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THE LITERATURE OF DIFFERENCE IN CULTURES OF SCIENCE

Scout Calvert

*The Nature of Difference:
Sciences of Race in the United States
from Jefferson to Genomics* edited
by Evelyn M. Hammonds and
Rebecca M. Herzig. Cambridge:
MIT Press, 2009. Pp. 368. \$95.00
cloth, \$45.00 paper.

Between social constructivism and cynicism over scientific racism, race-based science seemed, for some, to be a dead end at the end of the twentieth century. A new cultural acceptance of the social construction of race seemed apparent in contentions over data collection categories in the 2000 U.S. Census; California's 2003 Proposition 54 sought to eliminate race categories in data collection. At the same time, the rise of population genomics, spurred by efforts like the Human Genome Project, seemed to signal a pluralistic perspective, refusing to afford a genetic basis for race categories. In 2005, drawing on emerging discourses of sameness in genomic diversity, the National Geographic Society launched its Genographic Project, which asks volunteers to donate a DNA sample to a database to track human migration patterns. In genetic ancestry projects, enthusiasts use noncoding markers to identify others with whom to compare family trees. They also import other tools of population genetics to identify the "deep ancestry" or haplogroups, which indicate a geographic origin in prehistory. Recreational genomics is, with increasing frequency, topical fare in popular media, including weekly newsmagazines and mainstream Internet and printed news sources. This fascination is perhaps most popularly and poignantly visible in Oprah Winfrey and Henry Louis Gates Jr.'s public pursuit of data about their

African ancestors. Yet, postracial politics notwithstanding, recreational genomics improvises a racialized vernacular from understandings submerged in kinship, tribe, and population narratives, as Kimberly TallBear has pointed out, mutating “race,” out of the nineteenth-century concept of “blood quantum” that imperfectly signals complex tribal relatedness and membership.¹ Purchasers of the kits look to the genome as the “Book of Life,” finding themselves as racialized and medicalized subjects, written in its pages.² With publicity generated by Winfrey, Gates, and the Genographic Project, high school and college students, along with genealogists, are experimenting with recreational genomics and a mutated racial discourse that accompanies test-company promotional materials and test interpretations. In a genomic age, race categories are experiencing a renaissance.

As these ongoing genetic reconstructions and deconstructions of racial categories demonstrate, science has the authority to establish truth claims that scholars in the humanities must reckon with. While students of American culture and history have long turned to social science and literary sources to make sense of racialization in the United States, primary sources from the history of science have been less available for these scholars. Partly, the preeminence of scientific discourse and the

specialized genre of its literature have made it a difficult target for nonscientists to engage. Scholars in the humanities may avoid a scientific debate either because they feel out of their depths interpreting scientific data, assume that the scientific debates on race are settled, or resist scientific authority in response to well-documented instances of scientific exploitation of people of color. Or humanities scholars may have surrendered to science the work of settling matters of fact, keeping hermeneutics and textual matters for themselves. But researchers outside the sciences have been hobbled by rejecting science in a move that leaves untouched its power to legitimize knowledge claims. Science and technology studies can provide a methodological resource that will be ready to hand for literary studies: tracing objects through the practices and discourses that produce them as settled matters of fact, made, but not made up.

Race is a slippery object in scientific literature, and scholars in the humanities will have a hard time holding tight to both ends of what Donna Haraway describes as a “greased pole,” tracking the social and legal arrangements that produce race while examining and debunking scientific data claimed to be evidence for or against race.³ Here, Evelyynn Hammonds (Harvard University) and Rebecca Herzig’s (Bates College) edited volume will be a useful resource

with a welcome approach. Attuned to discursive strategies across decades of scientific literature, historians of science Hammonds and Herzig present a selection of fifty-seven primary documents that elucidate scientific understandings of racial difference from Thomas Jefferson's 1782 "suspicion" that "blacks . . . are inferior to the whites" (28) to contemporary arguments about the scientific validity of the concept of race, played out in anthropology and genomics. "Science" is coded as the interpreter of "Nature" in Western discourse; *The Nature of Difference* is a play on words made possible by that slippage, a play that simultaneously reminds the reader of the elision. Hammond and Herzig, in fine analytic form, throw the spotlight on how scientific practices across disciplines describe and create what thereby becomes naturalized difference, rather than describe the essence of difference itself.

Hammond and Herzig's attention to the distinction between scientific processes that stabilize racial facts and the facticity of scientific arguments is sustained in commentary and the organization of the source material. An astute general introduction explains the rationale for the selection of the pieces, most of which are reproduced in full. Each of the nine thematic sections also has a separate introduction, with questions that point readers to the discursive

moves and modes of attention of each author rather than to a pedantic exploration of racism that is stark in some of the articles. Herzig and Hammond focus on race in the United States, fittingly as the United States developed particular forms of race science in conjunction with institutionalized slavery at the founding of the nation. Racial understandings were perpetuated in new forms with westward expansion and at the end of legal slavery. Several selections take the racialization of Africans or American Indians head on, whereas others talk about "races" generally. Given the specific histories of Chinese exclusion, a selection specifically addressing the racialization of Asians in the United States seems to be an omission, although one article about the state of public health in San Francisco infers anxiety over Chinese immigration at the same time it constructs a version of appropriate white femininity around cleanliness and sensitivity to disease, and Hammond and Herzig give Chinese immigration due consideration in the introduction to this section. Obviously, the editors are unable to include the vast archive of source material that might address this and other questions of racialization in the United States. This predicament is rectified by the inclusion of a bibliography of materials for further study at the end of each section's introduction.

The editors purposely avoid settling on a particular definition or understanding of race, but attempt to show the unsettled and ongoing nature of the debate. They ask readers to track the rise and permutation of various features of the arguments. For example, in the introduction to a section titled “Anatomical Observations,” the editors ask, “In what larger political, economic, and social contexts might ears, noses, index fingers, or brain hemispheres attract attention as reliable signs of racial difference?” (17). Jefferson’s now-shocking assertion that blacks prefer white sensibilities, just as a male orangutan prefers an African woman to a female of its own species, comes in the middle of an elaboration of differences Jefferson thought were pertinent: fair skin that readily shows a blush; the alleged heat tolerance and cold intolerance of black people; the quality of sweat (25). Readers will see how some of these dubious distinctions remain present in people’s personal constructions of race.

Herzig and Hammond avoid the debunking strain of some histories of science that traced personal bias, logical leaps, and methodological failures that produced false evidence of racial difference and validated the prevailing racial hierarchies. They instead “approach science not as a single instrument or method that reveals (or obscures) the real truth about

human difference but instead, like race, as a profoundly heterogeneous array of practices” (ix). The editors’ selection rationale and organization support this endeavor, and make the text usable for scholars across disciplinary contexts who study race. The heterogeneity of practices is apparent from the get-go: The first section, which reproduces fifteen dictionary definitions of race, from medicine, biology, anthropology, genetics, and evolution, and spanning the late nineteenth through early twenty-first centuries, shows the mutability of the object and fraught efforts to settle and circumscribe the notion.

The remaining sections chart sites where racial differences might be found (hair, glands, lungs, birth canals, genes); methods that might specify them (counting sweat glands, measuring skin pigmentation, assessing skeletal differences, sequencing genes); anxieties over contagion of disease or race; what hybridity tells us about differences. These selections trace the shifting terms and methods that produce difference, and remind us that scientific communication is itself a procedure for establishing scientific matters of fact. For example, the section “Immunity and Contagion” features an 1887 debate between physicians Washington Matthews and Thomas Mays over interpretations of the prevalence of consumption amongst American Indians. The terms of this

argument—whether consumption was a sign of inborn racial difference, or ameliorated by “civilizing” factors that could affect the incidence of the disease—helped settle the fates of Native Americans at the close of the West and after more than fifty years of official removal policy. Science brings about the worlds it often claims only to describe.

The ultimate fate of racial groups is also a preoccupation evident in discussions in the following section on “Evolution and Degeneration.” Culminating in a 1914 essay by Alexander Graham Bell on positive eugenics, this section tracks the anxieties of a nation reckoning with Emancipation and the fulfillment of a manifest destiny to occupy the continent from coast to coast. Adaptation to new environments signals evolution; conveniently, groups that instead degenerated would eventually cease to exist. High mortality rates could signal problems in work and living conditions, or a congenital inability to adapt to those conditions. Sexual dimorphism was thought to be a component of degeneration, so considerations of race and sex together are more explicit here, though implicit throughout the collection. Just as genetics discourses are heavyweights in public rhetorical spaces now, each of these scientific explanations played a role in policy and popular conceptions of race in its day.

The options on offer for nonscientists to engage scientific knowledge production have seemed to avoid toeing the putative line between science and society that shields the sciences from social interference. This is the line that Stephen Jay Gould unwittingly defended when he recalculated cranial capacities to argue that bias resulted in skewed data that maligned Africans.⁴ Thus society becomes the scapegoat in any scientific failure, and truth is realized by good science when social interests are kept out. Better than that, science should be instructive to society, as Aravinda Chakravarti argues in a recent article on recreational genomics in *Nature*: “More often than not, the views of society have shaped science rather than the other way around. In this instance, it may be time for science to reshape the views of society.”⁵ In this view, which sees cultural and social processes as distinct from scientific ones, society should, at last, accept the hard truths on offer from science. This assumption was on display when University of Chicago geneticist Bruce Lahn defended his 2005 research showing that brain size had responded to selection pressures, coinciding with the emergence of culture in Europe. Unfortunately, the alleles Lahn found had a low incidence in sub-Saharan Africa. When Lahn’s data were reanalyzed by other researchers, casting doubt on his claims, Lahn argued that it is other

scientists who “start with a political agenda and fit the evidence to that.”⁶ His supporters claimed a social interest—political correctness—had interfered with the dogged pursuit of truth.

From here, it looks like those with an “agenda” produced a better account of Lahn’s data, calling into question the account of science as an activity best transacted outside of and separate from society (as if that were possible). More than this, contemporary genetics research illustrates that science’s power to beguile imaginations works on those in the humanities, too, some of whom have turned to genomics testing to discover and reveal “truths” about unknown ancestry, an apocryphal African or European cropping up in the family tree. The allure here is to finally prove we’re all the same under the skin, or at least that we have more in common than we had liked to admit. If this premise seems too neat, readers of *The Nature of Difference* will also be able to trace the evolution of this aspiration from its context after the Second World War and the Holocaust, and see how this project is another one for making race matter, but differently.

The Nature of Difference is a timely addition to conversations about race and genomics, organized so as to allow readers to make new connections between contemporary discourses and the histories of science and race. The text’s

selections and the organization of the selections with introductory material are especially helpful, serving as navigational aids to the sometimes astounding statements of racial fact that could otherwise be conversation stoppers. The book would be useful either as a course text or as a collection of primary material for individual research. Students wishing to track the scientific construction of sex and sexuality more directly alongside race should consider pairing this text with Lucy Bland and Laura Doan’s 1998 edited volume of primary sources, *Sexology Uncensored*. For those looking for analysis of the production of genetic racial difference, *Revisiting Race in a Genomic Age*, edited by Barbara Koenig, Sandra Soo-Jin Lee, and Sarah Richardson (2008), keys its essays to genomics, race-based medicine, and genetic ancestry, while *Genetic Nature/Culture*, edited by Alan Goodman, Deborah Heath, and M. Susan Lindee (2003), offers an anthropological approach and respected scholars in science studies (Troy Duster, Sarah Franklin, Joan Fujimura, Donna Haraway, Rayna Rapp, and Hilary Rose, to name just a selection). Both of these essay collections would help students see how the analytic questions suggested by Hammonds and Herzig open up the apparently settled domain of science for productive interdisciplinary inquiry.

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NOTES

1. Kimberly TallBear, "Native-American-DNA.com: In Search of Native American Race and Tribe," in *Revisiting Race in a Genomic Age*, ed. Barbara Koenig, Sandra Soo-Jin Lee, and Sarah S. Richardson (New Brunswick, NJ: Rutgers University Press, 2008), 235–52.
2. Donna Haraway, "Gene: Maps and Portraits of Life Itself," in *Modest_Witness@Second_Millennium. FemaleMan®_Meets_OncoMouse™: Feminism and Technoscience* (New York: Routledge, 1997), 131–72.
3. Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991), 183–202.
4. Stephen Jay Gould, *The Mismeasure of Man* (New York: Norton, 1981).
5. Aravinda Chakravarti, "Kinship: Race Relations," *Nature* 457 (2009): 380–81.
6. Michael Balter, "Brain Man Makes Waves with Claims of Recent Human Evolution," *Science* 314 (2006): 1871, 1873, quotation on 1873.

