

The Rise and Fall of Sociobiology

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Three views of the relationship between human beings and nature have been hugely influential in recent decades: social constructionism, sociobiology, and biotechnology. Each contains a good deal of truth, and each is still an influential force today. But like all popularized science, these big pictures gain clarity by distorting reality. Each presents part of the truth about being human by distorting the whole.

Social constructionism is the belief that human nature does not matter or exist, and that most of what we believe about human nature is actually the product of human institutions and cultures, and therefore open to be changed. *Sociobiology* is the belief that human beings have real natures and natural purposes, but natures and purposes that are fully intelligible through evolution and not really different from those of the other animals. *Biotechnology* is not so much a belief but a project, which involves using our knowledge of human biology to improve human life and perhaps remake human nature. It thus presumes at least some measure of discontent with what we are now, as well as the existence of an objective biological nature (or “system”) which it can reliably manipulate.

Each of these views is more an ideology than a science, more a program for human reform than a truthful account of the way things are. They are also forms of reductionism, which gain clarity by reducing human beings to less than we really are. In what follows, I focus on the rise and fall of sociobiology: what sociobiology says and what it means; how it is true and how it is false; and how it fits with the views that human nature can be created out of nothing (social constructionism) or reshaped into whatever we desire (biotechnology).

The Death of Social Constructionism

The social constructionists agree with the sociobiologists that we are fundamentally social beings; they disagree about how and why this is so. The sociobiologists say that our sociality is a natural or programmed trait; we are gregarious like the chimps are gregarious; everything about us can be explained through evolutionary biology. The “natural law,” in fact, is the same for all animals: We are born, spread our genes, raise our young, and die. The species that accomplish these goals flourish; those that fail by not adapting to their changing environment disappear. Contrary to our pretensions, there is no God or Nature that cares about particular human beings—or particular chimps or particular

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ants. Nature chooses for life, and in doing so chooses against each particular life. Nature wants each of us to be replaced by a new, better, or more adaptable being as soon as we have completed our simple and fundamentally physical tasks.

The social constructionists, by contrast, say that we create (or inherit) social and moral life according to our preferences (if we are strong) or slave-like condition (if we are weak). In either case, what we make of ourselves owes little or nothing to nature. There is no “natural law” worth heeding, because we alone among the species have a mysterious but real capability to be other than natural beings. Rather, we make ourselves into social or historical beings over time; everything distinctively human is the product of our free or unnatural social construction.

The most influential manifestations of social constructionism in our time are Marxism and feminism. According to the Marxists, we create ourselves through our mode of production. There is no human nature but only historical human types: feudal human beings, capitalist human beings, and socialist human beings. Once we become aware that our prevailing idea of God or nature is just an ideology imposed on us by the ruling class, we can revolt against all historical oppression. We can create a world where we all live freely and equally while doing very little work. We can finally socially construct a world without the socially constructed domination of some human beings by others. This new world will be populated by a “new man”—a new human type—who has never existed before.

Radical feminism works in a similar way: We have no experience of natural men or natural women; even the sex act is socially constructed and so not really sex at all. We don’t have natural purposes but “gender” roles, and those roles have been determined by those who have wielded social power—namely, the patriarchy. Once we dispel the illusion that masculinity and femininity are “natural,” we are free to construct a new way of life—one that allows men and women to share in all the privileges and duties of society and that frees men and women from their illusory dependence on each other. To be a free human individual is to realize that biology in no way shapes one’s destiny.

The utopias of the social constructionists are characteristically based on the premise that the human responsibilities connected with birth, love, and death have no real foundation. They have been constructed by human beings and so can be deconstructed by human beings. But surely a world full of individuals unmoved by love and death—unmoved by some perception of the truth about their natures—would be full of beings who are less than we are now, however happier or more “free” they imagined themselves to be. And while social constructionism is right to see that human beings are distinct from the other animals, it errs in believing that our distinct quality is total freedom from nature.

Over the last decade or so, it has become fashionable to say that social con-

structionism is dead. Communism, the great dissidents Václav Havel and Aleksandr Solzhenitsyn rightly told us, was defeated by human nature. Private property, for example, seems to be rooted in the limitations nature places on our powers of knowing and loving. We naturally prefer our kin and close friends to human beings in general, and in many biological ways our natural selfishness makes good sense. We prefer those who share and help us spread our genes. We cannot live as if we had no bodies, or as if we did not live in a particular place with particular people.

Feminism also seems on its way to disappearing. On one level, this is because feminism has mostly won: almost everyone now believes that the truth about nature points to equal rights and equal opportunity for both men and women. But in a more fundamental sense feminism has almost completely lost. Most women do not really believe that they can be happy by liberating themselves altogether from their natural desires for both men and children. They do not believe that being a woman simply means being duped by society's oppressive construction of gender roles.

But the fact that the utopias promised by the social constructionists are not in our futures is not unambiguously good news. Capitalistic or bourgeois animals are working harder than ever to avoid dying in a way that other non-human animals never do, perhaps because they are haunted by death in a way that human beings never have been before. Surely we are too self-obsessed really to be happy, and the hope for a remedy to that self-obsession is what really attracted many intellectuals to Marxism. The life of the contemporary "post-feminist" woman also looks rather hard and often miserable. She is free to leave the home and enter the workplace, but this freedom is now seen by most women as an "economic necessity." As Marx predicted, most of our women have become "wage slaves" just like men, while men are not reliably doing their part at home and with the children.

More evidence of the untruth of social constructionism has come from the new sciences of evolutionary biology and psychology. The idea that the human mind is simply a "blank slate" seems to be totally discredited. Human beings do not simply create themselves out of nothing. We are much more hardwired or programmed by nature in certain directions—toward being men and women, living in particular families and communities, and developing language with a certain kind of grammar—than the social constructionists imagined. We have animal natures, which are not fundamentally different from the other animals in being determined to some degree by our evolutionary genetic inheritance. This is the partial truth of sociobiology, if not the whole truth about being human. It aims to provide self-help for the misery that social constructionism has caused us, by making us see that as natural beings we have nothing to worry about.

The Darwinian Lullaby

In his sociobiological book *The Great Disruption*, Francis Fukuyama celebrated the return of Americans to more natural lives after the failure of the disastrous social constructionist projects of the 1960s. Human beings are returning to family, local community, and church in response to their natural social needs, especially those connected with children. And the free market and private property are back in fashion too. Fukuyama and others (notably Steven Pinker in *The Blank Slate*) explain that evolutionary naturalism is no threat to human morality. It is, in fact, the source of a truly conservative defense of family, moral limits, social duties, and personal responsibility. We have no real need to work as obsessed individualists or radical feminists or religious fundamentalists to transform our miserable condition. Sociobiology sets us free from such self-destructive fantasies by showing us that our being is both quite natural and quite good.

The most ambitious effort to unite political philosophy and evolutionary biology into a conservative ideology is Larry Arnhart's *Darwinian Natural Right*. Arnhart's conclusion is that "even if the natural world was not made for us, we were made for it, because we are adapted to live in it." The continued existence of our species is evidence that we are fit to be natural beings and that "we have not been thrown into nature from some place far away." Christians, Marxists, and existentialists say in different ways that we are "aliens," but they are all wrong. We are the products of natural evolution and nothing else; there is nowhere else that we have been or could possibly be. Nature "is our home."

Arnhart claims that there is little new about sociobiology; his view is that the scientific naturalisms of Aristotle, Thomas Aquinas, David Hume, and Charles Darwin are all pretty much the same. There is no fundamental contradiction between recent biological discoveries and the scientific thought of those who reflected rationally in the past about man as a natural being. Those who oppose Darwinism in our time must be "motivated by moral, religious, and political concerns," because their intellectual case is obviously so weak. But such moral, religious, and political ideologies are out of step with the truth about our natures. Misguided creationists and intelligent design theorists need to know that sociobiology is compatible with a free, conservative, pro-family outlook on politics and culture. By abandoning the mix of perversity and fantasy that causes us to choose against our natural inclinations, we can realize our true happiness as animals.

Human beings, Arnhart notices, are different from the other animals. They possess language, which gives them the ability to reflect upon and rank their desires. They also have acquired a "natural moral sense" that inclines them to perform the social duties required for the species to flourish. But this "uniquely human morality is rooted in natural inclinations (such as sexual mating and

parental care) shared with other animals.” We have distinctively human natural *means* to pursue the same biological or physical *ends* as the other animals. And even our means—“such as symbolic speech, practical deliberation, and conceptual thought—are elaborations of powers shared in some form with other animals.” Our differences are only ones of complexity.

For the sociobiologists, human social behaviors came into existence as unintended and unconscious results of various natural threats to our species. At a certain point in evolution, human beings came to see adaptive behaviors “as meaningful and moral.” And yet, human morality seems to encompass more than what is “best for the species as a whole,” and its purposes do not seem to be simply or predominantly “adaptive.” We think that moral action is good for its own sake, and we cannot see any morality in nature’s lack of concern for particular human individuals. Only human beings, such as some Christians and Kantians, could decide that nature is not always on the side of meaning and morality. Only human beings, such as Thomas Aquinas and Aristotle, could claim that human beings by nature have different and higher purposes than the other animals. And only human beings can make themselves miserable by thinking or imagining that they are more than they really are.

Arnhart’s solution to our misery is a kind of biological enlightenment, a method not at all needed to save the chimps or dolphins from themselves. The self-help he provides is to show that those who say we are more than natural beings and that we have more than natural longings are wrong. The Augustinian or existentialist tradition is false and the Aristotelian or naturalist tradition is true: “While pagan philosophers like Aristotle think that human beings as mortal animals can be happy, Augustine insists that human beings can never truly be happy as long as they are mortal, because their deepest natural desires can only be satisfied through an immortal union with the creator.”

Arnhart does admit, in a muted way, that the distinction between pagan naturalism and Christian alienation is too sharp. Aristotle, he notes, also observes that human beings “can know only momentary and incomplete satisfaction of . . . [their] social and rational desires.” Our self-conscious mortality—not shared with the other animals—gets in the way of our happiness; it frustrates the full satisfaction of our “deepest natural desires.” For this reason, Aristotle acknowledges that we cannot help but long for immortality, if often in ways that are “unreasonable” because they “ignore the eternal limits of our nature.”

Reasonable or not, these human longings persist. Arnhart’s self-help is to use sociobiology to discourage them. We should be happy as animals because we can be happy no other way. By reducing our longing for distinctively human happiness or completion, Arnhart hopes to reduce our distinctively human misery. In his hands, Darwinian evolutionism becomes a lullaby aiming to soothe certain misguided human experiences to sleep.

But Aristotle himself would not have seen such a lullaby as reasonable or effective. For him, human beings are the only animals that desire to be more than simply animals. This desire must be accounted for and satisfied, not explained away as some form of chimp aggressiveness. As Richard F. Hassing explains, Aristotle sets man “apart from nature in a way that is uniquely problematic.” The greatness and misery of being human is that we can be much better and much worse than the other animals. But we are not capable of being just like them. We are too proud, too self-conscious, and too rational. We are the only Darwinian creatures that know we are Darwinian creatures, and who wish to be something more. Arnhart’s belief is that “our earthly happiness is securely founded in our nature as mortal animals endowed by a moral sense that serves our natural desires.” But only human beings are fully aware of their contingent and temporary existence; they are the only animals that know there is no natural security for their existence.

The ancient philosophers, unlike the modern sociobiologists, understood this. The view of Socrates and no doubt Aristotle is that philosophy is, in great measure, learning how to die. This is a lesson only human beings have to learn through great and thoughtful effort. The other animals “know” it instinctually or unconsciously. We have been given duties by nature as animals, but we perform them quite unreliably because we have been given the additional duty of living well with our insecure and temporary natural existence. Everything that human beings do is infused by what we alone among the animals know about ourselves. Human love and human death cannot be reduced to anything like the experience of other animals. And thus it is unlikely that a moral sense linking us to the other animals can serve as the foundation for what human individuals alone have to do.

Whether he realizes it or not, Arnhart presents us with an ideology that aims to reduce us to less than we really are for our own good; it attempts to make men happy by saying that man is just another animal. But his account is too reductionistic to be effective. It blandly claims that the desire for knowledge, the experience of love, and the need for redemption are simply complex animal experiences; they are not hints of our difference but odd manifestations of our sameness. In the end, however, we cannot simply obliterate the human longings described so well by Aristotle, Augustine, and Heidegger by saying that they make no sense in a purely evolutionary framework. Sociobiology cannot provide enough evidence to convince us that we should rest content with our natural being. The lullaby does not finally put us to sleep.

The Hopeful Myth

Despite Arnhart’s deep knowledge of philosophy, he does not seem nearly as self-conscious about sociobiology’s function or its inadequacy as its brilliant and

famous founder, Edward O. Wilson. Wilson admits to preaching the “scientific myth of evolution” as a replacement for traditional religion. He has ironically and rightly been called a “scientific evangelist.” Even more than Arnhart, he regards the fundamental human alternatives as dogmatic creationism and evolutionary materialism.

Wilson’s first full-scale and best sociobiological polemic, *On Human Nature*, forecasted the demise of the era of sociobiology before almost anyone else even knew that this era had begun. He boldly asserted that “the intellect was not constructed to understand atoms or even to understand itself but to promote the survival of human genes,” and he noted with favor “the growing awareness that [religious] beliefs are really enabling mechanisms for survival.” Morality, too, is just another “technique by which human genetic material has been and will be kept intact.”

But it is also true, Wilson observed, that “man’s destiny is to know, if only because societies with knowledge culturally dominate societies that lack it.” Knowledge is the foundation for the domination of some human beings over others; those that do not have it do not survive. But knowledge can do more than promote survival; it can allow human beings to free themselves, to some extent, from their unconscious natural determination. By coming to understand “the elements of biological human nature,” we will gain “some measure of intellectual independence” from natural forces. By knowing how we are like the other animals, we can win a measure of “real freedom” or conscious control over our natures that the other animals can never possess.

Before scientists discovered the truth about sociobiology, we were blindly controlled by evolutionary forces we did not understand. Religion, morality, and philosophy were only illusory adaptive mechanisms. But once we discovered the truth of sociobiology—the truth that we are no different than other natural animals—its truth begins to become less true. The evolution of our species—unlike all the other animals—will become to some extent conscious and willful.

Wilson presents this new understanding of our biological natures as an unstable middle point between complete genetic determination and complete freedom from such determination. He knows that the era of sociobiology will be followed rather quickly by the era of biotechnology. Soon enough, knowledge that can only ambiguously be called “self-knowledge” will allow us to alter our “hard biological substructure,” our genetic composition, and thus our human nature. By determining what our genes *are*, we will be able to change what natural evolution *means us to be*.

Wilson acknowledges that we cannot know in advance to what extent we can change human nature or negate the truth of sociobiology. Even in the age of biotechnology, sociobiology might remain more true than false. In our efforts to change “the very essence of humanity,” we may discover that “there is something

already present in our nature” that limits or even thwarts our will. Or we may not. We cannot tell in advance how free we can be—perhaps because sociobiology itself cannot account for the willful freedom from nature that is uniquely characteristic of our species. Where there is no explanation there can be no prediction.

For example, Wilson complains that human beings react to death “bizarrely,” without really giving a sociobiological explanation or even wondering why this is so. But he does admit that “the anguish of death alone” may well be sufficient to keep “belief in a personal moral God” alive in spite of all scientific evidence. He would oppose scientists helping chimps acquire a sense of “personal death” unless the chimps could somehow know death without our fear, and he aims for us to keep that sense without being strongly moved by it. Wilson seems both to affirm and deny the fact that we human beings are distinguished by both death and religion. Like Arnhart, he clearly wants to employ myth to *make* us more like the chimps, to make our lives less unreasonably determined by death and religion. And in this respect, sociobiology means to be a form of social constructionism. It is an effort to make us into something rather than simply give an account of what we are.

Wilson seems to understand both the truth of our mortal anguish and the problem it creates for sociobiology. “While explaining the biological sources of religious emotional strength,” he writes, evolutionary biology “is unable in its present form to draw on them, because the evolutionary epic denies immortality to the individual and divine privilege to society, and it suggests only an existential meaning for the human species.” But the human individual still hungers for meaning and immortality, and that individual is moved very little by the quasi-immortality of the “evolutionary epic.” All the great existentialists—from St. Augustine to Walker Percy and beyond—have focused on the experience and fate of the individual, and we are much more moved by epic personal struggles than by evolution. There is, to my knowledge, no great literature on “species existentialism.” Because “scientists cannot in all honesty serve as priests,” Wilson observes, they cannot lie to human beings in order to move them the way priests do.

But then Wilson goes on to show why scientists, like all other mythmakers, must lie. “Men, it appears, would rather believe than know,” he observes. Once we know what really moves human beings, “noble” lying on behalf of scientific truth is necessary. The mythmakers of scientific naturalism must use what they know about evolutionary biology to make a “precise and deliberately affective appeal to the deepest needs of human nature”—including the need for personal immortality and existential meaning. The true scientific myth must actually be “Promethean”; its strength comes from giving people “blind hopes” that all they long for can be achieved through scientific progress and liberation. The original Prometheus, Wilson remembers, “caused mortals to cease foreseeing doom.”

Blind hopes can cure or at least deaden the symptoms of that specifically human “sickness” of foresight.

Wilson is pretty certain that our deepest needs cannot be satisfied through biotechnological progress, and that sociobiology by itself shows that they cannot (or perhaps need not) be satisfied at all. Sociobiology might balk at the absurdity of the longings that stand at the foundation of individual existentialism, but it cannot dispense with or explain them. It cannot explain why our species cannot live well without blind hopes, even as it claims to show that the hopes we place in social constructionism and religious belief are untrue. It makes the individual human life seem so hopeless that we cannot help but focus our hopes on biotechnology, even while acknowledging the limits of biotechnology to remake human nature.

Wilson’s later books seem to some extent to repudiate this flirtation with Promethean mythmaking, if not abandon mythmaking altogether. But the “Ionian enchantment” of his more recent book *Consilience*, or the belief in the materialistic unity of all knowledge, limps as an ideology or myth because it only inspires the mind. Wilson’s new hope and expectation is that human beings will be conservative in their use of biotechnology, and that they will keep much of their natural home intact, including qualities given to them as particular animals by evolution. His concern is properly sociobiological: the danger of biotechnology is that human beings might destroy the happiness they enjoy as natural animals and make themselves much more homeless than they are now.

In his more recent work, Wilson has focused increasingly on the dangers of destroying the good of natural diversity. In *The Future of Life*, he appeals to our natural “biophilia” as the foundation for a “culture of permanence” and against promiscuous natural devastation. He even heightens our sense of biological responsibility by overstating, at least on sociobiological grounds, the difference between human beings and the other species: “If the rest of the world is the body, we are the mind.”

But in the end, there remains an undeniable tension between Wilson’s calls for moderation and his view that the purpose of scientific knowledge is to give human beings a level of control over nature—including human nature—not enjoyed by the other animals. Biophilia is surely not sufficient compensation for our dissatisfaction with the sociobiological account of our meaningless, temporary, and contingent existence as individuals. And it is unlikely to halt or limit our desperate turn to biotechnology in pursuit of the happiness that nature by itself does not seem to give us.

The Era of Biotechnology

While it is important to see the limitations and ultimate falsehood of sociobiology, it would be wrong to ignore or disregard its partial truth. We remain in

some measure at home in the world as natural animals, and our enjoyments as parents, children, friends, and community members have a natural foundation in social instinct. Both communism and radical feminism were indeed defeated by human nature, though the time and place of their surrender had much to do with human *persons* making human *decisions* that shaped the course of human *history*. And for those in the know about nature—such as Arnhart or Fukuyama in *The Great Disruption*—it is not surprising to see revivals in “family values” or the emergence of all sorts of new moral communities. Nor is it surprising to see the growing strength of property rights and the free market throughout the world. The “social capital” we need to live well as human beings is partially embedded in our nature, not just in our “culture.”

But the view that all of human life can be explained by evolutionary naturalism makes human beings seem far more at home in nature than we really are. It makes us believe that the natural world should fully satisfy us. By denying our alienation as self-conscious mortals, it makes our experiences of individual longing and anxiety seem groundless or absurd. By trying to make us feel too much at home in the world, sociobiology has the perverse effect of making human individuals feel less at home than ever before.

The central problem is that human beings cannot be satisfied with a teaching about nature that says we are here simply to spread our genes and be replaced. “Just as you have to acknowledge the power and creativity of evolution,” Michael Rose observes, “you also have to acknowledge its complete indifference to us as individuals.” From the individual’s point of view, as Nicholas Wade puts it, evolution is a “blind and pitiless process.” But one point of human distinction is our ability to use scientific knowledge to bring nature under human control. Human technology is not fundamentally an elaboration of primate tool-making, because the chimps show no signs of being death-obsessed control freaks. Our technology is rather something distinctly human; it is a response to the dilemmas and possibilities of being the only moral, rational, and death-haunted animal.

At its best, sociobiology might produce human beings with a serene resignation or stoicism about our inevitable fate. But the Promethean teaching of modern science is that resignation is ridiculous if we can use knowledge to win our freedom. Without scientific knowledge, we blindly adapt as evolution intends. With scientific knowledge and modern technology, we can perhaps defeat nature in the name of the individual. We can take evolution into our own hands, and the individual can willfully and effectively choose his own life over what is best for the species.

Wilson is correct when he says that the truth of sociobiology is an unstable middle position between unscientific ignorance and biotechnological willfulness. Sociobiology is true until we know it is true. Once we understand how human nature “works,” we stand armed and ready to try to change or improve it. Perhaps that is why right after publishing a book celebrating nature’s victory, Fukuyama

wrote another book, called *Our Posthuman Future*, speculating about the end of our merely natural existence as human beings. And perhaps that is why witty new defenses of sociobiology against social constructionism, such as Pinker's *The Blank Slate*, seem out-of-date even before they are published. Biotechnology, after all, is a new and far more plausible form of social constructionism. All bets are off about what human beings are and how we will act if we can actually change our natures.

Perhaps feminists will use biotechnology to eradicate the natural differences between men and women. Perhaps society will use biotechnology to make men less aggressive. Perhaps psychiatrists and psychologists will use biotechnology to make everyone happy (or at least so unaware of reality that they are no longer sad). Perhaps the Chinese (who have a very different view of what should be socially constructed) will use genetic technology to create a race of strong, spirited, and fearless warriors. Or perhaps the new biotechnology will aid the creation of new forms of tyranny, producing a world that really is full of natural (or genetically engineered) masters and slaves. However used, biotechnology would be a means to construct an existence that is "naturally" different from the way we are now. The fact that the technology for achieving such things may be far off or never exist does not mean that experimenting with it (on ourselves or on our offspring) will be benign. Marxism, after all, was a fantasy that failed, but not without dire consequences in the real world.

Arnhart has speculated that the development of biotechnology might be directed by the natural moral sense that we have received through evolution. But it is unclear how much human behavior in our time can be explained through the evolutionary idea of human nature. The most highly sophisticated individuals in the most prosperous nations seem to be consciously thwarting natural evolution by voting against their natural replacements. They may act or at least talk like laidback animals untroubled by death, but they pursue health and safety in the most scientific and disciplined way. Exercise and diet are the parts of their lives they do not even pretend to enjoy. They are rather fanatical about lengthening their own lives and fending off death indefinitely. And they are too self-obsessed to have enough children to replace themselves.

Sociobiologists should rightly criticize these hyper-modern individualists for neglecting their natural sources of happiness and obsessing about "staying fit" long after their natural purposes (spreading their genes) have been fulfilled. But modern individuals seem more death-haunted than ever before precisely because they believe that something like sociobiology is true. They obsess about their bodies because they do not believe they have souls.

The Truth About Human Nature

It is too early to know for certain whether the latest advances in biotechnology will achieve their immortalizing promises. But the dominant tendency of the

biotechnology project, whether successful or not in achieving its own aims, will be an intensification of the modern preference for the individual over the species. The activities of raising children and having families will have more marginal roles in our lengthening lives; and genetic enhancement, embryo screening, and human cloning may well make the few replacements we have more manufactured than natural.

But in the end, biotechnology is not likely to satisfy the human longings that inspire it. What we need instead is a richer, more truthful account of human nature, one that comprehends the excellences and passions, the joys and miseries, of being the only animal who knows, loves, and thinks about death. Human beings are both social and natural, but we are not only social and natural. We have demanding responsibilities and thus a dignity not given to the other animals.

Human beings may have become human through an evolutionary process, but at some point in that process there must have been an “ontological leap” that made us more than simply clever animals. We are the beings with genuinely complex language and speech; we have been given the capability to seek and partially understand the truth about our souls and perhaps the truth about God. This capability alters the way we experience everything, including our enjoyments and miseries as animals. Birds do it, bees do it, and we do it, but human sex is quite different from winged sex; it can be exalted or degraded in a way that animal sex can never be.

A more truthful understanding of human nature would connect what we know from contemporary biology with the human experiences of alienation, anxiety, love, nobility, and wonder. We need, as Leon Kass once put it, a “more natural science” that accounts both for the heterogeneity of nature and the heterogeneity of natural human purposes, but which knows, recognizes, and learns from its own limitations. Sociobiologists, who have benefited us greatly by reflecting on the meaning of evolution, could do us an even greater service if they stopped believing that a materialist understanding of evolution explains everything, especially when the facts suggest otherwise.

We are, in part, natural beings, but we alone among the animals are in some ways alienated from the natural world in which we live. Fundamentalist creationism and rigidly atheistic evolutionism are both pretty implausible. We should instead face up to the truth about human nature, which might make us more at home with our homelessness and more open to the distinctly human joys, such as love, and the distinctly human responsibilities, such as caring for a dying parent or mourning a dead child. It would give us a genuine standard with which to accept or reject the various biotechnological possibilities that will rapidly be presented to us. And it would show why we should not put our deepest hopes in either history or science.