

Dutch Objections to Evolutionary Ethics

ROBERT J. RICHARDS

*Conceptual Foundations of Science,
The University of Chicago,
Chicago,
Ill. 60637, U.S.A.*

KEY WORDS: Altruism, C. Darwin, evolution, evolutionary ethics, naturalistic fallacy, Sociobiology.

While strolling the streets of Amsterdam, Sidney Smith, the renowned editor of the *Edinburgh Review*, called the attention of his companion to two Dutch housewives who were leaning out of their windows and arguing with one another across the narrow alley that separated their houses. Smith remarked to his companion that the two women would never agree. His friend thought the seasoned editor had in mind the stubborn Dutch character. No, said Smith. Rather it was because they were arguing from different premises. In recent articles, Stephen Ball (1988) and Bart Voorzanger (1987) have objected strongly to my defense of evolutionary ethics. In their reconstruction of my arguments, however, they have assigned to me premises different from those upon which my original defense stood. Their objections may demolish the arguments they have reconstructed, but fortunately my theory does not reside thereon. They have made Dutch objections.

Let me quickly sketch my defense of what I termed the "revised version" (RV) of evolutionary ethics. In my original article (1986a) and in the reply (1986b) I made at the time to the five critics kind enough to scrutinize my views, I proposed a possible evolutionary scenario, which was based on some important studies in evolutionary biology. I supposed that human beings evolved initially in small clans such that they often acted to benefit other community members without expectation of reciprocation and that they prized such behavior in others. I suggested that kin selection and natural selection on small groups might have engineered their altruistic dispositions. I further proposed that these other-regarding motives bred in the bone met the criteria that Alan Gewirth (1982, pp. 82–83) has identified as those necessary to establish a motive as moral, namely: that the agent takes it as prescriptive, universalizes it, regards it as over-riding and authoritative, and values actions so motivated simply because they bestow benefit on others. With these empirical assumptions made, I then attempted to demonstrate that such evolutionary facts could justify moral imperatives without committing any sin of logic. My defense,

in short, tried to show that my revised version (RV) of evolutionary ethics did not succumb to the naturalistic fallacy, principally because no such fallacy existed.

I discriminated two general kinds of objections to my defense, empirical and logical. I noted that some biologically astute critics might complain that my empirical scenario lacked evidence, that group selection was unavailing, that kin selection was insufficient, and so on. I handled these objections from the armchair. Though some evolutionary theorists would endorse my scenario and others condemn it, I wished simply to assume it. That is, I asked the reader to grant these supposed facts as true. For my purposes that was quite sufficient, since I wished to show that facts such as these could justify moral norms. The ultimate intention of my essay was to demonstrate that the usual and most potent objection to an ethics founded on evolutionary theory — namely, that any such scheme would be devoured by the naturalist fallacy — that this objection could be defeated. My defense, then, was logical and conceptual, not empirical. Though I reiterated this premise several times in my original essay and reply, it was the premise most often ignored by Ball and Voorzanger. They argued against me from different premises.

Before a full-frontal defense, I tried to prepare the ground in two ways: by illustrating the logical structure of justification and the uses that could be made of it; and by showing the typical ways philosophers and other right-minded people actually justified normative principles from fact — without committing any fallacy thereby. One clear meaning of justification is that a conclusion will be justified if it can be derived from acceptable premises by an acceptable rule. Take the usual sort of sophomoric example:

- (1) If Ronald Reagan is an ex-actor, then an ex-actor has occupied the White House for two terms;
- (2) But Ronald Reagan is an ex-actor;
- (3) Thus an ex-actor has occupied the White House for two terms.

Normally we would say that conclusion (3) has been justified by being derived from acceptable premises through use of the standard rule of *modus ponens*. The sarcastic voice from the back of the room might challenge this justification by asserting contrary empirical evidence, for instance, that the White House has been occupied by a *real* actor for eight years. The patient professor would then point out that if the premises and rule are acceptable to the interlocutors, then the conclusion is nonetheless justified no matter what the evidence against it. (This holds even if the premises or rule are granted ‘for sake of argument’ — for instance when one wishes to test the conceptual consequences of certain possibly true premises.) If the critic persists that (2) is not true, the dexterous professor might yet proclaim, all the better: we should then added the negative of (2) to our premises so that we can be sure the conclusion is justified. He

would, of course, confess that *modus ponens* justifies any conclusion as long as the premises contain a contradiction. Growing suspicious, the voice from the back might then ask for justification of a rule that seems to render an argument valid when it contains necessarily false premises. Now to answer his critic, the professor cannot seek a higher rule of logic to justify *modus ponens*, since *modus ponens* is virtually a first principle of the propositional calculus. The professor on this occasion will justify the rule either by threat of a failing grade or, in a more pedagogically persuasive fashion, by the way Aristotle justified the rules of the syllogism: by showing that the rules render valid those arguments that rational thinkers unhesitatingly recognize as valid. Thus the effort to justify such first normative principles requires an empirical appeal to actual practice.

There is a moral to this tale of sophomore logic. Consider a community of religious fundamentalists. That community finds acceptable — that is, not needing justification — a rule that says: if the *Bible* condemns an action, then it is morally wrong (i.e., *strictu dictu*, “From ‘x is condemned in the *Bible*’ conclude ‘x ought not be done’”). Now suppose that two members of that community are arguing about the morality of premarital sex. We can imagine one member justifying his conclusion that “premarital sex ought not be engaged in” by pointing out to the ill-read other member: “But the *Bible* explicitly condemns premarital sex — it’s fornication; you can look it up.” On this occasion, the morally imperative conclusion “premarital sex ought not be engaged in” would be logically derivable from a factual premise by a rule — comparable to Carnap’s meaning postulates (1956, pp. 222–32) — endorsed by both parties. Quite obviously normative statements can be derived from facts without committing any fallacy.

From the back of the room a critic might complain that the rule carries the normative burden, that the rule itself includes the moral imperative and thus a moral conclusion has not been derived from factual premises alone. But if that is the objection, the professor should not allow his critic to escape sophomore logic. He must point out that the justification of a conclusion and the justification of the rule by which the conclusion is drawn are quite different matters. The rule is not a principle ‘from which’ a conclusion is drawn, but one ‘by which’ it is drawn. (Here Lewis Carroll’s “What the Tortoise Said to Achilles” would be assigned.)

The carping student, perhaps now more hesitant but feeling certain that he would not condemn premarital sex — that student might inquire why the meta-moral inference rules of a fundamentalist community should be accepted. He would like to be shown how the rules of that community, or any other moral community, could be justified. What recourse is there, after all, beyond *first* principles? Here the shrewd professor would, of course, fall back on the strategy that all philosophers employ to justify the normative first principles of any discipline, whether of logic, esthetics, or

morals. He would explain that a normative first principle can be justified only by showing that it would itself justify conclusions we antecedently and clearly know to be correct but not conclusions we clearly know to be incorrect. In short, he would go over again Aristotle's strategy in justifying the rules of the syllogism, but now he would apply that strategy to the moral sphere. The fundamentalist judgment about premarital sex is not obviously correct for most moral agents, certainly not college sophomores. So that conclusion could not serve in the justification of the rule about the *Bible*, rather it would suggest the biblical rule might be inappropriate. But the usual conclusions drawn about Hitler's actions could serve as a test. For Hitler's actions stand out on an unobstructed moral plane, clearly visible to college sophomores, fundamentalists, and university professors alike. So any potentially justifiable meta-moral influence rule would have to lead to the conclusion that Hitler's acts were morally reprehensible: any rule that showed Hitler to have acted as a gentleman, to have performed virtuously in regard to the camps, that rule and the ethical system it grounds would be rendered falsified. Intuitively clear and commonly made judgments, then, provide the ultimate justification for moral inference rules of the kind here described.

It is important to point out that though these meta-moral inference rules are imperatives, they are not really moral imperatives, but logical ones. They enjoin the acceptance of a proposition of one kind on the basis of a proposition of another: they sanction the logical act of, for instance, accepting the principle "premarital sex ought be shunned," not the act of shunning early sex.

Now the justification of moral imperatives from evolutionary facts can, I hope, be shown clearly and persuasively. If human communities have evolved in the way suggested by RV, then we can well imagine that, on the basis of their constant experience of heeding the community good and holding altruistic motivation as over-riding and authoritative, community members will have formed for themselves simple rules of the sort "From 'action x promotes the community good' conclude 'x ought to be done.'" A community member might then, perchance, notice a drowning philosopher and, using a meta-moral inference rule of the type suggested, construct the practical argument: "Saving this philosopher promotes the community good, therefore this philosopher ought to be saved." In this evolutionary scenario, the community member would be deriving a moral imperative from a factual statement but would commit no error thereby.

In the evolution and growth of cultures, new knowledge will be accumulated and old beliefs discard. Over generations, community members will better understand what actually does contribute to the welfare of the group. These changing empirical beliefs will come to form the premises of their practical moral arguments. The Inca priest and his community believed that yearly sacrifice of a virgin was necessary to make

the corn grow; both he and other community members, including the virgin, took such sacrifice as a moral obligation. Now we think irrigation is more effective. If the priest acted, not for self-benefit, but for the welfare of the community, he surely performed a moral act in plunging in the knife, as much as it might be distasteful to us. In this respect, the priest would be no different from a modern fireman who, at peril of his life, makes a wrong turn in the burning building and consequently fails to find the crying child. In both cases a moral act would be performed, though through invincible ignorance an unfortunate (from our enlightened perspective) consequence would ensue.

Now a critically inclined member of a community might, in a cool hour, ask: Why ought I act for the community good? In this case, the critic would be calling for a justification of the meta-moral rule itself. Given the empirical course of evolution, as assumed in RV, two related justifying arguments could be used on such a critic.

To mount the first, we need initially consider the meaning of the concept "ought." Typically, "ought" implies that, given the antecedent causal matrix, some action will necessarily occur, provide no other events interfere. Thus the teacher admonishes the student: "if you study hard, you ought to pass". What the teacher means is: assuming that the student is of average intelligence, that he or she is not in love, that questions don't come from just those few pages in the text missing from the student's edition, etc., the student *must* pass. The use of "ought" suggests that the assumptions mentioned are not fully secure, so a cause could intervene to prevent the expected outcome, even though the student had studied hard. The rule for the deployment of "ought," then, is something like: "From 'y is enmeshed in causal matrix x' conclude 'y ought to act in x fashion.'" Now we could justify the rule of altruism from an argument of this sort: "Since all men evolved to act in accord with the community good (i.e., they have been causally formed to heed, value, and promote the community good), therefore all men ought to act for the community good." The premise would simply state the fact of altruistic evolution, that is, it would specify the causal matrix that obtains; and the rule leading to the conclusion would be that governing the disposition of the concept "ought." Again, a normative conclusion would be derive from a factual premise alone without committing any fallacy.

A second tactic requires a bit more reflection to perceive that a moral norm has been derived from facts alone. Reasoning together with the critic, we would first appeal to intuitively clear cases. We would ask, for instance, if he or she regarded Mother Theresa's work with the poor and dying as highly moral, and moral precisely because she acted only to benefit others and not directly herself. If RV is correct, as this scenario supposes, then the critic, having himself or herself evolved to promote the community good and regard such actions as authoritative, over-riding etc.,

the critic would necessarily agree: it is clear, Mother Theresa is a highly moral person. We would then present other cases that the critic would come to intuitive clarity about. The *fact of intuitive clarity* gathers for us certain cases of what we perceive as truly moral behavior and motives. Now the actions and motives that these cases present would be rendered moral by the rule of altruism. That is, the rule of altruism would be justified by showing it could warrant action and motives *we as a matter of fact* know to be moral, just as the rule of modus ponens is justified by showing it warrants arguments we as a matter of fact know to be valid. So again, we have a case of a norm being justified by non-normative facts without any fallacy.

Let me now turn to the specific Dutch objections of Ball and Voorzanger.

Ball's first objection to my defense of RV reappears in several guises throughout his essay. He (1988, p. 329) quotes a passage in which I rejected Edward Wilson's (1978, pp. 162–67) and Michael Ruses's (1984) claim that evolutionary theory installs "reciprocal altruism" or "contract altruism" as the highest kind of morality in human affairs. In the passage he cites, I agreed that evolutionary theory might *empirically* justify (that is, explain) reciprocal altruism and even demonstrate it to be pervasive throughout human interchange, but cautioned that in the same way evolutionary theory could also 'justify' murderous and aggressive behavior in men. I claimed that reciprocal altruism could not be *morally* justified in the way suggested (and, as a matter of fact, Ruse admits (1984, p. 177) that reciprocal altruism cannot be morally justified at all — he just happens to prefer it). Ball then remarks: "As against Wilson and others, Richards *assumes* that there is such motivation and behavior which is not, or cannot plausibly be explained as, resting ultimately on a selfish motive in terms of long-range, reciprocal benefits'. (p. 329) Ball goes on to suggest that there is evidence against my assumption and therefore (cutting to the gooey center of his several objections) that the premises have been cleared for a utilitarian, contract theory of morality.

Ball is right on one score. I do assume that humans have evolved to act altruistically on the appropriate occasions. But this is precisely what I require the reader simply to accept. I do not try to justify it empirically, though I think there is strong evidence for it. I want only to demonstrate what logically and morally would result *if* the facts of RV *were* true. If humans have evolved in the way suggested, then when anyone, such as Ruse or Wilson, would attempt a moral (as opposed to an empirical) justification of contract altruism or utilitarianism, they could not succeed. They would fail because as they turned to intuitively clear cases, they could not show selfish motivation to be authoritative, over-riding, etc. Ball's objection, then, is based on premises different from those I assume.

In stubborn Dutch fashion, Ball pursues this line of objection throughout the third section of his essay. For instance, he invokes Mill and Bentham to argue that evolution may have constructed us to act selfishly

in the depths of our genes, but yet have left us under the sunny illusion of acting altruistically as we cruise on the surface of conscious intention. (I discuss the relation of Darwin's theory of evolutionary altruism in relation to the moral theories of Bentham and Mill in my 1987, pp. 234–44.) Indeed, this biological subterfuge may “yield the most utility in the long run” (p. 330). Of course, maybe what Ball says is true. This is, in part anyway, an empirical question, which I think only further evolutionary investigation (with philosophical kibitzing) might answer. As for me, I simply assume otherwise and ask my reader to do the same.

In the fourth section of his essay, Ball momentarily enters the right premises. He recognizes that I've distinguished empirical justification (i.e., explanation) from moral justification. He charges, however, that at best I've only explained why people make the moral judgments they do, not that I've justified those judgments as authentically moral. Now this looks like a promising objection. Ah, but the charge ultimately rests on a misunderstanding of two words — “conformity” and “acceptable.” Consider an argument he reconstructs from my original essay:

- (1) Humans are dispositionally evolved to advance the community good;
- (2) Therefore, one ought to act altruistically.

So far, fair enough. But he understands that my justification of the inference from (1) to (2) is simply that “most people are so evolved that they do accept the conclusion. As Richards explicitly puts it, the *concept of 'justification' is that of conformity with accepted beliefs and practices*, i.e., justification amounts simply to a ‘large consensus’ or (near) universal agreement” (p. 337). Ball has, unwittingly I think, compressed my original definition and *its context* into the italicized pretzel — with a dash of ‘id est’ — I've just served up. In my essay (1986, p. 285) I put it this way:

“To justify” means “to demonstrate that a proposition or system of propositions conforms to a set of acceptable rules, a set of acceptable propositions, or set of acceptable practices.”

In context, this definition indicates that by “conform to a set of acceptable rules,” I meant that, for example, the propositions declaiming Socrates' mortality conform to — i.e., are governed by, logically consistent with — the first syllogistic figure in the mood BARBARA. If the Aristotelian syllogistic rule-pattern BARBARA is questioned, then one must — what is the alternative? — look to intuitively clear cases of rational argument to show that the pattern conforms to such cases and is inconsistent with notoriously bad arguments. The “conformity” mentioned refers not to, as Ball puts it, “what most people believe,” but to “acceptable” (not necessarily accepted) rules, like *modus ponens*, or, ultimately, acceptable cases — that is, intuitively clear cases of, for instance, rational arguments or morally good acts.

This conception of justification, only at a superficial level of analysis,

seems to imply merely “large consensus.” An intuitively clear case, as Descartes well understood, may be immediately opaque to the run of people. Thus when one justifies a logical or moral rule by appeal to its conformity with intuitively clear cases of acceptable practice, the justifier may have to work very hard to demonstrate that conformity. Ultimately, Ball takes “conformity” to be an empirical designation — i.e., “what most people believe” — whereas as I meant it to be a logical designation — i.e., a relationship between a rule in question and intuitively clear cases.

Ball continues to build on this misunderstanding. Referring to the above quoted set of propositions, he says (p. 337) that “the *fact* in (1), that evolution makes most people agree is conceptually irrelevant to establishing (2).” Upon his reconstructed premises, this assertion is, of course, quite correct. But my justification of (2) from (1) did not amount to that. I did not attempt to justify conclusion (2) from the fact that most people might agree with it, but by appeal to a rule governing the disposition of “ought” in relation to statements referring to an antecedent causal matrix. Further, I indicated that the rule for the disposition of “ought” would require a separate kind of justification, one that appealed to intuitively clear cases. But in both instances — the justification of conclusion (2) from facts stated in (1) and the justification of the rule by which the conclusion is drawn — the relation of conformity is logical, not empirical.

In section five, Ball tops off his analysis with a set of objections that root themselves back in the assumption that my defense has been empirical rather than conceptual. This Dutch analysis suffers not only from wrong premises, but from premises that sag into confusion about some distinctions fundamental since Kant: namely, the distinctions among an ultimate moral principle, a practical maxim that might conform to the principle, and the contingent circumstances and beliefs in light of which the maxim is formed and used in a particular practical judgment. The maxim “Bleed a person suffering from intermittent fever” embodies the best medical beliefs of fourth-century Greece, but would be ridiculed by a contemporary physician. When the Hippocratic physician acted on this maxim ultimately *because it conformed* to the principle of altruism, then he acted morally;¹ if he acted on the maxim because it generally meant a good fee, then at best he acted amorally. However, if a contemporary physician with standard knowledge acted on the maxim because he could hasten the final reward of a troublesome classics scholar, I believe we would judge him immoral.

But now back to Ball’s objections in section five. He suggests that I ignore other ordinary meanings for “morality” when I assert altruism as the highest principle and then fall into contradiction when I further claim that the meaning of morality has changed over different times and cultures (p. 340). First, what I claim is that moral maxims might change over time (in light of evolving knowledge and different circumstances), but that the

test of all maxims remains altruism. Second, for my purposes, it is quite irrelevant whether people ordinarily mean by “moral” ultimately something other than altruism. It is irrelevant for two reasons. First, I grant that a survey might show that most people today mean by “moral” something like refined rule-utilitarianism (Ball’s preference) — but that is an empirical question, which I have waved away by stipulation. I ask the reader to grant that we have evolved as RV outlines, so that our evolutionarily constructed altruistic motives meet the criteria Gewirth has identified as those sufficient to denominate a motive moral. Second, if RV is in fact true, then such a survey — taken by a prodding philosopher — would demonstrate that ordinarily people equate the altruistic and the moral. (Even without the assumption of RV, I believe such a survey would in fact endorse altruism as the highest moral principle — here I consult my intuitions.)

Voorzanger certainly has more title to Dutch objections, but in fact he often does carefully and correctly characterize my premises, though just as often quickly jumps over to a different set.

Voorzanger accepts my empirical assumption that men have evolved in the way suggested by RV. He appears willing to ride out the conceptual consequences. He acknowledges that the test of intuitively clear cases seems the only way to justify first moral principles (1987, p. 262), and agrees that Hitler will save us from moral disputes about ultimate principles. Indeed, he is persuaded that “an appeal to shared opinions on practical moral questions is our last resort in trying to *convince* others of the superiority of our own basic values”; beyond this “there is nothing more we can do” (p. 262). But after such admissions, he fails to follow up their consequences; rather, he stealthily changes premises.

Despite his acceptance of the proposal that men generally have evolved to act altruistically and prize such behavior and his admission that appeal to intuitively clear cases is the ultimate resort in justification, he yet supposes that a person, after lengthy discussion, might dispute that the highest moral principle is altruism. Such a person, he claims, would not be wrong, stupid, or a psychopath. In making such a claim, Voorzanger simply forgets the admissions he has just made. If all men generally have evolved to be altruists and to regard altruistic motives as over-riding, authoritative, etc., then how could some one of sound mind and well-formed psyche not be wrong to deny altruism as the highest principle? If such a person were not wrong, then he or she could only be mentally defective (and thus not even wrong) or psychopathic. To be a psychopath would mean that the recalcitrant individual would simply have escaped the finishing touches bestowed by natural selection. So it would seem that, given RV, a person who disputed altruism as the highest principal would have either to be wrong, defective, or psychopathic.

Thinking that I might retreat to higher ground after his first barrage, Voorzanger considers my argument that values can be derived from facts

if we apply the appropriate meta-moral inference rule (p. 262). He agrees that such rules govern practical reasoning and that they are not principles 'from which' conclusions are drawn. He then scrutinizes my particular example of how such rules might operate. In my original essay I proposed that a fundamentalist community might agree about the rule "Conclude as sound ethical injunction whatever moral leaders preach." With this rule one could argue:

- (1) The Pope condemns abortion;
- (2) The Pope is a moral leader;
- (3) Therefore abortion is wrong.

Now because of the different meanings that might attach to "moral leader" Voorzanger slyly suggests that it be interpreted, not as an empirical designation, but really a moral evaluation: "moral leader" really means *morally good* leader. So, he concludes, I have really slipped a normative statement into the premises and thus have not derived in (3) a moral imperative from facts alone.

Now this is a Dutch fish — a red-herring. The example could have been different, say the one I employ at the beginning of this rejoinder, i.e., "If the *Bible* condemns an action, it's morally wrong." Then it would be obvious that a premise such as "The *Bible* condemns fornication" is strictly a factual proposition. The point remains, values can be derived from facts without fallacy.

Voorzanger's next attacks my analysis of the concept "ought." He considers my example of moving from the premise "Lightning has occurred" to the conclusion "Therefore it ought to thunder." He argues that the "ought" could be replaced by its semantic equivalent — e.g., "Therefore it will thunder unless some event intervenes" — without loss of meaning. The same holds true, he maintains, in the justification of the conclusion "Each human being ought to act altruistically" from the premise stating the fact of the evolution of altruism. The term "ought," he objects, could be retranslated without loss of meaning to "each human being will most probably act altruistically if nothing interferes." Well, so what? Any definable word can be retranslated into its equivalent. The reverse might also be urged: wherever ever you have "x must happen, unless something intervenes," you can replace that phrase with "x ought to happen." The "ought" is a moral "ought," not because of its logical character, but because of the nature of the causal context to which it is applied — namely, man's moral nature (i.e., his altruistically disposed nature). The case of thunder is precisely the same: it is the physical process of 'lightening-producing-thunder' that makes the "ought" a physical-process ought. So the moral process of acting according to the evolutionarily derived disposition to altruism makes the "ought" a moral ought. If I were to say to Voorzanger, "You ought not shoot that innocent baby," I would in effect be saying (according to RV), "Since you have

evolved to heed the community good, being the kind of person you are, you won't shoot that baby, unless, of course, some strong passion or blinding hate gets the better of you." In such direct moral admonitions, the term "ought" also has performative force, which its semantic equivalent lacks. It suggests to the agent that the subject of his activity is a member of the same community: "Look here, Voorzanger that baby is also a human being, just like you, a member of the community to which you belong by birth, and if you recognize that, you must act accordingly." Such performative use of "ought" is intended to engage the altruistic dispositions of the agent in order to reduce the chances of intervention by extraneous causes.

I believe this analysis of the word "ought" not only captures the logic of actual usage, it conforms to the assumptions of traditional Aristotelian and Kantian theories about the ultimate object of moral predication — the character of the agent. Morally good acts — acts that 'ought' to be performed — are those caused by the appropriate internal motives, intentions, and beliefs, that is, by the person disposed in a particular way.

Reality is the last refuge of a philosopher. But in a war over conceptual issues, it offers scant cover from which to launch attacks. Voorzanger repairs to such protection when he finally argues that my scenario makes certain assumptions which, he believes, fly against current biological practice and understanding. I do assume that evolution has produced standard-issue human beings, that there is something like a 'human nature,' a set of generic properties realized in individuals whom we, on due consideration, recognize as members of the human species. With this assumption made, RV can show how it is possible for an individual to act altruistically toward a member of his or her community — since evolution has established standards for recognition of community membership. Moreover, this assumption allows one to understand how, in the course of long evolution, human individuals might learn that their community extends far beyond their original cultural group. As men grow in science and wisdom, they perhaps may come to see that their 'kind', that their community reaches to all individuals having a common biological nature. Under these circumstances, cultural evolution will have allowed a biological response — i.e., altruistic action that 'ought to occur' — to touch potentially all members of the human species.

Voorzanger (1987, p. 266), looking to David Hull, urges that my assumption of an evolutionarily produced 'human nature' is unwarranted:

... biologists like David Hull regard a species not as a class of which the members share certain characteristics, but as an individual whose parts are tied together through a common history From Hull's biological point of view, it makes no sense to consider Richards' immoral psychopaths as any less human moral members of society.

Hull does argue, as readers of this journal know full well, that what constitutes a species are causal bonds of reproduction, not epistemological

bonds of class inclusion or individual similarities. But Hull, while he has deep experience in biology, is principally a philosopher with a certain metaphysical ax to grind. Voorzanger, searching for empirically grounded biological practice, has instead cast his lot with a philosophical theory about which there is considerable dispute (see *Biology and Philosophy*, 1987, for venting of the view that species are individuals).

But let me meet this objection head on with two defenses. First, even Hull, on a clear Chicago day, would admit that not every outcome of human reproductive efforts is a human being. Causal outcome is simply not enough, lest we have to say that those bundles of unviable and disorganized tissues that are sometimes expelled (or taken) from an unfortunate woman's womb are ipso facto human beings. The results of human reproductive effort must meet certain minimum standards of similarity before we are ready to call them human. This view does not mean human nature must remain static — hardly the position that an evolutionist would wish to assume. But it does mean that if an organism lacks certain traits generally characteristic of a species during a certain period in its history, traits that we commonly use to identify members of that species, then such an organism will be excluded from consideration as a member of said species (an analytic truth, I believe). Most animals have evolved mechanisms for species recognition, only philosophical animals seem to have taken a different evolutionary path.

My second defense against Voorzanger's effort to show that my empirical assumption runs against the grain of current biological understanding is simply to observe that, in the end, this is a Dutch objection.

NOTES

¹ I have assumed that the reasoning of the Hippocratic in this case is something like: "I will bleed this person because such practice conforms to the accepted maxim; and I apply this maxim because I wish to cure the patient, not for gain, but because one should act for the welfare of those in distress."

BIBLIOGRAPHY

- Ball, S.: 1988, 'Evolution, Explanation, and the Fact/Value Distinction,' *Biology and Philosophy* 3, 317—348.
Biology and Philosophy, 2, no. 2 (devoted to the concept of species).
 Carnap, R.: 1956, *Meaning and Necessity*, University of Chicago Press, Chicago.
 Gewirth, A.: 1982, *Human Rights: Essays on Justification and Applications*, University of Chicago Press, Chicago.
 Richards, R. J.: 1986a, 'A Defense of Evolutionary Ethics,' *Biology and Philosophy* 1, 265—93.
 Richards, R. J.: 1986b, 'Justification Through Biological Faith: A Rejoinder,' *Biology and Philosophy* 1, 337—54.

- Richards, R. J.: 1987, *Darwin and the Emergence of Evolutionary Theories of Mind and Behavior*, University of Chicago Press, Chicago.
- Ruse, M.: 1984, 'On the Morality of the Gene,' *Monist* 67, 167–99.
- Voorzanger, B.: 1987, 'No Norms and No Nature — The Moral Relevance of Evolutionary Biology,' *Biology and Philosophy* 3, 253–270.
- Wilson, E. O.: 1978, *On Human Nature*, Harvard University Press, Cambridge.