for or knows is quite irrelevant. The biological questions is, what can nature hope for or know: that is, what really are the likely consequences of particular behaviors, regardless of what an individual hopes, fears, or knows. The moral question, however, does ride on what the agent hopes or knows: if I jump into Lake Michigan to save a drowning philosopher because I hope or expect he will do the same for me - well, there is nothing moral about my act, even if it has good philosophical consequences. Acts performed for the purpose of self gain are commonly judged not to be moral (though not necessarily immoral). It may be that our genes 'hope' for reciprocation or that they 'know' we are increasing the chances of our progeny; but it is what we hope for and know that counts in moral evaluations. In the terms of my essay, Trigg has confounded "action" altruism and selfishness with "genetic" altruism and selfishness.

It might be that once we have moved out of the community of small tribes, altruism would begin to have deleterious biological consequences. In the very long run, we might devolve, so that any altruistic instincts toward non-kin would become completely stifled. Then our descendants,

if there should be any, might remember a time when altruistic but reciprocally foolish proto-men walked the earth. This unlovely prospect for the human race, however, in no way confutes the supposition that we have initially evolved in the way I have suggested, or rebuts the argument that from those supposed facts of evolution we can draw moral conclusions

A third observation on Trigg's argument is that he fails to give due weight to what he thinks supremely important in the moral equation: the role of improvable reason. Nature seems to have bequeathed us the criteria of similarity and proximity as signs of our kin. But our inherited cultural traditions and sharpened reason teach us that skin color, religion, and nationality are superficial, but that common humanity goes bone deep. It is not a lesson easily learned, of course. We do feel greater obligation toward our relatives, our neighbors, and those in our university community — something Trigg recognizes as morally appropriate. Yet this sort of moral discrimination becomes perfectly anomalous under a vague theory of moral rationalism.

Trigg, paradoxically, highlights a fact of emotion to make his point for reason. He asks why it is that if we are designed initially for moral behavior, we still have social institutions (e.g., family, promulgated codes of behavior, etc.) that urge us to virtue. If we are instinctively moral, why "all [the] agonising about why we should be moral"? These sorts of objecting queries assume that nature has acted rather unimaginatively in designing man. Trigg forgets that both social animals and human beings have evolved within complex social environments, so that nature, as it were, counts on such environments in realizing her 'hoped for' outcomes: fledglings may have the instinct to fly, but it takes an encouraging shove from the mother bird to get them on their way, and nature counts on this. And who doubts that the sexual response is instinctual, or that it can throw most of us into agony over its requiting?

Trigg suggests that my view entails that there should be "basic agreement in morality amongst mankind," which we fail to find. He also thinks my version of evolutionary ethics ignores the Christian's awareness of "human self-centeredness." But these implications are drawn, I think, not from RV, but from a slim appreciation of the resources of evolutionary theory. To claim that we come equipped with basic urges toward altruism does not imply — and I took great effort to show that it did not — that all cultures and all members of a society will necessarily react in the same way to those urges. Since culture mediates instinctive responses, different societies will surely enshrine different moral maxims (e.g., concerning the sacrifice of virgins, polyandry, etc.) Moreover, evolution has instilled a panoply of other urges that look to number one. The Christian doctrine of original sin finds ample empirical support in the evolutionary depictions of man the warrior and man (also woman) the sexual commando. But the

Christian doctrine of redemption can also be given secular translation by our natural drive toward altruism.

Let me finally turn to the principal assumption of Trigg's reply: namely, that "morality must be primarily a rational matter." Reason, in Trigg's view, must bring us to judge that we ought to help the beggar on our doorstep. We cannot trust our instincts in these moral matters; for, as Trigg insists: "The rational conviction that we should help someone is not the same as a natural inclination to do so."

While reason must have a role in forming our moral convictions (on this we agree), I regard the role as instrumental. What, after all, does it actually mean to say that reason does (should?!) determine our moral attitudes and choices? When the beggar comes a-knocking for a hand-out, we might indeed be immediately repelled by his appearance, angered by the inconvenience, and yet feel sympathy for his plight. Training and experience would caution rational reflection: Is this just a con? — Might he have brought this on himself? — Are there agencies that might better aid him? — He does look like my brother — Could my brother, or could I, ever be put in this situation? — Mother Theresa sees Christ in the poor — I, at least, see me. Now suppose after such deliberation we rationally come to the conclusion that essentially this beggar is a member of the human community, a person who has hopes and fears like ours, who truly needs help. But after such calculation has been made, then what? Even after we have coolly reasoned about the matter, utilizing the resources of our highly evolved Western tradition, we will have reached a conclusion, on rational grounds alone, that is hardly different from that reached on the last line of a mathematical proof. We may be mentally exhausted but still unmoved. Only if our rational calculation places the beggar in a light which evokes our social instincts toward a member of our community, will we reach for our wallet. And if we instead slam the door — after all, we missed the thirteen-week climax of Masterpiece Theater — what will be left is not a sputtering syllogism, but remorse, a feeling of failure toward the human community. Coming and going we are biological creatures. And to admit this does not denigrate our humanity. It elevates our biology, our evolutionarily human and moral biology.

REFERENCES TO DISCUSSION

Alper, J.: 1978, 'Ethical and Social Implications', in M. Gregory, A. Silvers, and D. Sutch (eds.), Sociobiology and Human Nature, Jossey-Bass, San Francisco.

Ayer, A.: 1936, Language, Truth and Logic, Gollancz, London.

Baier, A.: 1975, 'Intention, Practical Knowledge, and Representation,' in M. Brand and D. Walton (eds.), Action Theory, Reidel, Boston.

Baier, K.: 1978, 'Moral Reasons,' Midwest Studies in Philosophy 3, 62-73.

Baier, K.: 1958, The Moral Point of View, Cornell University Press, Ithaca, N.Y.

Banister, R.: 1979, Social Darwinism: Science and Myth in Anglo-American Social Thought, Temple University Press, Philadelphia.

Barlow, G. and Silverberg, J. (eds.): 1980, Sociobiology: Beyond Nature/Nurture, Westview Press, Boulder, Colorado.

Barnett, S.: 1980, 'Biological Determinism and the Tasmanian Native Hen,' in Montagu (1980).

Bebel, A.: 1879, Die Frau und der Sozialismus, Dietz, Stuttgart.

Bernstein, E.: 1890—1891, 'Ein Schüler Darwin's als Vertheidiger des Sozialismus,' *Die Neue Zeit* 9, 171—177.

Burian, R.: 1978, 'A Methodological Critique of Sociobiology,' in Caplan (1978).

Cannon, S.: 1978, Science in Culture: The Early Victorian Period, Science History Publications, New York.

Caplan, A.: 1980, 'A Critical Examination of Current Sociobiological Theory,' in Barlow (1980).

Caplan, A. (ed.): 1978, The Sociobiology Debate, Harper, New York.

Carnap, R.: 1956, Meaning and Necessity, University of Chicago Press, Chicago.

Cela-Conde, C.: 1984, 'Nature and Reason in the Darwinian Theory of Moral Sense,' History and Philosophy of the Life Sciences 6, 3-24.

Chagnon, N. and Irons, W. (eds.): 1979, Evolutionary Biology and Human Social Behavior: An Anthropological Perspective, Duxbury Press, North Scituate, Mass.

Crook, J.: 1980, The Evolution of Human Consciousness, Clarendon Press, Oxford.

Darwall, S.: 1983, Impartial Reason, Cornell University Press, Ithaca, N.Y.

Darwin, C.: 1871, The Descent of Man and Selection in Relation to Sex, 2 vols., Murray, London.

Darwin, C.: 1936, The Descent of Man and Selection in Relation to Sex, Modern Library, New York.

Eibl-Eibesfeldt, I.: 1970, Ethology: the Biology of Behavior, Holt, Reinhart and Winston, New York.

Ferri, E.: 1909, Socialism and Positive Science, trans. E. Harvey, Independent Labour Party, London.

Feyerabend, P.: 1975, Against Method, New Left Books, London.

Feinberg, J.: 1980, 'Legal Moralism and Freefloating Evils,' Pacific Philosophical Quarterly 61, 122-55.

Flew, A.: 1967, Evolutionary Ethics, Macmillan, London.

Frankena, W.: 1939, 'The Naturalistic Fallacy,' Mind 48, 464-77.

Fried, C.: 1978, 'Biology and Ethics: Normative Implications', in Stent (1978).

Gauthier, D.: 1978, 'Economic Rationality and Moral Constraints,' Midwest Studies in Philosophy 3, 75—96.

Gauthier, D.: 1967, 'Morality and Advantage,' Philosophical Review 76, 460-75.

Gewirth, A.: 1985, 'Rights and Virtues,' Review of Metaphysics 38, 739-62.

Gewirth, A.: 1983, 'The Rationality of Reasonableness,' Synthese 57, 225-47.

Gewirth, A.: 1982, Human Rights: Essays on Justification and Applications, University of Chicago Press, Chicago. Gewirth, A.: 1978, Reason and Morality, University of Chicago Press, Chicago.

Gibbard, A.: 1982, 'Human Evolution and the Sense of Justice,' *Midwest Studies in Philosophy* 7, 31—46.

Gould, S.: 1980, 'Sociobiology and the Theory of Natural Selection,' in Barlow (1980).

Gould, S.: 1978, 'Sociobiology and Human Nature: A Postpanglossian Vision,' in Montagu (1980).

Gould, S.: 1977, 'Biological Potential vs. Biological Determinism,' in Ever Since Darwin, Norton, New York.

Haeckel, E.: 1904, Die Lebenswunder: Gemeinverständliche Studien oder Biologische Philosophie, Kröner, Stuttgart.

Hare, R.: 1984, Moral Thinking, Oxford University Press, Oxford.

Hare, R.: 1963, Freedom and Reason, Clarendon Press, Oxford.

Hofstadter, R.: 1955, Social Darwinism in American Thought, rev. ed. Beacon Press, Boston.

Huxley, J.: 1943, 'Evolutionary Ethics,' in *Touchstone for Ethics, 1893—1943*, Harper, New York, 1947.

Huxley, T.: 1893, 'Evolution and Ethics,' in Collected Essays, vol. 9, D. Appleton, New York, 1902.

Jones, G.: 1980, Social Darwinism and English Thought, Humanities Press, New Jersey.

Kelly, A.: 1981, The Descent of Darwin: the Popularization of Darwinism in Germany, 1860—1914, University of North Carolina Press, Chapel Hill.

Kern, L., Mirels, H. and Hinshaw, V.: 1983, 'Scientists' Understanding of Propositional Logic.' Social Studies of Science 13, 131-46.

Kohlberg, L.: 1981, The Philosophy of Moral Development, Harper and Row, New York.

Kort, F.: 1983, 'An Evolutionary-Neurobiological Explanation of Political Behavior and the Lumsden-Wilson "Thousand-Year Rule," 'Journal of Social and Biological Structures 6, 219—30.

Lewontin, R., Rose, S. and Kamin, L.: 1984, Not in Our Genes: Biology, Ideology, and Human Nature, Pantheon, New York.

Lumsden, C. and Wilson, E.: 1981, *Genes, Mind and Culture*, Harvard University Press, Cambridge, Mass.

MacIntyre, Alistair: 1981, After Virtue, University of Notre Dame Press, Notre Dame, Indiana.

Mattern, R.: 1978, 'Altruism, Ethics, and Sociobiology,' in Caplan (1978).

Mayr, E.: 1976, 'Behavior Programs and Evolutionary Strategies,' in *Evolution and the Diversity of Life*, Harvard University Press, Cambridge, Mass.

McCawley, J.: 1981, Everything that Linguists Have Always Wanted to Know about Logic, University of Chicago Press, Chicago.

Montagu, A. (ed.): 1980, Sociobiology Examined, Oxford University Press, Oxford.

Moore, G.: 1903, Principia Ethica, Cambridge University Press, Cambridge.

Nagel, T.: 1979, Mortal Questions, Cambridge University Press, Cambridge.

Nagel, T.: 1970, The Possibility of Altruism. Oxford University Press, New York.

Prior, A.: 1949, Logic and the Basis of Ethics, Clarendon Press, Oxford.

Richards, R.: in press, Darwin and the Emergence of Evolutionary Theories of Mind and Behavior, University of Chicago Press, Chicago.

Richards, R.: 1982, 'Darwin and the Biologizing of Moral Behavior,' in W. Woodward and M. Ash (eds.), *The Problematic Science: Psychology in Nineteenth-Century Thought*, Praeger, New York.

Ruse, M.: 1984, 'The Morality of the Gene,' Monist 67, 167-199.

Ruse, M.: 1979, Sociobiology: Sense or Nonsense? D. Reidel, Dordrecht.

Sahlins, M.: 1976, The Use and Abuse of Biology, University of Michigan Press, Ann Arbor.

Schilcher, F. von and Tennant, N.: 1984, *Philosophy, Evolution and Human Nature*, Routledge and Kegan Paul, London.

Searles, J.: 1964, 'How to Derive "Ought" from "Is," 'Philosophical Review 73, 43-58.

Sellars, W.: 1948, 'Concepts as Involving Laws and Inconceivable without Them,' Philosophy of Science 15, 287—315.

Sidgwick, H.: 1902, Lectures on the Ethics of T. H. Green, Mr. Herbert Spencer, and J. Martineau, Macmillan, London.

Simon, H.: 1983, Reason in Human Affairs, Stanford University Press, Stanford.

Singer, P.: 1981, The Expanding Circle, Clarendon Press, Oxford.

Smith, J.: 1978, 'The Concepts of Sociobiology,' in Stent (1978).

Stent, G. (ed.): 1978, Morality as a Biological Phenomenon, University of California Press, Berkeley.

Suppes, P.: 1985, 'Davidson's Views on Psychology as a Science,' in B. Vermazen and M. Hintikka (eds.), Essays on Davidson: Actions and Events, Oxford University Press, New York.

Thomas, L.: 1985, 'Human Nature, Love, and Morality: The Possibility of Altruism,' in J. Fetzer (ed.), Sociobiology and Epistemology, D. Reidel, Boston.

Thomas, L.: 1983, 'Morality, the Self, and Our Natural Sentiments,' in I. Irani and G. Myers (eds.), *Emotion: Philosophical Studies*, Haven Publications, New York.

Thomas, L.: 1982, 'Law, Morality, and Our Psychological Nature,' in M. Bradie and D. Braybrooke (eds.), Social Justice, Bowling Green University Press, Bowling Green, Ohio.

Toulmin, S.: 1960, The Place of Reason in Ethics, Cambridge University Press, Cambridge.

Trigg, R.: 1985, Understanding Social Science, Blackwell, Oxford.

Trigg, R.: 1982, The Shaping of Man: Philosophical Aspects of Sociobiology, Blackwell, Oxford.

Trigg, R.: 1980, Reality at Risk: A Defence of Realism in Philosophy and the Sciences, Harvester Press, Brighton.

Trivers, R.: 1985, Social Evolution, Benjamin/Cummins, Menlo Park, Cal.

Trivers, R.: 1971, 'The Evolution of Reciprocal Altruism,' Quarterly Review of Biology 46, 35-57.

Wade, M.: 1978, 'A Critical Review of the Models of Group Selection,' Quarterly Review of Biology 53, 101-114.

Wade, M.: 1977, 'An Experimental Study of Group Selection,' Evolution 31, 134-153.

Wade, M.: 1976, 'Group Selection among Laboratory Populations of Tribolium,' Proceedings of the National Academy of Sciences 73, 4604—4607.

Williams, G.: 1966, Adaptation and Natural Selection, Princeton University Press, Princeton.

Wilson, E.: 1978, On Human Nature, Harvard University Press, Cambridge, Mass.

Wilson, E.: 1975, Sociobiology, Harvard University Press. Cambridge, Mass.