Does your work have anything to do with normative issues or public policy?
Marshall Abrams

Sometimes I'm asked whether the things that I've been writing about in philosophy of biology have anything to do with normative issues, public policy, etc. The answer is "Yes," but I don't think that the reasons why are obvious. Much of my most recent work has focused on metaphysical issues concerning the nature of evolutionary processes. The following is a sketch of some connections between metaphysics, evolution, and normative issues which are of particular interest to me.

Policies concerning education, poverty, crime, economic development, taxation, child welfare, health care, religion, and other categories are often explicitly or implicitly justified and guided by views about the extent to which intelligence and other cognitive characteristics can be affected by those policies. The following issues relevant to such views are of particular interest to me.

There has been recent interest among biologists, social scientists, and philosophers in the idea that one of several kinds of natural selection on groups of human ancestors—in addition to selection on individual organisms—played an important role in the evolution of human cognition. Some authors have argued that such group selection might be part of what explains our moral intuitions and our tendency toward religious activity. Some authors argue that morality or religion exists only to increase reproductive success, and that it has no further content. I am quite sympathetic to arguments that group selection might have favored inclinations toward altruistic and religious behavior. There are reasons to think that natural selection would have prevented such behavior otherwise. However, I would argue that a proper understanding of evolutionary processes and of human evolution is unlikely to support any extreme conclusions about morality or religion.

It is widely assumed that intelligence and other cognitive characteristics are influenced by genetic inheritance, and there is some scientific evidence for this influence. Such assumptions surely have a tacit and sometimes explicit influence on public policies. Assumptions that intelligence is heritable easily lend support to intuitions that there are racial differences in intelligence or other cognitive characteristics, in spite of the fact that there does not appear to be good evidence for a correlation between race and genetically influenced variation in intelligence. Moreover, some evolutionary explanations of the existence of such genetic variation can easily be used to provide further support for the idea that there are genetically influenced racial differences in intelligence. However, I would argue that if group selection played an important role in human evolution, natural selection may have favored groups of ancestors containing individuals suited to play distinct social roles. Thus there may have been selection for within-group variation in genetically influenced cognitive characteristics. This hypothesis has the potential to provide a new explanation of the existence of genetically influenced variation in intelligence without lending support to intuitions that there are genetically influenced racial differences.

The preceding remarks skip lightly over a related issue. Many people think that genetic and environmental influences on a single trait simply push the trait in the direction of one

extreme variant or another. The actual trait is then the average result of the genetic and environmental "forces" pushing it in various directions. For example, it is sometimes claimed on the basis of scientific research that genetic factors tend to push males and females toward different psychological characteristics. This view does not imply that every male or every female must turn out a certain way, but it is nevertheless simplistic. An alternative view, popular but still somewhat controversial among philosophers of biology, is that nearly all traits are the result of a complex process of interaction between genes and environmental factors at different times in an organism's life. This view undermines intuitions about what men and women are "supposed" to be like, and it suggests that research on genetic and environmental influences on humans should have the goal of understanding the complex dance that produces the changing characteristics of a person over the course of life. It also suggests that such research may have to involve collaborations involving a variety of biological and social sciences. (An even richer account of influences on human characteristics can be achieved by adding a focus on the transmission of culture and how it influences different individuals in different ways.)

My organism-environment history conception provides a framework for thinking about the development of an organism in interaction with its environment, and my conception of mechanistic probability suggests that the right way to think of environmental influences on a group of humans—for example, those living in a particular neighborhood—is to view them as subject not to particular environmental conditions, but as subject to a distribution over a set of conditions which may or may not affect any given person. More generally, the effects of any given gene or environmental condition are determined by the distribution of other genes and environmental conditions among members of a group of people. The theory of mechanistic probability is a step toward a general understanding of the sense in which such distributions are influenced by other conditions in the world. I believe that this picture can ultimately help to provide a clearer understanding of the ways in which both particular individuals and the groups of which they are members are influenced by the circumstances of their lives as well as their own choices.