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Human Diversity Richard Lewontin

Scientific American Library 1995

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Differences between people or groups of people, and the biological bases of such differences, are common subjects for dinner-party debates and mass-media stories, especially when sex, intelligence, or race are involved. But popular thinking in this area is beset with confusions — perhaps not surprisingly given that such confusions and inaccuracies are all too common amongst scientists and scholars, even in fields such as anthropology. A straightforward, accessible explanation of the realities of human biological diversity, *Human Diversity* therefore answers a vital need.

In *Human Diversity* Lewontin sticks to straight science, taking a less polemical approach than in *Not in Our Genes* (co-authored with Leon Kamin and Steven Rose). He begins with a broad overview of human variety, of social, sexual, and regional differentiation. (This and three other chapters are illustrated with short photo-essays.) Then in a key chapter "genes, environment, and organism" he outlines the relationships between the causal forces that shape human beings, explaining the basics of development and the importance of norms of reaction.

The interconnection of the biological and the social is a theme that runs through *Human Diversity*, but Lewontin is a population geneticist rather than an anthropologist and his primary focus is on biological, and in particular genetic, diversity. In three chapters he explains the basics of genetics and genetic variation, illustrated with examples from *Homo sapiens*. The first covers basic polymorphisms, in amino-acids, blood-types, and enzymes, and the second their genetic basis, in alleles, genes, chromosomes, and DNA. The third turns to continuous variation and quantitative genetics, introducing some basic statistics and looking at variation (and its partition into genetic and environmental components) and heritability (and its estimation).

Lewontin then tackles the most controversial topics of all. He presents a concise account of the debate over mental traits, focusing on the confusions surrounding IQ, its connections with status, wealth, and power, and the estimation of its heritability. This includes a careful analysis of the methodology of twin and adoption case studies. A chapter on genetic diversity among groups cuts to the heart of claims about race and class differences, with an examination of the relative variation within and between geographical populations and the effects of adaptation and migration. This also glances at the differences between men and women and the complex paths of causation behind gender. And a final chapter considers the creation and maintenance of genetic diversity, both generally and specifically in the evolution of *Homo sapiens*.

Human Diversity is written for the lay reader but doesn't compromise on accuracy (though the lack of a bibliography or full references is a failing). The information it presents must, I think, be high on any ranking of "essential human knowledge", if only because bad science in this area has played a role in some terrible deeds. It really should be in every school library.

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