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Social Determinism and Behavioral Genetics

The fusion of evolutionary theory with genetics has yielded several profound insights into the nature of man. We now know that most traits are determined by interaction between genes and the environment, rather than by either acting independently. Moreover, the traditional view of race, as a set of stereotypes with minor variations, has been invalidated by the knowledge that races differ statistically and not typologically in their genetic composition. Finally, the rapid evolution of our species implies wide genetic diversity, with respect to behavioral as well as to morphological and biochemical traits.

Unfortunately, the idea of genetic diversity has encountered a good deal of resistance. Some egalitarians fear that its recognition will discourage efforts to eliminate social causes of educational failure, misery, and crime. Accordingly, they equate any attention to genetic factors in human behavior with the primitive biological determinism of early eugenicists and race supremacists. But they are setting up a false dichotomy, and their exclusive attention to environmental factors leads them to an equally false social determinism.

Ironically, this opposition parallels that of theologians a century ago: both saw the foundations of public morality threatened by an implication of evolution. But neither religious nor political fervor can command the laws of nature. One might accordingly expect scientists, knowing this very well, to encourage the public to accept genetic diversity—both as an invaluable cultural resource and as an indispensable consideration in any approach to social equality. Yet in a recent "NOVA" program on the Public Broadcasting Service a distinguished population geneticist denied the legitimacy of human behavioral genetics, scorned the belief that musical talent is inherited, and even minimized the contributions of genetics to agricultural productivity. Similarly, members of a group called Science for the People, criticizing a study of possible behavioral effects of chromosomal abnormalities, wrote* of the "damaging mythology of the genetic origins of 'antisocial' behavior," as though one must choose between genetic and social causation rather than study their interaction.

To be sure, in behavioral genetics premature conclusions are all too tempting, and they can be socially dangerous. Moreover, even sound knowledge in this field, as in any other, can be used badly. Accordingly, some would set up lines of defense against acquisition of the knowledge, rather than against its misuse. This suggestion has wide appeal, for the public is already suspicious of genetics. It recognizes that earlier, pseudoscientific extrapolations from genetics to society were used to rationalize racism, with tragic consequences; and it has developed much anxiety over the allegedly imminent prospect of genetic manipulation in man. Hence one can easily visualize an American Lysenkoism, prescribing an environmentalist dogma and proscribing or discouraging research on behavioral genetics. But such a development would deprive us of knowledge that could help us in many ways: for example, to improve education (by building on the diversity of individual potentials and learning patterns), to decrease conflicts, to prevent and treat mental illnesses, and to eliminate guilt based on exaggerated conceptions of the scope of parental responsibility and influence.

In the continuing struggle to replace traditional myths by evolutionary knowledge the conflict over human diversity may prove even more intense and prolonged than the earlier conflict over special creation: the critics are no less righteous, the issues are even closer to politics, and guilt over massive social inequities hinders objective discussion. What the scientific community should do is not clear. At the least we might try to help the public to realize the value of scientific objectivity, separated from political convictions, in understanding human diversity. Long ago men began to understand chemical diversity when they gave up the search for a philosopher's stone, which they had hoped would transmute other elements into gold. Today in human biology we face a similar problem in learning to build on facts as well as on hopes.—BERNARD D. DAVIS, *Harvard Medical School, Boston, Massachusetts 02115*

*J. Beckwith, D. Elseviers, L. Gorini, C. Mandansky, L. Csonka, J. King, *Science* **187**, 298 (1975).