



FROM BIRTH TO DEATH AND BENCH TO CLINIC

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CHAPTER 25

Nature, Human Nature, and Biotechnology

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nature, human nature, and biotechnology

by Gregory E. Kaebnick

Framing the Issue

From genetically modified foods to assisted reproduction, an increasing number of social debates feature what might be called “moral views about nature”—claims that leaving a naturally occurring state of affairs alone possesses a moral value that should be weighed in moral decision-making and protected in public policy. These views take a variety of forms and arguably do not involve any clear understanding of what “nature” is. Yet they have enduring power in everyday discussion and have recently gained wider acceptance in the scholarly literature, giving them increasing clout in a range of contemporary social and policy debates.

Appeals to Nature in Public Debate

There are three large kinds of social debates that feature moral views about nature: those about human nature, those about the nature of plants and animals, and those about the environment.

Humans. Perhaps the most prominent debate concerning nature is about what people might someday be able to do to human nature—to themselves or to others—using medical technology. For example, philosopher Michael Sandel argues that using gene transfer technologies to enhance ourselves or our children represents “a Promethean aspiration to remake nature, including human nature, to serve our purposes and satisfy our desires.” The President’s Council on Bioethics, formed by President Bush in 2001 to address the ethical and policy ramifications of biomedical innovation, argues that reproductive cloning would “represent a challenge to the nature of human procreation and child-rearing.” The environmentalist Bill McKibben has followed up his book on environmentalism, titled *The End of Nature*, with a book arguing that human genetic engineering and other technologies will bring about “the end of human nature.” Many commentators hold that we should not use performance-enhancing drugs in sports and that we should die natural deaths, neither hastening them with doctors’ assistance nor indefinitely prolonging them with tomorrow’s “antiaging” technologies.

Moral views about human nature have also long been cited in some nonmedical contexts, especially concerning sexuality. Wide swaths of the population hold that homosexuality is unnatural

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HIGHLIGHTS

- Moral views about nature—claims that nature or a natural state of affairs possesses some special value—are important in a range of contemporary debates.
- Three kinds of social debates feature moral views about nature: those about what we might be able to do to human nature using medical biotechnology, those about modifying plants and animals using agricultural biotechnology, and those about protecting the environment.
- Disagreements over what we mean by “nature” and whether views on it are really about something else—such as keeping the status quo—pose a challenge to moral views about nature.
- Examples drawn from the natural world and from the history of scientific and technological progress show that appeals to nature cannot serve as across-the-board moral laws that trump all others.
- Moral views about the environment have already led to policy aimed at environmental protection and preservation, but moral views about biotechnology may not be as easily enacted.
- Some moral views about nature might be better left to nongovernmental organizations.

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and therefore morally objectionable. Many also think that biological parents should be recognized as a child's "true" parents (over adoptive parents, for example).

Plants and animals. Another high-profile social debate concerns biotechnological intervention into nonhuman organisms, including livestock and crops (so-called agricultural biotechnology) and pets—such as the development of a fish, originally created for industrial purposes but now marketed as a pet, that glows red or green in the dark. Some philosophers have argued, for example, that genetically modifying chickens to make them egg producers that are devoid of sensation would unacceptably violate their "species integrity," even though it would benefit humans (and possibly even chickens). Many consumer activists who advocate for "natural foods" oppose foods produced with the help of gene modification techniques.

Environment. A third debate, focusing on environmental protection and preservation, can be illustrated by pointing to policy. For example, the Endangered Species Act of 1973 implies that human beings should avoid driving naturally occurring forms of life into extinction, even if the human activities that endanger them bring other social benefits. We should not build dams that would drive endangered species of fish into extinction, for example.

Likewise, the Wilderness Act of 1964 presupposes that it is morally desirable to preserve some spaces that are, in the language of the act, "untrammelled by man," even though those spaces might be put to other socially beneficial uses. Similar impulses probably lie behind the creation of the federal national park system, the idea for which is sometimes credited to the artist George Catlin and his hope that some of the West might be "A nation's park, containing man and beast, in all the wild and freshness of their natures' beauty!" Finally, some environmental policies that are also aimed at public health, such as the clean air and water acts, may be partly motivated by appeals to nature. The public service advertising in the 1970s that portrayed an American Indian reacting disconsolately to the sight of litter along a roadside assumed that combating pollution is not only about public health; it is at least partly about a moral attitude toward the environment.

IS IT NATURAL? SOME PROVOCATIVE EXAMPLES

Claims about the value of nature can lead into difficult philosophical debates. Counterexamples drawn from the natural world and from the history of scientific and technological progress help make these issues concrete.

- How can gene transfer be "unnatural," for example, if genes are sometimes transferred from one species to another "in nature"—without human involvement?
- How can asexual procreation be unnatural if many nonhuman species, such as bacteria and yeast, do it "in nature"?
- When analgesics were first given to women in labor, they were opposed by some as unnatural, but today, the moral calculus is reversed, and denying analgesics would be considered unacceptable.
- People have been genetically modifying crops and livestock for thousands of years already simply through breeding.
- Many landscapes and ecosystems regarded as natural turn out to have been influenced to some degree by humans; does that make them "unnatural"?
- What is medicine but an ongoing effort to overcome nature?

Counterexamples like these are sometimes thought to decisively refute the notion that moral views about nature are coherent or compelling. Strictly, they do not prove that all appeals to nature fail, but they do show that they are not across-the-board moral laws that trump all others. Other moral considerations—human well-being, rights of self-determination, and property rights, in particular—must also be borne in mind and might in particular cases outweigh them. And appeals to nature might depend on context. Naturalness might be important in sports, for example (see chapter 33, "Sports Enhancement").

Thinking through Appeals to Nature

Appeals to nature such as these have been contested on a number of grounds by philosophers and others. They argue that such arguments are muddy because nature itself is not a straightforward concept. Or they contend that those who appeal to what's natural as a reason not to embark on some path may actually be concerned with change itself and a desire to keep the status quo. So-called counterexamples give these objections some teeth—but also highlight the complexity of the debate (see box, "Is It Natural? Some Provocative Examples").

Disagreement over what "nature" is. "Nature" is a famously complicated term, employed to make a variety of different points at different times. In

the moral and policy debates described here, it refers (roughly) to a state of affairs prior to or independent of human interference in them. Some critics doubt that “nature” can be meaningfully used in this way, however. In its 1982 report *Splicing Life*, the President’s Commission for the Study of Ethical Problems in Medicine and Biomedical Research dispensed with all appeals to nature by arguing that they lead to a dilemma: Under one common definition, “nature” refers to the fundamental laws of nature. Under this definition, however, everything humans do must be regarded as natural, and therefore humans cannot harm nature. Under a second common definition, “nature” is what is free of human interference. If so, then it looks like everything humans do is unnatural. Either way, “nature” alone cannot help make any moral distinctions.

Those who support moral views about nature may try to develop a more satisfactory definition. For example, some in environmentalism might argue for a refined version of the second definition—perhaps replacing “free of human interference” with the more complicated “not under human domination” or “not under ongoing human control.” Alternatively, they may admit that the concept “nature” is necessarily somewhat vague and even changeable; we have some clear examples of what is widely accepted as natural or unnatural, but we may also have many hard cases somewhere in the middle that we cannot decisively resolve.

Can Moral Views about Nature Ever Be Justified?

Moral views about nature are also often criticized as resting on nothing other than feelings of disgust or fear about the prospect of change. Critics also hold that valuing nature is sheer sentimentality, as opposed to a well-grounded rational principle. Some also argue that the very point of morality is precisely to counter some aspects of human nature—to restrain natural human urges and to compensate for natural evils that befall people.

Those who offer moral views about nature must argue that morality is not fundamentally about countering nature. Some maintain that whether nature or human nature should be preserved depends on the circumstances. Others maintain that a relatively fixed understanding of human nature is important for other moral values. For example, Francis Fukuyama, a prominent critic of

RESOURCES

Recent news

- Donald G. McNeil Jr., “When Human Rights Extend to Nonhumans,” *New York Times*, July 13, 2008.
- John Tierney, “Are Scientists Playing God?” *New York Times*, November 20, 2007.
- Joel Garreau, “Is It Time for a Flex Plan? Techno-Athletes Change the Definition of Natural,” *Washington Post*, August 1, 2007.
- William Saletan, “Tinkering with Humans,” *New York Times*, July 8, 2007.
- James Carroll, “The Athletic Drive to Mastery,” *Boston Globe*, June 25, 2007.
- “Remembering Rachel Carson” (editorial), *Boston Globe*, May 27, 2007.
- Donna Seaman, “The Communitarian Manifesto; *Deep Economy, the Wealth of Communities, and the Durable Future*” (review), *Los Angeles Times*, March 11, 2007.

Further reading

- John Harris, *Enhancing Evolution: The Ethical Case for Making Better People*, Princeton University Press, 2007.
- Michael Sandel, *The Case against Perfection: Ethics in an Age of Genetic Engineering*, Belknap Press, 2007.
- Ronald Bailey, *Liberation Biology: The Scientific and Moral Case for the Biotech Revolution*, Prometheus Books, 2005.
- Bill McKibben, *Enough: Staying Human in an Engineered Age*, Times Books, 2003.
- President’s Council on Bioethics, *Beyond Therapy: Biotechnology and the Pursuit of Happiness*, 2003. Report available at www.bioethics.gov.
- Francis Fukuyama, *Our Posthuman Future: Consequences of the Biotechnology Revolution*, Farrar, Straus and Giroux, 2002.
- Leon Kass, *Life, Liberty, and the Defense of Dignity: The Challenge for Bioethics*, Encounter Books, 2002.
- Gregory Stock, *Redesigning Humans: Our Inevitable Genetic Future*, Houghton Mifflin, 2002.

biomedical technology, contends that typical human needs and abilities—human nature—is what grounds human rights and human equality. If medical technology leads to sufficiently dramatic changes in human nature, then “human” beings will give way to “post-human” beings, and claims about human rights and human equality will lose their justification. Environmental philosophers in the “Deep Ecology” movement take another fairly extreme position. They have tried to show that

nature can have “intrinsic value,” meaning that it is valued for itself (not merely as a way of achieving other ends), much as we value human beings as ends unto themselves.

Policy Implications

The way that moral views about nature are framed helps determine their relevance to public policy. In a liberal society, a policy decision is typically considered legitimate only when the reasons supporting it can be accepted by all reasonable citizens, from a range of philosophical and moral perspectives. Moral views about nature are indeed part of many citizens’ world views and seem no less reasonable than many religious perspectives, for example. Many other citizens are not moved by such appeals, however. This split suggests that government should usually adopt a hands-off stance—neither imposing such views on all citizens nor preventing citizens from living according to them. And while views about nature constitute a powerful moral ideal for many people, public policy is often reticent to require that citizens uphold ideals, even when those ideals are agreed upon. We do not require that citizens treat each other kindly, for example.

Views about nature might nonetheless lead to public policy through nongovernmental channels—such as sports governing bodies. Or perhaps gov-

ernmental channels specially designed to engage and protect public opinion might be devised. Francis Fukuyama, who argues that human nature provides a critical linchpin for human rights and equality, has proposed that the use of human biotechnology be regulated through a special governmental body that would insulate policy from politics and foster national moral deliberation on its uses. In the agricultural domain, food labeling that informs consumers about the use of genetic modification might provide a mechanism that respects different perspectives about nature without enforcing any of them.

Moral views about the environment have already led to environmental protection and preservation policy, but those views differ from moral views about biotechnology in at least two important ways: First, some environmental measures align with concerns that can more easily be regulated by government, such as public health. Second, on environmental issues, government policy can more easily go halfway; for example, it is possible to set aside some areas of land without imposing moral views about nature on everyone. Such halfway measures are more difficult with biotechnology. If some parents are allowed to use medical biotechnology to make their children smarter, for example, it might become extremely difficult for other people not to use biotechnology in the same ways. 🌳