THE TRIUMPH OF SOCIAL CONSTRUCTIONISM?

CONTEMPORARY SCIENCE AND THE NATURE OF RACE

Ann Morning, Ph.D.*
Department of Sociology
New York University

Draft Manuscript
September 14, 2004

* Please direct correspondence to:

Prof. Ann Morning
Department of Sociology
New York University
269 Mercer St., Rm. 445
New York, NY 10003-6687

Tel: (212) 992-9569
Fax: (212) 995-4140
Email: ann.morning@nyu.edu

This research has been supported by a grant from the National Science Foundation's Societal Dimensions of Engineering, Science and Technology division (award SES-0135507).

THE TRIUMPH OF SOCIAL CONSTRUCTIONISM?

CONTEMPORARY SCIENCE AND THE NATURE OF RACE

ABSTRACT

The idea that race is socially constructed has become nearly ubiquitous in sociological literature, as has the claim that social and biological scientists across the disciplinary spectrum share this conclusion. Little empirical evidence about scientists' conceptualizations of race has been gathered, however, and there are several reasons to question this depiction of academic consensus. This article explores the state of social and biological scientific thinking about race by analyzing data collected through in-depth interviews with university scientists. It addresses empirically the questions of whether contemporary academics share common understandings of what race is, and if not, how we might account for any patterns of variation in belief that emerge.

THE TRIUMPH OF SOCIAL CONSTRUCTIONISM?

CONTEMPORARY SCIENCE AND THE NATURE OF RACE

I. INTRODUCTION

Social and biological scientists are often portrayed as being at loggerheads when it comes to explaining a variety of individual and group outcomes. Whether the issue is intelligence, violence, sexual orientation or gender stratification, sociology and biology are frequently seen as offering "competing explanations"[1] for human behavior. The imagery of struggle comes through in social demographer Douglas Massey's (2000) characterization of sociologists' "historical resistance to the idea that social behavior has biological roots," and the battle lines are drawn even more sharply in psychologist Steven Pinker's denunciation of the "social-constructionist, antibiology mindset of the social sciences" (quoted in Wade 2002). As Pinker's remark suggests, social and biological perspectives are thought to diverge not only in terms of the weight they give to social versus biological causes of behavior—what is familiar to Americans as the "nature vs. nurture" debate—but also in terms of whether our observations of human activity are shaped by our embeddedness in social systems. In other words, belief in the importance of both socialization and social construction may divide social from biological scientists.

Amid such debates, the notoriously controversial topic of race seems to have emerged, paradoxically, as a place where social and biological scientists have reached common ground. In its 2002 "Statement on the Importance of Collecting Data and Doing Social Scientific Research on Race," the American Sociological Association noted that "[r]espected voices from the fields of human molecular biology and physical anthropology (supported by research from the Human Genome Project) assert that the concept of race has no validity in their respective

fields." Similarly, Omi (2001) reports that "[b]iologists, geneticists, and physical anthropologists, among others, long ago reached a common understanding that race is not a 'scientific' concept rooted in discernible biological differences," and political scientist Melissa Nobles (2000) argues that "[t]he intellectual consensus today is that race has no objective existence." Instead, the idea that race is a social construct—"a social invention that changes as political, economic and historical contexts change" (American Sociological Association 2002)—is now regarded by some as having acquired the status of "conventional wisdom" (Stevens 2003). As these comments suggest, observers in a wide range of disciplines—not just sociology—attest to a general scientific consensus on the nature of race, and it is one in which social forces rather than biological determinants seem to have emerged victorious.

Like any other triumphalist chorus, the claim that scientists across the disciplinary spectrum have converged on a shared sociological analysis of race merits closer examination. For one thing, little empirical evidence of such interdisciplinary consensus—or regarding academic understandings of race more generally—has been gathered. For another, the fact that claims of the dominance of a constructionist notion of race come largely from social scientists should prod us to ask whether the same view is held in other quarters. Beyond these, there are at least two other reasons to delve further.

First, it is difficult to square the claim that racial constructionism is the "intellectual consensus" with the prominent and determinant role that race appears to play in some current biomedical and genetic research (Braun 2002; Lee, Mountain and Koenig 2001). In recent years the *New England Journal of Medicine*, for example, has published research articles on "Racial Differences in the Response to Drugs—Pointers to Genetic Differences" (Wood 2001) and "The Importance of Race and Ethnic Background in Biomedical Research and Clinical Practice"

(Burchard *et al.* 2003). Specialist and interspecialist journals like *Genome Biology* (Foster and Sharp 2002; Risch *et al.* 2002), *Nature Genetics* (Editorial 2000), *Science* (Marshall 1998; Rosenberg *et al.* 2002; Sankar and Cho 2002) and the *International Journal of Epidemiology* (Chaturvedi 2001; Karter 2003) have also published articles and editorials supporting or criticizing the treatment of race as a feature of human biology.[2] In other words, the place of race in human biology seems to be far from a settled question in academic circles. And it raises the question of whether this literature linking race to genetics, genealogy (Shriver et al. 2003), pharmacogenomics (Kahn 2003), and criminal forensics (Evett *et al.* 1996) reflects widely-held essentialist understandings of race, or only the minority view of a "rejected science" (Collins 2000) that operates on the margins of interdisciplinary agreement about the social roots of race.

A second reason to question the portrayal of a shared scientific perspective on race is due to its usual accompanying claim that the American public, in contrast, conceptualizes race as a matter of innate biological difference. As Omi (2001: 243) put it, "race is commonly and popularly defined in terms of biological traits…often perceived as surface manifestations of deeper, underlying differences in intelligence, temperament, physical prowess, and sexuality…" The scenario of a wide gap existing between scientific constructionism and lay essentialism raises the puzzling question of why the public view would diverge so markedly from authoritative "expert" opinion, when the academic idea of race as social construct is hardly a new one—consider the wide popular and academic reading given Ashley Montagu's 1952 *Man's Most Dangerous Myth: The Fallacy of Race*—nor is it related to an arcane issue of little interest to the public. The ostensible schism between scientific and lay views of race raises a number of possibilities: that the public has rejected academics' constructionist interpretation of race, for example, or that scientists have been ineffectual in educating the public about race (as

evolutionary biologist Joseph Graves claims--see Graves 2001). But it also gives rise to the possibility that academics have not successfully disseminated the understanding that race is socially constructed because they themselves have not arrived *en masse* at that conclusion.

This article explores the state of social and biological scientific thinking about race by analyzing data collected through in-depth interviews with university scientists. It addresses first the empirical question of whether contemporary academics can be characterized as having formed a consensus about how best to understand what race is. If not, what patterns of variation in belief emerge, and how can we account for them? To explore these questions, I draw on qualitative data for its richness of argument and imagery. Moreover, given the methodological challenge of gauging individuals' conceptualizations of race, I employ more than one measure to do so.

It is important to stress that much more than academic debate is at issue in studying scientists' views of race. In a nation where race is and has long been a fundamental axis of social stratification, notions of its characteristics—its rigidity or malleability, its root cause(s) and its consequences—directly impact individual behavior, cultural practice, and public policy. In particular, essentialist notions of race—i.e. the belief in fixed, biologically-rooted racial differences—are often considered to be the *sine qua non* of racism (Cavalli-Sforza 2000; Hutchinson 1997; Lieberman 1968). Historically, Americans' understandings of race have been profoundly influenced by scientists' pronouncements, which have ultimately made their impact felt in realms as diverse as slavery (Smedley 1999), census taking (Nobles 2000), military service (Duster 1990), marriage (Davis 1991), medicine (Wailoo 1997), and immigration (Kevles 1995). Thus the topic of "expert" opinion on race is an important one given its traditional influence on public opinion and practice.

Academic scientists are also important links in understanding American racial ideology because educational institutions constitute a special site for the transmission of race-related knowledge. First, schools of all levels have been regarded as important allies in public education campaigns to transform lay thinking about race. In its 1967 Statement on Race (the fourth in a series launched in 1950), the United Nations Educational, Scientific and Cultural Organization (UNESCO) proclaimed, "The schools should ensure that their curricula contain scientific understandings about race and human unity, and that invidious distinctions about peoples are not made in texts and classrooms" (Montagu 1972: 161). More recently, the evolutionary biologist Joseph Graves has called for a new Manhattan Project to reëducate Americans concerning racial difference. Schools in general therefore constitute a site where we might expect to see particular effort expended to convey contemporary scientific perspectives on race, thus offering a window onto such thinking. Higher education in particular provides a special arena for the transmission of scientific knowledge because it reaches students at a formative time of life, exposes them directly to the teaching of highly-credentialed scientists, and it does so through the face-to-face exchange that Rogers (1995) considered most effective in swaying firmly-held convictions.

II. RESEARCH ON SCIENTISTS' RACE CONCEPTS

No single agreed-upon portrayal exists of the state of contemporary scientific thinking about race. As described above, social science literature often reports that academics across the disciplinary spectrum have come to the conclusion that race has no biological underpinning, only social origins (e.g. Cooper 2003). This depiction is not limited to the social sciences; for example, evolutionary biologist Joseph Graves (2001) claims, "Today, the majority of geneticists, evolutionary biologists, and anthropologists agree that there are no biological races in the human species," and reports that two American Association for the Advancement of Science

(AAAS) panels of philosophers, biologists, and social scientists have reached the same conclusion (156). Other observers, however, see a fundamental lack of agreement among academics on the nature of race (Angier 2000; Sankar and Cho 2002). In particular, they point to a disciplinary divide between social scientists who share a constructionist outlook and biologists and physical anthropologists who hold a range of opinions or largely maintain an essentialist approach (Cartmill 1999; Duster 2001; Keita and Kittles 1997; Krieger and Bassett 1993; Lee, Mountain and Koenig 2001; Odocha 2000). Describing geneticists, Foster and Sharp (2002) write that "although the simplistic biological understanding of race and ethnicity associated with the eugenics movement may be dead, the far more subtle presumption that racial and ethnic distinctions nonetheless capture 'some' meaningful biological differences is alive and flourishing" (844). Braun (2002) emphasizes the variety of biological scientists' views: "Multiple, frequently conflicting, and generally implicit understandings of the concepts of race and ethnicity circulate in biomedical circles, with some researchers proposing that race has no genetic meaning, others arguing that the estimated 5 to 6 percent genetic difference is sufficiently meaningful biologically to justify an intensive research program, and still others arguing that the whole controversy can be circumvented by substituting ethnicity for race…"[3] Thus many observers see uncertainty and conflict as characterizing the use of race in relation to biology, medicine, and physical anthropology.

To date little empirical evidence has been gathered to evaluate the disparate assessments that have been made of academic understandings of race. Some researchers have sought to measure their colleagues' views indirectly, through analysis of textbooks or of journal articles. After determining that the share of physical anthropology articles utilizing racial taxonomy had shown no discernible trend over the 1965-1996 period and averaged around 40 percent, Cartmill

(1999) for example concluded that "neither the proponents nor the opponents of racial classification have any grounds for thinking that history is on their side."

Research that directly asks scientists about their definitions of race has been conducted almost entirely by anthropologist Leonard Lieberman and his colleagues. Notably, his 1984-85 survey of 725 professors in Ph.D.-granting biology and anthropology departments suggests that scientists' concepts of race are far from unified and that they vary according to their academic discipline. When asked for their opinion of the statement, "There are biological races in the species *Homo sapiens*," 74 percent of the biologists surveyed agreed with it, whereas 49 percent of the physical anthropologists agreed and only 31 percent of the cultural anthropologists did as well. Lieberman (1997) attributes these differences to "the concepts, traditions, and data of each discipline," citing anthropologists' awareness of ongoing debate concerning the nature of race and their exposure to data on clinal (i.e. graded, rather than discrete) patterns of human phenotypic and genetic variation.[4] Moreover, anthropologists in all four traditional sub-fields are likely influenced by cultural anthropologists' study of variation in classification practices across societies and time periods. In contrast, biologists are accustomed to the application of taxonomic categories to both plant and animal life and might see subspecies nomenclature like "race" as a useful and unremarkable tool for identification.

Lieberman and his colleagues have also suggested that diverse disciplinary approaches to race are a product of their members' characteristics. It is particularly important to take into account such factors as the socio-demographic backgrounds of scientists or the institutions in which they work because there appears to be a great deal of intra-disciplinary variation to explain; recall Lieberman's finding that physical anthropologists, for example, were nearly split on the question of the existence of biological races.

Most of the variables that researchers have found to be associated with race concept relate to the broad hypothesis that marginalized or inferior social status is associated with a tendency to embrace social constructionism and reject biological determinism. Lieberman (1997) found that across disciplines, women were consistently more likely than their male colleagues to refute the notion of biological races. Minority racial or religious status has also been linked to racial conceptualization (Lieberman 1997; Littlefield, Lieberman and Reynolds 1982; Shanklin 2000). Littlefield *et al.* (1982: 646) concluded, "Anthropologists who teach in [nonelite] institutions, and whose social origins are relatively less privileged, tend to be more receptive to the no-race position than their colleagues in the elite institutions." Similarly, Stark *et al.* (1979) found that faculty interviewees who believed that races exist were more likely to come from a higher socioeconomic class as determined by the income and education levels of their families of origin. Their explanation could be applied equally to the findings on gender and minority status: "those who have benefited more from the extant structure of social relationships will tend to grant more legitimacy to the use of a concept reflecting and supporting that structure" (p. 97). For similar reasons, it is often suggested that political orientation colors individuals' views on the social construction of race and other classifications (Cartmill 1999; Harrison 1999; Shakespeare 1998). Specifically, conservatives are linked to essentialist views, seen as justifying the *status quo*, while liberals are associated with constructionism and its implication that social structures are ultimately flexible. Political orientation may also translate to geographic patterns of racial conceptualization.

Age cohort also appears to shape racial conceptualization because it influences exposure to particular understandings of race. In 1982, Littlefield *et al.* related historical changes in anthropologists' views of race to time trends in the demographics of the discipline and in

national politics. In a similar vein, Lieberman and Jackson (1995: 239) predicted that contemporary graduate students, "unexposed to the sensitizing experiences of the social movements of the 1960s and 1970s" (not to mention the postwar condemnation of mid-century race science), would become more likely to accept race as a biological given.

The foregoing discussion of factors influencing scientists' racial conceptualization has emphasized individual socio-demographic characteristics. However, characteristics of the institutions in which these individual operate may play a role as well. The empirical evidence to date is inconclusive. The results shown in Lieberman *et al.* (1992) demonstrate only minor differences in racial conceptualization between faculty in Ph.D.- , B.A./M.A.- and A.A.-granting biology and physical anthropology departments. But research conducted in the 1970s and reported in Littlefield *et al.* (1982: 646) found larger differences, where only 32 percent of the faculty in Ph.D.-granting physical anthropology departments took a "no-race" position as compared with 48 percent and 53 percent of the faculty interviewed in B.A./M.A.-level departments and A.A.-granting departments, respectively. This exploration raises the possibility that institutions of higher education are important not just for what they impart to students, but for the influence they exercise on their faculty members' understandings of racial difference as well.

The analysis to be described considers evidence bearing on the relationships hypothesized in the literature. Thus in addition to undertaking a descriptive inquiry into the state of scientists' racial conceptualization, I evaluate the hypotheses of a positive association between essentialist biological racial conceptualization and male gender, higher socioeconomic origins, mainstream religion, white racial identity, conservative political orientation, younger age,

southern or Midwestern regional origins, biological science participation, elite university setting, and low campus racial diversity.

III. INTERVIEW DATA AND METHODOLOGY

To shed light on the notions of race held by academics in the social and biological sciences, I conducted in-depth interviews with 41 faculty members at four research universities in the northeastern United States. Given this small sample size, study was limited to two disciplines: biology and anthropology, which are among the scientific fields that have historically been most involved in American debates concerning the nature of racial difference.

The interviews were structured around a series of open-ended questions in order to permit a more detailed investigation of academic concepts of race than the single, fixed-response item found on the questionnaires that Lieberman mailed to scientists. (In that study, respondents were asked simply to indicate agreement or disagreement with the statement "There are biological races in the species *Homo sapiens*.") Equally valuable, the interview strategy described here included multiple measures of racial conceptualization, in order to explore which question types were most readily or easily answered, as well as the extent to which different question approaches seemed to yield similar or congruent responses. Finally, this project provides the opportunity to reflect on changes in scientists' understandings of race since Lieberman surveyed professors in the 1980s.

The four campus interview sites were selected from among those that met a series of successively narrower conditions in AY2000-01: they were U.S. universities with Ph.D.-granting departments of anthropology (n = 85); they were located in the northeastern region (n = 26);[5] their anthropology departments included both physical and cultural or linguistic

anthropologists (for subfield comparison purposes) (n = 16); and their biology faculty included specialists in both evolutionary biology and in genetics, an additional constraint that further winnowed the list of campuses under consideration down to nine.[6] These nine northeastern universities as well as a campus selected for pilot interviews were then graphed according to their tuition rates (as a measure of eliteness) along one axis and their undergraduate racial diversity (measured by the percentage of students who identified as white) on the other.[7] A clear dividing line emerged in the cost of attending the selected colleges, with a gap of nearly $10,000 separating the most expensive of the five public universities from the least expensive of the five private schools. Along the other axis, I categorized the universities as "less racially diverse" or "more racially diverse" according to whether the percentage share of white students in their undergraduate bodies fell above or below the national mean of 75 percent (National Center for Education Statistics 2001). From the resulting grid, I selected three campuses as interview sites: "City" University to represent non-elite, non-diverse institutions; "State" University to represent non-elite, diverse campuses; and "Ivy" University to represent elite and diverse universities (Table 1). My "Pilot" University, selected for convenience, has similar characteristics as Ivy University but is somewhat less racially diverse.

TABLE 1 ABOUT HERE

It is important to note that, as Littlefield's research suggests, professors in university departments are not representative of the larger universe of American faculty in institutions of higher education. Only six percent of U.S. postsecondary institutions grant doctoral degrees, whereas 15 percent grant other graduate degrees, 35 percent award bachelor's degrees at most, and 44 percent are two-year colleges (National Center for Education Statistics 2003: Table 244). However, this study is limited to Ph.D.-granting departments in order to target: (a) departments

large enough to contain subfield variation (for purposes of comparison), and (b) the segment of the professoriate most easily equated with the "producers" of racial knowledge—those who "control professional training" as Littlefield *et al.* put it.

At each university site, publicly-available lists of anthropology and biology department faculty served as sampling frames for the interviews with professors. In order to reduce variation introduced by diverse cultural backgrounds, faculty with non-U.S. graduate doctorates were eliminated from consideration, using the publicly-available degree information as a proxy for foreign birth. In each department, I identified faculty who had either taught introductory general courses in the 2000-2002 period, or who specialized and/or taught in either of two fields of interest. In anthropology departments, these special fields were physical and sociocultural or linguistic anthropology; in biology departments, evolutionary biology or genetics. Thus I selected and stratified the sample by teaching and research interest in order to focus on the faculty whose teaching I expected to be either most accessible to undergraduate students (through introductory courses) or most likely to touch in some way on the topic of race. In addition, within each of these three groups (i.e. introductory teachers and specialists in two areas), I further stratified by sex in order to compare male and female perspectives. All faculty members were contacted initially by mail, with follow-up if necessary by telephone and then e-mail. The departmental response rates ranged from 46 percent (State University anthropology) to 100 percent (State University biology and City University anthropology), with an unweighted average of 77 percent. As the sample breakdown by campus, department, and gender in Table 2 shows, slightly over one third of the faculty interviewees were women (despite gender-stratified sampling), and the group was fairly evenly divided between anthropologists and biologists.

TABLE 2 ABOUT HERE

Interviewee characteristics were as follows: with respect to faculty rank, the modal group was that of full professors (39 percent), followed by associate professors (27 percent). There were slightly more non-tenure-track interviewees (20 percent) than assistant professors (15 percent). The median age in the sample was 49 years. Eighty-three percent of the interviewees described their race as "white" or "Caucasian." Nearly half of the interviewees were originally from the mid-Atlantic states of New York, New Jersey, or Pennsylvania, but 17 percent were born outside the United States. Almost 90 percent described their political orientation as left of center. Three-quarters reported they had no current religious affiliation; the modal religion of Judaism was reported by only 16 percent of the faculty. In terms of socioeconomic background, 63 percent of the interviewees stated their father had held a managerial or professional occupation; 53 percent reported the same concerning their mother's occupation.

An important concern in the interview process was to minimize potential interviewer effects that could result in "socially desirable"—rather than honest—answers. As a person of color interviewing predominantly white respondents, this was a serious issue. Research literature suggests, however, that race-of-interviewer effects are not generalized or applicable to all interview topics (Campbell 1981; Cotter, Cohen and Coulter 1982; but see contradictory claims in Davis 1997), but are most acute when interviewees are asked to comment on the racial group they ascribe to their interviewer. Consequently, I avoided questions about specific racial groups, as well as questions designed to measure respondents' attitudes or opinions about race relations. Moreover, analysts of race-of-interviewer effects rightly note that it is the interviewer's *perceived* race, and not his or her personal self-identification, that influences interviewee responses. In this connection it is worth noting that several respondents appeared unsure of my race and asked me at the end of the interview how I identified myself in racial terms. In other

instances, faculty members spontaneously referred to me as a mixed-race person in using me as an illustration of arguments they were making (for example, concerning forensic racial identification based on skeletal traits). Since their perception of my multiracial status was used to support arguments both for and against the biological nature of race, it is difficult to estimate the direction of the bias that race-of-interviewer effects might have introduced to interviewees' notions of race. Moreover, as the interview results show, a variety of views on this matter—and not just essentialist interpretations of racial difference—were construed by respondents as potentially undesirable. Still, the possibility that essentialist ideas of race were muted by social desirability effects suggests that what follows is a conservative measure of their true scope.

The interview data were analyzed both qualitatively—for example, by noting the arguments and terms respondents used—and to some extent quantitatively, through simple descriptive statistics and cross-tabulations. Inferential statistical tests (such as the chi-square) are not employed here, however, due to the non-random nature of the interview sample.[8] As described above, faculty interviewees were drawn from a very particular segment of postsecondary institutions (northeastern universities with Ph.D.-granting anthropology departments including both cultural and physical anthropologists) and were themselves selected based on specific criteria (i.e. holding a U.S. doctoral degree and teaching or conducting research in the subfields of cultural anthropology, physical anthropology, evolutionary biology or genetics). Although the interviewees were randomly sampled within those parameters (albeit subject also to gender-stratified sampling), the resulting group of interviewees cannot be said to be representative of an easily-defined population such as all U.S. university faculty or all U.S.-based academic anthropologists and biologists. In short, the sample is not a largely random one that lends itself to inferential statistical analysis, but rather is the end product of a deliberate

process of construction. Instead, this study aims for an in-depth examination of the qualitative meanings of race for scientists in the traditionally relevant disciplines of anthropology and biology.

IV. RESEARCH FINDINGS

When asked how he would define the concept of race, one professor[9] of anthropology at City University said, "I think I would define race as a particular form of ethnicity which is extremely powerful by virtue of its—of the way it's naturalized through the body." A colleague in the same department defined race as follows: "I guess a group of individuals that share at least one unique feature to them that is not shared by the rest of members—of individuals they recognize as belonging to the same species." The two perspectives, coming from the same academic department, testify to the wide range of approaches and arguments that faculty used in describing their understandings of race.

Below I present the outcomes of two measures of academic scientists' conceptualizations of race: (a) their open-ended definitions of race, and (b) their opinions of the statement, "There are biological races within the species *Homo sapiens*." Then I link the interviewees' responses to their academic, demographic, and institutional characteristics in order to assess the relationships hypothesized in existing literature.

A. Defining the Concept of Race

1. Race as Biology. When faculty interviewees were asked how they would define race, almost two fifths (16 out of 41) described it as a biological phenomenon. In other words, they defined race as a feature of human biology. In most of these cases, professors depicted races as the

product of evolutionary processes acting within genetically isolated human populations. A biology professor at Pilot University, for example, referred to race as "any useful and evolutionarily meaningful way of distinguishing two groups that do not interbreed at a high rate." Other evolution-related language that respondents used to define race included: "limited gene pool"; "open dynamic breeding groups which display some restriction of gene flow"; "species polymorphism" and "regional adaptations"; and "relatively small homogeneous genetic group." Some respondents equated "race" with "subspecies," often broadening its scope well beyond human beings to describe a phenomenon of "distinctive geographic variants" to be found in any animal (or plant) species.

About half of the faculty who offered biological definitions for race also pointed out the limitations of racial classification schemes. Critiques drew on the arguments that suites of human traits do not co-vary in tandem as would be necessary for racial grouping, or that intermixture between humans across the globe had precluded (or erased) the development of racial groups. As a State University biology professor explained, "Well, I think the textbook will say that there are three major races—Negroid, Caucasian, and Asian or Mongoloid—and a hundred years ago it was easier to see those particular designations." Given the common perception that a major drawback to biological race classification was the difficulty of pinpointing racial boundaries, it is not surprising that some of the faculty who offered a biological perspective on race sought to reconcile the malleability of racial categories with their reality and utility. After discussing the difficulty of determining what level of difference should be considered as corresponding to racial difference, a biology professor at Pilot University added, "but I think the concept of race is not completely artificial, because it does address the question of geographic origins and evolution of man." In other words, race might be an

imperfect measure, yet it has some information value. More than one interviewee pointed out that species and subspecies classification was not a straightforward matter either, yet this taxonomic approach is widely used despite the debates it provokes. Similarly, races may not be easy to delimit, but the concept provides a tool or set of labels to work with. And one physical anthropologist went so far as to reject the idea that sharp distinctiveness was a necessary feature of a system of racial categorization. In his view, racial groups should be considered inherently "fuzzy sets"[10] that are constantly undergoing change due to both ecological and sociocultural forces, and the fact that their boundaries and numbers are constantly in flux should not undermine their reality:

> So many of the things I get back in terms of critique or something is, "but, you know, nothing is distinct." And I say, get rid of that word "distinct." Because that's—that's what is the problem with the interface between the biologists, the PCs, social cultural anthropologists and so forth—is they've got this concept of distinct….What would it take to have races? What would you need? And so forth. And very few really come up with total distinction. And this has been—I don't know how I can put this delicately. I don't think I can. The people who have tried to say that there is no such thing as racial groups or races or race and so forth usually point to the lack of distinctiveness. They, you know: "we have clines and so forth, so nothing is distinct as we go through here." That's not, to me, the issue. If you're looking for distinctiveness, for Christ's sake, look at molecules and look at elements, you know, where you can count the number of protons and neutrons and, you know, come up with distinctiveness. You're not going to find it in living biological populations, whether it's birds, whales, mongoose, or humans. But this concept of—in other words, distinctiveness has become the straw man around which you

> validate the concepts of race or racial variation or different populations. And that is a mistake, I think.

Although this professor—who was among the interviewees who had given most thought to the relationship between race and biology—was unusual in his depiction of the "distinctiveness" criterion for racial classification as a "straw man," his view that the absence of clear racial boundaries did not preclude the meaningfulness and utility of the concept was in keeping with the outlook of the other faculty in this group.

2. Race as Ideology. The remaining faculty interviewees—25, or just over 60 percent—described race as an ideological phenomenon; that is, as a kind of idea rather than as a biological phenomenon. In particular, these faculty depicted race either as (a) a factually incorrect "myth" or false belief; or (b) a social construct. Although these two perspectives are not mutually exclusive, I distinguish below the 11 faculty members who used exclusively biological information to make their claims about the race concept, as opposed to the remaining 14 who referred to historical, social or political factors to characterize the constructed nature of race. Five professors in the latter group combined both biological and constructionist arguments to refute the biological race idea.

<u>a. Biological arguments against the race concept</u>. A prominent theme among those who relied solely on biological evidence to challenge the race concept was the idea that race was "unscientific" or lacking scientific utility. Comments in this vein included: "race has no biological basis"; is "scientifically untenable"; it "doesn't make sense," "doesn't have scientific validity in a biological sense"; "a useless concept," a "non-concept"; "there's no biology attached to it," and, "To a geneticist, there's only one race." For these interviewees, the falsity of

the biological race concept was underscored by emphasizing its distance from scientific knowledge, locating it outside the realm of science. This is a neat example of what Gieryn (1999) calls "credibility contests" in which "bearers of discrepant truths" rhetorically position the boundaries of science in such a way as to expel their opponents from that authoritative domain.

This group also put forth several specific arguments countering the validity of the biological race concept. Like the proponents of biological race, members of this group referred to human evolutionary history, but they arrived at very different conclusions. Instead of detecting the presence of racial differences that have developed over time, they emphasized the difficulties of distinguishing racial groups. A biologist at City University saw racial categorization as involving "false, overly stringent, or overly clear, unrealistically clear, distinctions between groups." Calling the correspondence between racial categories and nature "very crude, very approximate," a State University professor of biology added:

> Biologists don't find those categories to be very useful….Does a human race as a category correspond to a well-defined population of some sort in nature? Well they don't, they never do—not even close usually—so that's the ultimate justification for why I don't use them; that's why I try to stick to geography.

For these interviewees, the lack of clear racial boundaries meant that any dividing lines chosen were necessarily arbitrary; as one physical anthropologist put it, "The boundaries are completely porous, completely moveable, depending on how—where you want to put them." For some interviewees, the shortcomings of traditional racial categories were demonstrated by genetic research showing that greater variation exists within racial groups than between them. In this vein it is important to note that the faculty members who argued for "chucking the concept"

of race did not deny or downplay the existence of biological variation among human beings, but rather felt that the race concept was a poor measure for capturing that diversity. Some suggested that geography would be a preferable and sufficient conceptual framework for studying human variation. "The only thing that's really relevant," a physical anthropologist argued, "is geographic variation and local adaptation to particular environments."

b. Constructionist arguments against the race concept. In contrast to the professors who defined race primarily in terms of its inaccuracy or fallacy as a biological tool, others sought to explain race as an idea that has emerged and been maintained in particular historical or cultural contexts, and which serves particular interests. A faculty member in the State University biology department stated, "[F]or my definition, race is a social construct. It is defined culturally at the time, in the time period, and from a biologist's perspective it is not useful."[11]

Unlike the professors who criticized the biological race concept as being unscientific, the constructionists generally saw science itself as a social product and thus not antithetical to a culturally-produced idea like race. As a cultural anthropology professor at City University explained, "I have a really strong belief in sort of the way in which science is, sort of within culture, as opposed to between, you know, here's science and it's factual and race is part of it and here is culture and it's invented." A few faculty noted that the biological race concept derived much of its power from its appearance as scientific and thus unsullied by cultural value systems, but that it is nonetheless fundamentally a cultural product. Another City University anthropologist spoke of the need to regard "the biological criteria that are used [to define race] as highly charged with meaning by means of culture rather than in terms of any sort of reducible biological fixed point." Moreover, the race concept has often implied both physical and cultural difference, as an Ivy University cultural anthropologist suggested: "Every construction of race,

no matter how crudely scientistic and no matter how sort of apparently oriented to claims about biological difference or physical differences, nevertheless has always entailed assumptions that are social or cultural."

Many respondents cast race as one of several types of "construction of difference," like nationality, ethnicity, religion, gender and class. In this perspective, the deployment of racial classification is always part and parcel of larger processes of inequality and domination. As a result, race—like other social constructs—has important consequences, and these faculty adamantly rejected the conclusion that race is not "real." As the aforementioned Ivy cultural anthropologist maintained, "frankly, you know, race is infinitely more real because it's social, than, you know, than anything that might make it meaningful at the biological composition." A cultural anthropology professor at State University elaborated, "…if you're African-American and male and you're looking for a cab in New York City, it's going to be very real…but that's sort of real social effects from perceived biological differences."

B. On the Existence of Biological Races

In addition to the open-ended question on how they would define race, faculty interviewees were also asked to respond to a one-sentence statement on race. The statement, "There are biological races in the species *Homo sapiens*," was taken from Lieberman (1997) in order to provide the basis for a simple dichotomous response variable: "Agree" or "Disagree." However, a considerable number of interviewees took an unforeseen and somewhat difficult-to-classify route: that of responding that they would agree if the statement were altered somewhat. This approach is labeled "Contingent Agreement" in Table 3 below.

TABLE 3 ABOUT HERE

Not surprisingly, faculty positions on the existence of race appear to be related to their open-ended definitions of race. Eighty-seven percent of the professors offering biological definitions of race agreed to some degree with the Lieberman statement, versus only 16 percent of those who had not defined race in biological terms. This association supports the contention that both variables are indicators of the same underlying phenomenon of race conceptualization.

1. Agreement with the Lieberman Statement. Nearly one quarter of the professors presented with the Lieberman statement agreed with it as is (Table 3). When asked why, their answers included: "there are these genetic markers in terms of ... frequencies and stuff like that have a biological basis" and "that aspect of biology is true, real, unambiguous, because we can trace it."

Determining what constituted "agreement" with Lieberman's statement was not always a straightforward task. In particular, several interviewees took the position that they would agree with the statement if it were amended, usually by substituting other terms for the word "races." Examples of the replacements or definitions for "(biological) races" that faculty suggested included: "recognizable geographic variants"; "species subgrouping"; "different mitochondrial DNA haplotypes," and "human population group or breeding population." Although such comments could be considered as a mixed review of the Lieberman statement, I treat them as qualified agreements because the interviewees themselves indicated a willingness to agree with the statement if their understandings of race were acknowledged, and because the substitutions they proposed retained the fundamental idea of biologically distinguishable human subgroups. Consider, for example, the assistant professor of biology at State University who suggested replacing "race" because of its "negative social connotations" yet retained its basic premise of distinct groups:

> I just think that the word "race"—because I've been brought up thinking that you can't use the word because it has all these negative social connotations and it's just completely inappropriate and not scientifically sound—but it's just hard for me to imagine having any adjective associated with race that would apply. I would certainly be willing to replace the word "race" with another word, like I would say there are "distinct genetic haplotype groups" within *Homo sapiens*, but I just can't imagine using the word "race" in any context.

2. Disagreement with the Lieberman Statement. Almost half of the faculty interviewees who were asked to comment on the Lieberman statement said they disagreed with it (Table 3). As with their open-ended definitions of race, professors drew on both biological and sociological arguments to refute the existence of biological races; however, in this case, they were less likely to combine both types of argument.

Respondents who employed biological arguments against race again portrayed it as an unscientific notion, or more precisely, as an outdated notion no longer supported by modern science. As one biology professor at State University put it, "we have moved on" from such thinking: "modern genetics has dispelled the notion of race." A biology professor at Ivy University was even more emphatic: "Nobody who knows any current biology would agree with that statement, whatever their professional status is." These respondents found it hard to believe that their peers would argue for the existence of races. Another biology professor at Ivy University called the Lieberman statement "nonsense," laughing, and continued: "My reaction is 'nonsense,' and I would imagine, so if it was given in the eighties, so this was after I went to – after I was undergraduate, I would be astonished, if either biologists or anthropologists said anything other than 'nonsense.'" In the same vein, a State University biologist maintained:

> And I don't think there's any biological evidence to support the fact that there are things such as biological races. I would hope that when you were asking other people this that they would be smart enough to recognize that this is true. That if they took a logical – you know, like I said before, for there to be biological races two things had to happen. You needed to start different and maintain differences.

This comment points to another similarity between professors' open-ended definitions of race and their opinions of the Lieberman statement; namely, the focus of biological arguments against race on the difficulties or impossibility of delineating human races. "I don't think that the phenotypic characteristics are distributed in a way that allows the recognition of distinct races," a physical anthropology professor at City University said. A colleague in the same department stressed, "There are very, hardly any genetic difference between breeding populations of *Homo sapiens*, very, very tiny amount of genetic material." And a biologist at State University explained, "Human history, human variation is much more complex than any rough categorization can approximate."

Faculty who saw race as a social construct without biological underpinning expressed their rejection of the Lieberman statement in several ways. The view taken by an anthropologist at City University sums them up well, however: "I think there are *ideas* of biological races, but I don't think that they exist."

C. Patterns of Racial Conceptualization

As the quotations above suggest, differing views of race were not distributed randomly across the faculty sample, but rather, certain perspectives were more likely to be held by anthropologists and others by biologists. Among the latter, the modal definition of race was one

that treated race as a biological characteristic, whereas the mode among anthropologists was to portray race as a purely social construct (Table 4). Similarly, faculty opinions of the Lieberman statement ("There are biological races in the species *Homo sapiens*") also show an association with discipline. Both sets of results reveal that a social constructionist approach to race is not only the mode among anthropologists, but that it is much more likely to be voiced by anthropologists than biologists, among whom it is the least popular argument to be raised.

TABLE 4 ABOUT HERE

At first glance, these results may seem unremarkable: constructionism is associated with anthropologists and essentialist definitions of race with biologists. However, they are important because they suggest that the inroads made by racial constructionism have been quite limited even within the academy, or for that matter, even within the discipline of anthropology. Moreover, it is not a self-evident outcome; if biological race were as poor a tool for studying human variation as many academics have suggested, we might expect biologists and physical anthropologists to be among the first to recognize its shortcomings and reject it.

Although discipline appeared associated with faculty racial conceptualization, it is important to note that there was a great deal of variation among the practitioners of both disciplines. Nearly one-third of the anthropologists subscribed to a biological definition of race, and more than half of the biologists opposed a biological reading of race. To better understand this disciplinary variation, it is important to take subfield differences into account, particularly within anthropology. A finer-grained examination of disciplinary definitions of race reveals that physical anthropologists hold views more similar to those of biology professors than those of sociocultural anthropologists (Table 5). Fifty-seven percent of the physical anthropologists

interviewed defined race as a biological characteristic, as did 45 percent of the interviewees in biology, but only 17 percent of the sociocultural anthropologists shared that view. Similarly, the definition of race as a social construct was offered almost exclusively by the sociocultural specialists in anthropology departments; two thirds of them took this approach, compared to only 14 percent of the physical anthropologists (and 23 percent of biologists). Although the biology professors interviewed also represented different subfields—they were fairly evenly split between geneticists and evolutionary biologists—their definitions of race were similar across subfields.

TABLE 5 ABOUT HERE

Like academic specialization, the institutional variables of university eliteness and racial diversity showed some evidence of association with faculty race conceptualization. Professors in public institutions were marginally more likely than those at private universities to define race in biological terms (41 versus 36 percent respectively), and were much less likely to adopt a constructionist definition (15 percent compared to 36 percent of the private university faculty). The same pattern held for the professors' opinions of the statement "There are biological races…" This finding contradicts the predictions of Lieberman, Littlefield, and their colleagues that faculty at elite universities would be relatively likely to reject social constructionism. It may reflect, however, the greater presence of sociocultural anthropologists in the elite university anthropology departments and in the interview sample; whereas 55 percent of the anthropologists interviewed from the public State and City universities were in sociocultural fields, 75 percent of those interviewed at the private Pilot and Ivy universities were sociocultural anthropologists.

Racial diversity in the undergraduate student body appeared to have a stronger relationship with faculty conceptions of race than did university eliteness. Among faculty at the relatively diverse institutions (State and Ivy universities), 28 percent subscribed to a biological definition of race, compared to 53 percent of the faculty at the less diverse City and Pilot universities, and 39 percent agreed with the Lieberman statement compared to 56 percent at the less-diverse schools. However, the rate at which faculty offered a social constructionist understanding of race varied little by institutional racial diversity.

Unfortunately, racial and political diversity within the faculty sample was too limited to support study of their impact on racial conceptualization. Of the 41 professors, 34 identified themselves as white, three as Asian (including Indian), one each as black and Hispanic, and two chose other labels. The heavy skew of the professors' political leanings is reflected in the fact that 87 percent identified themselves as left of center. Still, it is worth nothing that while 39 percent of the left-leaning professors offered a biological definition of race and 21 percent provided a constructionist definition, 60 percent of the middle-to-right faculty defined race in biological terms and none offered a purely constructionist view. In line with the arguments of several scholars, this sample suggests that political orientation is linked to race concept.

Religiosity revealed a marked association with race concept. Faculty who described themselves as atheist or non-religious were much more likely than others (58 percent to 25 percent) to reject the Lieberman statement on the existence of biological races, and much less likely to offer a biological definition of race (46 versus 64 percent). Moreover, when respondents' religious upbringing was taken into consideration, those from Jewish and Catholic backgrounds were most likely to reject the Lieberman statement, at rates of 86 and 57 percent respectively compared with 20 percent of Protestants. The same finding held for professors'

open-ended definitions of race: 78 percent of Jewish-origin and 71 percent of Catholic-origin interviewees eschewed a biological interpretation of race, compared to 50 percent of the Protestant-origin faculty. These results lend support to Stark *et al.*'s contention that minority (religious) status lessens adherence to biological understandings of race.

Age also appeared to play a role in racial conceptualization. In fact, an interesting gradation emerged: the average age of the supporters of biological race was nearly 53 years old, whereas those who refuted race based on biological arguments were 48 years old on average, those who combined biological and constructionist arguments against race averaged 47 years old, and the proponents of a purely social constructionist were the youngest, at a mean 43 years old. The same relationship held when faculty opinions of the Lieberman statement were considered. Consistent with such age differences, senior faculty proved much more likely to hold biological conceptualizations of race than junior faculty, at rates of 52 percent versus 14 percent respectively.

Other variables that were hypothesized to influence professors' exposure to particular conceptions of race are age cohort and region. Cross-tabulation suggested little domestic regional effect, but nativity showed some association with race conceptualization. Sixty-four percent of the foreign-born faculty rejected the Lieberman statement on the existence of race compared to only 43 percent of the U.S.-born.

For the purposes of this study, socioeconomic background was operationalized using the measures of father's and mother's occupation. Interestingly, maternal occupation seemed to be more strongly associated than paternal with racial conceptualization. In both cases, higher-status (i.e. professional or managerial) parental occupations were associated with a lessened tendency

to espouse biological interpretations of racial difference. In fact, social constructionism was almost exclusively the province of the offspring of professional parents. This may reflect the turn toward liberal positions that Inglehart (1977) discerned among "post-materialist" generations accustomed to freedom from want.

Finally, gender is one of the variables to have received the most attention in previous study of scientists' racial conceptualization. In the present investigation it showed some association with race concept (Table 6); whereas 44 percent of male professors defined race in biological terms, only 29 percent of female faculty did so, and the women were almost twice as likely as the men to describe race as socially constructed (50 percent versus 26 percent respectively). However, little difference emerged between men and women's support of the Lieberman statement on biological race.

TABLE 6 ABOUT HERE

D. Linking Biology to Race: Essentialists and Anti-Essentialists

The pattern of gender differentiation in racial conceptualization, like those along the lines of discipline and university eliteness, suggests that the factors highlighted in previous research as having a bearing on notions of race in fact delimit most sharply the faculty who employ constructionist discourse from those who do not. In other words, it is when we compare social constructionists to the other faculty—regardless of whether those in the latter group agreed or disagreed with a biological notion of race—that we find the most marked differences in gender and discipline. What these variables do not explain as effectively, however, are the differences among the remaining faculty who, without resort—or perhaps exposure—to a constructionist interpretation of race, sort themselves into two opposing camps: those who argue that biological

races exist, and those who argue they do not. The factors that seem to contribute to the likelihood that one adopts a constructionist stance do not help explain how the others, who ground their views in discussion of human biology, divide themselves into opposing parties (which I will call "essentialists" and "anti-essentialists"). In short, the existing literature sheds more light on the constructionist – nonconstructionist comparison, rather than on the essentialist – anti-essentialist divide.

Indeed, essentialists and anti-essentialists seem to share a great deal in common. They base their arguments on the same body of research concerning human evolution and population genetics, yet arrive at very different conclusions about whether race reflects biological patterns of human variation. What makes some content to use racial labels to describe human variation, and others unwilling to do so? When both supporters and opponents of the biological race concept agree that such groupings are "fuzzy" and not sharply delineated, what is it that propels them to one side of the fence or the other? As Stark, Reynolds and Lieberman (1979: 90) put it, "we have, among authorities in the same discipline who employ similar techniques to analyze similar bodies of facts, different patterns of discovery and interpretation." What factors contribute to their diverse conceptualizations of race?

When we examine the characteristics of the 27 scientists who did not refer to social constructionism in defining race, we find that those who agreed that "biological races exist" were quite similar to those who disagreed (Table 7). Each group includes both anthropologists and biologists across the sample age range. Faculty in both groups are largely left-leaning in politics and hail from the mid-Atlantic states, although those against the race concept are more likely to have Pacific and East North Central origins (e.g. Ohio, Michigan, Illinois). Those who defined race in biological terms were more likely to have a parent in a labor-class occupation.

TABLE 7 ABOUT HERE

The bigger differences between the two groups who used strictly biological knowledge to make their cases were related to their ideological exposure: namely, their doctoral training and their age. No assistant professor defined race as a biological phenomenon, while 18 percent of the faculty who refuted biological race were assistant professors (as were 44 percent of those who defined it as socially constructed). Moreover, faculty who argued against a biological definition of race were almost three times as likely to have earned their doctorates at Ivy League institutions than were those who supported it (36 compared to 13 percent). Still, no single characteristic emerges as a decisive factor in explaining how faculty interpret the meaning of biological research as it relates to race.

In *The Structure of Scientific Revolutions*, Kuhn (1996[1962]) identified the awareness of anomalies—i.e. outcomes unexplained by a prevailing theoretical paradigm—as a prerequisite for scientific communities' adoption of a new approach. This insight raises the possibility that faculty who oppose the race concept are those who find it unsatisfactory, unable to account for or reconcile their observations concerning race, whereas those who support the biological race concept have not found it problematic. Suspecting the scientists whose research touches on human evolutionary history would be among those most likely to notice limitations in the biological race concept, I examined whether such faculty—i.e. evolutionary biologists and physical anthropologists—were disproportionately represented among those rejecting the biological race concept, but found very little difference between the two camps on this score.

In search of another perspective that might cast light on factors distinguishing essentialists from anti-essentialists, I sought to better flesh out the arguments and motivations

that led interviewees to certain opinions of the Lieberman statement by asking them to predict how other types of people would react to the same. In other words, the faculty discussions of how others would approach the same question were used to throw their own views into sharper relief. After asking each interviewee's personal opinion of the Lieberman statement, "There are biological races in the species *Homo sapiens*," I asked them to guess what kind of response would emerge as dominant from a hypothetical survey of (a) the members of their own discipline; (b) the members of the "other" broad disciplinary division (i.e. social scientists for biologists, or biological scientists for anthropologists); and (c) the American public.

Interestingly, biologists and anthropologists arrived at strikingly similar assessments of the degree to which their colleagues would agree with the Lieberman statement. As Table 8 shows, roughly 15 percent of both anthropologists and biologists thought that social scientists would agree with the statement, and about 40 percent of the interviewees in both groups thought biological scientists would agree with it. Furthermore, both sets of professors were largely convinced that Americans would believe the statement to be true.

TABLE 8 ABOUT HERE

Expectations concerning the degree to which their views were shared by others varied in a telling way between anthropologists and biologists. While 62 percent of the biology professors expected that their peers would share the same opinions they did on the Lieberman statement (regardless of those opinions were), only a minority—less than one fifth—believed that social scientists would share their views (Table 9). In contrast, anthropologists were confident not only that their peers saw things as they did (77 percent made this prediction), but they were also generally quite optimistic that biologists would share their views: 58 percent guessed this to be

the case. In fact, cultural anthropologists were particularly certain that biologists shared their outlook—78 percent made this prediction, while none of the physical anthropologists expected such an outcome.

TABLE 9 ABOUT HERE

The sharp difference between anthropologists' and biologists' speculations concerning the degree to which their concepts of race were shared across the academy may help explain why social scientists more generally have felt confident in claiming that the biological race concept has been discarded by all scientists and social constructionism has been widely embraced in its stead. In the anthropologists' perspective, their view of race is closer to biological scientists' than it is to the public's, whereas the biologists interviewed here guessed their own views to be closer to those of the American public than they are to social scientists'.

The rationales that faculty attributed to others may also help explain why they themselves defined race as they do. Asking interviewees to guess others' views about race opened a window on to the meanings that the scientists ascribed to each position, revealing common ideas about various stances on race, regardless of their own individual viewpoint.

Interviewees who agreed that biological races exist depicted like-minded people as scientifically oriented and knowledgeable. One biologist speculated about her colleagues, "I think people who work on model systems…like yeast or worms or flies…might agree…" with the statement on biological race. Another said, "I think that a lot of us see where biologists, particularly evolutionary biologists, see geographic variation within a species and we see it in *Homo sapiens* too. It's all sort of part of the same sets of processes."

The importance of establishing which concept of race is scientific—or as Gieryn (1999) put it, of drawing "the cultural boundaries of science" in such a way to bestow upon one's own camp the qualities associated with science, such as logic, truth, rigor, honesty and skepticism—was evinced by the efforts that the anti-essentialist faculty made to expel the concept of biological race from the realm of science. Accordingly, the opponents of an essentialist race concept made claims such as: "Modern genetics has dispelled the notion of race"; "Nobody who knows any current biology would agree" [that biological races exist]; and "genetic research shows little difference" [between races]. They portrayed belief in biological race as ignorant, and in the following example, that ignorance verges on religious credulity, evoking the public debates about creationism that many faculty interviewees felt they faced all too often:

> Unfortunately, there's probably some still uneducated people in certain areas of the country, and they might tend to agree with this. I don't know what the problems—what the frequency would be, hopefully not that high, 10, 15, 20 percent maybe, but I'm sure there are a number of individuals out there that still believe this, [like] that men have one less rib than women. (Anthropologist, City University)

Contrasting one's own view with that attributed to the public was a common strategy for emphasizing its scientific nature; one biologist suggested, for example, that most of the public would reject the statement on the existence of races because they would be "afraid of the implications" rather than remain "detached like biologists."

The accusation of being non-scientific was particularly sharp, however, when faculty speculated on the racial concepts held by academics in disciplines other than their own. One biologist, for example, suggested that social scientists would disagree with the Lieberman

statement because they would "try to deny the genetic truth"; another believed they "wouldn't understand race as an example of species polytypism," and yet another that social scientists "reject the idea of a data-driven reality." Here the presumption was that social scientists would reject the Lieberman statement. But even when biologists expected social scientists to agree with it, they still depicted the social scientists as operating outside the realm of science: either social scientists failed to grasp the underlying science or were motivated by non-scientific concerns; social scientists "wouldn't question the meaning of 'biological'," or they "need" race because "they are professionally invested in race and racism." In return, anthropologists accused biologists retain a "19th-century," unsophisticated view of race.

Despite the variation in the disciplinary targets of such remarks, both the anthropologists' and the biologists' accusations served to uphold a vision of contemporary science as blameless. Social scientists' shortcoming is that they are not "scientific" enough, whereas natural scientists are due for criticism by not keeping abreast of current science and instead cleaving to old, outdated principles. Modern science is not suspected of harboring problematic views of human difference, because any such troubling perspectives are associated with the past. And the frequent criticism of social scientists as being attuned to political concerns suggests that "real" science is conducted in a space free of such contaminating biases.

As central as it was to lay claim to scientificity in faculty discussions of diverse race concepts, this was not the only symbolic boundary that interviewees struggled over. Instead, it became clear that concerns over the moral dimension of racial conceptualization were equally prominent in faculty depictions of different views. In particular, the "moral boundary-marking" (Lamont 2000) that emerged required the scientists to distance themselves from racism. The

most common form of such attempts was to equate belief in biological race with racism, as in the following comment:

> …if you took a random survey across the United States, probably most people would agree with that statement. Because many people in the United States are racist, so they want to believe something like that, something that fits with what they already think. (Biologists, State University)

Another biologist predicted that the public would support the statement on races because "they don't want diversity." And just as in the case of scientific boundary-marking, moral boundary skirmishes provoked their own interdisciplinary antagonism. Anthropologists portrayed biologists as unconcerned with the history and meaning of the term "race," and just generally "unengaged above the cell level."

Moral boundary-marking also resembled attempts to position one's view as scientific in that neither camp ceded ground easily. Despite the confidence with which some interviewees equated essentialism with racism, the anti-essentalist position had to contend with claims that it was animated by a false anti-racism—that is, with a superficial "political correctness." One biologist at City University maintained that social scientists "would try more to be politically correct or some perception that this is politically incorrect, which I can imagine that people would think that way, but I don't see there's any real reason to try to deny it. It's a function of the genes that you get." Another biologist reasoned,

> So some people might actually have prejudices, but they know that that's wrong, so they might say, 'Oh, I don't believe in races,' but they're saying that because they have these beliefs and they just don't want their colleagues to know that or whatever.

In such accounts, such superficial anti-racism or political correctness was often portrayed as directly antithetical to the practice of science. This juxtaposition is evident in the comment above, where being politically correct may lead one to "deny" the truth, and in the following observation by an anthropologist who supported the notion of biological races:

> [Younger anthropologists] want to see anthropology doing good. Bettering humanity. And to take a neutral position that anthropology is for the sake of better understanding is unacceptable to them and anthropology has to be put into practice for good, and race, as a concept, has been used not for good, but for evil. So I think they'd be more inclined to reject this.

In his view, young anthropologists who reject the scientific value of "better understanding" are motivated by an ostensibly contradictory preference for "doing good." In fact, older anthropologists were among the most vocal critics of what one called "an unreflective, unreflexive, and unconsidered constructionism." A cultural anthropologist hypothesized that his younger colleagues had "postmodern" and "welfare" concerns that would turn them against the Lieberman statement on the existence of races. Even faculty who did not agree with the Lieberman statement suspected their peers of rejecting it in an unthinking fashion: one anthropologist accused others of being "knee-jerk constructive reductionists." Thus academics from a variety of standpoints on the nature of race associated the rejection of the biological race concept with unthinking politicized or ethical concerns—in short, with what is often called "political correctness."

Another tactical representation used by the supporters of an essentialist race concept was to assert that far from racist, their own position held the potential to offer real benefits to the

groups that have historically suffered racial discrimination. The implied link between essentialist race and racism makes it important for those who see race as a useful biological tool to cast their work as anti-racist; hence the embedding of racial categories in discussion of medicine. As one professor described hypothetically,

> So you say, for example, that blacks have higher rates of hypertension and males have much higher rates of prostate cancer. Why? And then you get the ... "there is no such thing as race." People's...origins and so forth and background mean nothing in terms of medicine. And we'd say, "Wow." I was wondering, if I were black and had prostate cancer, I'd want the medical association, you know, to have paid a little more attention to the diversity. You know. And they have to call me black, even though my – one of my great-great-grandmothers was white. I think I'd still want that to happen.

The boundary work in which scientists are engaged is rendered all the more complicated by the fact that it is effected along two distinct dimensions. Faculty seek to align themselves with particular moral values, such as honesty, justice, or freedom from prejudice, and at the same time, they position themselves with respect to the highly authoritative enterprise of science, seeking to expel others from within its boundaries. This simultaneous symbolic work on twin fronts raises a particular challenge: how to position one's standpoint on the right side of *both* boundaries? Ideally, one's view is "correct," both scientifically and morally—as opposed to the opponents'. In the typology shown below (Figure 1), this means trying to position one's self in category 1—"scientific" and "non-racist"—and depict detractors' views as corresponding to box 4—"unscientific" and "racist."

FIGURE 1 ABOUT HERE

Moreover, interviewees' comments suggest that although both essentialism and anti-essentialism (including constructionism here) claim to be on the right side, neither has definitively staked the claim. Each has particular obstacles to face. Those who take the essentialist position that biological races exist are accused of being racist, whereas all those who disavow the biological nature of race face charges of being un-scientific. For this reason, we see claims that constructionism, which is derided by its detractors as "unscientific," is in fact the "intellectual" [scientific] consensus, and conversely, that racial genomics, which has been tarred as "racist," will in fact benefit minorities.

The vehemence with which interviewees dismissed notions of race that conflicted with their own, and the ways in which they did so, offers a new direction for research on the determinants of scientists' racial conceptualization. As we saw, once we turn attention to the majority of the faculty who grounded their race definitions in accounts of human evolutionary history, we find many sociodemographic similarities between those who accept the idea of biological race and those who reject it. Moreover, all these faculty invoke the same body of research on genetics and evolution to make their diverse cases, which boil down to a "half full, half empty" judgments about how much physical differentiation is necessary to delimit a race. Given this prevalent framework for approaching the question of race, what may distinguish the two camps are not the logical conclusions they draw, but rather the value characteristics they attribute to different concepts of race. What remains to be explained then is not why some scientists embrace biological race and others reject it, but rather at a deeper level, why one man's "science" is another man's "racism."

V. CONCLUSION

The initial question addressed by this study was whether contemporary academics can be characterized as having formed a consensus about how best to understand what race is. The results from this small sample of anthropologists and biologists give an emphatic "no" in response. Not only were interviewees quite divided on how best to understand race—nearly 40 percent defined it as a biological phenomenon—but they were far from having converged on a constructionist interpretation of the race concept. Despite some social scientists' claims to the contrary, racial constructionism was a minority viewpoint in this sample, espoused by roughly one third of the respondents.

From this starting point, the next step was to identify factors that could potentially explain the observed patterns of variation in scientists' beliefs about the nature of race. Evaluating the hypotheses that such individual characteristics as gender or political orientation, or such contextual factors such as academic discipline or university eliteness, might be associated with conceptualization of race, the research offered some evidence of such relationships. A striking finding, however, was that the links hypothesized in sociology of knowledge literature were more applicable to distinguishing social constructionists from other faculty, and were not as effective in distinguishing essentialist from anti-essentialist interpretations of race among the majority of interviewees who did not employ constructionist discourse. This group merited a closer look, however, as representatives of what may be a sizeable share of academics who are not exposed to—or perhaps not convinced by—the idea of race as social construct.

Faced with the difficulty of identifying factors that explained why, among the faculty who used exclusively biological arguments to make their cases about race, 60 percent embraced a biological race concept and 40 percent rejected it, I analyzed the data from another angle: that of boundary work. In other words, rather than confine the investigation to correlations between race concepts and hypothesis variables, I mined the interview data for evidence of the symbolic meanings and characteristics that respondents ascribed to various race notions. In this way, I sought to map the terrain of debate in the way its participants sensed it, and to understand what it meant for them to align themselves with the positions they did.

It quickly became apparent that not just one, but two types of symbolic boundary were important to interviewees. On one front was the science – nonscience border, along which academics vie in "credibility contests" for recognition as "scientific" and in possession of associated qualities such as objectivity, precision, and logic (Gieryn 1999). Along another front, it was equally important for respondents to position themselves morally in opposition to racism. Like their military counterparts, however, such symbolic battles on twin fronts pose special challenges. In particular, the respondents were faced with the task of staking out a position that fell simultaneously on the "right" side of both boundaries. Thus proponents of biological race cast themselves as objective scientists untainted by social influence and searching for knowledge that would benefit people who have been disadvantaged by racism (e.g. Risch et al. 2002), while opponents of biological race portrayed themselves as modern scientists who have rejected the racist, erroneous thinking of the past.

Such symbolic boundary work may help explain not only why certain social and biological scientists take the stands they do when it comes to defining race, but it may also contain the key to why this debate seems so far from being settled. Neither essentialists nor

constructivists have yet been able to definitively wrest the mantles of both science and anti-racism away from the other. Until the outcomes of these distinct but related boundary-marking struggles are determined, academics lack important guideposts that signal where their support should lay. In other words, no consensus on race has emerged because agreement has yet to form about which is symbolically the "right" side to be on; both the essentialist and non-essentialist camps actively claim to have inherited the legacies of science and nonracism.

One implication of this interpretation is that prospectively, the race debate will not be resolved by "educating" either the public or the academy as some have believed (Graves 2001; Montagu 1972; Montagu 1945). It is not likely to be factual knowledge that sways scientists; the faculty in this study who disagreed on the existence of biological race were in fact entirely in agreement on the existence of human biological diversity, its roots in long-term evolutionary processes of local adaptation, and the fuzziness of group boundaries. Instead, the ideological winner will emerge after conquering the symbolic fronts of both scientificity and moral integrity; once one side becomes established as correct on both grounds, we may begin to see a consensus form around it, regardless of the biological or social information that comes to the fore. At this point, it is difficult to predict which concept of racial difference will gain the ascendancy.

Table 1. University Undergraduate Data, AY 2001-02

University	*Undergraduates Enrolled*	*% White**	*Acceptance Rate*	*University Status*	*Tuition (In-State)*
State	> 25,000	62	> 60%	Public	> $5,000
City	> 15,000	84	> 60%	Public	> $5,000
Ivy	> 5,000	60	> 10%	Private	> $25,000
Pilot	< 5,000	66	> 10%	Private	> $25,000

* Including “Race Unknown” responses.

Note: Figures compared to the nearest multiple of 5,000 (or 5 in the case of acceptance rate).

Source: National Center for Education Statistics, Integrated Postsecondary Education Data System (College Opportunities On-Line).

Table 2. Faculty Sample Composition										
FACULTY	**City U.**		**State U.**		**Ivy U.**		**Pilot U.**		***Total***	
	Anth	**Bio**	**Anth**	**Bio**	**Anth**	**Bio**	**Anth**	**Bio**	***Anth***	***Bio***
Female	1	3	3	3	2	2	0	0	*6*	*8*
Male	6	5	1	5	4	2	2	2	*13*	*14*
Total	*7*	*8*	*4*	*8*	*6*	*4*	*2*	*2*	*19*	*22*
Univ. total	*15*		*12*		*10*		*4*		***41***	

Table 3. Faculty Response to Statement, "There are biological races in the species *Homo sapiens*."	
Faculty Response	**Percent**
Agree	24
Contingent Agreement	24
Neutral / Don't Know	6
Disagree (Biological argument only)	26
Disagree (Social argument)	21
Total (N = 34)	*101*

Note: This question was asked of 34 professors rather than the full sample of 41 because it was omitted when interviews were particularly lengthy. Total percent adds to 101 due to rounding.

Table 4. Faculty Definitions of Race and Opinions of Lieberman Statement, by Academic Discipline		
Faculty Definitions of Race:	**Anthropologists**	**Biologists**
	(%)	(%)
Pro Biological Race	32	45
Con Biological Race: Bio Arguments only	21	32
Con Bio. Race: Biological & Social Arguments	5	18
Con Bio. Race: Social Construct Arguments only	42	5
Total (N = 41)	*100*	*100*
Faculty Opinions of Lieberman Statement:	**Anthropologists**	**Biologists**
	(%)	(%)
Agree	23	24
Contingent Agree	15	29
Neutral	0	9
Disagree: Biological Arguments only	23	29
Disagree: Social Construct Arguments	38	10
Total (N = 34)	*99*	*101*

Table 5. Faculty Definitions of Race, by Disciplinary Sub-Field

Percent faculty defining race as:	**BIOLOGY**	**SOCIAL CONSTRUCT**	**NOT BIOLOGY**	Total %	*N*
Anthropologists	**32**	**47**	**21**	**100**	***19***
Sociocultural	17	67	17	100	*12*
Physical	57	14	29	100	*7*
Biologists	**45**	**23**	**32**	**100**	***22***
Genetics	50	25	25	100	*12*
Evolutionary Biology	40	20	40	100	*10*
Total	*39*	*34*	*27*	*100*	*41*

Table 6. Faculty Definitions of Race, by Gender					
Percent faculty defining race as:	**BIOLOGY**	**SOCIAL CONSTRUCT**	**NOT BIOLOGY**	Total %	*N*
Male	**44**	**26**	**30**	100	*27*
Female	**29**	**50**	**21**	100	*14*
Total	*39*	*34*	*27*	*100*	*41*

Table 7. Interviewee Characteristics, by Opinion on Existence of Biological Race					
Faculty opinion on races' existence:	**% Biologists**	**% Male**	**% at Public University**	Total %	*N*
Agree	**63**	**88**	**75**	*33*	*8*
Contingent Agree/DK	**77**	**44**	**44**	*38*	*9*
Disagree	**57**	**100**	**86**	*29*	*7*
Total	*67*	*75*	*67*	*100*	*24*

Note: Based on the 27 interviewees who did not use social constructionism to define race. Three of these interviewees were missing information on their opinions of the statement on biological race, so this table includes 24 cases.

Table 8. Faculty Expectations Concerning Comparison Groups' Agreement with Lieberman Statement			
Percentage of Interviewees Expecting Comparison Groups to Agree with Lieberman Statement	Comparison Groups:		
	Social Scientists	Biological Scientists	U.S. Public
Anthropology Interviewees	15	42	77
Biology Interviewees	14	38	67

Table 9. Faculty Expectations of Concord between Own and Comparison Group Opinions, by Discipline			
Percentage of Interviewees Expecting Concord with Comparison Groups Opinions	Comparison Groups:		
	Social Scientists	Biological Scientists	U.S. Public
Anthropology Interviewees	77	58	46
Biology Interviewees	19	62	43

Figure 1. Typology of Race Concepts Along Two Symbolic Boundaries		
Ascribed characteristics of race concepts:	**"Non-Racist"**	**"Racist"**
"Scientific"	Own view (1)	Essentialism (2)
"Unscientific"	Anti-Essentialism / Constructionism (3)	Opponent's view (4)

REFERENCES

Afshari, R., and R.S. Bhopal. 2002. "Letters to the Editor: Changing Pattern of Use of 'Ethnicity' and 'Race' in Scientific Literature." *International Journal of Epidemiology* 31:1074.

American Anthropological Association. 2000. *Guide 2000-2001: A Guide to Programs, A Directory of Members*. Arlington, VA: American Anthropological Association.

American Sociological Association. 2002. "Statement of the American Sociological Association on the Importance of Collecting Data and Doing Social Scientific Research on Race." Washington, DC.

Angier, Natalie. 2000. "Do Races Differ? Not Really, Genes Show." Pp. F1, F6 in *The New York Times*.

Baker, Lee D. 1998. *From Savage to Negro: Anthropology and the Construction of Race, 1896-1954*. Berkeley, CA: University of California Press.

Braun, Lundy. 2002. "Race, Ethnicity, and Health: Can Genetics Explain Disparities?" *Perspectives in Biology and Medicine* 45:159-74.

Burchard, Esteban Gonzalez, Elad Ziv, Natasha Coyle, Scarlett Lin Gomez, Hua Tang, Andrew J. Karter, Joanna L. Mountain, Eliseo J. Perez-Stable, Dean Sheppard, and Neil Risch. 2003. "The Importance of Race and Ethnic Background in Biomedical Research and Clinical Practice." *New England Journal of Medicine* 348:1170-1175.

Campbell, Bruce A. 1981. "Race-of-Interviewer Effects Among Southern Adolescents." *Public Opinion Quarterly* 45:231-44.

Cartmill, Matt. 1999. "The Status of the Race Concept in Physical Anthropology." *American Anthropologist* 100:651-660.

Cavalli-Sforza, Luigi Luca. 2000. *Genes, Peoples, and Languages*. New York: North Point Press.

Chaturvedi, Nish. 2001. "Ethnicity as an Epidemiological Determinant--Crudely Racist or Crucially Important?" *International Journal of Epidemiology* 30:925-7.

Collins, H.M. 2000. "Surviving Closure: Post-Rejection Adaptation and Plurality in Science." *American Sociological Review* 65:824-845.

Cooper, Richard S. 2003. "Race, Genes, and Health--New Wine in Old Bottles?" *International Journal of Epidemiology* 32:23-5.

Cotter, Patrick R., Jeffrey Cohen, and Philip B. Coulter. 1982. "Race-of-Interviewer Effects in Telephone Interviews." *Public Opinion Quarterly* 46:278-84.

Davis, Darren W. 1997. "Nonrandom Measurement Error and Race of Interviewer Effects Among African Americans." *Public Opinion Quarterly* 61:183-207.

Davis, Floyd James. 1991. *Who is Black? One Nation's Definition*. University Park, PA: Pennsylvania State University Press.

Duster, Troy. 1990. *Backdoor to Eugenics*. New York: Routledge.

—. 2001. "Buried Alive: The Concept of Race in Science." Pp. B11-B12 in *The Chronicle of Higher Education*.

Editorial. 2000. "Census, Race and Science." *Nature Genetics* 24:97-8.

Evett, Ian, Peter D. Gill, John K. Scranage, and B.S. Weir. 1996. "Establishing the Robustness of Short-Tandem-Repeat Statistics for Forensic Applications." *American Journal of Human Genetics* 58:398-407.

Foster, Morris W., and Richard R. Sharp. 2002. "Race, Ethnicity, and Genomics: Social Classifications as Proxies of Biological Heterogeneity." *Genome Research* 12:844-850.
Gieryn, Thomas F. 1999. *Cultural Boundaries of Science: Credibility on the Line*. Chicago, IL: University of Chicago Press.
Graves, Joseph L. 2001. *The Emperor's New Clothes: Biological Theories of Race at the Millennium*. New Brunswick, NJ: Rutgers University Press.
Harrison, Faye V. 1999. "Introduction: Expanding the Discourse on 'Race'." *American Anthropologist* 100:609-631.
Hutchinson, Janis Faye. 1997. "The Resurgence of Genetic Hypotheses to Explain Social Behavior among Ethnic Minorities." Pp. 5-25 in *Cultural Portrayals of African Americans: Creating an Ethnic/Racial Identity*, edited by Janis Faye Hutchinson. Westport, CT: Bergin & Garvey.
Inglehart, Ronald. 1977. *The Silent Revolution: Changing Values and Political Styles among Western Publics*. Princeton, NJ: Princeton University Press.
Kahn, Jonathan. 2003. "Getting the Numbers Right: Statistical Mischief and Racial Profiling in Heart Failure Research." *Perspectives in Biology and Medicine* 46:473-83.
Karter, Andrew J. 2003. "Commentary: Race, Genetics, and Disease--In Search of a Middle Ground." *International Journal of Epidemiology* 32:26-28.
Keita, S.O.Y., and Rick A. Kittles. 1997. "The Persistence of Racial Thinking and the Myth of Racial Divergence." *American Anthropologist* 99:534-544.
Kevles, Daniel J. 1995. *In the Name of Eugenics: Genetics and the Uses of Human Heredity*. Cambridge, MA: Harvard University Press.
Krieger, Nancy, and Mary Bassett. 1993. "The Health of Black Folk: Disease, Class, and Ideology in Science." Pp. 161-69 in *The "Racial" Economy of Science: Toward a Democratic Future*, edited by Sandra Harding. Bloomington and Indianapolis, IN: Indiana University Press.
Kuhn, Thomas S. 1996[1962]. *The Structure of Scientific Revolutions*. Chicago, IL: University of Chicago Press.
Lamont, Michèle. 2000. *The Dignity of Working Men: Morality and the Boundaries of Race, Class, and Immigration*. Cambridge and New York: Harvard University Press and Russell Sage Foundation.
Lee, Sandra S.J., J. Mountain, and B. A. Koenig. 2001. "The Meanings of 'Race' in the New Genomics: Implications for Health Disparities Research." *Yale Journal of Health Policy, Law and Ethics*:33-75.
Lieberman, Leonard. 1968. "The Debate Over Race: A Study in the Sociology of Knowledge." *Phylon* 29:127-141.
—. 1997. "Gender and the Deconstruction of the Race Concept." *American Anthropologist* 99:545-558.
Lieberman, Leonard, Raymond E. Hampton, Alice Littlefield, and Glen Hallead. 1992. "Race in Biology and Anthropology: A Study of College Texts and Professors." *Journal of Research in Science Teaching* 29:301-321.
Lieberman, Leonard, and Fatimah Linda C. Jackson. 1995. "Race and Three Models of Human Origin." *American Anthropologist* 97:231-242.
Littlefield, Alice, Leonard Lieberman, and Larry T. Reynolds. 1982. "Redefining Race: The Potential Demise of a Concept in Physical Anthropology." *Current Anthropology* 23:641-655.

Marks, Jonathan. 1995. *Human Biodiversity: Genes, Race, and History*. New York: Aldine de Gruyter.
Marshall, Eliot. 1998. "DNA Studies Challenge the Meaning of Race." *Science* 282:654-655.
Massey, Douglas S. 2000. "What I Don't Know About My Field but Wish I Did." *Annual Review of Sociology* 26:699-701.
Montagu, Ashley. 1972. *Statement on Race: An Annotated Elaboration and Exposition of the Four Statements on Race Issued by the United Nations Educational, Scientific, and Cultural Organization*. New York: Oxford University Press.
Montagu, M.F. Ashley. 1945. *Man's Most Dangerous Myth: The Fallacy of Race*. New York: Columbia University Press.
National Center for Education Statistics. 2001. "Digest of Education Statistics, 2000." Washington, DC.
—. 2003. "Digest of Education Statistics, 2002." Washington, DC.
Nobles, Melissa. 2000. *Shades of Citizenship: Race and the Census in Modern Politics*. Stanford, CA: Stanford University Press.
Odocha, Okay. 2000. "Race and Racialism in Scientific Research and Publication in the Journal of the National Medical Association." *Journal of the National Medical Association* 92:96-7.
Olson, Steve. 2001. "The Genetic Archaeology of Race." Pp. 69-80 in *The Atlantic Monthly*.
Omi, Michael A. 2001. "The Changing Meaning of Race." Pp. 243-263 in *America Becoming: Racial Trends and Their Consequences*, edited by Neil J. Smelser, William Julius Wilson, and Faith Mitchell. Washington, DC: National Academy Press.
Peterson's. 2001. *Peterson's Graduate & Professional Programs: An Overview 2001*. Princeton, NJ: Peterson's.
—. 2001. *Peterson's Guide to Four-Year Colleges 2002*. Lawrenceville, NJ: Peterson's.
Rigby, Peter. 1996. *African Images: Racism and the End of Anthropology*. Oxford: Berg.
Risch, Neil, Esteban Burchard, Elad Ziv, and Hua Tang. 2002. "Categorization of Humans in Biomedical Research: Genes, Race and Disease." *Genome Biology* 3.
Rogers, Everett M. 1995. *Diffusion of Innovations*. New York: Free Press.
Rosenberg, Noah A., Jonathan K. Pritchard, James L. Weber, Howard M. Cann, Kenneth K. Kidd, Lev A. Zhivotovsky, and Marcus W. Feldman. 2002. "Genetic Structure of Human Populations." *Science* 298:2381-2385.
Sankar, Pamela, and Mildred K. Cho. 2002. "Toward a New Vocabulary of Human Genetic Variation." *Science* 298:1337-8.
Sarich, Vincent, and Frank Miele. 2004. *Race: The Reality of Human Differences*. Boulder, CO: Westview Press.
Shakespeare, Tom. 1998. "Social Constructionism as a Political Strategy." Pp. 168-181 in *The Politics of Constructionism*, edited by Irving Velody and Robin Williams. London: Sage.
Shanklin, Eugenia. 2000. "Representations of Race and Racism in American Anthropology." *Current Anthropology* 41:99-103.
Shriver, Mark D., Esteban J. Parra, Sonia Dios, Carolina Bonilla, Heather Norton, Celina Jovel, Carrie Pfaff, Cecily Jones, Aisha Massac, Neil Cameron, Archie Baron, Tabitha Jackson, George Argyropoulos, Li Jin, Clive J. Hoggart, Paul M. McKeigue, and Rick A. Kittles. 2003. "Skin Pigmentation, Biogeographical Ancestry and Admixture Mapping." *Human Genetics* 112:387-399.

Smedley, Audrey. 1999. *Race in North America: Origin and Evolution of a Worldview*. Boulder, CO: Westview Press.

Stark, Jerry A., Larry T. Reynolds, and Leonard Lieberman. 1979. "The Social Basis of Conceptual Diversity: A Case Study of the Concept of 'Race' in Physical Anthropology." *Research in Sociology of Knowledge, Sciences and Art* 2:87-99.

Stevens, Jacqueline. 2003. "Racial Meanings and Scientific Methods: Changing Policies for NIH-Sponsored Publications Reporting Human Variation." *Journal of Health Politics, Policy and Law* 28:1033-1087.

The College Board. 2000. *The College Board Index of Majors and Graduate Degrees*. New York: The College Board.

Wade, Nicholas. 2002. "A New Look at Old Data May Discredit a Theory on Race." Pp. F3 in *The New York Times*.

Wailoo, Keith. 1997. *Drawing Blood: Technology and Disease Identity in Twentieth-Century America*. Baltimore, MD: Johns Hopkins University Press.

Wood, Alastair J.J. 2001. "Racial Differences in the Response to Drugs--Pointers to Genetic Differences." *New England Journal of Medicine* 344:1393-1396.

ENDNOTES

[1] The centrality to the discipline of sociology of offering "competing explanations" is underscored by its prominence as a major theme of the American Sociological Association's 2005 centennial.

[2] Media that report on scientific discovery for broader public consumption have followed suit. In December 2003, the cover of *Scientific American* was devoted to the question "Does Race Exist?"; previously, *The Atlantic Monthly* reported on "The Genetic Archaeology of Race" Olson, Steve. 2001. "The Genetic Archaeology of Race." Pp. 69-80 in *The Atlantic Monthly*., and *The Sciences* and *Discover* focused on the biology of race in their March/April 1997 and November 1994 issues respectively.

[3] On substitution of ethnicity for race, see also Afshari and Bhopal

Afshari, R., and R.S. Bhopal. 2002. "Letters to the Editor: Changing Pattern of Use of 'Ethnicity' and 'Race' in Scientific Literature." *International Journal of Epidemiology* 31:1074. and Foster and Sharp

Foster, Morris W., and Richard R. Sharp. 2002. "Race, Ethnicity, and Genomics: Social Classifications as Proxies of Biological Heterogeneity." *Genome Research* 12:844-850..

[4] For background on the historical evolution of the fields of biology and anthropology in relation to the race concept, see Baker

Baker, Lee D. 1998. *From Savage to Negro: Anthropology and the Construction of Race, 1896-1954*. Berkeley, CA: University of California Press., Graves

Graves, Joseph L. 2001. *The Emperor's New Clothes: Biological Theories of Race at the Millennium*. New Brunswick, NJ: Rutgers University Press., Marks

Marks, Jonathan. 1995. *Human Biodiversity: Genes, Race, and History*. New York: Aldine de

Gruyter., or Rigby

Rigby, Peter. 1996. *African Images: Racism and the End of Anthropology*. Oxford: Berg..

[5] Northeastern states include Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. Research was limited to this region both to limit expenses and to refrain from introducing another factor in campus variation.

[6] University characteristics were obtained from the American Anthropological Association's American Anthropological Association. 2000. *Guide 2000-2001: A Guide to Programs, A Directory of Members*. Arlington, VA: American Anthropological Association. *Guide*, the College Board's

The College Board. 2000. *The College Board Index of Majors and Graduate Degrees*. New York: The College Board. *Index of Majors and Graduate Degrees*, and Peterson's

Peterson's. 2001. *Peterson's Graduate & Professional Programs: An Overview 2001*. Princeton, NJ: Peterson's. *Graduate and Professional Programs: An Overview*.

[7] The campuses were also graphed by their undergraduate selectivity or entrance difficulty (another measure of eliteness), with similar results. Peterson's

Peterson's. 2001. *Peterson's Guide to Four-Year Colleges 2002*. Lawrenceville, NJ: Peterson's. five-tier rankings of entrance difficulty, which are based on entering freshmen's high-school standing, SAT or ACT scores, and their class acceptance rate, were used as indicators of selectivity.

[8] Inferential tests, including chi-square and mean difference tests, were nonetheless performed for heuristic purposes, and the results are available upon request.

[9] Unless specifically indicated otherwise, I apply the term "professor" to all faculty members and teaching staff regardless of their tenure status.

[10] He attributed the phrase to Vincent Sarich, anthropologist at the University of California at Berkeley and co-author of *Race: The Reality of Human Differences*

Sarich, Vincent, and Frank Miele. 2004. *Race: The Reality of Human Differences*. Boulder, CO: Westview Press..

[11] Eleven of the 41 faculty interviewees used the word "construct" when asked to define race, often joining it to other terms—e.g. "cultural construct," "political construct," "behavioral construct." However, in their usage "construct" did not always seem to refer to a process of human elaboration so much as it was a synonym for the word "concept."