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DARWIN'S EVOLUTIONARY ETHICS

The Empirical and Normative Justifications

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In the increasingly secular atmosphere of the nineteenth century, intellectuals grew wary of the idea that nature had any moral authority. In an earlier age, one might have looked upon the dispositions of nature as divinely sanctioned, and thus one could call upon natural law to ground moral judgment. Certain behaviors, for instance, might have been declared “against nature” or denominated “unnatural acts,” and thus morally forbidden. And one could have looked to examples drawn from nature for indications of virtue. For instance, in his little book *Quod animalia bruta saepe ratione utantur melius homine* (1654), Hieronymus Rorarius, papal nuncio of Clement VII to the court of Ferdinand of Hungary, compared the perfidy of human beings to the probity of elephants, “who care for their weak” and who “not only do not know of adultery, but think this act one of turpitude; for after copulating with females they do not return to their herd until they wash themselves in a stream” (Rorarius 1654, 21, 70). With the advent of Darwinian evolutionary theory in the mid-nineteenth century, nature seemed to lose its benign authority. Stripped of divine control, nature began to look like the enemy of humane morality.

Thomas Henry Huxley, Darwin's friend and critical defender, declared in a lecture given just before his death that individuals were obliged to fight against the “cosmic process,” since nature was com-

pletely indifferent to human welfare. In his lecture “Evolution and Ethics” (1893), Huxley maintained:

The struggle for existence tends to eliminate those less fitted to adapt themselves to the circumstances of their existence. The strongest, the most self-assertive, tend to tread down the weaker. . . . Social progress means a checking of the cosmic process at every step and the substitution for it of another, which may be called the ethical process; the end of which is not the survival of those who may happen to be the fittest, . . . but of those who are ethically the best. (Huxley 1902, 9:81)¹

Huxley launched a singular objection to any effort at constructing an evolutionary ethics, an objection that would gather potency during the twentieth century, namely, that any ethics based on evolution would commit the “naturalist fallacy.” Huxley didn't call it that; and the philosopher who named the fallacy, G. E. Moore, did not exactly formulate it in the manner of Huxley—though both had evolutionary ethics as their target (Richards 1987, chap. 7 and app. 2).² But it's essentially Huxley's formulation that provides the modern definition. The naturalistic fallacy, as it has come to be known, is the supposed derivation of a moral prescription—an “ought” statement—from premises that are descriptive only of empirical facts—“is” statements.³ Huxley granted that we might have altruistic instincts, as well as selfish impulses. But simply having altruistic or nominally moral impulses does not entail that we “ought” to follow them. That decision requires another judgment, a moral judgment, and cannot flow from the simple fact of having a particular set of evolved instincts, even if those be instincts to act for the benefit of others. The older modes of natural law theory, as well as the Darwinian appeal to our evolved nature, now, in the twenty-first century, seem highly suspect philosophically. The dangers of the easy identification of moral attitudes with natural dispositions appear obvious from the events of the late 1930s and early 1940s in Germany.

The Nazi biology of the period seems to offer the cautionary example of not heeding Huxley's warning. The moral of the tale is encapsulated in the title of a book by Richard Weikart: *From Darwin to*

Hitler (Weikart 2004). A more recent volume trumps the first: *Hitler's Ethic: The Nazi Pursuit of Evolutionary Progress* (Weikart 2009). These volumes lay the blame for Hitler's actions, partly at least, on the doorstep of Down House. The path from that doorstep led to infamy: "No matter how crooked the road was from Darwin to Hitler, clearly Darwinism and eugenics smoothed the path for Nazi ideology, especially for the Nazi stress on expansion, war, racial struggle, and racial extermination." More precisely the source of Hitler's regime of evil was ethics of a particular sort: "Evolutionary ethics drove him [Hitler] to engage in behavior that the rest of us consider abominable" (Weikart 2004, 6; 2009, 2). Though analyses of the kind offered by Weikart pretend to be disinterested, simply a factual account of the historical trajectory of Darwinian ethical theory, it is clear they are intended also to morally indict Darwin's general theory of evolution and his specific conception of ethics (Richards 2013, 192–242).

Even many of those who regard Darwin favorably assume that his ethical considerations were rooted in selfishness. As Michael Ghiselin, a Darwinian scholar, so delicately put it: "Scratch an altruist and watch a hypocrite bleed" (Ghiselin 1974, 247). Michael Ruse and E. O. Wilson, two scholars who couldn't be more committed to Darwinian evolutionary theory, nonetheless argue that our evolved morality has deceived us into thinking we act benevolently and altruistically for good, objective reasons, whereas our decisions flow from inherited epigenetic rules that "(unknown to us) ultimately serve our genetic best interest" (Ruse and Wilson 1986, 179).⁴ They maintain, in short, that what we might believe to be an altruistic act directed to the welfare of another is really a selfish act to enhance the propagation of our genes. In order that we guard against this Darwinian original sin of intrinsic selfishness, Richard Dawkins presumes that we have to escape our endowed nature and acquire, through learning, a second nature: "we must *teach* our children altruism," he urges, "for we cannot expect it to be part of their biological nature" (Dawkins 1976, 139).

Thus the usual view of Darwin's accomplishment is that he not only eviscerated nature of moral value, he left man morally naked to the world. I think it will come as something of a surprise to the proponents of Darwinism that Darwin, on the contrary, reconstructed

nature with a moral spine in the *Origin of Species* (Richards 2013, 13–54), and that in the *Descent of Man* he conceived his moral theory as removing "the reproach of laying the foundation of the most noble part of our nature in the base principle of selfishness" (Darwin 1871, 1:98). In what follows, I will sketch out Darwin's theory of evolutionary ethics and attempt to show that with some mild philosophical therapy it escapes the usual objections brought against it. First, however, a word about two kinds of justification.

EMPIRICAL AND MORAL JUSTIFICATION OF ETHICAL THEORY

In discussing the viability of a theory of evolutionary ethics, we must distinguish between a descriptive justification and a normative justification. A descriptive justification, say by a historian or anthropologist, would consist of two parts: a description of certain actions that members of a society would call moral or ethical (as well as those they would term immoral or non-ethical)—that is, a description of what society members believe someone in their community ought or ought not to do simply by reason of being a member of their social (as opposed to professional or legal) group; and then, the historian or anthropologist would have to provide empirical evidence that such descriptions are valid (i.e., members of the society do so characterize their behaviors—or might do so if required) and further evidence that the behaviors have causally derived from evolved moral attitudes or instincts.

Such an empirical justification might fail in two ways: the descriptions of the behaviors might be inadequate, that is, might not capture what members of the society actually regard as behaviors governing all members of their group; or the supposed causes of the behaviors are not what the justification claims them to be. Various evolutionary thinkers have advanced theories of moral evolution—Charles Darwin, Herbert Spencer (Spencer 1893), E. O. Wilson, Michael Ruse, Marc Hauser (Hauser 2006), Jonathan Haidt (Haidt 2007), just to name a few—all of whom assume that social groups have acquired, over long periods of time, behavioral attitudes that could nominally be called

“moral,” and that these attitudes explain the altruistic behaviors of the groups. Darwin and Spencer relied on both natural selection and the inheritance of acquired characters to explain the evolution of moral behavior; modern scholars, of course, have dispensed with the Lamarckian device. Other auxiliary causes are also invoked by advocates, from cultural learning and early training to linguistic codes and behavioral examples.

A thinker could advance an empirically justified moral theory, and yet a critic might still ask for normative justification. T. H. Huxley, in his lecture “Evolution and Ethics,” found that evolutionary ethics failed in just this manner. He had originally directed his animus against his old friend Herbert Spencer, but it’s obvious that his objections were also relevant to Darwin’s proposals in the *Descent of Man*. In the following, I will describe Darwin’s theory of morality, which is an empirical theory, and then consider whether a theory of the sort he devised can be empirically justified and then whether it can, despite Huxley’s objections, be morally justified.

DARWIN’S MORAL THEORY

Just before he read Malthus in late September 1838, and began to develop his ideas about natural selection, Darwin had considered what his incipient transmutation theory meant for human beings. It would have to explain the distinctive feature of the human animal, which Darwin and his contemporaries took to be moral behavior, not rational behavior. After all, in the British Empiricist tradition, reasoning amounts to the association of ideas, which are only faint sensory images. Animals are quite capable of such associations; many aristocratic Englishmen thought their hunting dogs showed as keen a rational ability as their valets. So it was moral behavior that seemed to distinguish decisively the hounds from the master of the hounds.

Initially, Darwin explained moral behavior following the utilitarian ideas of William Paley, the philosopher whose work he knew best from his Cambridge days. Paley defined the moral as what, in the long run, would be really useful for the individual or the community.

Darwin gave Paley’s rule of “expediency” a biological interpretation. He supposed that the social instincts—friendship, cooperation, parental care—which had been honed over long periods of time, were ultimately what was useful, and therefore what we meant by morally good (Darwin *Notebook M*, in Barrett et al. 1987, 552).⁵ Darwin read Malthus on 28 September 1838, and three days later further advanced his ideas about moral behavior. He believed he had discovered the roots of conscience in unrequited social instincts. He imagined what would count as the prick of conscience in an animal—being a sporting Englishman, he not surprisingly thought of his dog:

Octob. 3d. Dog obeying instinct of running hare is stopped by fleas, also by greater temptation as bitch. . . . Now if dogs mind were so framed that he constantly compared his impression, & wished he had done so & so for his interest, & found he disobeyed a wish which was part of his system, & constant, for a wish which was only short & might otherwise have been relieved, he would be sorry or have a troubled conscience.—Therefore I say grant reason to any animal with social & sexual instinct he *must* have conscience—this is capital view. (563–64)

At this stage in his theorizing, Darwin supposed that the social instincts were those impulses we regarded as quintessentially moral; and if a persistent urge to perform some such social act were thwarted by a stronger impulse, then the nagging, unfulfilled social instinct would be what we meant by a feeling of guilt.

Darwin further expanded his considerations of conscience in light of his reading of James Mackintosh’s *Dissertation on the Progress of Ethical Philosophy* (1836). Mackintosh, a distant relative of Darwin by marriage, sided with the likes of Shaftesbury and Hutcheson, contending that we had a moral sense for right conduct; he disputed Paley’s notion that pleasure or utility guided us in moral action. Mackintosh’s analysis of moral sense fit neatly into Darwin’s conception of the moral impulse as based in persistent social instincts: “Butler & Mackintosh,” he jotted in his notes during the summer of 1839, “characterize the moral sense, but its ‘supremacy’,—I make its supremacy,

solely due to greater duration of impression of social instincts, than other passions, or instincts" (Darwin, "Old and Useless Notes," in Barrett et al. 1987, 628).

Though he had already formulated his principle of natural selection by the time he read Mackintosh, Darwin continued to suppose that inherited habit was the root of the other-regarding instincts, presumably because his new device seemed to establish traits that benefited the actor, not the recipient of the action—he assumed the highest moral behavior aimed principally to aid others, not self. Darwin would only be able to apply the device of natural selection to explain moral instincts when he solved this problem of traits that benefited the recipient and not the actor. And he did solve the problem, but only in the short period before the publication of the *Origin of Species*.

The solution came with the unraveling of another difficulty. In the 1840s, Darwin began reading up on the social insects, especially honey bees and ants. In studying, for example, William Kirby and William Spence's *Introduction to Entomology* (1818), he puzzled over the origin of instincts in neuter insects—especially the instincts characteristic of the various castes of ants within a nest. Since natural selection operates on traits that allow the individual to reach reproductive age and pass on those traits, the instincts of worker ants and bees, which are neuters, present an obvious problem. As Darwin scribbled in the margin of volume 3 of Kirby and Spence's *Introduction*: "Neuters do not breed! How instinct acquired" (Darwin annotation on Kirby and Spence 1818, 2:55). The problem was compounded in the case of soldier bees, who sacrificed their lives in stinging intruders to the hive and thus eviscerated themselves. They instinctively acted, but with extreme prejudice to themselves.

Darwin came to his solution only in the throes of composing his *Big Species Book*, the abridgement and extension of which became the *Origin of Species*. In the chapter on instinct, he hit on the answer to the puzzle. He wrote:

The principle of selection, namely not of the individual which cannot breed, but of the family which produced such individual, has I believe been followed by nature in regard to the neuters amongst social insects. (Darwin 1975, 510)⁶

With the solution to the problem of the neuter insects, Darwin had a way of applying natural selection to explain traits that were not of an advantage to the individual but to the community. Natural selection worked on the whole hive or nest. Those hives or nests that by chance had individuals that cooperated in the work and protection of the community would have a better chance of surviving than hives or nests lacking such individuals. As the successful hives and nests sent out queens to establish new communities, the continued operations of natural selection would hone instincts and anatomy of workers to finely carve out distinctive castes with distinctive traits. In this way, the properties of the neuter workers would evolve, and other-regarding traits would be explained. Darwin would recruit this kind of community selection to explain those human social instincts that were costly to self but provided advantage to the family and wider community. And in the *Descent of Man*, he quite explicitly drew on the model of the social insects to lay the foundation for his theory of moral conscience.

Since his earliest theorizing about the transmutation of species and the place of human beings in nature, Darwin realized he would have to give an account of the distinctive character of the human animal, which for him was not rational ability but moral capacity. Darwin, as I've suggested above, was schooled in the British Empiricism of his grandfather Erasmus Darwin and was a careful reader of David Hume. Neither he nor others of this school would hesitate to attribute a modicum of reason even to insects, since reason could only be the more or less simple association of ideas, which themselves were but faint images of sensation—certainly characteristics not denied to lower animals. The unique feature of human nature, in Darwin's estimation, was the capacity for moral judgment as realized in the operations of conscience. And in the *Descent*, he devoted considerable space to developing an account of conscience.

Four features of the capacity for moral deliberation seemed to Darwin requisite for an adequate account of conscience: sufficient intelligence and memory to be able to compare past with present deliberations; language ability to codify rules of conduct for a social group; the acquisition of habit to refine behavior in line with community rules; and, most importantly, social instincts that regarded the welfare of the family and the community (Darwin 1871, 1:72). This last note

was perhaps the defining characteristic: the unselfish impulse “to act for the good of the community” (1:72). In order to explain the evolution of this kind of instinct, Darwin proposed a scenario based on the model of the social insects.

He imagined a community of social animals advancing toward a stage in which the social instincts had become well developed; then, with the gradual acquisition of higher reasoning ability and finally language, human beings, as we now recognize them, would slowly emerge. But how to explain the binding instincts that formed those proto-men into a real human community? Darwin thought the principal explanatory force would be natural selection operating on small clans. Those groups that by chance had individuals that cooperated with one another and sought the welfare of their kin and that of their fellows in the group—they would have the advantage over other clans that lacked altruistic individuals. Here is how Darwin put it in the *Descent*:

It must not be forgotten that although a high standard of morality gives but a slight or no advantage to each individual man and his children over the other men of the same tribe, yet an increase in the number of well-endowed men will certainly give an immense advantage to one tribe over another. There can be no doubt that a tribe including many members who, from possessing in a high degree the spirit of patriotism, fidelity, obedience, courage, and sympathy, were always ready to give aid to each other and to sacrifice themselves for the common good, would be victorious over most other tribes; and this would be natural selection. At all times throughout the world tribes have supplanted other tribes; and as morality is one element in their success, the standard of morality and the number of well-endowed men will thus everywhere tend to rise and increase. (Darwin 1871, 1:166)

Darwin added that the fundamental altruistic impulse would be augmented by two processes: individuals becoming responsive to “praise and blame” and individuals recognizing that other-regarding action might well be reciprocated. While both of these principles would un-

doubtedly be operative in a community, he thought that such principles, in themselves, produced a “low motive” for moral behavior (1:163). Authentic altruism was rooted in natural selection. The natural selection of those communities exhibiting members who were morally sensitive would ensure that moral behavior was not adventitious, not something that was only contingently related to human beings; rather, selection would instill such attitudes into the very fabric of human nature. In Darwin's estimation, morality was bred in the bone.

In his theory, Darwin had a place for learning and what we might consider cultural evolution. He envisioned proto-human groups, small tribal clans undergoing natural selection for altruistic behavior. But then the gradual development of intellect and the establishment of cultural habits would play a role: individuals in these groups would come to learn just who their brothers and sisters were and what measures were truly beneficial. They would eventually discover that superficial differences of skin color and head shape did not distinguish their group from the other group across the river. Thus as societies developed, members of tribal clans would expand their other-regarding behavior to neighbors, then to larger community groups, finally to members of the same nation and other nations—to mankind at large (1:100–101).

Darwin was persuaded that the histories of peoples, explored within the framework of evolution and natural selection, supported his theory of moral development. Such histories supplied an empirical justification of his moral theory. Today, a good many studies in behavioral biology and behavioral economics seem to lend general support to the empirical justification of Darwin's general view (Katz 2002). But what about moral justification? That is, though we may have evolved to have the impulse to help our fellows on this or that occasion, the question remains: “Ought we to help them?” And more generally, though human beings may have a set of altruistic impulses, is there a general argument that suggests those impulses “should” be followed? Put another way, can the Darwinian approach escape committing the naturalistic fallacy of moving from what evolution as a matter of fact has instilled as motives for behavior to justifying those motives as norms of right action?

Darwin himself seems to have anticipated the issue of moral justification, at least in an inchoate way. Recognizing the special character of the imperious “ought,” he asked in the *Descent of Man*: “Why should a man feel that he ought to obey one instinctive desire rather than another? Why does he bitterly regret if he has yielded to the strong sense of self-preservation, and has not risked his life to save that of a fellow-creature?” (Darwin 1871, 1:87). These would also be Huxley’s questions. Darwin answered by suggesting that the deeply instilled social instincts would be more persistent than the momentary though stronger desires for pleasure or other kinds of gratification. When these latter faded and the underlying social instinct remained unfulfilled,

man will then feel dissatisfied with himself, and will resolve with more or less force to act differently for the future. This is conscience; for conscience looks backwards and judges past actions, inducing that kind of dissatisfaction, which if weak we call regret, and if severe remorse. (Darwin 1871, 1:91)

The attentive philosopher will not, of course, be content with this answer, since it remains at the level of empirical fact. Yet, as I believe, it offers the opening wedge for a normative justification.

NORMATIVE JUSTIFICATION OF EVOLUTIONARY ETHICS

The crux of the assumed problem of normative justification is the gap between empirical fact and normative command. It seems as if no justification of norms based on facts can obtain. But part of the difficulty, I believe, has to do with the concept of justification itself. What does it mean to justify a proposition? Presumably it means providing compelling evidence for it. Of course, we want, in a regressive way, to make sure the standards for compelling evidence are appropriate, that they themselves are justified. As propaedeutic to tackling the problem of the nature of justification in the moral realm, we might first consider standards for evidence in scientific justifications of hypotheses.

Usually some relationship, principle, or law is justified through experiment or controlled observation. Popperians are wont to point out that such efforts at justification commit the logical fallacy of affirming the consequent (i.e., the problem of induction: no limited empirical observations can allow, according to the norms of modern logic, to conclude to a universal proposition). Yet the whole edifice of science is based exactly on justifying the laws of science by experiment and observation. The practice and success of science sets the standards for accepting laws and other norms. So even if one points out that according to the rules of modern logic, one cannot go from factual premises to normative conclusions, this does not settle the question. It certainly didn’t settle it in the general case of the establishment of scientific laws.

Quite typically we advance the moral proposition “You should not cheat” by asking: “What if everyone cheated?” The implicit answer that society would be in chaos is, of course, a factual reason for accepting the norm. That’s the justification, and, of course, it’s a typical strategy for justifying norms. When immigrants to the U.S. swear allegiance to the Constitution, they presumably do so for the reason that, all things considered, the society the U.S. Constitution mandates is of a certain empirical kind—that is to say, an orderly, Constitution-governed society supplies the justification for accepting the norms embodied in the Constitution. The ubiquity and success of the practice, as in the case of science, sets the standards for justification in the moral sphere.

Of course, one may be called on to justify the desire to live in a particular kind of society, but that’s another, independent justification. It’s comparable to asking why one should use a T-test as opposed to a Chi-square test in accepting a hypothesis in science, after the T-test has justified the hypothesis. In the case of the new immigrants assenting to the Constitution, they might simply say that, as a matter of fact, they prefer the kind of society that the U.S. Constitution mandates. So here is a typical two-stage justification, appealing only to matters of fact. So the first step in overcoming the naturalistic fallacy is to recognize there is no general fallacy of this kind (though there may be fallacious arguments in particular instances of going from facts to values).

Looking more precisely at Darwin's argument that moral instincts are persistent and that this supplies their unique character, a Kantian argument comes to the fore. Kant justified the a priori status of the categories of cause, substance, unity, and so on, by arguing that it made sense of or explained the character of experience, at least in the theoretical realm. But if we have evolved in the manner that Darwin has maintained, then we have come equipped with a set of persistent social instincts, which we are ready to identify as moral impulses because they have that persistent, special character. Now in a cool hour, if we reflect on these instincts and ask, should I follow these impulses as opposed to others, then the reflective answer must be "Yes, you ought"—since we have evolved so as to regard them as special, privileged, and of ultimate consequence. Thus by reason of our nature—that is, by reason of who we are—we recognize the morally imperative power of these instincts; we must recognize that power because that's the kind of creature we are. But what more is there to justification? One could keep asking the regressive question: "Yes, but what of the reflective judgment that these instincts have normative force—what justifies that judgment?" The regressive question can always be asked in any effort of justification; so either the justificatory buck must stop at some point or no justification is possible in any domain. But the latter is quite unacceptable; so the appeal to further justification must cease. Here is a case in which, from a meta-ethical standpoint, a normative framework that allows the justification of lower ordered norms is itself dependent on an empirical justification, namely, that of the evolution of human beings as altruists.

A related objection might yet be voiced, of the sort played out in Ronald Dworkin's book *Justice for Hedgehogs* (2011). The objector might say that an individual who binds himself or herself under the norms of the Constitution does so because of yet more remote values, say, the value of living a life that protects individual liberties. Dworkin remains convinced that the is-ought divide cannot be bridged. Only the whole system of values can justify a particular value that fits coherently into the system. I believe this tactic, however, is liable to the problem of infinite regress: attempting to justify each lower level value by a higher level value, that itself stands in need of justification. Unless

one breaks the circle with an appeal to principles outside the circle, the problem of justification would fall into Zeno's trap. The circle is broken by recognizing that typically we justify complexes of norms by appeal to empirical situations, and often justify single norms in the same fashion.

When Aristotle was formulating the norms of syllogistic logic, he sought to examine those kinds of arguments that people generally regarded as sound. His normative principles were justified by demonstrating that they rendered valid those arguments that individuals intuitively regarded as valid. That is, he justified norms by appeal to empirical facts. The individual who binds himself or herself under the rule of the Constitution does the same.

As I've already mentioned, Michael Ruse and E. O. Wilson have an objection to the normative justification of evolutionary ethics. This is based on the supposed non-objective character of the values instilled by evolution. In their article "Moral Philosophy as Applied Science," the authors grant that the empirical evidence is mounting that human beings have evolved so as to have altruistic impulses as part of their genetic endowment (Ruse and Wilson 1986). They maintain that, as part of this endowment, humans have been led to believe that moral prescriptions are objective, that they are given independently of human beliefs and desires:

Human beings function better if they are deceived by their genes into thinking that there is a disinterested objective morality binding upon them, which all should obey. We help others because it is "right" to help them and because we know that they are inwardly compelled to reciprocate in equal measure. (179)

Ruse and Wilson thus maintain that because moral impulses are part of our hereditary legacy, they are contingent: "No abstract moral principles exist outside the particular nature of individual species." They believe that this "is obviously quite inconsistent with the notion of morality as a set of objective, eternal verities" (186). The authors agree with the tired philosophical idea that values cannot be justified by facts.

The first response to the position of Ruse and Wilson is that they have a strange idea about what “objective” means. It’s rather surprising that they harken back to the religious idea that if God promulgated the moral code, then it would be objective—that is, eternal and binding on all human beings. Yet, one can immediately inquire about their notion of “objective” when it is applied to other kinds of propositions. “Objective” in mathematics, logic, and science means “not a matter of individual whim,” “recognized as valid independently of individual preferences,” “publically testable and confirmable.” Mathematical demonstrations and logical proofs can be perfectly objective without any external propositions against which they need be measured. In arithmetic, for instance, it is an objective fact that changing the order of the operands in addition or multiplication does not change the results, since the commutative law sanctions such moves—it justifies them. One can ask for the justification of the commutative and other such rules, but that is another matter, though one which can be adjudicated objectively as well—one could bring evidence to show using such rules produces a useful formal instrument. Just so, an act conferring benefit on another can be objectively justified if done intentionally and with an altruistic motive—such is the justification of moral behavior. To ask for a justification of the motive—why act altruistically?—is another request for justification, which then moves to the empirical realm: objective evidence indicates that is the way we have evolved. And so, when we reflectively consider our altruistic instincts, we naturally conclude they ought to be followed. But could we have evolved otherwise?

Ruse and Wilson seem to think that we could have evolved into some other kind of creature than an altruist; and it is also this possibility, they suggest, that makes our morality non-objective: we are contingent creatures. But if we evolved into another kind of creature, we wouldn’t be talking about human beings: the very meaning of “human” includes responsiveness to the needs of others. It could also be that humans, as we now know them, might in future evolve into a different kind of beast; but again, that would have no bearing on the objective assessment of humans as they now exist. If all copper suddenly disappeared from the universe, it would still be true to

say that copper conducts electricity; just so, if we evolved into a different kind of creature, it would still be objectively true that intentionally acting for motives of altruism is morally sanctioned. If we could see into the future and observe individuals who had our bodily form but were pitiless in the presence of others’ pain, who neglected the welfare of their children, who failed completely to cooperate with others—if such creatures were observed we would not likely call them human beings, but rather refer to them as some weird zombielike creatures, pod people who only look like us.

But this is science fiction. As far as we know, a race that lived in groups, had our mating characteristics, and produced offspring requiring long-term care—such a race that failed to cooperate with one another and neglected their offspring would, under the terms of natural selection, quickly become extinct. We can imagine a future universe in which fire did not consume human flesh, but in a real universe that would require the abrogation of the laws of physics and biology. The conclusion to be drawn is, I believe, simply this: the fact that humans have evolved—even contingently evolved—does not preclude there being perfectly objective truths about their nature and behavior, especially their moral behavior.

DARWINIAN MORALITY JUSTIFIED

The empirical justification of Darwin’s theory in most areas of biology has been established conclusively over the last 150 years since the publication of the *Origin of Species*. The *Descent of Man* extended his considerations to human beings and offered a compelling account of human moral behavior. In the last twenty years or so the evidence of the general empirical validity of Darwin’s conception as applied to the explanation of human moral behavior has gained apace, without concern for the philosopher’s problem of fact-norm justification.⁷

On the assumption that we have, as the evidence indicates, evolved basically in the way Darwin has argued, then we come possessed with a set of dispositions that constitute a necessary feature of what it is to be human. So the simple argument for normative justification runs:

if you want to be human—and you cannot help but want that—you ought to act altruistically in the appropriate circumstances. The judgment has the form of what is usually called an instrumental ought—for example, if you want to cut wood in the most efficient way, you ought to use a saw, since that's the best way to do it. It is sometimes thought that the *ought* of the moral injunction should be absolute: you simply ought to act altruistically. But we would not say that of an individual who lacks the requisite mental functioning, an individual so deficient as not to be able to discern an altruistic act or its circumstances. We, of necessity, make the argument in relation to the empirical subject before us—ourselves or others—and presume that individual to be a well-functioning human being. Then we put it to the person: if you want to be true to your human nature—and you do (since that is the way you are evolutionarily constituted)—then you ought to act altruistically.

One could yet ask the regressive question: But why should I as a human believe either that I do have such desires or that I have evolved in the way suggested? But at this stage, the moral justification has become the empirical justification, and the regressive questioning has been stanchied. It should be remembered that most all practical efforts at justification—from the promptings of one's mother to the coaxing of one's parole officer—are attempts to get the individual to recognize his or her own humanity and its deepest features. And this typical practice of human beings is the final justification.

NOTES

1. Huxley's animus was initially directed at Herbert Spencer's system of evolutionary ethics; but it was clear his objections would also have told against Darwin's conception. I have discussed Huxley's objections and Darwin's position in Richards 1987, chap. 7 and app. 2.

2. I have discussed Moore's position in Richards 1987, 323–25.

3. Sometimes this form of the so-called fallacy is attributed to David Hume. See Hume 1888, 469: "In every system of morality, which I have hitherto met with, I have always remarked, that the author proceeds for some time in the ordinary ways of reasoning, and establishes the being of a God, or

makes observations concerning human affairs; when all of a sudden I am surprised to find, that instead of the usual copulations of propositions, is, and is not, I meet with no proposition that is not connected with an ought, or an ought not. This change is imperceptible; but is however, of the last consequence. For as this ought, or ought not, expresses some new relation or affirmation, 'tis necessary that it should be observed and explained; and at the same time that a reason should be given; for what seems altogether inconceivable, how this new relation can be a deduction from others, which are entirely different from it." It should be noted that Hume does not reject this kind of inference; he only asks that it be explained. And he has his own explanation, which is not far from Darwin's—namely, it is based on a kind of moral instinct.

4. Ruse and Wilson argue that our genes deceive us into thinking we are making objective judgments in making moral decisions: "human beings function better if they are deceived by their genes into thinking that there is a disinterested objective morality binding upon them, which all should obey" (Ruse and Wilson 1986, 179).

5. Darwin in Barrett et al., 1987, 552: "Sept. 8th. I am tempted to say that those actions which have been found necessary for long generation, (as friendship to fellow animals in social animals) are those which are good & consequently give pleasure, & not as Paley's rule is those that on long run *will* do good—alter *will* in all cases to *have* & *origin* as well as *rule* will be given."

6. A comparable passage can be found in Darwin 1859, 242.

7. For example, the collection *Evolutionary Origins of Morality* has only one, passing mention of the naturalistic fallacy (Katz 2002).

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NINE

CROSSING THE MILVIAN BRIDGE

When Do Evolutionary Explanations of Belief Debunk Belief?

Paul E. Griffiths and John S. Wilkins

But then with me the horrid doubt always arises whether the convictions of man's mind, which has been developed from the mind of the lower animals, are of any value or at all trustworthy. Would any one trust in the convictions of a monkey's mind, if there are any convictions in such a mind?

—Darwin to Graham, 3 July 1881

EVOLUTIONARY DEBUNKING ARGUMENTS IN THREE DOMAINS

Two traditional targets for evolutionary skepticism are religion and morality. Evolutionary skeptical arguments against religious belief are continuous with earlier genetic arguments against religion, such as that implicit in David Hume's *Natural History of Religion* (Hume [1757] 1956; Kahane 2011, 121n10). Evolutionary arguments are also commonly used to support moral skepticism. For example, Richard Joyce's influential *The Evolution of Morality* argues "that descriptive knowledge of the genealogy of morals (in combination with some