

THE EVOLUTIONARY ROOTS OF MORALITY IN THEOLOGICAL PERSPECTIVE

by *Stephen J. Pope*

Abstract. Theological ethics can interpret the relation between evolution and morality in at least three ways. The reductionist approach holds that morality emerges because it is adaptive. The independent approach maintains that morality develops without registering the influence of evolution. Finally, the interdependence position holds that morality reflects the influence of evolution to the extent that the latter shapes human emotional capacities and predispositions, for example, those regarding reciprocity and kin preference. The third approach is more suitable for theological ethics, which attends to ways in which natural desires can be ordered to serve morality, for example, to be habituated to virtue, and to ways in which we must strive to curb or minimize their disruptive effects on human communities.

Keywords: evolutionary theory; morality; reductionism; theological ethics; theology.

For all the controversy over the evolution of morality, introducing the dimension of theology adds another level of complexity in that this discipline is as diverse and multifaceted as any other. Theology was classically defined by Saint Anselm as “faith seeking understanding.” Faith takes on a bewildering variety of forms, reflecting the fact that people are influenced by their own individual life experiences and family backgrounds and also by different histories, communities of origin, ethnicities, languages, and so on, and therefore reflections on faith generated from these diverse backgrounds will themselves be radically diverse. In one sense, then, there is no generic “Christian theology,” only Greek Orthodox, Lutheran, my own Roman Catholic, and so forth. And, of course, a variety of theological perspectives or schools develop within as well as across these different communions.

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Theology as an intellectual discipline attempts to help us to think more clearly, more adequately, and more profoundly about God and things related to God. Theology typically reflects upon its object, *theos*, “up close,” from a personal point of view characterized by commitment, loyalty, and trust. But because theology engages *logos*, it also strives to be rigorous, fairminded, and methodologically careful. The depth of the subject matter of theology is matched with its comprehensiveness: God and all things in relation to God. Intellectual honesty requires theology to accept truth from wherever it comes. God is the source of both reason and revelation, and truth from one source cannot contradict truth from the other. Disagreements in science and religion are capable of reconciliation, because these sources are two valid but distinct modes of apprehending what is true.

On theological grounds, then, we are required not only to acknowledge but also to appropriate critically the information and insights produced by the life sciences, including those pertaining to morality. The doctrine of creation is expressed in the Profession of Faith in God as the “maker of heaven and earth, of all things seen and unseen.” The doctrine of creation refers not just to the cause of the beginning of the world but even more importantly to a relation between the world and God—that of radical dependence of the former on the latter. It does not offer a final scientific explanation of that relation or of that cause, nor does it produce a scientific theory of how human beings (along with a lot of other things) were produced by the long and halting evolutionary process. Evolutionary theory provides the most plausible scientific framework for understanding the proximate means used by God to generate species, including *Homo sapiens*.

EVOLUTIONARY ROOTS OF MORALITY

How might theological ethics itself approach the “evolutionary roots of morality”? Resolving this question depends on what theory of evolutionary “roots” is being proposed. I will examine three distinctive interpretations of evolutionary “roots,” but before doing so I would like to make two generalizations. First, most evolutionary theorists seem to agree that human communities have evolved to need, in some form or other, the social institution that we call morality. Neuroscientist Antonio Damasio (1994) believes that morality has its origin in the emergence of the capacity for suffering and the awareness of significant vulnerability to further suffering, made possible by an evolved ability to remember the past, to anticipate future events, and to make and execute plans affecting the future. The primatologist Franz de Waal (1996) suggests that we have evolved, as social animals, to need reasonable degrees of order in community, widely shared moral standards that can organize interactions in a way

that minimizes conflict, reliable ways of identifying property ownership, commonly held arrangements regarding mating and the rearing of children, and some trust that the community will provide justice in cases of intracommunal conflict and necessary defense in the face of intercommunal conflict. These are, not coincidentally, all the object of the “second table” of the Decalogue—those precepts of the Ten Commandments that govern relations between human beings, from honoring parents and not killing to the prohibitions on theft and adultery—but also of most other moral codes as well. I take it that there is no specific biological drive for morality, but rather that as social animals we are constituted in such a way that morality is a feature of all human communities.

The second generalization is the simple claim that morality depends on “evolutionary roots” established in human physiology, because everything human depends upon the biochemical and neurological substrates that are necessary conditions of human action. Moral nobility need not be identified with disembodied cognition or volition. Love, altruism, or other free acts of the will, Damasio properly notes, are not thrown into doubt by the fact that they are made possible by brain chemistry, any more than they are thrown into doubt by the sheer fact that they contribute to a person’s survival or are transmitted by proper social and emotional nurturance in childhood.

Biological substrates can sometimes be much more than simple “necessary conditions for action,” though. They can at times give positive support for what we would consider morally appropriate affections or attitudes. For example, the body produces the chemical substance oxytocin, which influences a wide range of behavior, including maternal caregiving and emotional attachment between sexual partners (Damasio 1994, 122). More broadly, the performance of altruistic acts can be accompanied by “positive somatic markers” (see Damasio 1994, 176ff.). They can also have the opposite, less desirable effect, which I will discuss in a later section.

Disagreements arise over the relation between morality and evolution. Some disputation is occasioned by excessive ambiguity. Damasio, for example, recognizes that, while elaborate moral codes are transmitted culturally rather than genetically, “some innate mechanisms . . . are the likely basis for some ethical structures used by humans” (1994, 261). At another point he describes feelings as the “base for what we humans have described for millennia as the human soul or spirit” (p. xvi). Unfortunately, Damasio is not clear about how exactly this “basis” functions in the moral life or influences human conduct. The word *basis* is itself ambiguous: it can function causally, as in “the basis of Jack’s obesity is a physiological disorder,” or it can function supportively, as a necessary condition, as in “footwork is the basis for a good three-point shot.” In the

latter case, bad footwork makes a good shot improbable, but good footwork does not necessarily guarantee a good shot. Here, basis is a necessary but not sufficient condition. In the former, it is given much stronger causal attribution.

One finds at least three approaches to the question of the relation between evolution and morality. First, the “reductionist version” draws a strong causal connection from evolution to morality. It argues that morality itself has evolved because it is adaptive. This view holds not only that morality as an institution is adaptive but also the stronger claim that particular moral standards are nothing but strategies that have evolved to promote reproductive interests. For example, David Buss, who sometimes fits this type, holds that men are prone to enforce the prohibition on extramarital sex against their mates and to react with passionate jealousy when this norm has been violated (see Buss 1994, 10). He suggests not only that the relevant norms and emotions serve the reproductive interests of males in our society but also that they exist because and *only* because they promote these interests. Philosopher Michael Ruse exemplifies the reductionistic position clearly when he writes, “We believe what we believe about morality because it is adaptively useful for us to have such beliefs—that is *all* there is to it” (1988, 42; emphasis added).

The second position appears to be at the other end of the spectrum. This position is illustrated in the work of evolutionary biologist Francisco J. Ayala, who writes, “Ethical behavior is rooted in the biological makeup of man. . . . [It] did not evolve because it was adaptive in itself, but rather as the indirect outcome of the evolution of eminent intellectual abilities” (Ayala in Thompson 1995, 302). Ayala holds that three evolved capacities, similar to those proposed by Damasio, provide the basis of morality: “Humans exhibit ethical behavior because their biological constitution determines the presence in them of the three necessary, and jointly sufficient, conditions for ethical behavior. These conditions are: (*i*) the ability to anticipate the consequences of one’s own actions; (*ii*) the ability to make value judgments; and (*iii*) the ability to choose between alternative courses of action” (Ayala in Thompson 1995, 297). This strongly “nonreductionist” approach to evolution and morality employs the less deterministic notion of “basis” and acknowledges that something can be “supported by” (in the weak, non-reductive sense) an evolved base without itself having been directly caused (in the reductive sense) by that base.

Ayala’s position, which so strongly emphasizes the cultural basis of morality, seems to be the opposite of Ruse’s, but his second condition for morality, that of value judgments, may leave open the possibility that evolved emotional and cognitive predispositions may incline human beings to adopt some courses of action more easily than others.

In any case, this is proposed in a third view, that of anthropologist William Irons, who holds that morality came to exist because it allowed the formation of “better and more unified groups on the basis of indirect reciprocity” (1991, 67). Irons agrees with Ayala that the evolution of basic human cognitive and emotional capacities was a necessary condition for the appearance of morality, but he also echoes in his own way Ruse’s belief that the ought-generating “moral sense” was selected because it helped its agents obtain their reproductive goals, especially in the environments of evolution (see Irons 1991, 60). Irons’s position seems finally closer to Ruse, not in the claim that morality is an illusion but in its embrace of the principle that, despite frequent enough divergences, “culture is something individuals use and manipulate in pursuit of the proximate goals that, in the environments of human evolution, were reproductively advantageous” (Irons 1991, 60).

Is it possible to integrate what is valuable in these three competing perspectives? It seems reasonable to hold that evolution has shaped profoundly some of the important levels of our emotional and cognitive constitutions as human beings. At what point morality actually emerged from social life is hard to say, and no one seems to have been able to give a convincing argument that “explains” the origin of morality. One might speculate that emerging social conventions reflecting forms of patterned reciprocity would generate monitoring of compliance, attempts to subvert dominant arrangements, retaliation, and internal acceptance of conventions. But as de Waal (1996) points out, it is not possible, at least yet, to identify where fear of punishment and fear of being caught is transcended by a more identifiable and distinctive “moral sense” of being obligated by what is right—if indeed this sense is not a peculiarly Western, and notably Stoic and Kantian, theme that we are projecting onto human nature as such.

In any case, it seems reasonable to hold that, rather than particular moral beliefs or a fixed moral code “engraved” in the psyches of all human beings in all societies, the evolutionary process has created a human emotional constitution characterized by general proclivities, desires, or valuational preferences. Human beings inherit evolved proclivities to learn some things more easily than others (the theory of “prepared learning”). A newborn child learns to recognize faces and to feel some things more easily than others, for example, attachment to parents more readily than hospitality toward strangers. Other things being equal, natural proclivities play a role in one’s loyalty to one’s own group more than to other groups, readiness for altruism to kin more than to strangers, a willingness to reward those who cooperate and a tendency to punish those who violate reciprocity, and a general desire to treat others the way they treat us. Particular communities at

particular times and places attach moral valuation to these preferential tendencies, some channeling parental investment in one direction, toward immediate offspring, others in another direction, toward overlapping caregiving within an extended family.

This accords with the classical position of Aristotle, who, I think, is generally correct to hold that each child is born with a range of fairly indeterminate natural abilities, powers, or capacities (*dunameis*), which exist in human nature prior to practice and which are gradually shaped by training and instruction (or habituation) to become the adult's "second nature," that is, the virtues or vices that constitute character (see Aristotle [c. 350 B.C.E.] 1962, 33). Biological predispositions tend to be fairly general in their directionality, as in the notion of "open programs" (Mayr 1988, 26). We are capable of experiencing a variety of basic emotions, but they can be subject to human evaluation and direction. Our moral responses to these predispositions may often be implementation, but they can also include introspection, criticism, deliberate redirection, and revision of the place they have in our lives.

This generality indicates why we should expect a dazzling variety of moral codes throughout history and between cultures. Our evolved specieswide proclivity to aid closely related kin, for example, takes a wide variety of different expressions in different locales. Moreover, and more disagreeably to the pure sociobiologist, the deeply ingrained specieswide proclivity to maximize inclusive fitness itself is subject not only to delay and redirection but also to abandonment by all sorts of people—missionaries and utopians, artists and poets, prophets and mystics—because of what they consider to be warranted by the highest good.

IMPLICATIONS FOR THEOLOGICAL ETHICS

I would now like at least to mention, if not explicate fully, four important ethical implications of this approach to the evolutionary roots of morality. First, natural law theory is the traditional resource for thinking about moral norms in the Roman Catholic tradition. It should be noted that natural law theory itself is not static (except in the minds of some of its proponents) but is currently undergoing its own significant kind of "evolution." Natural law theory infers from the doctrine of creation the general principle that the natural desires human beings share with other animals are not only biologically significant or interpersonally gratifying but also morally good when ordered ethically.

In the First Part of the *Summa theologiae*, Thomas Aquinas described the soul as the "form of the body" and rejected the alternative, more dualistic view of the soul as a small "pilot in a ship" inside a body that it controls (see I, 75–76 in Thomas Aquinas [c. 1266–72] 1946, 363–82). This claim supports the recognition of human beings as biophysical entities

rather than isolated ethereal souls only artificially attached for a brief time to material bodies. This is a claim that warrants both a sacramental vision of human desires and an ethical commitment to basic rights of bodily integrity.

This applies to the full range of natural desires, be they social desires for companionship, intellectual desires to know, or sensual desires for food and sex. The good life is guided by reason but allows for the healthy and balanced expression of the full range of human passions. Thus it can take seriously evolutionary psychologist David Buss's analyses of evolved psychological mechanisms and sexual strategies, both for their descriptive and explanatory insights and for their ability to provide material for ethical reflection on what might constitute positive and negative expressions of human sexuality. Theologians might associate Buss's observations about the relatively indiscriminate nature of sexual desire in males, for example, with the sensitive account of "concupiscence," or disordered sexual desire, classically depicted in Saint Augustine's *Confessions* (see *inter alia*, Augustine [c. 400] 1992, 24–34).

Second, evolved natural emotional and mental proclivities are pervaded by a profound moral ambiguity. They are capable of motivating good or bad character and leading to right or wrong behavior, depending on the agent's intentions and other relevant circumstances. Kin altruism can be good if expressed in ordered parental care and filial loyalty, but it can be evil if it leads to moral myopia that is indifferent to the suffering of nonkin or to xenophobic suspicion of strangers. This moral ambiguity is characteristic of the juxtaposition of elementary adaptations in modern human psyches. Buss hypothesizes that the relatively stronger indiscriminate male desire for sexual variety was an evolutionary solution in ancestral conditions to the crucial challenge of gaining sexual access to a variety of women. This evolved sexual tendency was highly adaptive in prehistory but causes a great deal of havoc in modern society. "Men [today] do not always act on this desire," Buss observes, "but it is a motivating force" (1994, 77).

Third, understanding more fully the "evolutionary roots of morality," therefore, can also serve a critical function. I take it that personal integrity involves evaluating spontaneous objects of desire in light of our comprehensive beliefs about the good life and our fundamental commitments. Evolutionary theory can alert us to obstacles to personal integrity that come from within us by nature (alongside those that come from individual character defects).

For example, it alerts us to innate tendencies to engage in deception, to ignore our own oversights, to minimize our own moral weaknesses and vices, and to justify our biases and those of our friends. Evolutionary psychology is particularly adept at attending to ways in which professional

advertisers manipulate psychological mechanisms, and to ways in which morality can be co-opted to provide ideological support for nonmoral ends, for example, in Buss's analysis, for certain kinds of mating strategies. Evolutionary theory strives to get to the roots of many human disappointments and conflicts and thereby to understand more accurately both the depth of the human predicament and the level of commitment required if our conflicts are to be ameliorated more effectively.

Neurophysiology also alerts us to the dangers of bias. "Somatic markers" facilitate decisions in complex social situations, but they can be disordered as well, as in uncritical "obedience, conformity, [and] the desire to preserve self-esteem" (Damasio 1994, 191). Bias can be felt "in the bones," as when, for example, a person experiences unpleasant body states when encountering those he or she finds repulsive, be they mentally ill homeless people asking for aid or an affluent interracial couple on a date. The body's neurally based drive to reduce unpleasant body states can and sometimes does act as a countermoral force that needs to be held in check.

Fourth, understanding the evolutionary roots of morality underscores the value of regarding moral progress in terms of the proper training, directing, and tutoring of the emotions. "Knowledge of the conditions that favor each mating strategy," Buss tells us, "gives us the possibility of choosing which to activate and which to leave dormant" (1994, 209). We can employ knowledge to avoid the kinds of conditions that tend to activate what we identify to be undesirable aspects of our evolved "incentive system." Conversely, at least ideally we can deliberately create conditions that elicit desirable kinds of behavior. This is as true of a social ethos and its institutions, or what sociologist Robert Bellah and his colleagues call a community's "social ecology" (Bellah et al. 1986, 284f.), as it is of personal moral development and individual pursuit of the good life.

In Damasio's feedback loop, cognitive processes are induced by neurochemical substances, but neurochemical substances are also induced by cognitive processes. Habitual action shapes and organizes emotional states and their neurochemical profile (see Damasio 1994, 149–50). In the language of Thomas Aquinas, then, virtue is not "implanted" in us by nature but formed by habit, and the moral life is a matter of gradually shaping these emotional responses (including what Damasio identifies as their underlying neural machinery) into forms that promote the human good (see Thomas Aquinas 1948, 820–21). Moral conversion, moreover, might lead to not only a modification of thoughts, words, and deeds but also, by the repeated physiological effect of appropriate action (to some extent perhaps) even a reordering of this neurochemistry, particularly in the prefrontal cortices (Damasio 1994, 182–83).

Fifth and finally, understanding the "evolutionary roots of morality" allows us to see more clearly human transcendence of our evolutionary

past, a claim more readily appreciated by the “nonreductionist” perspective mentioned earlier. Human beings do not have unlimited freedom, Damasio writes, but we “do have some room for such freedom, for willing and performing actions that may go against the apparent grain of biology and culture” (1994, 177). Clearly, accounting for the origin of *some* human values, even central values, need not exhaust the full range of *all* human values.

We would probably all agree that evolution has shaped human nature in a way that set the conditions for the emergence of moral ideals that confirm in a general way what is indicated by “nature” in, for example, self-defense and defense of loved ones, parental care, communal loyalty, cooperation, and reciprocity. Yet human nature also sets the conditions for the emergence of moral claims that transcend what seems to be encouraged by natural selection. We are familiar with the lofty ideals of Henry David Thoreau, Mohandas Gandhi, and Martin Luther King, Jr. They articulated ethical ideals of universal love, the Golden Rule, renunciation of violent retaliation and revenge, disinterested regard for others, love of enemies, and solidarity with the poor and marginalized. They called people to higher standards than are either ordinarily implemented or motivated by inclusive fitness, but yet their visions are deeply attractive to most of the human race. Our conduct may reflect the influence of the remote evolutionary past of our species, but we can strive for greater nobility than would be encompassed by natural selection.

CHALLENGES FROM EVOLUTIONARY THEORY

There are obviously many more objections (from both theological as well as evolutionary critics) to the kind of position advanced here than can be considered in a short presentation, but I would be remiss not to at least mention and respond briefly to a couple.

The first objection is that the reading of the “evolutionary roots of morality” proposed here is Roman Catholic rather than objective, that is, it is guilty of circularity in which I select out aspects of evolution with which I am predisposed to approve and ignore aspects with which I am uncomfortable. I am not properly acknowledging what some authors take to be the inescapably materialistic implication of Darwinism. This would be rather like a Marxist selecting out lines from Shakespeare to support an interpretation of Shakespeare as proto-Marxist, all the while ignoring, or at least not noticing (in a negligent way), Shakespeare’s pervasive pro-aristocratic conservatism. I hope that I am not engaging in rank ideological distortion, but there is a way in which each of us thinks in a circular manner from within our own particular perspectives with all their strengths and weaknesses. This problem is compounded when someone trained in the humanities thinks about scientifically based theories.

Probably the best we can do is to aim for nonvicious circularity by acknowledging the characteristic weaknesses of our perspective, trying to be open to correction from fair-minded people who know better and making judgments with an appropriate degree of humility and openness to revision—the same kind of traits exercised by responsible scientists when engaged in their own work as well as in speculative enterprises outside their fields of expertise.

A second criticism is more directly philosophical. Some critics argue that since evolutionary theory provides an account of the origin of morality, it cannot have a divine origin. Morality is generated by emotional predispositions that themselves were caused by natural selection and random variation—by an indifferent universe, not by God. Ruse (1990) claims that the very fact that we feel a powerful desire for transcendent justification for our morality is an “illusion of our genes” that is itself a fitness-enhancing product of natural selection. If we seek to know the truth rather than simply justify ourselves, Ruse argues, we ought to employ a scientific understanding of the “evolutionary roots” of morality and throw out the theological understanding of God as the source of morality (1990, 65; see also Ruse and Wilson 1989 and Murphy 1982).

There are many facets to this important criticism, only a few of which I will take up. First, this reflects the “reductionist” understanding of the “evolutionary roots of morality” already called into question. Second, it makes an assumption about how God is properly or at least ordinarily conceived as the source of morality by Christians (I am trying to read between Ruse’s lines here) usually on the model of supernaturally implanted conscience or moral sense, brought to full maturity by conforming to Scripture. Ruse assumes that Christians accept what is called a “divine command” theory of ethics, a highly contested position within theology. The revised natural law theory entailed here, on the contrary, understands the authority of moral claims to be warranted not by divine dictates but by their contribution to human flourishing. Third, this objection unnecessarily and artificially separates divine and natural causality. The set of scientific hypotheses and insights regarding the “evolutionary roots of morality” need not make impossible their religious interpretation, including the claim that God orders the world through the evolutionary process. At times, those who insist on understanding human life in terms of nature rather than God take for granted that the only way to think about God is in a naively anthropomorphic way, that is, as the really strong, smart, guilt-inducing, and punitive God of Sunday school, a mythical version of someone on Kohlberg’s conventional level of moral development with lots of power at his discretion.

In theological terms, though, this God is an idol, a false god, a being in the world. Because idolatry constantly threatens to distort religious

thought, Lutheran theologian Paul Tillich (1951, 110) spoke of God as the “ground of being” and Catholic Karl Rahner (1978, 44f.) referred to God as “absolute mystery.” God is not a being in the world, somewhere out past Orion, but a transcendent Being that continually sustains the world in being and orders it through the processes and patterns of nature. It is therefore unnecessary and theologically improper to assume that *either* God *or* the evolutionary process orders the natural world. This is a false dichotomy based on the assumption that God is an alternative cause of ordering. Theologians Kenneth and Michael Himes (1993), drawing on Thomas Aquinas, explain: “Every event is caused . . . completely by both God and natural agencies but in two different ways. The action of God and the natural causal network of creation are distinguished modally, not substantively; certain things are not caused by God and others caused by natural factors; *everything* is caused by God *one hundred percent* and caused by natural forces within the world *one hundred percent*” (p. 79; emphasis in original).

From a theological viewpoint, then, it is a mistake to force a choice between religious and biological “roots.” Biological theories compete with other biological theories and not with theology, unless theology offers biological theory (in which case it is no longer theology) or, more likely, relies upon inaccurate biological assumptions. Biblical creationism obscures this distinction in treating Genesis and evolutionary theory as alternate scientific theories. In doing so, creationism ironically joins the skeptics in forcing an unnecessary choice between well-established scientific theory and biblical revelation.

So, while it is true that the reductionistic model that equates evolutionary roots with the “essence” of morality will not be acceptable to believers, it is equally the case that the “spiritualistic” view that regards God rather than nature as *the* “root” of morality is suspect. Neither view allows for the possibility that God works in and through the intrinsic ordering of human nature.

CONCLUSION

Perhaps some will take offense at the latter claim, as others take offense at the former. The main thesis of this presentation has been that one can reasonably claim that the “evolutionary roots of morality” examined by scientifically informed sources not only is compatible with theological ethics but also helps to illumine what, theologically construed, is the human nature that is divinely created, habituated in the moral life, denigrated by sin, and healed by grace. These theological claims are not and cannot be justified by, or even be made intelligible to, evolutionary theory on its own terms, at least when it functions properly in the domain of science with its own distinctive standards and procedures. This is as it should be.

These kinds of theological claims are apprehended in religious faith, though optimally not by a blind faith but rather by one that sincerely appreciates and humbly accepts the insights into the "roots of morality" provided by evolutionary theory.

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