Black and White Medicine

A review of

Race in a Bottle: The Story of BiDil and Racialized Medicine in a Post-Genomic Age

by Jonathan Kahn

New York, NY: Columbia University Press, 2013. 311 pp. ISBN 978-0-231-16298-2 (hardcover); ISBN 978-0-231-53127-6 (e-book). $35.00, hardcover

Reviewed by
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What is your race? (a) Mestizo, (b) Greek, (c) Creole, (d) Peninsular, (e) Mulatto, (f) Quadroon, (g) Octoroon, (h) Indian, (i) Chinese, (j) Japanese, (k) Moor, (l) Syrian, or (m) Nubian? In another time and place, these may have been the available choices. Obviously these categories are not anthropologically or scientifically based.

Currently the United States uses the definition of racial categories as published by the Office of Management and Budget (1997) in its Revised Directive 15. Directive 15 stems from the civil rights movement; it aims to provide consistent data and a uniform language in order to increase fairness in society. All federally funded research with human participants is required to address issues of race, although the OMB explicitly states that its categories are not anthropologically or scientifically based.

The current racial choices in the United States are (a) American Indian or Alaska Native, (b) Asian, (c) Black or African American, (d) Native Hawaiian or other Pacific

Islander, and (e) White. There are two categories for data on ethnicity: (a) Hispanic or Latino and (b) not Hispanic or Latino (Office of Management and Budget, 1997). Many people objected that it is difficult to fit into these categories, so in the 2000 census, one could also self-select multiple categories of race/ethnicity. Selecting one's race is complicated: It is about identities; it is not about genetic differences.

The human genome project, completed in June 2000, concluded that all human beings, regardless of race, have pretty much the same genes. In fact, the American Anthropological Association has asserted that race is "a worldview, a body of prejudgments that distorts our ideas about human differences and group behavior" and that "racial beliefs constitute myths about the diversity in the human species and about the abilities and behavior of people homogenized into 'racial' categories" (American Anthropological Association, 1998, para. 8, and cited in book under review, p. 40).

Race is an ideology that changes according to time and place. However, at the same time that the human genome project has unequivocally demonstrated that *race* is a construct with no biological validity, the idea of *race* as a genetically based population variant is becoming more and more entrenched in biomedical research and practice. How is it possible?

At a time when no genetic markers of race have been found, there are 29 drugs approved for specific racial or ethnic groups and 719 medicines in the pipeline for African Americans (Pharmaceutical Researchers and Manufacturers of America, n.d.). The book *Race in a Bottle: The Story of BiDil and Racialized Medicine in a Post-Genomic Age* is an elaborate examination of how and why this is happening.

Race in a Bottle, by Jonathan Kahn, follows how the Food and Drug Administration (FDA) approved BiDil, a heart failure medication, for specific use with African Americans, and *only* for African Americans. The book is more of an argumentation than a story or narrative. The case study of BiDil is used as an emblematic illustration of what is happening in the field of race-specific pharmacology. It suffices to say that BiDil sold for seven times the estimated price of the generic medication from which it was composed (p. 104).

Dosing of warfarin is also used as an emblematic case study of racial profiling. Warfarin, an anticoagulant drug and one of the most widely prescribed drugs in modern medicine, is notable because race continues to be used as a dosing consideration even after the actual genetic mechanisms of action can be traced that do not correspond with the social construction of racial identity.

By using the development of specific medications as examples, Kahn clearly and logically presents the paradoxical forces creating the biologization of race. He explores how the institutional and commercial use of race as a form of marketing and as a way of extending drug patents has created a conflation of geographical, political, and genetic characteristics that are now called *race* and are being misrepresented as biological, immutable factors. Kahn goes on to explore the implications of this state of affairs and offers

very specific recommendations for how scientific research can more clearly define and handle this dangerous conceptual muddle.

Kahn is a lawyer and historian who uses the tools of his professions to unpack the insidious creep of biologized racial concepts into the research, commerce, and practice of medicine. The exploration leads readers through recent advances in the field of pharmacogenomics, drug trials, institutional mandates, politics, medical disparities, misused statistical analysis, and pejorative agendas, among other things. Kahn does so systematically and with great logical precision.

Race in a Bottle is finely crafted and written. Kahn foreshadows and summarizes each of his main points, creating the opportunity for the book to be read in several ways. For those readers generally interested in the topics and for the mostly curious, it will suffice to read the introduction and chapter summaries; for those readers desiring more specialized knowledge, step-by-step logical adduction, and abundant references, quotations, and examples, a careful reading of the whole book will be in order.

The book is superbly organized, with goals and questions explicitly identified, clear chapter and subchapter demarcations and headings, and explicit definitions of core concepts. Those who read the whole book will find it to be well documented and evidential, although a bit repetitive and dry because the same point is reached by several paths.

A full reading of this work could be very useful in a psychopharmacology graduate course to help students analyze the way that commerce interacts with research in the selection, prescription, and pricing of medications. It would also be a useful book for students of social justice and diversity issues, as it describes the steps by which well-intended policies can create a quagmire of expensive ghettoization of medical services and foster a conservative agenda that emphasizes individual blame and biochemical treatments as opposed to funding for social programs and affirmative action. Who would have thought that the 1993 NIH Revitalization Act, the one that establishes guidelines for the inclusion of women and minorities in clinical research, could be used to bolster the assumption of biological racial inferiority? Read all about it in this book.

Kahn identifies several main themes: specific institutional mandates; data collection; the historical influence of the concept of race; the balance of commerce and science; the politics of using race as a placeholder for unknown causes; and the politics of race, genetics, and health disparities. Here is a sample of Kahn's main conclusions:

> Indeed, to the extent that a patent is conceived of as a right to *exclude* others from use of a particular invention, a racialized patent gives the patent holder the right to exclude members of the identified races from access to or control over the terms through which the patent process appropriates and commodifies their racial identity. Patents place the refinement of race from a social into a genetic category, beyond the reach of the implicated racial communities. (p. 155)

A book that addresses racial issues in a similar but more anecdotal and accessible way is Dorothy Roberts's (2011) *Fatal Invention: How Science, Politics, and Big Business Re-Create Race in the Twenty-First Century.* For a more technical and detailed understanding of *pharmacogenomics*, the study of how individuals' genetic makeup influences their response to therapeutic drugs, I recommend *Molecular Pharmacology: From DNA to Drug Discovery* by Dickenson, Freeman, Lloyd Mills, Sivasubramaniam, and Thode (2013). For a sociological account of the political influences on drug development and policies, there is *Inclusion: The Politics of Difference in Medical Research* by Robert Epstein (2007).

One of the more intriguing parts of the book is its description of how groups from opposite sides of the political spectrum have come to collaborate in the development of race-specific medications. Kahn concludes that the more liberal groups have been co-opted by the more conservative ones by focusing the efforts on individual and even cellular health, at the expense of social initiatives. An unexamined assumption is that focusing on the individual precludes focusing on social and environmental issues. It is my hope that some day we will find a way to give both individuals and societies their due and that our models will grow rich enough to support parallel and concurrent levels of analysis.

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