

Understanding Race

The human species is very young, but in a short time it has acquired some striking, if biologically superficial, variations across the planet. As this book shows, however, none of those biological variations can be understood in terms of discrete races, which do not actually exist as definable entities. Starting with a consideration of evolution and the mechanisms of diversification in nature, this book moves to an examination of attitudes to human variation throughout history, showing that it was only with the advent of slavery that considerations of human variation became politicized. It then embarks on a consideration of how racial classifications have been applied to genomic studies, demonstrating how individualized genomics is a much more effective approach to clinical treatments. It also shows how racial stratification does nothing to help us understand the phenomenon of human variation, at either the genomic or physical levels.

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The ***Understanding Life*** series is for anyone wanting an engaging and concise way into a key biological topic. Offering a multidisciplinary perspective, these accessible guides address common misconceptions and misunderstandings in a thoughtful way to help stimulate debate and encourage a more in-depth understanding. Written by leading thinkers in each field, these books are for anyone wanting an expert overview that will enable clearer thinking on each topic.

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“DeSalle and Tattersall provide a brilliant and comprehensive refutation of the folk concept of human races. Anyone who thinks that there are natural categories of people that correspond to zoological subspecies will have their worldview blown to bits!”

Jonathan Marks, Department of Anthropology,
University of North Carolina at Charlotte

“*Understanding Race* explains to the reader in accessible terms all the misconceptions that continue to plague both lay people and professionals concerning race. First the authors establish for the reader the fundamental mechanisms of evolution that are responsible for the variation within all species; then they explain how people thought about variation before there was a science to correctly explain it. The book guides the reader through how racial thinking changed as our understanding of evolution, as well as the technology to understand genetic variation, improved. The authors end by drawing attention to ongoing misconceptions concerning biological variation and social definitions of race in a variety of arenas, including medicine. If you don’t read my books, you should read theirs; and in the best of all worlds you should read both.”

Joseph L. Graves Jr., Professor of Biological Sciences,
North Carolina A&T State University

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To the Memory of Richard Lewontin
(1929–2021)
Who brought sanity to the issue of genetics and race

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Foreword

The term “race” is unfortunately one that immediately brings to mind situations of discrimination and inequalities when it is applied to humans. But this is not due to any inherent differences between the human groups that are often distinguished from one another as being different races; rather, it is due to biases – conscious or unconscious – that make people think that internally homogeneous human races exist that are in turn clearly distinct from one another. The situation becomes even more complicated when attempts are made to naturalize these distinctions and divisions by explaining the existence of distinct human races on biological/genetic grounds. As Robert DeSalle and Ian Tattersall explain in this magnificent book, this is far from accurate from a scientific point of view. All available evidence, especially from human genomics, supports the conclusion that human genetic variation is continuous, not clustered. This means that the genetic variation of any two human groups is overlapping, and that we share most of our DNA. Of course, there are average differences between human groups, but these differences do not support the division of humans in genetically distinct human races, or groups of any kind. Does this mean, then, that human races do not exist? The answer that the authors give is that if they do, they depend on culture and not biology. If people decide to differentiate themselves from outgroups in favor of their ingroup, this is something done by choice or culture and upbringing, and is not imposed by our genetic background. DeSalle and Tattersall invite you on a fabulous journey that presents the scientific evidence for the fact that all humans living today are members of a huge family that has evolved

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very recently in evolutionary terms. Reading this book will make you appreciate how much we share in common, and wonder why we often insist on paying attention to our very minor differences.

Kostas Kampourakis, Series Editor

Preface

Race matters. Historically, economically, and culturally, race matters a lot. In the United States, for example, a straight and uninterrupted line of distress can be drawn between slavery in the eighteenth and nineteenth centuries and the mass incarcerations of African Americans in the twenty-first. A similar line connects the early nineteenth-century miseries of the “Trail of Tears” (a series of horrendously long forced marches in which members of various southeastern indigenous American tribes were made to relocate to unfamiliar new western territories, with at least one-quarter of them dying of disease and exhaustion along the way) to the conditions of deep deprivation that prevail on many Native American reservations today. These important historical factors cannot be ignored; and without accommodating them we cannot explain, or understand, or even begin to improve the deeply flawed social world we live in. And there is equally no doubt that those historical and current travesties are inextricably intertwined with notions of race.

Yet we will argue in this book that, biologically speaking, human races do not exist. That is because, to be accessible to science, something must not only be observable but also definable and preferably measurable. This in turn requires that the entity observed possess recognizable boundaries. And, as we will see, human races simply do not meet this criterion at the biological level. Certainly, striking variations in hereditary physical features can be observed between members of human populations originating in different areas of our planet, just as similar variation exists among the individuals who compose those populations. But on closer examination the boundaries between those populations fade, not just because most human physical features vary in

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a continuous manner, but because the human varieties – the races – we perceive are constructs not of Nature, but of the human mind. Beyond the human mind, it turns out, races have no objective biological existence.

Of course, perhaps the most remarkable uniqueness of we human beings is that we live – at least for much of the time – in the worlds we construct in our minds, rather than in the world as Nature directly presents it to us. Our artificial constructions of the world are of critical importance to the quality and conduct of our daily lives; and indeed, we couldn't live our complex interior existences without them. But this makes it all the more important for us to understand when the distinctions that are filtered through our mental processes are accurate reflections of Nature itself, and when they are by-products of the ways in which we arbitrarily represent the world. If we are to remain grounded in reality, it is essential to ensure that the images we entertain of the world around us are as accurate as possible, and are not simply products of our preconceptions, or objects of our convenience.

That essential grounding in reality is what science is there to provide; and nowhere is scientific understanding more important than in the all-pervading question of race. We hope to show in this short book that, while our notions of "race" are based on the undeniable reality of human biological variation – and yes, in some respects human beings do indeed differ strikingly, if not significantly – they are in fact artifacts of subjective human perception that vanish under closer scrutiny. And since, like all other organisms, we are the product of a long and complicated evolutionary history, we will begin by looking at the evolutionary background.

But before we do that, let's just note that words matter too. As members of a species that uses language to communicate, we have developed into a curious group of organisms whose words can be angry, soothing, creative, influential, and, sadly, viciously fatal. Our words thus need to be precise in order to avoid misunderstanding. The one word that we focus on in this book – "race" – has been used to propagate some of the most evil, pernicious, and regrettable episodes in the history of human existence, which makes it necessary to be precise about what this word means, and how we use it. A casual reader might conclude that we spend too much time on interpretation, potentially reducing the problems we discuss here to ones of semantics; but that

would be wrong. Outside its use for humans, the word “race” has a precise meaning in science; and it is that scientific meaning, and how that meaning is implemented by scientists, that we address in detail because human beings are, of course, an integral part of the natural world. Race also, of course, has distinct but somewhat less precise definitions in the cultural and social spheres; and it is our purpose here to dissect the exact scientific meaning of the word and to show that it does not apply to humans, in order to place those less precise social and cultural uses of the word in scientific context.

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