

Real and metaphorical moral limits in the biotech debate

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From the beginning, the regulatory and public debate over biotechnology has been closely tied to the question of whether it matters what process is used to develop a product. Generally speaking, critics of genetic engineering argue that, yes, it does matter, while proponents argue that, no, only the features of the product matter.

I argue here that this question is at the root of the ethical debate over modern biotechnology. I argue further that fully understanding this question is of critical importance in moving the ethical debate surrounding modern biotechnology ahead.

The process-versus-product view is important to the ethical analysis because the two views neatly map onto the distinction between nonconsequentialist and consequentialist ethics. Simply put, nonconsequentialists formulate ethical prescriptions that stand regardless of the consequences, whereas consequentialists consider consequences in ethical decision making. For example, a nonconsequentialist may hold that killing an innocent human being is wrong under all circumstances. In contrast, a consequentialist would not prohibit such killing absolutely, but would attempt to judge it in the context of predicted consequences (e.g., one can imagine a lifeboat situation in which the choice is between a single act of murder and the probable death of all passengers). The critical point is that nonconsequentialists may formulate absolute moral limits, whereas consequentialists will prefer to formulate ethical prescriptions contingent on the forecasting of consequences.

Within this classification, the process view is nonconsequentialist and the product view is consequentialist. Nonconsequentialists may argue that some or all types of genetic engineering are wrong, because these methods lie beyond a moral limit. An expression of this view would be, for example, "the genetic engineering of humans violates the basic dignity that all humans possess." In support of this line of argument, one can point out that metaphysical concepts, such as "dignity" and the prescription of moral

limits, are common ingredients of existing and widely accepted legal and moral frameworks; for example, in human rights declarations. The categorical refusal to consider the use of human embryos as a source of stem cells is based on such an approach. Arguing that some nonhuman animals also have "dignity" that could be violated can extend this line of argument. Finally, one may single out genetic engineering as the worst offender within biological technologies, all of which may be considered a threat to the "intrinsic value" of nature (the existence of such value is implied in the United Nations World Charter for Nature of 1982) or to the "integrity of ecological systems" (the existence of such integrity is explicit in the new Earth Charter Initiative, see www.earthcharter.org/draft/charter.htm). I would call such moral arguments "the prescription of a 'real' moral limit."

In contrast, consequentialists would argue that no method is intrinsically wrong, morally speaking. What really matters is the harm that may result, and such harm should be forecasted with risk assessment methodology. Very broad categories of goods may be considered within this approach. As a result, risk assessment may have to be conducted not just with human health and the economy in mind, but also to assess environmental, aesthetic, social, and political change. Still, what matters is the risk of harm; all decisions are contingent on the prediction and consideration of risks and benefits. This line of argument does not support the view that a type of research is intrinsically immoral.

The differentiation between nonconsequentialists and consequentialists suitably characterizes two extreme approaches to the evaluation of a new technology. In practice, however, advocates and opponents of modern biotechnology often combine consequentialist and nonconsequentialist elements.

For example, Greenpeace's slogan "no genetic manipulation of nature" (www.greenpeace.org/~geneng/) appears to describe a moral limit. In reality, however, Greenpeace debates the issue using science and (consequentialist) risk language. Greenpeace is not alone. In the public debate, all opponents are pressed to provide a whole list of arguments that often have the structure: first, genetic engineering is absolutely wrong; and second, the projected risks are too high considering the projected benefits. This prompts the question: Why do we need to add a risk argument


after stating the moral argument?

The absolutist, nonconsequentialist moral prescription would trump the contingent risk argument in any case—even if the balance of benefits and risk would call for the use of biotechnology on consequentialist moral grounds, as the industry keeps arguing. Perhaps the moral language is just a metaphor to strongly suggest a conclusion reached on the basis of (consequentialist) risk. I would call this position "the prescription of a metaphorical moral limit."

The problem with this approach is that it lacks clarity. Is a metaphorical moral limit specified to illustrate that the consequences are thought to be so severe that only an absolute prohibition will do? Or, is risk language used to convince science-minded individuals who may not be inclined to accept the true reason, the real moral limit specified first? Lack of clarity on this point fuels the rhetoric in the debate.

It is perhaps helpful here to consider an ethical prescription of the second order—a prescription for the way ethical prescriptions should be used in this debate. I believe it is, in principle, defensible to argue for the prohibition of a technological method on moral grounds, even when the argument is based on an extension of traditional moral limits (e.g., an extension from a human-centered approach to one not centered on humans). I note in this context that religious freedom is a human right. I further believe it is defensible to scrutinize closely the control structure over vital resources, such as food and health care, or to scrutinize closely the conditions for release of persistent technologies that may be hard to trace or manage, and in cases in which it is difficult to assign liabilities. However, I do not believe it is defensible to call for prohibition when tight regulation is in order, or to argue for tight regulation as a tactic toward achieving the real goal of prohibition.

Similarly, if the primary goal is profit, then one should avoid the argument that "we have to feed the world." The use of imprecise language or rhetoric entails a very real cost: when it becomes necessary to alter one's stance over time, then credibility and trust are at risk. A loss of credibility and trust hurts advocates in both camps—and most of all, the public.

In a nutshell, a second-order viewpoint of the ethical debate leads to a straightforward prescription. If we want fairness, respect, and progress in this debate, then we all have to say what we really mean. 

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