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ELSI Working Group Statement on The Bell Curve

In 1994, a highly publicized book, Richard Herrnstein and Charles Murray's The Bell Curve, claimed that IQ is largely genetically determined and that the differences in IQ between ethnic groups are substantially explained by genetic factors. We are especially concerned about the impact The Bell Curve, and a series of subsequent "bell curve" clones developing similar themes, because we believe that the legitimate successes of the Human Genome Project in identifying genes associated with various human diseases should not be used to foster an environment in which mistaken claims for genetic determination of other human traits gain undeserved credibility.

Herrnstein and Murray suggest that fundamental IQ differences between people explain social problems such as crime, welfare dependence, and single parenting. Now that socio-cultural barriers to personal advancement have largely been removed, they say, social success and high IQ are highly correlated. Programs to eliminate inequalities are thus doomed to failure. Herrnstein and Murray are especially concerned that high birth rates among the poor and the "dysgenic" behavior of women with high IQs, who are not bearing enough children, are threatening the population with genetic decline. According to them, these trends are "exerting downward pressure on the distribution of cognitive ability in the United States."

The authors follow this analysis with policy recommendations. They propose eliminating welfare, which they feel subsidizes birth among poor women, thus lowering the average intelligence of the population. They suggest ending remedial education programs because the results are not worth the cost, given the claimed significant genetic determination of IQ differences. They urge the development of programs of social support that would encourage women from the higher socio-economic classes to have more children.

Neither Herrnstein nor Murray are geneticists, nor have they carried out studies themselves on the genetic basis of behavior. Their lack of training and experience in genetics does not disqualify them from evaluating genetic research nor from drawing their own conclusion. However, as geneticists and ethicists associated with the Human Genome Project, we deplore The Bell Curve's misrepresentation of the state of genetic knowledge in this area and the misuse of genetics to inform social policy.

We urge consideration of the following three points:

First, Herrnstein and Murray invoke the authority of genetics to argue that "it is beyond significant technical dispute that cognitive ability is substantially heritable." But, the research in this field is still evolving, the studies they cite face significant methodological difficulties, and the validity of their results is disputed. Some geneticists have pointed out the enormous problems in attempting to separate genetic components from environmental contributors, particularly given the intricate interplay between genes and the environment for such a complex human trait as IQ.

Second, even if there were a consensus on the heritability of cognitive ability, the lessons from genetics are misrepresented. The authors argue that it is not possible to alter differential cognitive ability so that remedial education is not worth the effort or cost. But, this is neither an accurate message from genetics nor a necessary lesson from efforts at remedial education. Heritability estimates are relevant only for the specific environment in which they are measured. Change the environment and heritable traits can change remarkably. Saying a trait has high heritability has never implied that the trait is fated to be. Height is both genetically determined and dependent on nutrition. Common genetic conditions such as myopia or allergic rhinitis can be corrected with eyeglasses or behavioral modification (avoidance of allergens).

Third, the more genome scientists learn about human genes, the more complexity is revealed. This complexity has become even clearer as more genes correlated with human genetic diseases are discovered. We are only beginning to explore the intricate relationship between genes and environment and between individual genes and the rest of the human genome. If anything, the lack of predictability from genetic information has become the rule rather than the exception. To make simplistic claims about the inheritance and malleability of such a complex trait as cognitive ability at this stage of genetic research is unjustifiable. Moreover, as the history of eugenics shows, it may be dangerous.

It follows that the arguments from genetics cannot be used to determine nor inform social policy in the areas cited by Herrnstein and Murray. Since the lessons of genetics are not deterministic, they do not provide useful information on deciding whether or not to pursue various programs to enhance the capabilities of different members of the society. Those decisions are moral, social, and political ones.