CHAPTER 1

ARISTOTLE, DARWIN, AND NATURAL RIGHT

> The difference between Plato and Aristotle is that Aristotle believes that biology, as a mediation between knowledge of the inanimate and knowledge of man, is available.
>
> —Leo Strauss, *On Tyranny*

AN INTELLECTUAL JOURNEY

The ultimate aim of politics is to form the character of human beings to promote some conception of the best life. This must be so, because every political debate depends fundamentally on opinions about what is good and bad, just and unjust. The moral opinions that drive political controversy are ultimately opinions about the best way of life for human beings, about how human beings must live to satisfy their natural desires. Consequently, the greatest questions of politics concern the problem of how to shape the moral character of human beings to conform to a naturally good way of life.

Although differing opinions of the best way of life create great diversity in the political experience of human beings, there is a regularity in those moral opinions that expresses a universal human nature. For example, every political regime must provide somehow for family life, because the dependence of the young on adult care is an enduring feature of human nature. Every political regime must also have some hierarchy of dominance in which some individuals will have higher social status than others, because the competition for social rank is another enduring feature of human nature. There is great variability, however, in the particular expressions of these universal tendencies, and therefore prudence is required in judging what is appropriate for the circumstances of particular individuals and particular societies. Satisfying the natural human desires requires moral character. Parents must have the moral character that inclines them to properly nurture the moral character of children. And those who desire high social rank must have the moral character that inclines them to satisfy their desire for preeminence without tyrannizing over others.

As a college student in the late 1960s, I found that this view of politics as a character-forming activity rooted in human nature was best developed by Aristotle. In his *Nicomachean Ethics* and *Politics*, he argues that the aim of politics is to shape moral character to satisfy the natural desires of human beings. In the *Ethics*, he studies the moral and intellectual virtues necessary for human flourishing or happiness. In the *Politics*, he shows how the social and governmental structures of various political regimes can foster or impede the virtues of human character. Judging human virtues and political regimes cannot be determined by universal rules, he insists, because the diversity in the individual and social circumstances of life requires prudence or practical wisdom, which cannot be reduced to abstract rules. Nevertheless, human nature does provide a universal standard of judgment: human beings are by nature social and political animals who use their natural capacity for speech to deliberate about the conditions of their social and political life. Therefore, we can judge political communities by how well they conform to the nature of human beings as political animals and rational animals.

Despite the important differences between Aristotle's Greek *polis* and the modern liberal democratic state, the writings of Harry Jaffa (1965, 1973, 1975) convinced me that the Lockean notion of natural rights as adopted by American political thinkers like Thomas Jefferson and Abraham Lincoln appeals to natural justice as rooted in human nature, which thus resembles Aristotle's conception of natural right. When Jefferson and Lincoln spoke of human beings as endowed by nature with a moral sense that distinguishes right and wrong, they manifested an Aristotelian tradition of ethical naturalism that supports the idea of natural rights in American political thought.

As I continued my reading of Aristotle in college and in graduate school in the early 1970s, I began to look at some of his biological writings. Although I noticed that political scientists who read Aristotle almost never read his biological works, it appeared to me that his view of human beings as political and rational animals was rooted somehow in his biological understanding of human nature. I noticed that in the *Ethics* he compares human beings with other animals, particularly in explaining the biological basis of parent-child bonding. And I saw in the *Politics* that in explaining the political nature of human beings, he compares them with other political animals such as the social insects.

Recently, some of the scholars studying Aristotle have come to recog-

nize the importance of Aristotle's biology for all of his philosophic writing (Nussbaum 1978; Gotthelf and Lennox 1987). Some of this new scholarship now suggests that for Aristotle, "ethics and politics are in a way biological sciences" (Salkever 1990, 115). And at the same time, some biologists have shown new respect for Aristotle's contributions to the history of biology. "All of biology," one biologist has declared, "is a footnote to Aristotle" (Moore 1993, 33).

In 1978, I read a conference paper by Roger Masters entitled "Classical Political Philosophy and Contemporary Biology." (A revised version of this paper was eventually published in 1987 with the title, "Evolutionary Biology and Natural Right.") Masters argued that Aristotle's political thought rested on a biological understanding of human nature that was essentially compatible with modern Darwinian theories of social behavior. Masters saw a biological approach to politics in Aristotle's claims that human beings are by nature political animals, that their political nature shows an ambivalent combination of individualistic competition and social cooperation, and that the full development of human moral and political capacities requires a complex interaction of nature and nurture. On each of these points, Masters thought that modern Darwinian biology could confirm Aristotle's insights. Even more surprising to me, however, was Masters's contention that Aristotle's understanding of "natural right" as resting on a teleological understanding of human nature could also be compatible with modern biological science.

According to the ancient Greek notion of "natural right," which appears in Aristotle's writings, human beings, like all natural beings, have natural ends, so that whatever fulfills those natural ends is naturally good or right for them. For example, if human beings are inclined by nature to live in political communities, if that is one of their natural ends, then political life is right by nature for them, and whatever hinders their living as political animals is contrary to nature. But this depends on a teleological conception of nature—the idea that nature acts for the sake of ends. Leo Strauss, a political scientist who had taught Masters at the University of Chicago, argued that insofar as modern science had apparently refuted the ancient teleological conception of the universe, modern science had thereby refuted natural right.

Strauss thought this created a dilemma. Either we try to develop a non-

teleological science of human life by explaining human action as governed by purely mechanistic laws, or we try to maintain a dualistic separation between a nonteleological natural science and a teleological science of human life. Strauss thought neither alternative was intellectually satisfying. Mechanistic explanations of human action cannot account adequately for human ends. But to insist on the absolute separation of natural science and the science of human life is intellectually incoherent (Strauss 1953, 7–8).

I was impressed, however, by Masters's argument, in response to Strauss, that Aristotle's teleological conception of nature was based primarily on his biology rather than his physics, and even if modern physics seems to deny teleology, modern biology does not. Although modern physicists try to explain inanimate nature without reference to ends, modern biologists must explain animate nature as serving certain ends. The growth of plants and animals to maturity, for example, or the striving of animals to satisfy their needs implies natural ends or goals that become part of any full biological explanation. Consequently, Aristotle's understanding of natural right as resting on a biological conception of natural teleology might be fundamentally compatible with modern biological science.

The arguments of Masters led me to read Darwin to see if his account of human nature would support Aristotle's idea of natural right. I saw that like Aristotle Darwin claimed that human beings are by nature social animals—coming together first in families and then in larger social communities. He also agreed with Aristotle in deriving morality from human nature. From David Hume, Darwin adopted the idea that morality was founded on a natural moral sense, and he explained this moral sense as a natural adaptation of human beings shaped by their evolutionary history. I wondered, however, whether Hume's idea of the moral sense was consistent with Aristotle's position.

In 1988, I read an article by Alaisdair MacIntyre on Hume that convinced me that Hume was closer to Aristotle than I had previously believed (MacIntyre 1959). MacIntyre persuaded me that, in contrast to Immanuel Kant's dualistic separation between morality and nature, Hume's idea of the moral sense as rooted in natural human desires belonged to a tradition of ethical naturalism begun by Aristotle. This thought was strengthened by my reading of Robert McShea's book, *Morality and Human Nature* (1990). Not only did McShea defend Hume's rooting of morality in the natural passions or sentiments that typically constitute human nature, McShea sug-

gested that this view of morality could be founded on a Darwinian explanation of human nature as shaped by natural selection.

I began to see a tradition of ethical naturalism that included Aristotle's idea of natural right, Hume's idea of the natural moral sense, and Darwin's idea of the moral sense as shaped by natural selection. I found confirmation for this thought in 1993, in the work of James Q. Wilson. In his Presidential Address to the American Political Science Association and in his book, *The Moral Sense*, Wilson surveyed the contemporary research in the social sciences supporting the existence of a natural moral sense, and he concluded that this research sustained the ethical naturalism of Aristotle, Hume, and Darwin in rooting human morality in the biological nature of human beings (Wilson 1993a, 1993b).

I began to suspect that some human desires were universal because they expressed natural propensities of human biology. This thought was confirmed by my reading of Donald Brown's *Human Universals* (1991) and some of Edward O. Wilson's books. Brown challenged the assumption of cultural relativism among anthropologists by showing that the anthropological evidence indicated the existence of hundreds of universal behavioral traits found in some form in all or most societies. Brown's suggestion that many of these human universals were biological was sustained by Edward Wilson's sociobiological theory of human nature. In his recent intellectual autobiography, *Naturalist* (1994), Wilson summarizes his Darwinian view of human nature:

> Human beings inherit a propensity to acquire behavior and social structures, a propensity that is shared by enough people to be called human nature. The defining traits include division of labor between the sexes, bonding between parents and children, heightened altruism toward closest kin, incest avoidance, other forms of ethical behavior, suspicion of strangers, tribalism, dominance orders within groups, male dominance overall, and territorial aggression over limiting resources. Although people have free will and the choice to turn in many directions, the channels of their psychological development are nevertheless—however much we might wish otherwise—cut more deeply by the genes in certain directions than in others. So while cultures vary greatly, they inevitably converge toward these traits. The Manhattanite and New Guinea highlander have been separated by 50,000 years of history but still understand each other, for the elementary reason that their common humanity is preserved in the genes they share from their common ancestry. (1994, 332–33)

Since the human traits considered by Wilson—such as parental care, familial attachment, sexual division of labor, and male dominance—are included in Aristotle's account of human nature, it seemed to me that, despite the differences between Darwin's biology and Aristotle's biology, a Darwinian science of social behavior might support Aristotle's ethical naturalism.

TEN PROPOSITIONS

I am now prepared to defend what I will call "Darwinian natural right." It combines ideas from the classic texts of Aristotle, Hume, and Darwin as well as the contemporary work of political scientists like Masters, McShea, and James Q. Wilson, and biologists like Edward Wilson. I can state my position in ten propositions.

1. The good is the desirable, because all animals capable of voluntary movement pursue the satisfaction of their desires as guided by their information about the world.

2. Only human beings, however, can pursue happiness as a deliberate conception of the fullest satisfaction of their desires over a whole life, because only they have the cognitive capacities for reason and language that allow them to formulate a plan of life, so that they can judge present actions in the light of past experience and future expectations.

3. Human beings are by nature social and political animals, because the species-specific behavioral repertoire of *Homo sapiens* includes inborn desires and cognitive capacities that are fulfilled in social and political life.

4. The fulfillment of these natural potentials requires social learning and moral habituation; and although the specific content of this learning and habituation will vary according to the social and physical circumstances of each human group, the natural repertoire of desires and cognitive capacities will structure this variability.

5. We can judge divergent ways of life by how well they nurture the natural desires and cognitive capacities of human beings in different circumstances, but deciding what should be done in particular cases requires prudential judgments that respect the social practices of the group.

6. Rather than identifying morality with altruistic selflessness, we should see that human beings are moved by self-love, and as social animals they are

moved to love others with whom they are bonded as extensions of themselves.

7. Two of the primary forms of human sociality are the familial bond between parents and children and the conjugal bond between husband and wife.

8. Human beings have a natural moral sense that emerges as a joint product of moral emotions such as sympathy and anger and moral principles such as kinship and reciprocity.

9. Modern Darwinian biology supports this understanding of the ethical and social nature of human beings by showing how it could have arisen by natural selection through evolutionary history.

10. Consequently, a Darwinian understanding of human nature supports a modern version of Aristotelian natural right.

SEVEN OBJECTIONS

My Aristotelian and Darwinian conception of natural right, as summarized in the foregoing ten propositions, is subject to at least seven major objections.

1. The fact-value dichotomy. The most common objection to any ethical naturalism is that moral values cannot be derived from natural facts. This argument is attributed to David Hume, who is said to have shown that there must be a radical separation between questions of what *is* or *is not* the case, which belong to the realm of nature, and questions of what *ought* or *ought not* to be done, which belong to the realm of morality. Because of this dichotomy, it is a logical fallacy to infer a moral *ought* from a natural *is*.

If there is a universal human nature that includes certain desires, those natural desires will influence human action. And therefore, an Aristotelian or Darwinian science of human nature might help us to explain human action as a product of those natural desires. But if there is an unbridgeable gap between facts and values, *is* and *ought*, then this science of human nature could not support human ethics. From the fact that human beings have a natural desire to do something, it does not follow that they *ought* to do it. On the contrary, it might seem that what makes human beings uniquely moral animals is that they can choose to resist those natural desires that violate standards of moral duty.

As human beings, it often seems, we are naturally selfish animals. We are naturally inclined to lie, steal, and even kill to satisfy our selfish desires while exploiting our fellow human beings. But we can learn to restrain our egoistic desires when they violate our moral duties to others. And since the preservation of social order requires that people respect their social duties, every society must enforce some rules of social cooperation. Although some people obey those rules only when they fear being punished if they don't, other people obey because they have a sense of conscience, so that they feel guilty when they act contrary to their moral duty. But in any case, doing one's moral duty means resisting rather than conforming to one's human nature.

Natural science can describe the way things *are*, but it cannot prescribe the way things *ought* to be. A Darwinian science of human nature might describe the biological factors influencing human motivation, but it could not prescribe norms of proper human conduct without invoking moral standards that transcend the facts of human biology. For example, it would be proper for biologists to investigate the biological psychology of human sexuality, but for them to infer from the biological facts of human sexual motivation that some kinds of sexual conduct were morally better or worse than others would be fallacious.

If we accept the radical separation of natural facts and moral values, an Aristotelian or Darwinian conception of ethical naturalism must be rejected as a fallacious attempt to deduce moral conclusions from factual premises.

2. *Human freedom.* Separating nature and morality, natural law and moral law, would seem to be necessary to secure the moral freedom of human beings. Unlike other animals, human beings are moral beings because they have the freedom to act outside the laws of nature that govern animal behavior. If human behavior were as completely determined by the laws of nature as animal behavior, then human beings would not have "free will," and we could not hold them morally responsible for their actions.

A second objection to ethical naturalism rooted in human biology, therefore, is that it denies human freedom by explaining human action as determined by the same natural laws that govern other animals. A biological science of human nature cannot explain human morality if morality presupposes a human freedom from nature that sets human beings apart from the animal world.

3. Human learning. Human morality transcends animal nature because human beings have a freedom that other animals lack. The reason for that uniquely human freedom is that while animal behavior is mostly instinctive, human behavior is mostly learned. In contrast to the fixity of animal instinct, the flexibility of human learning gives human beings a freedom of choice that allows them to act as moral agents. This thought would support a third objection to Aristotelian or Darwinian ethical naturalism: human morality is not biologically determined, and therefore it cannot be explained as a product of natural laws, because it arises from human learning rather than from animal instinct.

4. Human culture. As an expression of the uniquely human capacity for learning, human beings are the only cultural animals. Whatever human beings learn they can share with one another through language and other forms of symbolism, and this collection of social symbols can be passed from one generation to another as the cultural tradition of a social group. Language, ideas, artifacts, and patterns of customary behavior—anything that can have symbolic meaning for human beings—can become parts of a culture. Human societies differ from one another insofar as they create different cultural traditions.

If moral norms are largely products of culture, and if culture is largely a social invention that is not determined by nature, this would suggest a fourth objection to ethical naturalism: any attempt to derive ethics from human nature must fail if ethics is shaped more by culture than by nature.

If ethics were rooted in a universal human nature, we would expect ethical norms to be universal. The radical differences in ethical norms as they emerge in different cultures indicates that ethics is more cultural than natural, and thus there is no universal morality because cultures are radically diverse. While a naturalist explanation of morality would assume a moral universalism founded on the unity of human nature, a culturalist explanation of morality would assume a moral relativism founded on the diversity of cultural traditions.

5. Impermanent species. Cultural diversity is not the only source of ethical relativity. Although the ethical naturalist assumes an unchanging human nature, Darwin's theory of evolution asserts that the human species—like all species—is changeable. Contrary to Aristotle's assumption that species are eternal and unchanging, which was commonly accepted prior to Darwin's

work, Darwin claimed that all species have evolved from ancestral species, and all present species will evolve over time, with some old species becoming extinct and new species emerging in their place.

Consequently, as a fifth objection to ethical naturalism, it would seem that ethical principles rooted in the nature of the human species must be changeable if we accept the Darwinian teaching that all species are changeable. An ethical naturalism founded on Aristotle's assumption that species are eternal would have to deny Darwin's evolutionary account of species. If so, then the Aristotelian naturalist cannot also be a Darwinian.

6. The problem of teleology. The Aristotelian naturalist might also have to defend a teleological conception of nature against Darwin's denial of teleology, which would be another point of conflict between Aristotelian naturalism and Darwinian naturalism. Aristotle's appeal to nature as a source of moral norms requires a teleological conception of nature as directed to the fulfillment of final ends. All natural beings aim at natural ends, goals, or purposes. Consequently, the natural good for each being is to attain its natural end. The natural good for human beings is to fully develop those natural ends that are distinctively human. So, for example, political life is naturally good for human beings, because as political animals they find their end or goal *(telos)* in political life.

Modern science, however, including Darwinian biology, denies this ancient teleological conception of the universe. According to modern science, nature is governed solely by material or mechanical laws that act without aim or purpose. According to modern Darwinian biology, the evolution of species is determined by forces of blind necessity and historical contingency that lack any cosmic purpose. Any appearance of purposefulness in nature, it would seem, is an illusion of human yearnings for cosmic norms to support human morality. Therefore, a sixth objection to a Darwinian conception of Aristotelian natural right is that Darwinian biology denies the natural teleology that supports natural right.

7. Religious transcendence. Nature would be purposeful, and there would be cosmic support for human morality, if human beings were created in the image of God. If human beings were endowed by their Creator with a moral dignity that set them apart from the rest of nature, then obeying the moral law sanctioned by God would fulfill their true nature and thus satisfy their deepest longings. It is not clear, however, that an Aristotelian or Darwinian conception of natural right allows for such religious belief. Far from

sustaining a religious view of the world, Darwinism seems to claim that we can explain the appearance of design in nature without any need for invoking a Divine Creator. Therefore, as a final objection to the attempt to root ethics in the biology of human nature, it could be argued that a Darwinian explanation of nature denies any appeal to God as the transcendent ground of morality.

These seven objections rest on seven antithetical dichotomies: (1) biological facts versus moral values, (2) biological determinism versus human freedom, (3) biological instinct versus social learning, (4) biological universality versus cultural relativity, (5) Aristotelian fixity versus Darwinian flux, (6) biological mechanism versus human purposefulness, and (7) natural morality versus religious morality.

I will argue that these are false dichotomies. (1) If the human good is what is desirable for human beings, then the facts concerning the natural human desires do imply ethical conclusions. (2) A biological explanation of human nature does not deny human freedom if we define that freedom as the capacity for deliberation and choice based on one's own desires. (3) The human ability for learning by experience extends the animal instincts for learning through the uniquely human capacity for language and other symbolism. (4) The life of any human community reflects a complex interaction between nature and culture, between the natural desires and capacities that characterize the human species and the historical or ecological circumstances that characterize particular social traditions, so that we need to understand both the circumstantial variations and the human universals expressed in particular societies. (5) Despite the mutability of species in evolutionary time, the patterns of speciation are stable enough over long periods of time to justify our apprehension of natural kinds as enduring features of the world. (6) Although Darwinian theory denies the cosmic teleology of natural theology or mystical vitalism, Darwinian biology recognizes the immanent teleology—the goal-directed character—of living beings, which is the only kind of teleology required for Aristotelian naturalism. (7) Darwinian natural right confirms the moral teaching of religion, at least so far as religious morality is rooted in human nature.

I have not mentioned one fundamental objection to my argument in this book—namely, the objection that Darwin's theory of evolution is not true. Although I recognize that there is plenty of room for controversy in determining the exact mechanisms of evolutionary change, the arguments—

from "scientific creationists" and others—for completely rejecting Darwin's theory of evolution seem implausible to me. But developing a general defense of Darwin's theory would require a book unto itself, and others have already done that better than I could. The arguments against Darwin have been summarized by Henry Morris (1985) and Philip Johnson (1991), and Ronald Numbers (1992) has written a good history of "scientific creationism." The case in defense of Darwin, which I find persuasive, has been well stated by Douglas Futuyma (1983), Philip Kitcher (1982), Timothy Goldsmith (1991), and Monroe Strickberger (1996). The most common reason for doubting Darwin's theory is that the complexity of the living world—as illustrated by complex organs such as the eye—manifests a design that implies a Divine Designer, because such complexity of design cannot be explained as the product of Darwinian evolution. Richard Dawkins (1986, 1996) has shown, however, that in fact Darwin's theory of evolution was the first scientific theory to explain how complex adaptations like the eye could be built up by small steps through natural selection working on random variations. Creationists like to cite the criticisms of Darwinian "gradualism" and "adaptationism" by biologists such as Stephen Jay Gould, Richard Lewontin, and Niles Eldridge as evidence that Darwinian theory has been refuted (Eldridge and Gould 1972; Gould 1989; Gould and Lewontin 1979). But Dawkins (1986, 223–52; 1996, 105–7) and Ernst Mayr (1988) have shown that the valid points made by these critics are fully compatible with modern Darwinian theory. The flaws in the argumentation of Gould and Lewontin are so serious that their work is now studied by rhetorical theorists as a model of sophistical rhetoric in science (Bazerman 1993; Borgia 1994; Charney 1993; Coyne and Charlesworth 1997; Wright 1990). In explaining order in the organic world, structuralist biologists like Gould emphasize formal causes, while adaptationist biologists like Dawkins emphasize functional causes. For a full explanation, we need to see the partial truth in both sides of this debate (Amundson 1996).

In this book, I will speak of natural selection as the primary force in evolutionary change, because I agree with Darwin that natural selection is "the main but not the exclusive means of modification" (Darwin 1936a, 367). Other mechanisms and contingent events are often crucial for evolutionary history. For example, the mass extinction of dinosaurs and many other species about sixty-five million years ago might have been caused by the catastrophic impact of a meteor, which would not be explained by

natural selection. Yet it is still true, even for those scientists like Gould who emphasize evolutionary mechanisms other than natural selection, that natural selection is the primary cause shaping evolutionary adaptation (Gould 1997a, 1997b).

AN OVERVIEW OF THE BOOK

This book develops my arguments for my ten propositions and my replies to the seven objections. In chapter 2, I defend my proposition that the good is the desirable. I show that the combination of reason and desire in human action manifests a normative structure found in all voluntary animal movement. I also claim that there are at least twenty natural desires that are universal to all human societies, and therefore the satisfaction of these natural desires constitutes a universal standard for judging social practices as either fulfilling or frustrating human nature, although prudence is required in judging what is practicable within the limits of particular social and physical circumstances.

As political animals, human beings satisfy their desires in social and political groups. But it has become common for social scientists in the Hobbesian tradition to assume that the political order of human life is not a natural expression of human biology but an artificial construction of human culture. In chapter 3, I argue against this Hobbesian dichotomy between biology and culture; and I defend Aristotle's claim that human politics is rooted in human biology.

Just as Hobbesian social scientists assume that culture transcends biology, they also assume that human freedom transcends the laws of nature, and consequently human morality transcends natural facts. In chapter 4, I show that these are false dichotomies. There is no absolute separation between natural facts and moral values, because human morality is derived from a natural moral sense. And there is no absolute separation between nature and freedom, because human freedom manifests a natural human capacity for deliberate choice in satisfying natural desires according to some plan of a whole life well lived.

In the central chapters of the book, I provide some illustrations of how Darwinian natural right distinguishes between those social relationships that are according to nature and those that are contrary to nature. In chapter 5,

I contend that the familial bonding of parents and children is a biological bond that satisfies the natural desire for parental care. In chapter 6, I contend that the conjugal bonding of husband and wife is a biological bond that satisfies the natural desires for mating, parenting, and a sexual division of labor based on the natural complementarity of male and female. Utopian communities that try to abolish familial and conjugal bonding must fail, I argue, because the emotional cost from frustrated desires is unbearable for most people.

In these central chapters, I maintain that there are natural differences between men and women based on their biological nature: typically (on average) men are more dominant, and women are more nurturant. Female nurturance sustains the social order of familial life, while male dominance sustains the social order of political life. Although this is denied by those feminists who believe that all sex differences in behavior are arbitrary constructions of culture, I argue that feminist criticisms of cultural practices that oppress women contradict cultural relativism. A coherent and cogent feminism must appeal, I claim, to an ethical naturalism that draws its norms from a universal human nature. In chapter 6, I offer female circumcision (clitoridectomy and infibulation) as an example of a custom injuring women that can be condemned because it unnecessarily frustrates natural human desires.

In contrast to familial and conjugal bonds as conforming to human nature, I turn in chapter 7 to slavery as an example of a social relationship that is contrary to human nature. I survey the history of the debate over slavery to show that although slavery arises from the natural desire of the master to exploit the slave, slavery frustrates the natural human desire to be free from exploitation, which expresses the moral sense rooted in human biology.

While arguing for a natural moral sense, I concede that some human beings apparently have no moral sense. Psychopaths, for example, seem to lack the social emotions necessary for a moral sense, which allows them to act as social predators unrestrained by any sense of guilt or shame. In chapter 8, I examine some modern studies of psychopaths, and I conclude that they suffer from some abnormality of the brain, so that they lack the social emotions necessary to live successfully as social animals. For that reason, I suggest, we must treat them as moral strangers.

In defending natural right as founded on human biology, I assume the reality of natural kinds and natural ends, because I assume that human be-

ings exist as a distinct species, and I assume that their species-specific nature inclines them to certain ends or goals. In chapter 9, I show that Darwinian biology affirms the existence of natural kinds and natural ends. Although species are not eternal, they are real for as long as they exist. And although Darwinian science denies any cosmic teleology for nature as a whole, Darwinism affirms the teleology of living beings as directed to ends or goals.

Finally, in chapter 10, I respond to the objection that Darwinian natural right cannot support morality if it cannot accept a religious belief in God as the transcendent source of moral law. I argue that since the moral sense arises from natural human experience, religious belief is not essential, although it can reinforce the dictates of nature. Moreover, I contend that even in the Mosaic law of the Bible and in the Christian theology of Thomas Aquinas, one can see a recognition of the natural self-sufficiency of morality based on human nature as aiming towards the earthly happiness of human beings. I conclude by showing that although the natural human desire to understand is sometimes taken as a sign of the supernatural origin of the human soul, this intellectual desire can be explained as a product of purely natural evolutionary causes.