

Book reviews

The Emperor's New Clothes: biological theories of race at the new millennium. Joseph L. Graves Jr. Rutgers University Press, New Brunswick, New Jersey. 2001. Pp. 252. Price \$22.40 hardback. ISBN 0-8135-2847-X.

Graves joins a chorus of voices in the human genome project in asserting that biological races do not exist. Ironically, some leaders in the human genome project want racial identifiers on DNA samples from which molecular genetic polymorphisms are to be discovered. The population geneticist, Luigi Cavalli-Sforza, also calls for abandoning the traditional classification of races, but at the same time, his groupings of human 'populations' in *Genes*, *Peoples*, and *Languages* are close to racial groups as originally conceived. Despite its many detractors, a concept of race keeps returning and finding uses.

Graves' attack on the concept of race is polemical in tone. He is clear on where he stands from the outset: biological races do not exist. Scholars who believe that biologically-based racial differences may exist in behavioural traits he labels as 'racists.' This *ad hominian* name-calling is apt to put those on the other side of debate on the defensive. Graves is not seeking a dialogue but rather intends to discourage the use of racial categorizations.

His book is divided into four sections. The first three sections are historical in their coverage. Chapters 1–3 deal with pre-Darwinian theories of race. Chapters 4–6 give coverage to Darwin's beliefs about race, social Darwinism, and the eugenics movement. The third section, consisting of another three chapters, attributes many harmful social movements to a misapplication of racial ideas. Part 4 is the section of the book most critical to Graves' whole line of argument. In chapters on 'Race and the IQ Fallacy', 'Race and the Disease Fallacy', and 'Can We Do Without Race?', he updates the book to include modern knowledge about the molecular basis of genetic polymorphisms. The book also contains chapter footnotes and reference sources. The writing style is generally accessible. His historical examples document many of the horrors that have been perpetrated in the name of racial superiority.

Graves' push for abandoning the racial concept partly depends on his using a definition of racial group that is extremely restrictive, requiring that races have '...hereditary features shared by a group of people and not present in other groups' (p. 5). However, the definition from the American Heritage Dictionary, which he offers on the following page, emphasizes race as a genealogical line, a lineage, and offers that races differ '...in the frequency of hereditary traits' (p. 6). Racial groups are like a large extended family; people in them share a common ancestry, are somewhat inbred, and share some physical resemblance because of their common genes. Natural selection has produced marked phenotypic differences between racial groups; but large numbers of neutral genetic markers can be used to identify lines of ancestry.

Graves seems to ignore the trait frequency concept entirely. Dutch caucasians (the tallest in Europe), and Japanese Asians differ in mean height because of their different genetic ancestries. That their height distributions may overlap does not invalidate a racial group concept. Similarly, two racial groups could have the same mean on an hereditary trait, but different variances.

In some places, Graves' effort to debunk race falls wide of the mark. In the chapter on IQ, he attacks the idea that blood group B is a gene associated with intelligence (IQ). Scientists currently looking for quantitative trait loci (QTL) associated with IQ, however, do not propose the ABO blood group system as a likely QTL candidate. Graves' inadequate treatment of Jon Entine's book (p. 32–33) on the athletic superiority of African and African-descended athletes leaves the reader with little understanding of Entine's argument. Graves' reasoning on race and disease is unclear. Against the idea of race, he uses some data that were claimed to show that Australoids (who these are was not clearly defined) have a higher melanoma rate than other dark-skinned people. Graves recognizes, however, that his collection of populations, from Caucasians in India to Asians in Central America to Australoids, do not constitute one ancestral grouping and is not a single race by any stretch. Thus, his critique merely shows that when race varies among dark-skinned peoples, so do melanoma rates, hardly a counter to a concept of race. Race cannot be defined on the basis of one phenotypic characteristic. On the other hand, I accept Graves' implication that one needs to be cautious before using single genes to explain racial differences in complex traits.

In summary, this book is unlikely to convert those who find a racial concept useful, but it may play well to a growing choir denying that race exists. My own guess is that a racial concept, although sometimes in the guise of another name, will remain in use in biology and in other fields because scientists, as well as lay persons, are fascinated by human diversity, some of which is captured by race.

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The Hierarchical Genome and Differentiation Waves — Novel Unification of Development, Genetics and Evolution (2 vols). Richard Gordon. Imperial College Press, London. 1999. Pp. 1835. Price £108.00, hardback ISBN 981022268 8.

I am not a developmental biologist, nor am I physicist or a mathematician. Yet as a molecular biologist, I managed to not