

**HUMAN NATURE AND PUBLIC POLICY:**An Evolutionary Approach, ed. Albert Somit and Steven Peterson, [ pp.3-18 ]

## CHAPTER 1

From Human Nature to Public Policy: Evolutionary Theory Challenges the “Standard Model”

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For some twenty-five centuries, the “nature of human nature” has been the central issue in Western political thought. Fully aware of that issue’s crucial importance, many of our greatest political philosophers (Plato, Hobbes, Locke, Rousseau, and Machiavelli immediately come to mind) made it their explicit point of departure.

Although not always as readily recognized, much the same has been true in the formulation of public policy. With few exceptions, the policies adopted in a given polity reflect and flow from the views about human nature held by those charged with setting these policies. The reason is quite simple. Almost invariably, the measures proposed to deal with social, political, and economic problems stem from some (often unarticulated) conception of human nature and a corresponding set of assumptions about the likely consequences of governmental efforts to encourage, redirect, limit, or even prohibit a given type of social, political, or economic behavior.

For at least the past fifty years, the so-called Standard Social Science Model (SSSM) has dominated the behavioral sciences, colored popular thought, and, by its pervasiveness, directly and indirectly influenced public policy (e.g., see Harrison and Huntington, 2000). As we know, the SSSM insists that, for all practical purposes, human nature—and thus human behavior—is shaped<sup>1</sup> by *culture*. Put less laconically, the SSSM rests on three cardinal tenets—two of them explicit, the third usually implicit. These are: (1) that humans have no innate behavioral tendencies; (2) that, consequently, human nature is solely the product of learning and socialization (in short, of “nurture”); from which it follows (3) that human nature (and consequently human behavior) is essentially quite malleable.

Long the reigning paradigm—and accepted even by most Marxist theorists—the hitherto hegemonic SSSM has recently been challenged by an increasingly formidable rival. In literally every one of the social and behavioral sciences, there are now practitioners who advocate an evolutionary model (EM) that flatly contradicts the tenets on which the SSSM is based. Yes, the EM agrees, culture *is* important, but so are the genetically transmitted behavioral tendencies that our species has evolved over literally millions of years (“nature,” of course). Given this reality, *both* nature and nurture must be taken into account if we are to understand why humans act as they do. Almost inevitably, the idea that our evolutionary past may sometimes significantly influence how we act today leads to a radically different conception of the wellsprings of human behavior and of human nature itself. Almost inevitably, too, it often leads to quite different conclusions about the issues that governments should address and of the policies best suited to deal with these issues.

The near-180 degree shift in orientation raises three closely related questions. First, how does the EM paradigm differ from that of the SSSM in its approach to human behavior? Second, how does it differ in its understanding of human nature? Third, and obviously the central concern of this book, what are the implications of these differences for the formulation of public policy?

The magnitude and scope of the third question clearly compels a division of labor. Accordingly, we left the analyses of these implications, *as they apply to a wide-ranging spectrum of domestic and foreign policy issues*, to fellow contributors who are recognized authorities in their respective fields. As the reader will soon realize, in some instances, the policies suggested by the EM may be disconcertingly counterintuitive; in almost all areas, they tend to part company with those, so often enacted, that flow from the SSSM. Among the former are (1) the role of culture in shaping behavior; (2) genetic factors as behavioral influences; (3) the use of historical evidence; and (4) the relevance of primatological data. Not surprisingly, these conflicting views eventuate in a basic parting of the ways with regard to the malleability of human nature—and of human behavior.

With regard to differences of *emphasis*, we would surely have to list the following: (1) research methodology; (2) solutions vs. trade-offs; and (3) the importance of chance and accident in human affairs and the resulting difficulty of correctly divining actual policy outcomes. We will examine these in the order listed.

### ***Key Differences in Approach to Human Behavior***

The two models differ in many striking respects in their approaches to human behavior. Some of these are major conceptual differences; others, although the borderline is not always easily drawn, may reasonably be viewed as a matter of relative *emphasis*, rather than of fundamental disagreement.

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### **Major Conceptual Differences**

#### *The Role of Culture in Shaping Behavior*

The importance of culture as a factor in shaping human behavior is probably the most commonly misunderstood—and sometimes deliberately misrepresented—aspect of the evolutionary model. For this reason, the issue should be addressed head-on.

As noted earlier, the SSSM holds that, for all practical purposes, human behavior is the product of culture; the EM differs significantly in that it looks as well at the extent to which behavior might also be influenced by our evolutionary legacy as social primates.<sup>2</sup> But far from denigrating culture, the EM stresses that ours is the only species that has evolved the capacity for developing anything more than a very rudimentary culture.<sup>3</sup> Even more to the point, it emphasizes that *Homo sapiens* are the only species capable of creating and, in many circumstances, then acting in accordance with beliefs that actually *run counter* to some very powerful innate behavioral tendencies.<sup>4</sup>

The charge is regularly made that the EM, dismissing culture out of hand, would “reduce” all behavior to biology. Almost always, this charge is based on what E. O. Wilson is alleged to have said (or implied) in the concluding chapter of his (once infamous, now classic) *Sociobiology*.<sup>5</sup> That, however, was a quarter-century ago and even then Wilson’s views (considerably modified since) were hardly representative of his fellow biologists. Today, and for probably the past two decades, even a casual reading of the human ethology literature leaves little doubt of the importance the EM attaches to culture as a behavioral influence.<sup>6</sup>

The point need not be belabored. One model holds that to understand human social behavior we should look only at culture;<sup>7</sup> the other contends that we should—in fact, must—also consider the possibility that evolution has endowed us, *as it has all other species*, with innate propensities, which often influence that behavior. If we dispassionately weigh these two formulations, we can quite reasonably ask—which is truly “reductionist”?

### *Genetic Factors as Behavioral Influences*

In light of what has already been said, the discussion here can be quite brief. Beyond doubt, culture plays a very important role in shaping how we act, but so do genetically transmitted behavioral tendencies evolved over literally millions of years.<sup>8</sup> Some of these are probably unique to our species—language, culture (in any “rich” sense),<sup>9</sup> and, surely unique, often a willingness to sacrifice ourselves in behalf of some religious or secular belief.

However, there are other proclivities, perhaps not always so admirable, that we share with most of our fellow primates. Among these are hierarchical social structures characterized by dominance above and submission below; status seeking;<sup>10</sup> aggression; selfishness;<sup>11</sup> an aversion to celibacy and an often reluctant and unreliable commitment to monogamy (Barash and Lipton, 2001); xenophobia; ethnocentrism; and nepotistic favoritism.<sup>12</sup> These behaviors have become part of our genetic legacy because they have served on balance to maximize the “inclusive fitness” of our ancestral fellow species, and the fellow species from which they, in even earlier times, evolved.

As history abundantly testifies, culture (especially when it actively encourages religious, ideological, or ethnic animosities), may stimulate and strengthen these tendencies. Perhaps more frequently, though, it works to constrain, modify, or even prohibit their expression, albeit with less than invariable success. For much of humankind, there is often a regrettable gap between the morality their culture preaches and what individuals actually practice. In any event, whether culturally ignored, encouraged, deplored, or even banned, these biologically based proclivities play a significant role in shaping how we behave, individually and collectively.

### *Use of Historical Evidence*

Historical evidence can be used for two essentially, but not completely, different purposes. One is the attempt to discern—in human history—broad repetitive patterns, direction(s), teleological design, laws, or even some ultimate goal. Among the most familiar examples of this usage would be (1) the early Greek conception of decline, that is, from an age of gold to that of brass; (2) the later Platonic and Aristotelian notion of a cyclical pattern of political change; (3) the belief that history inexorably moves toward a predetermined end, a conviction found in Judaic, Christian, and Moslem religions and (in secular form) in Hegel and Marx. And, to be sure, there is the idea of history as inevitable “progress,”

originally voiced in the West by Condorcet and later, recast in a more “scientific” guise, by Herbert Spencer.

The second, less sweeping usage is to support a given political theory or, still more narrowly employed, to justify (or oppose) a proposed public policy or set of policies. Here (speaking only of the secular realm) we find quite a range of views on the usage and relevance of historical evidence. On some of these, supporters of the SSSM and the EM tend to concur; on others, they differ.

*Historical Evidence as the Basis for Ethical or Moral Norms* Here, of course, we have the so-called naturalistic fallacy—the claim that persistent historical regularities (what *has* been) can properly be the basis for moral or ethical rules (i.e., what *should* be). In earlier eras, the defense of monarchy often rested on this contention; some nineteenth-century Social Darwinists,<sup>13</sup> purporting to find “survival of the fittest” the ineluctable rule in nature and in history, elevated it to the philosophical principle by which sound public policy should be determined; and, to offer only one more example, there were those who, pointing to the frequency and ubiquity of armed conflict across the ages, concluded that it must therefore serve a positive and constructive purpose.

By and large, this use of history, at least in its more blatant form, is rarely encountered today in either the SSSM or the EM camps (see Barash, 2001). Granted, an occasional article or even book may argue that, properly understood, history *can* yield valid ethical and moral principles but a persuasive demonstration of that possibility is yet to be seen.

*History as the Basis for Predicting Future Behavior* On this question, the two models part company rather quickly. As might be expected, evolutionary theory holds that, barring mutation or some profound environmental change, the behaviors a species has evolved are likely to remain essentially constant. In terms of public policy, this means that where attempts to alter or even prohibit behavior have been consistently unsuccessful in the past, similar attempts are not likely to be any more effective in the future.<sup>14</sup> From this perspective, the leopard does not readily change its spots. Or, as Edmund Burke put it in a pre-Darwinian era, “We cannot change the nature of things and of man, but must act upon them as best we can.”

Nor surprisingly, given the emphasis it places on culture and the determinative role of socialization, the SSSM is far readier to discount the significance of past behavioral consistencies. If human nature is essentially malleable, history is not necessarily a reliable guide to the future—and efforts to modify human behavior that have failed in the past may well be more successful in the future. That is, the leopard might be induced (or compelled) to

change its spots. Implicit in the SSSM, as one of its severest critics has not unfairly observed, is the optimistic conviction that “... a new, better, and perhaps perfect nature can be produced by a rearrangement of social institutions” (Bork, 1996: 27).

#### *Use of Primatological Data*

The divergence between the two models on this point is eminently reasonable. If, on the one hand, human behavior is shaped almost entirely by culture and socialization, information about other species, no matter how closely related biologically, serves no useful purpose since it does little or nothing to further our understanding of human behavior. On the other hand, if our genetic legacy

meaningfully influences how we act, then the study of closely related species (and especially the apes) that share much of that legacy.... Well, the rest of the reasoning need hardly be elaborated (for an apt statement of the relevance of this type of research, see Stanford, 2001).

Given their underlying premises, for both models the conclusions are logically equally sound; both can justifiably say “QED.” Whether they are equally valid scientifically is, of course, quite another matter.

### **Differences of Degree and of Emphasis**

There are sharp disagreements between the two models on the issues just discussed. The gap is smaller on the points to which we now turn—and even some occasional overlap of position between their respective proponents. But the differences, though not as great, are no less real.

#### *Research Methodology*

The study of human behavior from an evolutionary perspective emerged from, and by many is still regarded as a subfield of, the much broader discipline—animal ethology. And ethological research, it is essential to stress, is guided by a key dictum: to understand how and why an organism acts as it does, we must observe its natural behavior in a natural setting.<sup>15</sup> Applied to the study of our own species, this means we should focus our attention on actual behavior, rather than some surrogate for behavior. As a consequence, although there are numerous similarities in research methodology between the SSSM and the EM, there are also some notable differences. Among the most important of these are as follows:

*Survey Research* One of the most frequently employed weapons in the SSSM armory, survey research seeks to elicit information about attitudes, beliefs, preferences, and/or past, present, or prospective behaviors by means of oral, written, or physical (press a lever, etc.) responses. These responses, after appropriate (and often arcane) statistical analyses, are then treated as valid and accurate measures of, and surrogates for, the attitudes, behaviors, and the like under investigation.

This is hardly the place to enter into a discussion of the strengths and weaknesses of survey research, an issue on which there is an already abundant literature. We need only say that the EM, with its ethologically derived emphasis on actual behavior in a real-life setting, regards survey responses as dubious equivalents of behavior, and views surveys, by and large, as the research instrument of last resort.

*Experiment* Both models accept experiment as a valid means of inquiry. But the EM introduces a stringent requirement—the setting, conditions, and “tests” of the experiment should mirror, to the greatest degree possible, the environment and challenges that the subject(s) would encounter under real-life conditions. For this reason, the EM eschews experiments in which the subjects (worms, mice, birds, primates, etc.) are tested in environments—and required to perform tasks—that have little or no relationship to their normal mode of existence. For the same reason it looks askance at experiments where human subjects are placed in a patently artificial setting and are asked to perform tasks and/or give responses that lack meaningful consequences.

The behaviors observed under these conditions, ethologists have long maintained, may have little relationship to how the organisms would respond under real-life conditions. This “bias” was nicely

summarized by Michael Ruse in his comment that "... laboratory experiments have the definite value of showing what can occur, not what does occur and certainly not what must occur ... it remains to be seen that mechanisms which can operate in the laboratory do in fact operate in nature" (1998: 57).

Admittedly, this places serious constraints upon experiments involving human subjects (and conceivably other "higher primates") who are intelligent enough to realize the artificiality of the situation and of what they are being asked to do. Beyond doubt, it requires considerable ingenuity, effort, and (often) resources to devise experiments that can meet these requirements. But when satisfactorily accomplished, as Robert Milgram's famously infamous research on human obedience (1974) testifies, the results can be truly impressive.

*Gaming and Mathematical Modeling* In principle, these would be quite acceptable if—and it is a huge if—the game and/or the model reasonably satisfies the requirements mentioned earlier. Regrettably, no one has yet been able to design and carry out an experimental game in which the participants' behavior entailed more than trivial personal consequences; as yet, mathematical models suffer not only from that limitation but from the arbitrary and often grossly over-simplifying stipulations.<sup>16</sup>

In recent decades, the so-called rational choice approach has won a sizable following in many of the social and behavioral sciences; in some, in fact, it is now the dominant school of thought.<sup>17</sup> Despite its formalistic guise, rational choice is essentially a variant of the SSSM,<sup>18</sup> and its practitioners rely heavily on gaming and mathematical modeling. Although some of those committed to an evolutionary perspective have begun to explore these techniques, the net effect (at least in the short run) has been to widen rather than narrow the gap between the two schools.

#### *Trade-Offs rather than Solutions*

Evolutionary change, its eponymous model teaches, almost invariably entails a trade-off. Even when the change serves, on balance, to better fit the organism to its environment, there is a price tag involved. Thus, greater size requires greater caloric intake for its maintenance; more speed comes at the cost of endurance; greater acuity in one sense usually entails diminished sensitivity in another; and a more massive protective covering or carapace leads to lessened mobility. Coming closer to home there are some familiar (and often painful) examples. The shift of our primate ancestors to an upright posture opened a Pandora's box of back ailments; a larger skull to accommodate *Homo sapiens'* enlarged brain turned childbirth into a painful and sometimes fatal experience; and a vastly expanded capacity to learn and a lessened need to rely on genetically transmitted behavioral patterns was achieved by a prolonged period of child nurture and care. In evolution as elsewhere, there is no free lunch.<sup>19</sup>

So schooled, the EM approach to policy problems is less in terms of a "solution" and more in terms of what is to be gained—and lost. 'What is the projected policy likely to achieve and—too often overlooked or ignored—what might be the possible negative consequences?'<sup>20</sup> Is there a real danger the latter will outweigh the former?<sup>21</sup> These are questions that, with the wisdom of hindsight, were obviously not adequately considered in enacting the ill-fated "Prohibition" amendment, in structuring the 1960s "War on Poverty" or, to take an ongoing instance, the decades old "War on Drugs."<sup>22</sup>

We do not want to suggest that the difference here between the two approaches is black or white, all or none, or invariably qualitative rather than quantitative. Within each camp there are

gradations of belief and, no doubt, considerable overlap of opinion. Nonetheless, we think that, faced with a policy problem, those who share an evolutionary perspective are more likely to be wary of ready “solutions” and to seek, instead, a course that seems to offer, on balance, the greatest promise of a positive pay-off.

*The Difficulty of Predicting the Future: The Role of Chance and Accident in Human Affairs*

Here, curiously enough, the two models seemingly reverse their positions. EM advocates, though confident of the continuity of human behavior, are skeptical about our ability to foresee the course of events much beyond the immediate present. SSSM partisans, though denying that past human behaviors must necessarily repeat themselves, tend to be more confident of their ability to anticipate—and possibly even to control—future developments.

The apparent paradox can be readily explained. Evolutionary theory, as its opponents rightfully charge, denies that natural selection is guided or directed by any ultimate teleology, purpose, or objective. Thus, the appearance, evolution, and (in most instances) the eventual disappearance of a species is seen as a process governed by chance, accident, and contingency. To take the most obvious cases in point, there was surely no way of predicting the several mass extinctions that have occurred since life first originated on earth. Sheer happenstance made it possible, some sixty-five million years ago, for a tiny shrew-like creature to survive one of these biological disasters and, by the luck of the evolutionary draw, to become our mammalian forebears. Understandably, those trained in evolutionary theory are likely to see random events (technically termed “nonlinearities”) as playing a greater role in history, and the future correspondingly less predictable and subject to human control, than do the SSSM partisans.<sup>23</sup>

***To Sum Up...***

The fundamental disagreement between the two models, it seems clear, is on the factors that shape, if they do not actually determine, human nature. Given their divergent positions on this issue, their other differences are almost inevitable. For the SSSM, human nature and thus human behavior is essentially the product of culture, and it is to culture alone (i.e., nurture) that the behavioral sciences should attend. For the EM, both culture and genetically transmitted behavioral tendencies (i.e., nature) are operative and consequently both need fall within our purview.

They differ, accordingly and we can say necessarily, on human nature. With its emphasis on culture, the SSSM comes perilously close to the Lockean tabula rasa with humans as blank slates upon which culture and experience inscribe their dictates. Not so for the EM. Evolution has endowed our species, as it has all other forms of life, with behavioral proclivities (ranging from aggressiveness to xenophobia); culture may strengthen these proclivities; on occasion it may override them; but in either event they significantly influence our actions.

Closely related to this, of course, is the question of human malleability. Those who believe in the SSSM are much more (we are tempted to say congenitally) optimistic about the possibility of altering human behavior than are advocates of the EM<sup>24</sup> who, as did Edmund Burke, give greater weight to the inherent limitations of human nature and of the human mind.

Turning to the use of historical evidence (the “argument from history”), both agree that what has been does not provide a valid basis for determining what *should* be. The EM, however, looks carefully at long-established behavioral patterns and, consistent with its notion of limited human malleability, sees those patterns are likely to persist in the future. No less consistent, the SSSM is more inclined to what we might call an “it ain’t necessarily so” stance. On the other hand, given the emphasis in evolutionary theory on the role of accident and nonlinearities,<sup>25</sup> the EM is the more cautious of the two with regard to our capacity to predict, let alone direct, the course of future events.

Not surprisingly, the two models do not always see eye-to-eye with regard to research methodology. Both endorse experiment but, as noted above, the EM stresses that the experiment should entail, as nearly as possible, a real-life environment and meaningful (for the subject) challenges and tasks. The importance of real-life conditions leads most EM proponents to view survey research, gaming, and mathematical modeling with limited enthusiasm. In analogous fashion, the SSSM denies that the evidence from primatology, to which the EM gives considerable weight, is really relevant to the study of human behavior.

As might be expected, these conflicting conceptions of human nature, human behavior, and even of history, yield markedly dissimilar approaches to social, economic, and political problems. The SSSM, more sanguine about the prospects of appreciably modifying human behavior and our capacity to direct and control the course of events, is more inclined to think in terms of solutions; the EM, in contrast, tends to see problems more in terms of constrained options, difficult trade-offs, and uncertain outcomes. It would be truly remarkable if the policies advocated by the devotees of one of these models were not frequently at odds with those favored by partisans of the other.

And, as the chapters to follow repeatedly evidence, they frequently are. This book, then, argues that an EM yields a much more realistic understanding of human behavior than does the SSSM—although the latter has long dominated our approach to political, social, and economic problems. Among the policy implications of the EM, to select only some of the topics discussed in the book, are the following. (1) The only realistic way to deal with prostitution is via legalization and careful regulation. (2) The absolute necessity of employing agricultural biotechnology (i.e., genetic modification) if world food-needs are to be met. (3) The social desirability of legally permitted and carefully regulated physician-assisted suicide. (4) The danger of relying on “technical fixes” to solve increasingly urgent environmental problems. Their solution requires, rather, a change to carefully regulated sustainable development. (5) Drug policies based on the assumption of individual free will and responsibility are designed for failure, as the evidence testifies. (6) There should be much greater utilization of psychopharmaceutical methods, rather than sole dependence on imprisonment, in treating criminal and antisocial behavior. (7) There should be a formal reward system for encouraging “Good Samaritan” behavior (rescue efforts, altruistic interventions, etc.). (8) Foreign policy intended to deal with ethnic conflicts in other countries should be based on minimum expectations since these deep-seated ethnic conflicts tend to be almost intractable. A corollary of this position is that we should invest minimum resources in attempts at “nation-building” in those countries. (9) Efforts designed to eliminate and/or reduce war, violence, and “terror” in relations between peoples and nations should be based on the realization that these behaviors have characterized human affairs since the beginning of recorded history and have given no indication of diminution, all palliative efforts notwithstanding. (10) In the selection of political candidates, the ideal male prospect would be tall, physically attractive, moderately but not too overtly Machiavellian, and, contrary to established folklore, not necessarily free of imputation of extramarital sexual dalliances.<sup>26</sup> On the other hand, the ideal female candidates, whatever their other favorable attributes, must be free of any such imputation.



## ***Appendix: Basic Introduction to Evolutionary Theory***

Evolution is a theory of change among living forms. Whether we are looking at the familiar evolution of horses or of dogs or of humans, we see change in how the individuals within a species appear over time. Darwin's theory of evolution was based on two simple propositions: first, there is variation among creatures within any species; second, some of the variation is more apt to provide survival advantage for individuals and, hence, will be selected. As Mayr puts it (1992: 22): "Evolution thus is merely contingent on certain processes articulated by Darwin: variation and selection."

Populations tend to produce more offspring than an environment can support. Natural selection is the process by which nature selects those individuals whose characteristics are best fit for survival in their environments. Individuals whose characteristics do not fit an environment so well will tend to die off before reproducing or reproduce less successfully (for a good, brief introduction to evolutionary theory, see Mayr, 2001).

Those characteristics that fit the environment and confer some survival value for the organism are termed "adaptations." Those organisms most adapted to their environments are more likely to survive to reproduce. In that sense, they are more "fit" (e.g., see Williams, 1966). Their offspring, in turn, carry these adaptations and are themselves more likely to survive and reproduce. Over time, individuals within a successful species develop adaptations that make them increasingly more apt to manifest reproductive success and have those adaptations become dominant or widespread within the species.

Assume that we have a particular environment. Each year, two hundred young of a species are born with just enough food and other resources to support only one hundred of the young. Thus, many will die. Those whose physical characteristics and behavior allow them to flourish better in their environment will be the ones we would expect to survive. And, in turn, they would be expected to mature and reproduce and have their genes represented in the forthcoming generation. Evolution is not just about survival—but transmission of the characteristics that enabled that survival.

In Darwin's time and for decades thereafter, though, the mechanism by which adaptations were transmitted from generation to generation was unknown. Those theories in existence at the time were unable to adequately account for transmission. It was the work of Gregor Mendel, who described the transmission of characteristics from generation to generation, that paved the way for an understanding of genetics. We now know that genes are the basic units by which characteristics are passed on from one generation to the next.

In the 1930s, biologists like R. A. Fisher and J. B. S. Haldane and Sewall Wright began to link genetics with Darwinian natural selection. This wedding of genetics and Darwinian theory was the foundation of the modern synthetic theory of evolution. Two of the classic works outlining the synthetic theory are by Ernst Mayr (1963) and Theodosius Dobzhansky (1951). More recently, Stephen Jay Gould has contributed his final work as a massive discourse on evolution: *The Structure of Evolutionary Theory* (2002).

One major current approach to applying evolutionary theory to human social behavior appears in later chapters of this volume. Sociobiology is the study of the evolutionary bases of social behavior (Wilson, 1975; Dawkins, 1989). A key concept for sociobiology is "inclusive fitness." For sociobiology, an underlying premise is that evolution has inclined living organisms to those modes of behavior most likely

to maximize the number of his/her genes transmitted to the next generation. This can be done in two different ways: first, by passing along one's genes directly, usually referred to as individual reproductive success; second, one can behave in such a manner as to increase reproductive success of one's relatives, with whom one shares genes. The combination of these two is termed "inclusive fitness," encompassing both the reproductive success of an individual *and* of that individual's relatives with whom, depending upon the degree of relatedness, the individual shares more or fewer genes (see Barash, 1982; Dawkins, 1989, Wilson, 1975).

Let us illustrate the application of this perspective to social behavior, specifically with reference to dominance behavior (a striving to attain valued goods, whether food, power, or shelter) and the formation of social and political hierarchies (see Somit and Peterson, 1997). Social primates display dominance behavior; they also live, in the main, in hierarchical social (and in the case of our species, political) structures. Hierarchy is, in fact, one of the most pervasive and ubiquitous characteristics of human social (as well as political) organization.

Dominance behavior can, according to evolutionary theory, affect reproductive opportunities. Dominance relations yield predictability. Individuals know where they stand with one another with respect to access to valued resources, as noted earlier. As a consequence, there is no need to constantly dispute who is to get what, disputes which, at best, would entail repeated and possibly substantial investments of energy and, at worst, repeated risks of injury or death.

Dominance furthers predictability and predictability, in turn, benefits both the dominant and the subordinate. The former gains the desired resource (and resulting possible enhancement of inclusive fitness) at no greater cost than a possible threat or two; the subordinate, by yielding, escapes a clash that might otherwise reduce or literally end his/her reproductive possibilities.

No less significantly, a society beset with continuing turmoil is not conducive to reproductive success. The more orderly mode of life generated by the type of predictability just described creates more felicitous conditions for passing one's genes along to the next generation. A stable, peaceful society is more apt to lead to individual reproductive success than one in continuing disarray and upheaval as a result of constant fighting over status and resources.

### **Notes**

1. Some advocates might even say "determined."
2. For a brief summary of evolutionary thought and some key concepts, please read the appendix to this chapter.
3. Whether other species, especially among the social primates and our fellow apes, have evolved even a pale shadow of that capacity remains a matter of some dispute among primatologists. E.g., see Boyd and Silk, 1997.
4. The willingness to suffer and even to die on behalf of some religious or secular conviction (nationalism is the classic example of the latter) is an obvious and familiar example; voluntary celibacy (and possibly faithful monogamy) is another.
5. In retrospect, as Michael Ruse has written, Wilson's book marked "... the end of a recessive Darwinism, a Darwinism polite enough to coexist peacefully with traditional social science." But there

was a stiff price to be paid—“No Darwinian had been treated to such sustained moral and political denunciation [and even physical assault] since Charles Darwin himself” (1998: 168-169).

6. See, e.g., the space devoted to “memes” (the cultural analogue of genes) by Richard Dawkins (1989), generally regarded as making the most sweeping claims for the EM.
7. A recent article in a major political science journal, specifically surveying the “causes of war,” failed to even mention the idea that the human tendency toward aggressive behavior might be a possible contributing factor.
8. Since that statement holds for all other species, it would be truly miraculous if it were not true of ours.
9. “Human beings produce culture in the same sense that they produce carbon dioxide: they can’t help it” (Menand, 2001: 407).
10. “There can never be enough status to go around ... a top dog exists only by virtue of his inferior” (Jones, 1999: 81). John Adams said much the same, some two hundred years earlier—“I believe there is no one principle which predominates in human nature so much in every state of life, from the cradle to the grave ... as this passion for superiority” (McCullough, 2001: 170).
11. As Michael Ruse puts it, human nature exhibits “... self-interest, if not outright selfishness, with the host of features and attitudes and characteristics that we find offensive and that the Christian judges sinful” (cited by Crews, 2001: 54).
12. And, according to Melvin Konner, “It would be disingenuous to omit hatred, lust and greed, which come to mind when human nature is mentioned” (Konners, 2002: 121). Or, as William Hamilton, a leading neo-Darwinian theorist, put it, “... genetics, not nurture, accounts for a large and important range of human behavior—from racism and xenophobia to differences in intellectual abilities between men and women—and that only by admitting this, only by casting aside hypocrisy on the matter, can fundamental human problems be tackled” (quoted in Judson, 2002: 17-18).
13. Herbert Spencer and William Graham Sumner are probably the best known examples.
14. To be sure, one need not be a Darwinian to arrive at this conclusion. Michels’ “Iron Law of Oligarchy” and Orwell’s *Animal Farm* are classic examples of the conviction that, if history teaches anything, it is that past behavioral patterns can confidently be counted on to recur—and recur.
15. A technique urged on political scientists—though not personally practiced—by Woodrow Wilson, more than a century ago (Wilson, 1887: 188-189).
16. This does not preclude the possibility that gaming and mathematical modeling may have some heuristic value.
17. This now seems to be the case in political science. See, e.g., Goodin and Klingemann (1996). More recently, Benjamin Barber deplored “... the ‘rational choice’ approach that is so disturbingly dominant in our nation’s graduate schools” (2001: 27).
18. We say this for two reasons: first, and probably more important, because of its emphasis on the “rationality” of human behavior; second, although there is now emerging a curious ambivalence, because it, too, still treats nurture as the determinative factor in behavior. That ambivalence, we predict, will necessarily be resolved by a much more “neo-Darwinian” stance.
19. “Apropos of lunch, chickens bred for meat lay fewer eggs; those who lay more eggs tend to die sooner...” (Jones, 1999: 74).
20. “When culture is conceived of as an evolutionary product—an ecology of human relations—it is by no means clear than any and all well-articulated reasons for changing particular parts of the social ecology must be valid. Even if plausible in the specific case, a policy’s unintended consequences throughout a complex system is a weighty consideration” (Sowell, 1980: 103).
21. Hegel somewhere remarked that politics offers only bad choices, i.e., the choice between greater and lesser evils.

22. As gently hinted earlier, the SSSM tends to dismiss the “argument from history” in matters relating to the consistency of human behavior. One is reminded of Poobah’s statement to the Mikado that “When your highness orders that something be done, it’s as good as done. And if it’s as good as done, then it’s done.”
23. “The all-too-human response to the prospect of nonlinearities is denial” (Terborgh, 2001: 44).
24. Thomas Sowell speaks rather uncharitably of the “anointed”—those who have great faith in their capacity to modify human behavior by adjusting the “underlying social conditions” so as to make people desire the right, rather than the wrong, thing (Brude-Briggs, 1977: 125).
25. Stephen J. Gould invariably emphasizes what he calls the “... enormously complex, uniquely contingent, and utterly unrepeatable history of life” (2001: 51).
26. E.g., someone has said: “The Kennedy magic seems to work best when ambition comes wrapped with a bit of roguery” (Lexington, 2002).

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