

## The Dishonest Claim of Genetic Racial IQ Differences

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Charles Murray and Richard Herrnstein's new book, "The Bell Curve," tries to wrap a conservative political agenda in the mantle of scientific respectability. It should be dismissed as a travesty of population genetics.

In the book, they claim that the stratification of society by income and social achievement is largely the inevitable result of IQ differences, and that these IQ differences, including the average IQ differences found between blacks and whites, are largely due to genetics. The book, and Murray's comments since, have tried to portray the debate on this issue as one between science (on their side) and wishful thinking. This ruse may be succeeding since few commentators are familiar enough with behavioral population genetics to evaluate the book on those terms. In fact, not only are the claims of the book not scientifically proven, they are by their very nature unprovable.

Although the authors provide a brief explanation of the concept of heritability, they go on to ignore the implications of the definition. They repeatedly misuse the concept of heritability as if it were an absolute number, as, for instance, when they estimate that the heritability of IQ is about 60%. But it is meaningless to talk about heritability this way and the authors knew it. Heritability is defined as a ratio. It is the ratio of genetically determined variance in a population to the total variance. The total variance is assumed to be the sum of genetic variance plus environmentally determined variance. If you grow genetically similar seeds in uniform conditions, most of the slight variations that occur in them will be due to genetic differences. Since the environmental variance is nearly zero, the heritability ratio is high. If the same seeds are grown in a variable environment much of the observed variation will be due to the environmental differences and the resulting heritability ratio for the same seeds will be low. Thus it is impossible to talk about the heritability of the seeds themselves, only of the seeds grown under particular conditions.

The key travesty of this book is using measures of heritability within groups to make assertions regarding the differences between groups. Suppose you divide the same seeds into two groups and grow them under uniform conditions except that you give one group more sunlight than the other. In this case the heritability ratio of each group will be high because the environmental variance within each group is low. But the sunlight may cause a large (environmental) difference between the groups. If we did not know about the lighting difference, we would have no way of knowing whether the difference between the groups was due to a genetic factor or some unknown environmental factor. This is exactly the situation we are faced with in regard to racial differences in average IQ scores. We know that heritability of IQ is fairly high among both whites and blacks, but it is scientifically impossible to determine whether there is any genetic contribution to the difference between the groups.

The ideal way to answer such questions is to compare sample groups raised under identical conditions. When this is impossible, you can try to eliminate the environmental factors by equating the groups on those factors. In the human case, we can equate groups on such measurable factors as income, age, schooling, and housing, and see if there is still a difference between the groups. This is sometimes a reasonable way to conduct population studies, but in the case of race it is completely unjustified. It is like equating various social indicators for two individuals, one black and one white, while assuming that the rest of their environmental experiences are identical. No one could possibly come to that conclusion unless they were blinded by ignorance, lack of sensitivity, or racism. It is logically impossible to rule out factors involving the experience of race itself. Factors such as concern about how whites are evaluating you, unfamiliar dialect, cultural differences, and negative self images, are very plausible influences on IQ scores.

Is the racial difference hypothesis plausible even if it is unprovable? Couldn't the races have diverged substantially in the time during which they were geographically separated? While it is possible that there might be some slight overall average difference one way or the other, it is probably not significant because there is no reason to suspect that environmental conditions in Africa made intelligence any less important for survival than did the conditions of Europe and Asia. There is every reason to assume, given the evidence of

anthropology and linguistics, that intelligence, language and communication were equally important to all groups of people.

Murray and Herrnstein's claim that the lower social strata of society are in that position largely due to IQ differences is nearly as weak and nearly as destructive as their racial claim. It is true that IQ correlates strongly with social success and it is plausible that intelligence plays some causal role in social achievement. But it is equally plausible that many aspects of social success play a causal role in determining measured IQ. Moreover, many other factors, such as attractiveness, height, personality, energy level, and "character", to name a few, also play important roles in determining achievement. To go from a set of correlations between social factors to a model attempting to show which factors cause others, and how much they do so, always involves making a number of prescientific, often speculative, assumptions, and the interpretation of multivariate statistical techniques is as much an art as a science.

History is replete with elites who have taken their own cultural qualities as evidence that they are naturally superior to the unfortunate classes beneath them. Perhaps Murray should see how far his own personal IQ would get him in the "IQ tests" of some other culture, say the streets of Harlem or a third world country. He could start by seeing how long it would take him to pass a test in black English.