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Introduction to the Symposium Issue

Race Reconciled?: How Biological Anthropologists View Human Variation

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In May 2006, the authors of this introduction had an argument about how best to describe and interpret human biological variation. The disagreement focused on whether human races exist, and, even if they do, whether we should continue to use the term "race" in our research and teaching. We eventually realized that we were re-hashing an argument that has no doubt taken place for generations (e.g., Mason, 1960; Montagu, 1964; Mead et al., 1968; also see Anthropology Newsletter 1997-1998 and Caspari, this issue) and that our different training, research interests, and life experiences had led us to approach the study of human biological variation from very different perspectives. One of us is a genetic anthropologist interested in the global pattern of neutral genetic variation. The other is a bioarchaeologist interested in how patterns of phenotypic variation are shaped by culture in the United States. Our exchange, coupled with our reading of recent literature from various subfields of biological anthropology, led us to suspect that our inability to communicate is widespread within our discipline and that it hampers effective collaboration. Inadequate communication and collaboration likely lead to less than optimum progress in solving important anthropological problems and send conflicting signals about human variation to our students and the public.

To address these issues, we decided to organize a meeting of scholars who had made original and important contributions to the study of human variation. The purpose of the meeting would be to outline our differences, to determine if they could be reconciled, and to explore ways to more effectively communicate our heterogeneous views within and outside our various disciplines.

In May 2007, the Maxwell Museum and Department of Anthropology of the University of New Mexico hosted a symposium entitled, "Race Reconciled?: How Biological Anthropologists View Human Variation." The symposium was attended by scholars who specialize in human biology, genetics, forensics, bioarchaeology, and paleoanthropology and who hold a wide spectrum of views about the nature, causes, and social and scientific implications of patterns of human biological variation. We had two specific goals. The first was to communicate to one another our diverse views of human biological variation and the data and methods we use to arrive at those views. Participants were asked to give 40-min lectures that addressed the following questions:

What is race? What is the relationship between your definition of race and your view of the structure of human biological variation? What specific data and methods did you employ to reach this view? What are the implications of your view for understanding one or more of the following?

- human origins
- human population history
- the relationship between human biology, language, and culture
- the genetic and environmental components of complex disease
- forensic identification
- whether or how to use the term "race" in research and teaching

The second goal of the symposium was to identify common ground and significant points of disagreement, and to determine how disagreements should be discussed within our discipline and communicated to the larger scientific community, to our students, and to the public. To achieve this goal, the participants were asked to consider the following questions:

Can we reconcile our disparate views of biological variation? If so, how? If not, how do we effectively (1) stimulate communication and collaboration within anthropology and the larger academic community, and (2) communicate our different views to our students and to the public in ways that make the points of agreement and disagreement and their broader implications clear?

Both the authors contributed equally to this paper.

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The outcome of this effort are the articles in this issue by Caspari; Edgar; Gravlee; Hunley, Healy and Long; Konigsberg, Algee-Hewitt and Steadman; Long, Healy and Li; Ousley, Jantz and Freid; Relethford; and Wolpoff. They show that there are not only many points of agreement among anthropologists but also important points of disagreement. The purpose of this introduction is to briefly highlight these points of agreement and disagreement and to promote a dialogue about how to more effectively communicate the breadth of our ideas and their larger social and scientific significance.

COMMON GROUND

The points of agreement in the following articles reflect a shared evolutionary perspective that focuses on describing and interpreting the apportionment of biological variation between individuals both within and among groups (see also Lee et al., 2008). We agreed that:

- There is substantial variation among individuals within populations.
- Some biological variation is apportioned between individuals in different populations and among larger population groupings.
- Patterns of within- and among-group variation have been substantially shaped by culture, language, ecology, and geography.
- Race is not an accurate or productive way to describe human biological variation.
- Human variation research has important social, biomedical, and forensic implications.

SOURCES OF DISAGREEMENT

Like the argument that led to the symposium, some of our disagreement stems from our different training and the different types of questions we ask; it does not reflect fundamental differences of opinion about the geographic distribution or evolutionary causes of patterns of human biological variation. Some of us, for example, study the nature and evolutionary causes of global patterns of neutral genetic variation (e.g., in this issue, Hunley et al.; Long et al.; Relethford), while others are more interested in the social and health-related implications of local phenotypic patterns, especially in the United States (e.g., see articles by Edgar; Gravlee). The former tend to emphasize *ancient* demographic events that may have produced meaningful genetic differences between groups, while the latter tend to focus on the relative impact of *recent* sociocultural processes on group structure and the apportionment of phenotypic variation (Hanson and Butler, 1997; Goodman and Leatherman, 1998; Stojanowski, 2005; Edgar, 2007; Gravlee and Sweet, 2008). These different foci come into play, for example, in the debate over whether racial categories should be used in medical genetic research (e.g., Gravlee, this issue; Wilson et al., 2001; Risch et al., 2002; Burchard et al., 2003; Cooper et al., 2003; Keita et al., 2004; Sankar et al., 2004).

A related issue that may prevent effective communication and collaboration is that anthropologists with different research foci may sometimes be unaware of or discount the methodological or theoretical contributions of others to the study of human variation. The contributions of forensic anthropologists, who approach the study of human genetic variation from a more practical medico-legal perspective, and paleoanthropologists, who study variation in past populations, in particular, may be discounted. However, as the contributions in this issue by Konigsberg et al. and Ousley et al. show, despite their more practical focus, forensically-oriented anthropologists continue to provide innovative methods for characterizing and interpreting human biological variation, and are increasingly applying a more biocultural perspective that recognizes the consequences of secular changes for forensic estimation of ancestry (Jantz and Jantz, 2005; Wescott and Jantz, 2005; Spradley et al., 2008). The contribution by Wolpoff, which posits that Neandertals were the only true human race, highlights how the study of variation in past hominids can provide important insights into the nature, causes, and implications of variation in living humans.

Fundamental disagreement

There was really only one fundamental difference of opinion among the symposium participants, which was about the precise nature of the geographic patterning of human biological variation. Many participants supported the views of Livingstone and Lewontin that continue to be central to thinking and teaching about human variation in biological anthropology (Brown and Armelagos, 2001; Boyd and Silk, 2006; Mielke et al., 2006; Jurmain et al., 2007). These views highlight the clinal nature of human biological variation (Livingstone, 1962) and the fact that little neutral genetic variation is apportioned among human groups (Lewontin, 1972). Several participants also argued that human neutral genetic and phenotypic variation conforms to a pattern of isolation by distance, in which case there are no geographic discontinuities and therefore no races. Others questioned the empirical and theoretical bases for these views and suggested that geographic patterns of human genetic variation are the result of a complex combination of population splits, regional founder events, and local migration. This difference of opinion about the geographic structure of human biological variation and its evolutionary causes is reminiscent of the disagreement between Livingstone and Dobzhansky (1962), and it has important implications for reconstructing human population history and possibly for identifying the genetic component of multifactorial disease. These fundamental differences of opinion and their larger anthropological implications are highlighted in articles by Relethford, Long and colleagues, and Hunley and colleagues.

RECONCILING RACE?

How do we stimulate collaboration within anthropology and the larger academic community, and, at the same time, more effectively communicate our diverse views to the public in ways that make the points of agreement and disagreement and their broader implications clear? It is our hope that the articles in this issue will contribute toward reconciliation. We also advocate a more proactively collaborative approach in teaching. Biological anthropologists teach thousands of students

every year and have a real opportunity to influence public views of human variation. The content of our teaching is strongly influenced by introductory textbooks (e.g., Boyd and Silk, 2006; Fuentes, 2007; Jurmain et al., 2007). Although these textbooks explain the views of Livingstone and Lewontin and why their ideas led to a rejection of biological race concepts, they often lack important features. First, they seldom address the results of more recent and novel studies of human biological variation that reveal a more complex population history than that envisioned by Livingstone or Lewontin (Rosenberg et al., 2002; Relethford, 2004; Serre and Pääbo, 2004; Manica et al., 2005; Ramachandran et al., 2005; Manica et al., 2007). Second, they often fail to convey the breadth of opinion among biological anthropologists about the nature, causes and implications of biological variation. Third, they seldom draw on research from other subfields in anthropology that describe the ethnographic and linguistic factors that mediate biological interactions between human groups. Finally, although our textbooks effectively describe the social relevance of the study of human biological variation, they seldom consider its medical genetic significance (Wilson et al., 2001; Risch et al., 2002; Cooper et al., 2003; Keita et al., 2004; Sankar et al., 2004). In addition to providing a clear example of the practical applications of research in biological anthropology, inclusion of a biomedical perspective would provide a forum for discussing the concept of biological determinism and its pernicious social consequences.

Specialists in informal education talk about "naïve notions," which, in the context of education in biological anthropology, are the ideas our students have when they walk in the doors of our classrooms (Borun et al., 1993). Often, these ideas are typological, even when they are not racist. Although we have now been teaching for generations that races do not exist, these naïve notions persist and they continue to have social and scientific consequences. This may be because we have failed to offer a clear and satisfactory explanation that meshes with students' lived experience. These simple recommendations are far from exhaustive and are hardly a panacea, but, along with the contributions in this issue, they may help reinvigorate our thinking about human biological variation and stimulate a discussion about how to more effectively communicate our ideas to one another and to our students.

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