

ALAN H. GOODMAN, DEBORAH HEATH and M. SUSAN LINDEE (eds.), **Genetic Nature/Culture: Anthropology and Science beyond the Two-Culture Divide**. Berkeley, Los Angeles and London: University of California Press, 2003. Pp. xvii + 311. ISBN 0-520-23793-5. £16.95, \$24.95 (paperback).
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Genetic Nature/Culture explores the relationship between anthropology and genetics in the current age of geneticization. The book is divided into four parts. The first considers the formation of knowledge about human genetics and the ways in which people are recruited (or forced) into networks of knowledge creation. The second part focuses on animals and their role in making knowledge. The third part looks at how groups of people redefine knowledge to fit their culture. The fourth part examines the genetics of race. A major theme running throughout is ethics: in genetics, in anthropology, and more generally in the power relationships surrounding knowledge. As such, the book speaks more directly to science studies professionals than to historians of science. However, some of the issues surrounding the genetics of today also apply to the genetics – and more widely to the science – of the past. The book therefore provides ideas for writing non-standard histories of science that address present concerns.

The opening essays use historical cases to investigate the ethics of using people to create knowledge. The first tells the story of the major human population-genetics project that James Neel conducted during the 1960s and 1970s. In the second, Susan Lindee discusses how Victor McKusick recruited Amish people into a network of informants about the health of community members. Her essay can be profitably compared with that of Donna Haraway, in the second part, on dogs. Haraway shows that animal fanciers have collected information about inheritance which geneticists have neither the inclination nor the means to collect. At the same time, as she reveals, fanciers have had to enrol scientists to turn their information into knowledge. When Haraway's analysis is considered alongside Lindee's story of a geneticist recruiting people to gain information, it appears that only geneticists can create genetic knowledge, but that they often use information gained from others to do so.

Another interesting comparison between these two essays concerns the question of audience, of whom the knowledge was created for – a second theme that runs throughout the book. Lindee points out that while McKusick took advantage of the Amish's interest in health issues, the results of his research were not intended for Amish eyes; similarly, Haraway shows that many fanciers did not want to recognize their stock as diseased. In the book's animal-oriented second part, Haraway's essay is placed alongside those of Sarah Franklin and Jonathan Marks. While Haraway considers animal genetics in connection with fancying, Franklin looks at that science in the context of agriculture, and Marks in the context of comparative anthropology. None of these contexts have received much consideration by historians of genetics. The general lesson I drew from these essays was that historians need to pay more attention to the roles that non-geneticists have played in creating genetic knowledge. We have begun to investigate the people and animals

that geneticists have studied, but have much to learn about what fanciers, agriculturalists and anthropologists have contributed.

Where the first half of the book deals with knowledge creation, the second half turns to the meanings given to knowledge and the uses to which it is put. In the third part, the focus is on cultural meanings among traditionally oppressed groups. For example, Chaia Heller and Arturo Escobar look at how the people of the Pacific rainforest have reinterpreted biodiversity to include different ways of living, in order to preserve their land (and other) rights. Joan Fujimura and Himla Soodyall's essays go further, arguing that cultural meanings can be the reason for knowledge formation. In Fujimura's example, Japanese scientists believe that the results of genetics are more compatible with Eastern culture than Western. In Soodyall's case, the very act of doing anthropological genetics in South Africa is seen to restore a sense of pride to the South African people.

The final essays, on race, looks at the question of whom knowledge serves and the surrounding social, ethical and legal issues. We learn, for example, that though studies of disease in African Americans might be supposed to benefit the health care of that group, its social situation means that its members tend to lack access to health care, so that being defined as high risk for certain diseases in fact threatens access to health insurance and employment. In Troy Duster's contribution, he argues that, while we can disprove the existence of biological races, denying their social existence amounts to denying racial discrimination.

Despite historians' protestations that science must be studied because it affects many aspects of everyday life, the use and meanings surrounding genetic knowledge have so far been little examined. This book is not a history of genetics, anthropology or other sciences. However, in discussing genetics from a wide range of perspectives (anthropological, methodological, ethical), it suggests that perhaps historians should broaden their view of genetics, from one concentrating on a single scientific discipline, to one which encompasses the multiple and diverse influences of genetics on individuals' lives.

JENNY MARIE

Max Planck Institute for the History of Science