
What we see in patterns is, in part, indicative of what we believe and how we theorize. It is equally revealing about what we do not see, do not believe, and do not theorize. That the same pattern can evoke markedly different feelings and thoughts in two people is a truism about human capacity and experience—and a recognition of our necessarily creative, subjective, and interactive engagement in the world. Yet, while our deeply human ability to interpret is rightly prized in realms of art and the humanities, in the world of science, the vagaries of human interpretation are supposed to give way to the clarity attained by rigorous testing of competing ideas using sound methodological approaches.

Welcome, then, to the world of ‘race’ or ‘ethnic’ science. Here, typically unstated priors, deeply entrenched, govern presentation and interpretation of information constituted as evidence.1–7 One such prior, promulgated since the early 1700s by leading practitioners in numerous fields of science, is that humanity is divided into distinct ‘races’, distinguished by fundamental biological differences. Within this schema, some ‘races’ (the ‘white’ ones) are ‘naturally’ superior to others (the ‘dark’ ones) in intellect and moral rectitude, while the remainder are ‘naturally’ more developed in brute capacities related to physical strength and sexual habits. At the other extreme, a different prior, also advanced since the early 1700s, is that humanity is one ‘race’, with apparent differences in such visible features as skin colour, hair texture, and facial appearance only ‘skin deep’ in biological significance, albeit potentially of important social significance. Within this schema, there is no ‘natural’ ordering of types of humankind, and any dominance of one group over another is historically contingent, not inevitable. Separating these two poles is a murky middle, filled with allusions—in contemporary parlance—to differential distribution of genetic traits and ‘gene-environment’ interactions. In this less articulated schema, genes figure prominently and the ‘environment’ typically stands as everything extrinsic to the gene, a catch-all composite of ‘physical’ and ‘social’ exposures.

Recognition that the human endeavour of science has in fact spawned racist and anti-racist science and everything in between is an important starting point for evaluating any claim for scientific knowledge about ‘race’, ‘ethnicity’, or ‘race/ethnicity’. It is, in fact, the starting point of the new British book Health and Ethnicity, edited by Helen Macbeth and Prakash Shetty.8 Unfortunately, however, the text does not move us forward far in our understanding. A collection of disparate chapters containing conflicting definitions, conflicting data, and conflicting interpretations of the same data, the volume sadly misses the opportunity to have its different contributors engage meaningfully and methodically with each other’s contributions. Instead, the book’s 16 chapters variously: (a) accept or (b) reject biological definitions of ‘ethnicity’ and/or ‘race’, (c) posit or (d) discount chiefly genetic explanations of racial/ethnic disparities in health; and (e) ignore, (f) mention, or (g) emphasize social determinants of racial/ethnic inequality and its expression in racial/ethnic inequalities in health. The net result is a volume that exemplifies, rather than helps redress, the reigning confusion that abounds in the realm of research on ‘health and ethnicity’.

Consider, for example, the case of hypertension. Ryk Ward, in a chapter titled ‘Genetic variation and ethnic variability in disease risk’ (pp.88–102), strongly argues that ‘location, not genes, is the primary discriminator’ (p.105) for why rates of hypertension steadily increase across populations of African descent residing in, respectively, West Africa, the Caribbean, and the US, and are also higher among US people of African versus European descent. At issue, states Ward, are levels of urbanization and concomitant rises in obesity. Yet, in the very next chapter, ‘Approaches to investigating the genetic basis of ethnic differences in disease risk’ (pp.113–32), Paul McKee and Ward conversely avers that ‘For hypertension in West Africans compared with other groups ... the epidemiological evidence points strongly to genetic explanations for the ethnic difference in disease risk’ (p.113). To McKee, disparate patterns of risk across continents are due not to different environments, but to different ‘admixtures’ of biologically distinct populations (p.115). Indeed, Ward and McKee not only differently interpret the ‘same’ evidence but also selectively marshal different data to support their divergent arguments. The reader is thus left to wonder what would have happened if the two authors had been challenged to respond directly to each other’s chapters. Such an exchange would likely not only have lent clarity to the volume but been edifying for the scientific community at large.

Consider, next, the case of non-insulin dependent diabetes mellitus (NIDDM). McKee and Ward likewise deems this to be a disease for which ethnic differences are chiefly attributable to genetic differences (pp.114, 116). In favour of this hypothesis, he cites (p.118) a 1962 paper by the recently deceased geneticist James Nee, in which he formulated the ‘thrifty genotype’ argument to explain high rates of NIDDM, especially in certain American Indian populations. Core to this hypothesis is the idea of an underlying ‘differential selection for the ability to survive famine’ (p.118). Yet, in the very next chapter, ‘Diabetes, ancestral diets and dairy foods: an evolutionary perspective on population differences in susceptibility to diabetes’ (pp.133–46), Anthony J McMichael cites a 1982 ‘reformulation’ by Neel ‘of an insulin-resistant genotype rather than an insulin-driven metabolic thriftiness as the basis of NIDDM susceptibility’, noting that ‘[t]here is no longer a need to invoke periodic acute food shortages as the main selective pressure that acted on ancestral populations’ (p.137). Elaborating on an hypothesis proposed by JS Allen and SM Cheer in 1996, McMichael draws attention to inverse correlations between lactose tolerance and reduced risk...
of diabetes to argue that ancestral Europeans' historically relatively higher reliance on dairy foods underlies the relatively lesser impact of urbanization and higher caloric and dairy-rich diets on their risk of diabetes compared to populations of non-European descent. Once again, readers would have benefited if McKee and McMichael had constructively engaged with each other's arguments, clarifying their differences and proposing critical studies to test competing explanations of observed population patterns of NIDDM.

Finally, consider the various authors' handling of conceptual and operational definitions of 'race' and 'ethnicity'. Helen Macbeth, in the opening chapter 'Defining the ethnic group: important and impossible' (pp.10–20), writes that 'accurate definitions of ethnic groups are impossible because of the absence of meaningful boundaries ... Nevertheless, some factors, which deserve to be called ethnic, are highly significant to health and illness' (p.8). Among these factors are 'ideas' (e.g. 'cultural influences on food choices' [p.11]) and genes, whose clustering may be understood as 'not so much the cause of ethnicity as the outcome' (p.11). Together, these factors create the 'mosaic of inheritance, language, beliefs, loyalties, change and context' in which 'lies ethnicity' (p.15). Raj Bhopal, in turn, in 'Ethnicity and race as epidemiological variables: centrality of purpose and context' (pp.21–40), implores researchers to state explicitly their definitions and hypotheses. Thus, studies should routinely specify how they measure 'race' or 'ethnicity' and whether racial/ethnic health differences are hypothesized to arise from genetic differences, cultural differences, consequences of racial discrimination, or some combination thereof.

In contrast to these recommendations, however, virtually none of the remaining 14 chapters pause to clarify how they or the various studies they cite define or categorize their racial/ethnic data: as self-identified within pre-existing options, self-identified via open-ended questions, or observer-identified. Nor do the chapters engage equally in the challenge of conceptually defining their terms. Definitions employed of 'race' and 'ethnicity' instead range from: (a) non-existent (Chapters 4, 5, 10, and 16), (b) chiefly or exclusively genetic (Chapters 7, 9, and 13), (c) solely social (Chapters 14 and 15), to (d) social and genetic (Chapters 6, 8, 11, and 12). Only Chapter 3, by James Y Nazroo and George Davey Smith, provides empirical evidence on socioeconomic inequalities in health within racial/ethnic groups; the rest barely mention or else totally ignore health implications of socioeconomic inequalities within and between racial/ethnic groups, within and between nations. Nor do any chapters summarize any of the extant evidence linking experiences of racial discrimination to health,1,6,9 and only four briefly mention that such discrimination—in its non-economic as well as economic manifestations—may have a bearing on health (Chapters 2, 14, 15, and 16). At a minimum, the contributors could have clarified their usage of the terms 'race' and 'ethnicity', including in the studies they cite. Better yet, they could have been requested to consider whether socioeconomic inequality and racial discrimination might contribute to the observations they seek to explain.

In conclusion, it is one thing for the editors to acknowledge, if not insist, that 'Readers who seek in this book straightforward answers to simple questions about the ethnic dimensions in health and ill health may be frustrated' (p.8). It is another entirely to have authors present profoundly divergent takes on the 'evidence' without any requirement that they explicitly address each others' concepts, data, and arguments. Without such engagement, the science of racial/ethnic inequalities in health is bound to remain a Rorschach test for deeply-rooted beliefs about 'race' and 'ethnicity'. Given the horrors of scientific racism, past and present, epidemiologists and other health researchers—including the editors of and contributors to Health and Ethnicity—share the responsibility of setting a higher standard for our work in this critical and contentious field.

References


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