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Measuring Race (and ethnicity): a paper for the National Academy of Science

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As a concept, the idea of “race” is intended to convey information about human difference. It is not the only way that that human difference can be linguistically expressed, and the information it conveys may or may not be factually accurate. Nonetheless, it is a device for describing physical and cultural differences that individuals find useful for differentiating between “them” and “us”; for creating and maintaining a sense of togetherness and otherness in social space.

The thrust of this paper focuses on alternative strategies for capturing race as it is experienced in the social environment. That is, to consider the question of whether there is a strategy or set of strategies that might permit the social sciences to coherently and consistently capture this essential form of human social behavior. Accordingly, this essay begins by mapping the intellectual terrain associated with the concept of race and then moves to a review of alternative approaches for the measurement of race. It concludes with a series of considerations that should be considered essential for the measurement of race and ethnicity.

### **Historical Overview**

The habit of noting the physical features of others is a practice that likely pre-dates human society. It is well-known that in a number of animal species, members of the herd, pack, flock or school will reject or even attack differently appearing members of the same species. This is not to suggest that race and racism is innate to human behavior but at the very least, analogs exist within animal populations (cites...SJ Gould).

In human societies, the construction of sameness and otherness is a more complex process that may draw on observed physical features in connection with systematically organized habits of behavior loosely connected to the idea of culture, symbolic and material. “Others” may consume forbidden foods, select mates differently, and worship false idols as well as having bone structure, hair texture, and skin pigmentation unknown among one’s in-group.

Pre-dating the terms of “race” and “ethnicity”, there is a growing body of research attesting to the existence of something akin to racial and ethnic distinctions in ancient societies. In ancient societies there was an awareness of differences connected with physical appearance or cultural practices. Hall (1997:42) for example argues that the ancient Greeks had well-formed ideas about their origins and territorial space that represented the foundations of Hellenic ethnicity.

Moving beyond the simple notion of a common identity, Issac (2004) argues that practices representing a type of “proto-racism” were common throughout the societies that formed around the Mediterranean Sea, and were especially deeply rooted in Greco-Roman culture.<sup>1</sup> Proto-racist ideas and practices spread and proliferated as these

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<sup>1</sup> It is worth noting that some scholars, most notably Fredrickson (2002) explicitly dismiss the idea that elemental forms of race and racism, “proto-racism, were present in Greco-Roman culture.

societies expanded their colonial reach beyond the Mediterranean region; encountering people and societies they deemed to be inferior to themselves. The core of proto-racist ideas and practices revolved around the need, or desire, to keep immigrants and minorities in Greco-Roman society permanently in a subordinate position through oppressive measures legitimated by an ideology extolling the inherent superiority of Greco-Roman culture (Issac 2004).

The influence of Greco-Roman culture on modern western societies is undeniable. In 1512, the Spanish King Ferdinand of Aragon sought advice about the legitimacy of conquering and enslaving the people of the newly discovered western hemisphere. No less an authority than the Greek philosopher Aristotle was invoked to justify Spanish imperialism in the Americas. The argument rested on the premise that Native Americans were primitive barbarians of the sort that Aristotle wrote about and therefore were, in Aristotle's terms, "natural slaves" (Issac 2004:200). As Issac writes (2004: 201) "Aristotle's ideas about natural slavery, barbarism, and brutishness were used as arguments to justify the Spanish treatment of the local population in the American colonies."

Although tribal and inter-ethnic conflict was common throughout Europe as various groups struggled for the possession of land and other resources, the Jewish diaspora precipitated the first instances of a group systematically persecuted by virtue of their "otherness." The systematic persecution of the Jews in the twelfth and thirteenth centuries evolved from a simple hatred of Jews as different to a fully articulated ideology justifying their destruction (Fredrickson 2002). Among the early Christian converts of Europe, Jews represented the penultimate "other" in their disbelief and for their role in the crucifixion. Fredrickson argues that that the persecution of Jews serves as the foundation of modern racism. He argues that "Anti-judaism became anti-semitism whenever it turned into a consuming hatred that made getting rid of Jews preferable to trying to convert them,

The persecution of the Jews in Europe led to the deep connection of race and biology. This innovation, compared to earlier societies, appears to be a unique development in modern western civilization. The first manifestation of this connection emerged in Spain during the fourteenth and fifteenth centuries and gained momentum during the Inquisition. As thousands of Jews converted to Christianity to avoid expulsion from Spain, the doctrine of *limpieza de sangre* (purity of blood) was raised to undermine the veracity of these conversions (Fredrickson 2002).<sup>2</sup> The argument being that "tainted" Jewish blood could never be fully converted to that of a true Christian. By the middle of the sixteenth century, certificates of "pure blood" were required in many quarters of Spanish society. Fredrickson (2002:21) writes that "It is also highly significant that from

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<sup>2</sup> Invocations of "blood" and "blood purity" are not unique to Spain nor to the Inquisition, insofar as these notions frequently appear in western civilization as a trope in many different contexts (see Meyer 2005). However, this use of the blood metaphor was novel inasmuch as it was used to stigmatize an entire group in a way that could neither be erased nor changed.

the very beginning of the settlement of the Americas, only those thought to be of pure Christian ancestry were permitted to join the ranks of the *conquistadores* and missionaries.”

The Spanish preoccupation with blood and blood purity manifested itself once again in the Americas as the missionaries and other officials attempted to track and classify the offspring of Spanish, African, and Native American parentage. These classifications have been handed down in history in the form of paintings, *pinturas de castas*, intended to depict the physical features and approximate social standing of each racial admixture (Katzew 2004). The attempt to classify various types of human beings and organize knowledge about them came about during the late eighteenth century against the backdrop of the Spanish Enlightenment and more widely, the growing secularization of western civilization.

In the newly formed United States, how to classify slaves and to a lesser degree, American Indians for the purpose of taxation and political representation was a critical issue in the nation’s founding. At issue was whether to count slaves as a full person, a partial person, or exclude them from consideration in the determination of political representation. The outcome of this debate promised to tip the balance of power in favor or against the southern states where large numbers of slaves were held. The nation’s founders agreed to settle this with the so-called three-fifths compromise noted in Article 1, Section 2 of the United States Constitution that “Representatives and direct Taxes . . . shall be determined by adding to the whole Number of free Persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three fifths of all other Persons.” “Indians not taxed” were deemed to sovereign entities beyond the jurisdiction of the United States and therefore subject to exclusion.

The secularization of western thinking also was important because it helped birth modern scientific thinking. The biological sciences in particular emerged from natural philosophy as a distinct science in the eighteenth century. One of the first great accomplishments marking biology as a distinct science was the taxonomy developed in 1735 by the Swedish naturalist Carl Linnaeus for classifying the living world of plants and animals. Linnaeus’ scheme also attempted to differentiate among several types of human beings he denoted as European, American Indian, Asian, and African; and a fifth category of “monstrous” to denote a mostly mythical group of human beings believed to exist at the time (Fredrickson 2002).

In 1776, Johann Blumenbach published the authoritative *On the Natural Varieties of Mankind* and articulated five categories that still resonate with contemporary ideas about race. His scheme consisted of Caucasians, Mongolians, Ethiopians, Americans, and Malays, and allowed for some variation across these categories (Fredrickson 2002). Blumenbach’s work is particularly significant because it laid the groundwork for the development of the so-called racial sciences—ethnology and eugenics—in the nineteenth century, known today as “scientific racism.”

Emergent ideas from the biological sciences had a profound influence on nineteenth century thinking about the nature of human difference and the origins of these differences. Racial characteristics—including a complete ensemble of cultural and behavioral traits—were deemed to be rooted in human biology. For most of this century, scholars and scientists pursued studies designed to ascertain the physical traits peculiar to a particular race and then to determine how these physical traits were implicated with certain types of culture or behavior. Samuel Morton, for example, carried out studies of cranial structure in an attempt to establish a racial hierarchy based on the presumption that cranial capacity was a marker of intelligence (Gould 1981). Likewise, Lewis Henry Morgan, one of the founders of modern anthropology spent decades cataloging the innate cultural traits of the Iroquois people. Because Morgan believed these traits were passed down through heredity, he advocated a program of inter-marriage to bring about the civilization of American Indians (Bieder 1986). Among the most influential works published in this period was Gobineau's *An Essay on the Inequality of the Human Races* published in 1855. This was a voluminous work intended to prove that a natural hierarchy exists among the White, Black, and Yellow races, with the White race deemed naturally superior to all others. Gobineau's work, while influential in the nineteenth century attained a measure of infamy as the underpinnings of Nazi Germany's ideas about racial superiority (Gould 1981, Fredrickson 2002).

That racial admixtures might exist and have a bearing on scientific inquiry also was a concern during this period. An influx of immigrants from Europe and China raised public worries about the degradation of the racial stock of America. This concern was manifest in the United States census of 1890. This census collected information about the blood quanta of American Indians and the numbers of mulattos, quadroons, and octoroons. Enumerators were admonished to carefully record this information because "Important scientific results depend upon the correct determination of this class..." (Snipp 2003).

The connection between human social behavior and biological features was a powerful and near irresistible intellectual theme throughout the late nineteenth and early twentieth centuries. Cesar Lombroso, an Italian criminologist spent his career attempting to show how physical features were associated with different types of criminal behavior. Likewise, ideas about racial biology and the natural origins of racial differences and racial hierarchies remained influential well into the twentieth century. In the United States, Madison Grant published in 1916 *The Passing of the Great Race*, a popular book advocating racial purity, anti-miscegenation laws, and racial segregation; measures that resonated well with the Jim Crow era (Gould 1981).

### **Measuring Race in the Early Twentieth Century**

The measurement of race in the twentieth century, especially in the United States, has been shaped by two historic tensions. One is the tension that sets the interests of dispassionate scientific and scholarly inquiry, against popular opinion and political

agendas. The other tension has been the powerful prevailing wisdom that race is inseparable from biology and the counterview that race is not reducible to mere biology. While it is possible to analytically identify these tensions, explicating the manifold ways that these tensions play off and resonate with one another is exceedingly difficult.

While race as biology remained the dominant paradigm in the early part of the twentieth century, this was a view subject to growing challenges. Julian Huxley, ironically a biologist was among the first to question the reducibility of human culture and behavior in the early part of the century (Huxley and Haddon 1936, Huxley 1941, Shipman 1994). In its place, Huxley advocated for the idea of replacing studies of race with research on ethnicity—a classificatory scheme based on behavioral and cultural characteristics alone. This viewpoint also was shared by the great anthropologist Franz Boas who advocated the study of human culture as important in its own right, separate and apart from the interests of biology.

However, a frontal assault on the idea of race as biology did not materialize until 1942 with the publication of Ashley Montagu's *Race: Man's Most Dangerous Myth*. This book put forward the idea that "race" is a largely a fiction put forth and laid the foundation for the idea that race is a construct arising from human social behavior. Montagu later had an opportunity to articulate this position in a UNESCO statement published in 1950 (Shipman 1994). The statement proved highly controversial with one critic, Henri Vallois, a physical anthropologist writing that "For the existence of races within the species of Man is an incontestable, biological fact." Vallois also took exception with another assertion in the statement concerning intelligence. "The range of mental capacities is 'much the same' in all races is scarcely a scientifically accurate statement. It is at most a vague generalization." (quoted in Shipman 1994: 164).

Outside of this small group comprised mostly of anthropologists and population biologists, the social sciences spent little time in the early part of the twentieth century interrogating the meaning of race and its scientific utility. This is not to say that most social scientists were unaware of these issues; only that racial epistemology was less of a concern because of the manifest importance of race in everyday life. Gunnar Myrdal's magisterial *An American Dilemma* (1944) exemplifies this approach. Describing the American definition of "Negro", Myrdal (1944:113) wrote that "Everybody having a *known* having a known trace of Negro blood in his veins—no matter how far back it was acquired—is classified as a Negro." Myrdal (1944:115) goes on to explain that "The definition of the 'Negro race' is thus a social and conventional, not a biological concept."

By sidestepping the ontological debates surrounding race as a scientific concept, and instead adopting an everyday meaning approach to race, Myrdal takes a path that has become well-worn in the social sciences: let race mean whatever people say it means. For African-Americans (Negroes in Myrdal's era), Myrdal simply invokes the so-called "one-drop rule" or the principle of hypodescent that is customary in the South. By invoking a "social" as opposed to a scientific concept of race, Myrdal and multitudes of

other social scientists opened a Pandora's box of complex issues surrounding the construction of race as a social concept, and particularly how it is defined and measured.

For much of the twentieth century, social scientists, particularly anthropologists and sociologists struggled to reach a consensus about how best to define and measure the concept of race. By the mid-1960's, the sociologists George Simpson and Milton Yinger (1965) declared this effort to be a fool's errand and suggested instead that a single suitable definition of race was unlikely to be found. As an alternative, they proposed that a multitude of definitions could be classified into three broad categories they designated as *biological*, *mystical*, and *administrative*.

They explained that biological definitions of race rested on some notion about a homogeneous gene pool and required some test or series of tests to establish the existence of a genetically homogenous population<sup>3</sup> (Simpson and Yinger 1965). Mystical definitions are those promulgated from mythology or folklore; the most prominent example being the "Aryan" race. For obvious reasons, they are beyond the pale of scientific work. Finally, administrative definitions are those devised by political institutions or bureaucratic organizations for the purposes of administration or surveillance. These types of definitions are the ones most commonly encountered in everyday life in the course of applying for official identification, as well as other sorts of applications connected with work or school (Simpson and Yinger 1965).

Administrative definitions of race are first and foremost social constructions of the sort that Myrdal described. They can be seen as an embodiment of legal mores and public attitudes about the meaning of race, and who may or may not be designated with a particular racial appellation. They are particularly important because they can be seen as the tangible manifestations of how a society goes about the construction of race, how race is defined, how it is to be understood by the public, and how it is to be observed and measured (see Omi and Winant 1994: Chapter 6). These issues deserve careful consideration because with the ascendancy of social constructionist interpretations of race in the latter half of the twentieth century, these issues lie at the heart of any attempt to define and measure race.

### **Socially Constructing Race in America**

A particularly important issue connected with the social construction of race, especially for social science is the melding of popular ideas about race with extant political agendas<sup>4</sup> and pitting these against the interests of scientific and scholarly inquiry requiring an orderly stable metric. Three illustrations should make this a compelling point. One is the evolution of legal definitions for African-Americans, American Indians,

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<sup>3</sup> The condition of genetic homogeneity is one of the reasons that Cavalli-Sforza et al. (1996) among others have argued against the scientific utility of race in the study of population genetics.

<sup>4</sup> Political interests in particular have had a powerful influence on the construction of race and the collection of information about race, see Alonso and Starr (1987), Omi and Winant (1994), and Peterson (1995).

and Asians. The second is the evolution of racial categories in the United States census. The third is the set of controversies that surrounded the most recent revision of the federal government's official racial classification.

*Legal Definitions of Race in the United States:* There is perhaps no finer example of Simpson and Yinger's (1965) administrative definitions of race than those racial categories formally demarcated by legal standards and tests, and enforced by various regulatory authorities. African-Americans, American Indians, and for a time Asians were subject to legislation and legal opinions about who belonged in these categories. Juxtaposed against one another, they reflect how categories can be managed to serve the interests of the wider society, even when it comes at the expense of minority communities.

**African-Americans:** As Myrdal (1944) noted, the African-American community has long been subject to a rule of hypodescent. The origins of hypodescent involve a long and complex history dating back to sexual unions in the early years of slavery in what is now the United States; and well beyond the scope of this paper (see Davis 1993). However, in broad outline, hypodescent as a legal doctrine emanated from the early years of Jim Crow legislation in the post-reconstruction South. It played a figurative role in the 1896 Supreme Court case of *Plessy v. Ferguson* (163 U.S. 537) "that a negro of black is any person with any black ancestry" (Davis 1993:8). In the years since *Plessy*, the courts have consistently agreed with this idea (Davis 1993). As a doctrine, it helped solidify the interests of poor working class Whites with those of White elites. In particular those interests involved sustaining the system of White privilege that had existed in the antebellum South (Davis 1993). As a practical matter, by including mixed race persons and making them subject to Jim Crow segregation regardless of their ancestry or even their phenotypical appearance, hypodescent rules greatly expanded the pool of individuals subordinated by and subject to White rule and lessened the competition for jobs and other resources valued by Whites, such as schools, parks, and seating on busses and in theatres.

The power and the influence of hypodescent is difficult underestimate. As generations grew accustomed to these rules, they assumed the power of "common sense" or conventional wisdom by Blacks as well as Whites (Davis 1993). The widespread acceptance of these rules meant that they remained collectively unchallenged by the Civil Rights movement and individual challenges were sporadic and unsuccessful throughout the century. Most recently, a widely publicized case involving a Louisiana woman, Susie Phipps, U.S. courts reaffirmed the one-drop rule in decisions rendered in 1985 and 1986. Phipps considered herself White and grew up believing herself to be White until she discovered that her birth certificate indicated that she was Black. She filed suit to have the race of her parents changed, and by implication, her race as well as her siblings. In proceedings, the courts found that her ancestry included three-thirty-seconds of Black heritage (Davis 1993:10). This was deemed sufficient for the courts to rule against her

and the U.S. Supreme Court found insufficient merit in Phipps claims to accept it for review.

**American Indians:** The principle of “equal protection” before the law is a powerful idea in American law as well as in American culture yet the experiences of American Indians represents a stark contrast against those of African-Americans and hypodescent. However, at the outset, it also should be understood that American Indians possess a unique and political status unparalleled by any other group in the United States. American Indian communities are accorded limited rights of self-government in recognition of their prior occupation of territory that now belongs to the United States. Consequently, American Indians possess a sort of dual citizenship as enrolled members of federal and state recognized tribes in addition to being citizens of the United States (Wilkins 2006).

For many purposes, tribal membership is critical consideration in determining whether one is or is not an American Indian. The United States Congress has articulated a doctrine that stipulates that an American Indian is anyone who belongs to a federally recognized American Indian tribe (Wilkins 2006). This, of course, allows the tribes to set the criteria that determines who will and will not be accepted as a *bona fide* tribal member. According to a 2008 *Federal Register* notice, there are 562 federally recognized tribal entities eligible for services from the federal government (Vol. 73, No. 66, April 4, 2008:18553). This means that conceivably there are 562 definitions for who may be enrolled as a tribal member, and therefore recognized as an American Indian.

In practice, the actual number is likely much smaller in part due to the influence of the federal government. In the 1930s and 1940, the federal government loosened the restrictions on reservations and allowed them to form governments as long as they adhered to certain requirements, including the adoption of a written constitution (Prucha 1984). Among other things, these constitutions stipulated who was eligible to become an enrolled tribal member and in this connection, many tribes opted to follow the example of Bureau of Indian Affairs that had decided in 1932 that anyone with one-fourth or more American Indian ancestry—blood quantum--was eligible for membership (Wilkins 2006). Blood quantum was (and is) determined by tracing an individual’s ancestry back to records that the Bureau of Indian Affairs has maintained since the nineteenth century.

Unlike African-Americans, for whom any amount of African-American ancestry is sufficient to be deemed Black, persons wishing to be recognized as American Indian must demonstrate that they possess at least *minimum* required amount of ancestry for eligibility. Compared to African-Americans, American Indians are governed by a principle of *hyperdescent*, as opposed to hypodescent for the former. Why is one group subject to a hypodescent rule while the other is governed by hyperdescent? One can speculate the reasons already mentioned for why hypodescent applies to African-Americans. For American Indians, the rationale for hyperdescent is plainer. In the 1932 edition of the annual report of the Board of Indian Commissioners, the then-governing body of the Bureau of Indian Affairs, the following statement was reported:

“The rolls of Indian tribes have been greatly enlarged by the addition of thousands of individuals whose quantum of Indian blood is small and consequently the assistance [ed.: financial resources] designed for the protection and advancement of a primitive people has been directed and applied to many who are competent to protect themselves. Therefore it is recommended by this board that in future legislation and administration an Indian should be specifically defined as an individual possessing not less than one-fourth of Indian blood” (Board of Indian Commissioners 1932).

Quite plainly, the institution of hyperdescent rules was intended to limit the expenditure of federal monies by limiting the numbers of persons identified as American Indians.

**Asians:** Compared to African-Americans and American Indians, the designation of Asian, and specifically whether a person was Chinese, Japanese, or Asian Indian was a matter of some ambiguity early in the twentieth century. Certainly national origins and culture were decisive considerations with regard to the early immigrants. However, they were never subject to hyper- or hypodescent rules. The absence of these rules left open the question of whether later generations of Asians born and raised in the United States were still subject to the same restrictions aimed at their immigrant forbearers. The question specifically arose that forbid U.S. citizenship for Asians, and whether the designation of Chinese, Japanese, or Indian represented a racial category or nationality. If these labels represented nationalities, then persons born in America with immigrant ancestors from Japan, China, or India should be eligible for citizenship.

In 1914, Takao Ozawa born in Japan and raised in Hawaii and California for over twenty years applied for citizenship under the 1906 Naturalization Act. The Act extended the opportunity for citizenship through naturalization to “White aliens” and “persons of African nativity or heritage.” Ozawa argued that the law effectively eliminated considerations of race, and that with his years in the country, that he spoke English at home, had attended American schools, and attended a White church, he should be considered a White alien for naturalization purposes. Eight years later, in 1922, the Supreme Court rendered a decision in *Takao Ozawa v. United States* (260 U.S. 178). The court conceded that “by character and education”, he was well qualified for citizenship. However, the court denied his petition by finding that the designation of “White” was specifically reserved for persons of Caucasian descent, denying his bid to be recognized as White (Haney-Lopez 1996).

In hindsight, this case may seem straightforward but it set the stage for another more complicated decision to follow. A year after *Ozawa*, the court was forced to clarify the meaning of the term “Caucasian” in the case of *United States v. Bhagat Singh Thind*, (261 U.S. 204). Thind, an Indian Sikh of high caste status maintained that he should be eligible for citizenship as a Caucasian by virtue of the location of his ancestral village in India and a history of contact with Aryan invaders. The court conceded that by the standards of modern anthropology, Thind could indeed be considered “Caucasian”. However, Justice George Sutherland, author of the decision, opined that

“Mere ability on the part of an applicant for naturalization to establish a line of descent from a Caucasian ancestor will not *ipso facto* and necessarily conclude the inquiry. “Caucasian” is a conventional word of much flexibility, as a study of the literature dealing with racial questions will disclose, and while it and the words “white persons” are treated as synonymous for the purposes of that case, they are not of identical meaning. . . . In the endeavor to ascertain the meaning of the statute we must not fail to keep in mind that it does not employ the word “Caucasian” but the words “white persons,” and these are words of common speech and not of scientific origin. The word “Caucasian” not only was not employed in the law but was probably wholly unfamiliar to the original framers of the statute in 1790. When we employ it we do so as an aid to the ascertainment of the legislative intent and not as an invariable substitute for the statutory words. “(*United States v. Bhagat Singh Thind*, (261 U.S. 204) 1923)

With this decision, the court ruled clearly that Asians were a distinct race and subject to the restrictions forbidding them citizenship (haney-Lopez 1996). Unlike African-Americans and American Indians, descent rules were never an issue for this population. Most likely this was because the numbers of mixed race persons of Asian descent remained small in the early part of the century and restrictions on Asian citizenship were relaxed after World War II, nearly two decades before large number of Asian immigrants began arriving the nation

*Measuring Race in the Census*: Regardless of the legal contentions about who is or is not an African-American, American Indian, or Asian, the U.S. census has handled these issues in a manner that encompasses legal definitions, scientific judgments, and public opinion. The census is especially important because it represents a “gold standard” for the collection of racial data. Particularly as social science has developed, especially survey research, the classification deployed for the census represents a benchmark with which to evaluate the quality of survey samples. The census also plays a crucial role in the construction of the nation’s ethno-racial order (Hochschild and Powell 2008). Censuses “create the official language and taxonomy of race and imbue them with the authority of the state.” (Hochschild and Powell 2008:62).

As noted above, there is a constitutional mandate that the United States population be enumerated every ten years and the Constitution lays out a framework that explicitly includes categories of race without actually expressing the term and acknowledging only American Indians by name. Thus, every census since 1790 has included some scheme involving some sort of racial classification. In the census between 1790 and 1840, there is relatively little attention explicitly devoted to “race” *per se*. Keep in mind that in the first decades of the nation’s history, the census was conducted by federal marshal’s under the supervision of the Secretary of State. Their job was to enumerate the civil status of the inhabitants of the Union, whether free or slave, and if an American Indian, whether taxed or not. Although racial characteristics almost certainly were enlisted to help identify an inhabitant’s likely civil status, racial characteristics were not recorded until 1820 when the term “color” was added to the enumeration schedule (Snipp 2003).

By 1850, the development of ethnology and eugenics was well underway and the first indications of the influence of these disciplines can be seen in the design of this

census. For the first time, representatives of learned societies were invited to provide advice and guidance for the taking of the census. Among the changes made in the count, the schedules were revised to collect information about individuals as opposed to households and a special schedule was created for the enumeration of slaves. Like past censuses, marshals were instructed to collect information about color, as well as “civil condition” and perhaps most significantly, a mulatto category was added to the schedule (Snipp 2003).

. The 1860, 1870, and 1880 censuses more or less followed the template of the 1850 census insofar as color and mulatto were retained as categories, and of course, slavery had been eliminated by 1870. However, reflecting concerns about Asian immigration, categories were added for Chinese in 1860 and for the Japanese in California in 1870. The 1870 census also added a category for American Indians, regardless of tax status. By 1880, large numbers of American Indians had been sequestered on federal reservations and no doubt this led to the publication of a special Indian schedule for this census. In contrast, the 1890 census was a marked departure from previous censuses by adding categories for quadroon and octoroon in addition to the mulatto category. The census also became involved with the salvage ethnography movement of the late nineteenth century, recording extensive amounts of detail about the customs and living arrangements of American Indians in a special project anticipating the eventual extinction of that group.

The collection of information about race in the early twentieth century reflected the continuing concerns about immigration. Items were added for place of birth, citizenship, and language spoken. In 1930, new categories for Mexicans, Filipinos, Hindus, and Koreans were added. The influence of Jim Crow ideas about hypodescent also was manifest in these censuses. Notably, the detailed admixture categories for quadroon and octoroon were dropped in 1900 and by 1930, the one-drop rule was fully institutionalized for African-Americans. For the 1930 census, enumerators were instructed that “A person of mixed White and Negro blood was to returned as Negro, no matter how small the percentage of Negro blood; someone part Indian and part Negro also was to be listed as Negro, unless the Indian blood predominated...”(Bennett 2000, pp169-170). The 1940 census used this same scheme with one exception: as a result of lobbying by the Mexican government and Mexican-American advocacy groups, Mexicans were elevated from the non-White status and enumerated as White (Skerry 1993).

The next major innovation in the enumeration of race was introduced in 1960. In an effort to reduce the costs of taking the census, the Census Bureau implemented the mail-out, mail-back census. This sharply reduced the numbers of enumerators required to complete the census by allowing household members to complete their census form. And while it was intended as a cost cutting measure, it also fundamentally altered the content of information collected about race. In censuses before 1960, race was ascribed to members of household by enumerators who observed and determined how racial heritage

was to be recorded each person. The accuracy of information about the racial composition of households depended mostly on the visual acuity of the census enumerators. Since 1960, the fact that individuals complete the census form means that the census now taps into *racial identity*; that is how individuals wish their racial heritage to be known to others, as opposed to how they are seen by others, specifically census enumerators. This shift means that the content of the race question is now a complex phenomenon connected with how individuals think about race and how they construct their personal racial identification. Put another way, the 1960 methodology moved the data collected for race from information about perceived phenotypical traits to something much closer to a purely social construct (Cornell and Hartmann 2008).

From 1960 to 1990, only minor modifications were made to the race question. However, in 1980, an additional item was added to ascertain Hispanic ethnicity. The Hispanic origin question meant that census respondents identified their race as well as whether they claimed Hispanic ethnicity. Hispanic origins were identified with specific nationalities, Mexican, Cuban, and Puerto Rican for example. For persons of non-Hispanic origins, their ethnicity was unspecified except for persons who received the so-called long form distributed to a sample approximately twenty percent of households in the United States. The sample questionnaire included an open ended question that allowed persons to respond with information about their ethnic origins. This question elicited a wide variety of responses ranging from national origins such as Irish or German, to ethnic subcultures such as Cajun or Mullungeon, to more non-descript responses such as American (Liebersohn and Waters 1988).

In the 2000 census, in response to new regulations issued by the U.S. Office of Management and Budget, a major modification was again introduced to the collection of information about race. The categories were modified to include Native Hawaiians and Other Pacific Islanders as a group distinct from Asians; a group with whom they were aggregated in previous censuses. The question instructions also were modified to allow person to have two or more races. For the first time since the 1910 census which included a category for mulatto, individuals responding to the census were given the opportunity to identify themselves as having more than one racial heritage, and across a broad spectrum of different racial heritages than the options offered in earlier censuses.

*OMB Directive No. 15 and its 1997 Revision:* The option to allow respondent's to report more than one in the 2000 decennial census was the culmination of efforts to standardize the collection of information about race in the federal statistical system dating back to the mid-1970's. In the late 1950's and early 1960's, Congress passed a series of bills protecting the civil rights of disadvantaged minorities as well as other measures designed to alleviate poverty in minority communities (Levitan et al. 2003). Many of these bills required reporting about the status of these populations. In the absence of a uniform standard, some agencies reported data for "Whites and Non-Whites", other agencies used "Whites, Blacks, and Others", and still other agencies (such as the Census

Bureau) used more detailed classifications. The upshot was that it often impossible to compare the data collected by one agency with the data collected by another (Lott 1993).

To remedy this situation, in 1974 the Office of Management and Budget (OMB) assigned an inter-agency committee to develop a standard racial taxonomy that would become the standard for collecting information about race in the federal statistical system. In 1975, the committee recommended that at least five standard categories should be used: 1) American Indians and Alaska Natives; 2) Asians and Pacific Islanders; 3) Non-Hispanic Blacks; 4) Non-Hispanic Whites; 5) Hispanics. Following further review, OMB officially adopted these categories with a proviso that they represented a minimum standard and that agencies such as the Census Bureau could use more detailed classifications as long as they adhered to this basic scheme. This standard was issued in 1977 as OMB Directive No. 15 (Lott 1993). The scope of this document was sweeping because it was a mandate imposed upon all federal agencies, grantees, and contractor. In other words, virtually any organization that received money from the federal government—businesses, schools, universities, non-profit organizations, state and local governments, to name only a few—were required to adopt this official classification. For a generation, more or less, Directive No. 15 served as the official racial cosmology for American society.

The seeds of change in this cosmology were sown in the aftermath of the 1990 census. Two features of the race question on the 1990 drew criticism. One is that some groups such as Caribbean immigrants, Arab-Americans, Taiwanese, and others objected to the fact that they were not included as a specific response on the race question in the same way that Chinese and Koreans were represented. Similarly, Native Hawaiians objected to being aggregated with Asians. Another sharp criticism of the race question came from organizations representing multiracial families who object to the “mark one” instruction. They argued that this requirement forced them to privilege the race of one spouse over another when reporting the race of their children. Instead, these groups would have preferred the option of a box indicating “multiracial.”

These complaints led to a series of events that began with congressional hearings in 1993, a conference held at the National Academy of Science in 1994 (see Edmonston et al. 1996), several large tests conducted by the Census Bureau and finally a large inter-agency task force was created by OMB to review possible revisions of Directive No. 15 (Snipp 2003). In October 1997, OMB released a revision of Directive No. 15 involving two major changes. These changes were the aforementioned modifications that first appeared in the 2000 census: a separate category for Native Hawaiians and the option to report more than one race. The implementation of this new standard was slated to be no later than January 1, 2003.

The National Academy of Science report, *Spotlight on Heterogeneity* (Edmonston et al. 1996) lists a series of objectives for a racial classification in the federal statistical

system; features deemed desirable by participants in the conference sponsored by the Academy. Specifically, eight objectives were mentioned:

- 1) fostering the exchange of statistical reports between agencies;
- 2) ensuring the availability of data for the monitoring of discrimination against minority groups;
- 3) designing the system for administrative and statistical records so that the data are reliable even when disaggregated by race and ethnicity;
- 4) ensuring that the categories are mutually exclusive and exhaustive and that the number of categories be of manageable size;
- 5) incorporating flexibility so that the standard can be adapted to the context of its use;
- 6) producing longitudinal consistency for categories over time;
- 7) producing relevant and meaningful categories for federal policy purposes; and
- 8) producing categories that are relevant and applicable to individual respondents.

Over a decade has passed since the revised standard was issued and in the years since, it is fair to say that the standard has fallen short of these objectives in a number of areas. The most obvious shortcoming is with respect to the dictum that the “number of categories be of manageable size” (item 4). Allowing multiple responses and using the five basic race categories yields 20 unique race categories and overlaying these categories with Hispanicity creates 40 unique categories. The 2000 census used thirteen categories and this resulted in 63 unique combinations, or 126 with the addition of Hispanic-Non-Hispanic. If 20, 40, or even 63 were deemed manageable, few would argue that 126 distinct categories is a manageable number.

The fact that the Census Bureau has rarely published data for all 126 combinations can be viewed as *prima facie* evidence that this system is unworkable. The impracticality of this system first became evident in the final specifications for the file used for congressional redistricting (PL 94-171). This file was the first one produced from the 2000 census and it is critically important not only for redistricting but also for civil rights and voting rights enforcement as well. The Census Bureau proposed to use a subset of the 126 categories while the Office of Civil Rights in the Department of Justice proposed an alternative subset. Unable to resolve their differences with representatives of the Justice Department, the Census Bureau produced a voluminous file using the complete set of 126 categories.<sup>5</sup>

In the wake of this disagreement, OMB produced a memorandum outlining a subset of categories that should receive special attention for civil rights enforcement. This document resorted to the doctrine of hypodescent for the purpose of determining whether an individual might be subject to civil rights protections. That is, any person who is White in combination with another race should be considered a protected minority for

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<sup>5</sup> This file also included vast numbers of empty cells given the large number of unusual race combinations.

civil rights enforcement purposes; thereby “ensuring the availability of data for the monitoring of discrimination” (see item 2 above).

The revised standard also has fallen short with respect to “fostering the exchange of statistical reports between agencies” (item 1) and “incorporating flexibility so that the standard can be adapted to the context of its use” (item 5). While federal agencies have adopted the revised version of Directive No. 15, states, local governments and other entities have been slower to comply. In a survey conducted by the Department of Education early in 1997, before the revision of Directive No. 15 was issued, states were queried about the problems they might anticipate in moving to a different or modified racial classification. Most states did not anticipate serious problems (Burns et al 1998). However, the new standard proved to be confusing and difficult to implement, especially for school administrators, and adoption of the new standard proved to be slow.

In 2007, The Department of Education issued new guidance and a simplified set of categories (Federal Register Vol. 72, No. 202 , 59266-59279). In the new system, all persons identified as Hispanic, regardless of their race, are counted simply as “Hispanic.” The five original single race categories of the revised version of Directive No. 15 are retained and persons who report two or more races are simply categorized as “Two or more races.” While this system is more or less comparable with units of government using the 1997 classification, there are some noteworthy lacunae.. For example, in the southwest, Hispanic origins are common and nationwide, about 14 percent of the total American Indian population reports Hispanic origins. This group is lost within the Department of Education system and undermines the comparability of these data with data from agencies adhering to the 1997 standard, such as the Census Bureau. The same can be said for groups such as Cubans and Puerto Ricans of African descent.

The National Center for Health Statistics (NCHS) has encountered a similar problem as the Department of Education. The NCHS adopted the revised standard in its own data collection efforts and in 2003, unveiled a model birth certificate that incorporated the new standard. The model birth certificate was designed to help states meet the reporting requirements for race and ethnicity but adoption has been slow. Currently (August 2009), there are 30 states that have adopted the model certificate and 20 that have not complied.<sup>6</sup> This means that some states report births using the new system and others still use the old system. To harmonize these systems, NCHS devised a probability model for re-assigning births reported under the new system into the single race categories used in the old system (Ingram et al. 2003). They will continue this practice until all, or nearly all states are in compliance.

The NCHS practice of reallocating underscores another shortcoming with respect to the objective of “producing longitudinal consistency for categories over time” (item 6).

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<sup>6</sup> This number was obtained from NCHS staff. NCHS also collects vital statistics for territories such as Guam and 4 of these areas also have not adopted the model birth certificate.

Like NCHS, the whether and how to make comparisons has challenged the imaginations of researchers, though this was an issue anticipated early in the implementation of the revised standard. In 2000, a special OMB working group published alternative methods that might be considered to make racial data comparable over time (OMB 2000, Tucker et al. 2002). More recently, Liebler and Halpern-Waters (2008) devised a method that could be applied to individual level microdata. All of these methods are “backwards-looking” insofar as they seek to achieve temporal comparability by reallocating data back into the old system.<sup>7</sup>

A final shortcoming concerns the mandate of “producing categories that are relevant and applicable to individual respondents,” (item 8). This is a matter especially acute in census data and but nonetheless has clear implications for Directive No. 15. That is, the Census Bureau received special permission to include a category for “Some Other Race.” This was not a “Some other race” category in the original or revised version of Directive No. 15. After the 2000 census was completed and tabulated, it was discovered that an extraordinarily high percentage of “some other race” respondents were Hispanic—a little over 90 percent of the “Some other race category” was Hispanic. This very high percentage was partly due to editing rules in the processing of census forms. Regardless, this along with a high item non-response rate among Hispanics for the race question in the 1990 census has been cause to believe that the five race categories of the original and revised version of Directive No. 15 is not meaningful to a sizable number of Hispanics. As an alternative, there has been a suggestion to revise Directive No. 15 to include “Hispanic” as a response in the race question (Prewitt 2005).<sup>8</sup> However, there are arguments against this proposal insofar as it further muddies an already ambiguous and highly heterogeneous group (Rodriquez 2000).

### **Measuring Race: outstanding considerations**

This paper has been thus far preoccupied with the ways and means that scientists and the United States government have endeavored to define and measure race. The balance of this paper is devoted to a set of issues that might be considered in future efforts to measure race. The first issue concerns the validity and reliability of racial data. The second involves a series of inter-related dualities in the measurement of race. Finally, this discussion would be incomplete without at least some mention of the implications of recent discoveries in genomic research.

*Validity and reliability:* Although validity and reliability critical are concerns in the social sciences, the validity and reliability of data for race and ethnicity receives relatively little attention in the literature. In a simpler time when race was understood as a fundamentally unalterable, biological characteristic, similar to sex, there was very little to be concerned about with respect to the measurement of race. If data about race proved

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<sup>7</sup> Harrison (2002) presents a harsh critique of the 1997 revised standard and likens the process of making temporal comparisons of race data under the new and old systems as akin to “putting humpty-dumpty together again” (2002:137).

<sup>8</sup> The Census Bureau currently plans to test this option in planning for the 2020 census.

unreliable, it almost certainly was the result of clerical errors or some other problem in the execution of a research project. Similarly, virtually any kind of question about racial affiliation or identity was valid, *ipso facto*. However, as social scientists have become more sophisticated about the nuances of race in modern societies, questions about the reliability and validity of information about race and ethnicity are increasingly inescapable.

**Reliability:** In the not-too-distant past, the reliability of racial data would have been one of little concern. Given a fixed set of categories, any variability that might be observed was attributable to clerical errors and other minor mistakes; race was a fixed, stable, never-changing characteristic. However, anomalous data for the American Indian and mixed-race populations have rendered this assumption obsolete insofar as they show how racial data is rather more fluid and dynamic than believed in the past.

The instability in the reporting of race has been well-documented. For example, in one post-censal longitudinal study carried out by the Census Bureau, about 40 percent of the multiracial respondents changed their racial identification in the course of the survey (Bentley et al. 2003). Earlier studies have also documented substantial mismatches in the birth and death records of American Indians (Hahn 1992) and for the reporting of race by Hispanics (Eschbach and Gomez 1998). This has led some critics to dismiss these data as unreliable (Prewitt 2005). However, reliability is fundamentally a measurement problem. Unreliable data arise from weak instruments that generate variables with high levels of random noise attached to them. However, there is a growing body of literature that suggests that this “noise” is in fact systematic fluctuations associated with both survey mode effects and systematic influences on the reporting of racial identity (Carlson and Mooney 1996, Harris and Sim 2002, Roth 2005). That is, rather than being the result of random fluctuations arising from poorly created instruments, the instability observed in the reporting of race can be systematically modeled and therefore, merits further inquiry as an object of social scientific research.

**Validity:** From the standpoint of construct validity, it would be desirable to have a well-defined concept and agreed upon meaning for race. However, this is plainly a problem for the many reasons already articulated in this paper. “Race” is a fuzzy concept at best, but even assuming the ability of a researcher to clearly articulate what is meant by this term, there are still obstacles to developing a valid measure. One formidable problem arises in connection with ascertaining the accuracy of a given response. For example, if a respondent reports that she or he is an “American Indian,” does this mean that this person is an enrolled member of a federally recognized tribe or someone who merely recalls a distant ancestor who reportedly was American Indian, a “Cherokee princess” generations removed from the present? It might be possible to solve this problem with greater specificity in the question. However, this underscores two additional complications. One is that some concordance must exist between the researchers understanding of the meaning of race and the understanding held by the research subject. A second and related problem is connected to the question of racial and

ethnic authenticity. Who is, and is not entitled to claim a particular racial heritage. There are of course rules such as hypodescent that can be reference. However, if respondents disregard these rules for whatever reasons, should researchers include additional questions and measures that might allow them to re-allocate the race of their subjects? Are researchers prepared to become the arbiters of who is and who is not a bona fide member of a racial or ethnic group, say who is and who is not Latino for instance?

Assuring content validity in the measurement of race and ethnicity is another challenge facing researchers. Content validity in the context of racial measurement may involve at least two sets of issues. The most obvious issue is whether the race-specific categories under consideration are the correct ones. For some types of applications, such as the administrative requirements embodied in OMB Directive No. 15, legislation or other mandates can be consulted to determine the appropriate categories. Other applications may be dictated by practical matters such as having sufficient sample size to reach rare populations. The General Social Survey, for example, uses the categories of “White”, “Black” and “Hispanic” mostly because the GSS sample size is too small to yield reliable estimates for other populations such as Asians or American Indians.

Another set of issues is whether the complex content entailed by the idea of race is comprehensively measured by one or more items on a survey questionnaire or interview schedule. Returning to the first sentences of this paper, if race is a shorthand term for denoting an ensemble of socially significant differences, then the content validity of an instrument depends on capturing most, if not all of these differences, whether it be language dialects, marriage customs, hair texture or bone structure. Bailey et al. (2009) use data from Brazil to illustrate how multiple questions are necessary to adequately gauge a person’s race. Similarly, the most recent version of the National Survey of Adolescent Health (Add Health) uses **nine items** that can be used to assess the respondent’s race. The complexity of race and particularly the challenges it poses to content validity, and construct validity as well emanates from the fact that race is a highly multidimensional phenomenon. One way to think of this multi-dimensionality is in terms of a series of dualities that represent different perspectives on the lived social experience of race.

*Racial dualities:* The dualities presented here represent a set of domains or perspectives that might be brought to bear in designing a question or set of questions about race. They are pertinent both to the construct and content validity of a given item, and to some extent they are overlapping ideas or considerations that deliberately or not, are manifest in the questions used to elicit information about race. Although they are presented as a set of contrasts, they are indeed more like two sides of the same coin; analytically separable in theory, virtually impossible to disentangle in practice.

**Structure versus agency:** There are many ways to think about the “structure” of race in a society and a full consideration is well beyond the scope of this paper. In a very simple way, an administrative rule such as OMB Directive No. 15 structures the racial

universe of American society by articulating a set of categories into which residents must sort themselves. These categories structure the known racial world for persons in the United States. A slightly more complex view of structure might involve the specification of a racial hierarchy in which some races are subordinate to others. A rule such as hypodescent facilitates such a structure by clearly demarcating the boundaries between more and less privileged races and by providing the means to unambiguously determine social position in the hierarchy.

On the other hand, no matter how rigid the structure or tightly organized the hierarchy, individuals do have a measure of agency with respect to their race, and certainly some more than others. Even in the face of ostensibly rigid bureaucratic categories, individuals may choose to ignore the instruction to to “mark one” or write in a description of themselves that seems to more accurately reflect how they understand their race. Depending on personal characteristics and how well they conform to existing ideas about the qualities attached to a particular race, individuals may choose to “pass” from one race to another. Needless to say, this is easier for persons of mixed racial heritage than someone bearing the features associated with African-Americans or Asians.

**Perceptions of others versus perceptions of self:** The subject of racial perceptions of self and by other invokes a complex array of cognitive processes that are not well understood. Needless to say, one does not substitute for the other. There is clear evidence that self-perceptions do not always match the perceptions of others (Harris and Sim 2002, Brown et al. 2006). This evidence is based on surveys that query interviewers and others such as teachers or friends about the race of the respondent and match this report against the respondent’s self-reported race.<sup>9</sup> What is missing from this approach is that very little knowledge exists about the cues used by these others to reach their judgment about another person’s race. Clearly, the visual assessment of race depends on a gestalt built from observations of characteristics such as skin color, bone structure, hair texture as well as speech patterns and other cues. More could be known about exactly how observers assemble and weight these cues to reach a judgment about the race of the observed subject.

The cognitive organization of racial identification is a subject that transcends scientific knowledge. How individuals are perceived, particularly in terms of the lightness or darkness of their skin has a considerable bearing on social position and the lived experience of race (Keith and Herring 1991, Herring et al. 2004). For example, employers, police officers, teachers, and others who may be inclined to discriminate on the basis of race depend more on their personal observations and less on the ways that others may choose to describe their personal racial affiliations. Indeed, an argument can be made that racial self-identification misses the mark when the subject of study involves the discriminatory actions of employers and others because what matters most is how they personally assess race (Bailey et al 2009).

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<sup>9</sup> Add Health is one of several surveys that use this approach.

Of course the assessment of race never occurs in a vacuum and almost always involves some sort of social interaction and this interaction also bears heavily on how individuals form their own ideas about race. Unlike the observation of race, the subject of racial identity and how racial identities are formed has been extensively studied and written about. This is a topic written about by psychologists, sociologists, and anthropologists and can be seen as a specialized topic within the larger literature on identity formation (Howard 2000). With respect to racial and ethnic identities, this literature sometimes focuses on the volitional aspects of identity (Song 2003) while others stress the importance of in-group connections (Cornell and Hartmann 2008, Garrouette 2003, Romanucci-Ross 1995). A review of this literature is out of scope for this discussion but it is worth noting that regardless of which perspective one adopts for emphasis or attention, much of this literature owes its foundations to G.H. Mead and the idea of the “looking glass self” (Howard 2000).

**Indicia versus criteria:** While observer and self-perceptions of race involve a range of cognitive processes, the distinction between indicia and criteria re-focuses attention on those elements of race that are decisive in determining group membership. That is, they serve as the “raw material” for cognitive processes and are formally abstracted from the lived experience of race. A racial measurement strategy should be conscious of these differences and may explicitly decide to focus on one or the other, or devise a strategy that exploits the information conveyed by ethno-racial indicia and criteria.

Racial indicia are the characteristics or markings that an observer may use to determine another person’s race. They may be a formal set of conditions such as the characteristics that interviewers may articulate as key traits for determining the race of a respondent. That is, what are the qualities that make a person “look Black” for example? During World War II, the United States government developed training manuals to help military personnel differentiate Japanese soldiers from Chinese soldiers (need cite). Skin color is one obvious choice but relatively few studies have focused on the constellation of features that are considered the defining marks of racial affiliation (Herring et al. determine racial identity (Herring et al. 2004). Indicia also might be considered a group-specific set of traits. For example, ethnic community indicia might include group traits such as a common diet, common form of family organization, common religion, or common language—features visible to outside observers..

Criteria are the more or less formally established conditions that an individual must meet to be considered a *bona fide* member of a particular race. In the past, as noted above, descent rules have been important for establishing whether a person is African-American or not, and whether one has sufficient ancestry to qualify for the appellation of American Indian. Criteria may be imposed from without, as in the case of descent rules or they may be established by the group itself. Fredrik Barth (1969) observed that mutual self-awareness between a group and an individual was a hallmark feature of ethnicity,

and one can imagine that a group might have a collectively shared sense of the conditions that might be required for this recognition. For example, in the United States, the tribal governments elected by American Indians are usually responsible for establishing and overseeing the criteria by which an individual can become an enrolled tribal member, eligible for tribal services and participation in the civic life of the tribe.

*The New Biology of Race:* As the twentieth century closed, “race” as a concept in the biological sciences seemed destined for the dustbin of history. The noted geneticist, Luca Cavalli-Sforza (2000) called for an end to the use of race in scientific research, arguing that the concept had little or no utility. However, shortly after the publication of Cavalli-Sforza’s book, other discoveries from genomic research made it possible to trace the continental origins in human DNA (Lee et al. 2008). Early studies were confined to determining the percentage of genetic material that could be traced to Africa, Asia, Europe, or the western hemisphere. In recent years, the technology has advanced to the point where a higher level of resolution is possible leading to ever finer estimates of origins. Further, these origins can be connected with other genetic traits, raising the possibility of individualized medicine, including race based treatment protocols (Risch 2006). The best known instance is the drug BiDil; a product marketed specifically for treating hypertension in African-Americans patients.

Since the sequencing of the human genome was completed in 2001, a number of private firms have made available services to help individuals assay the continental origins of their personal DNA. One company, Orchid Cellmark offers to help individuals seeking to become an enrolled member of an American Indian tribe, stating that “a DNA tribal test is a paternity, maternity or kinship test performed to determine if two or more individuals are biologically related. Depending on a tribe’s membership requirements and descendency criteria, the results may potentially be accepted by a tribe in an enrollment application.”<sup>10</sup> As of September 2009, there are no federally recognized tribes that require a DNA test and Orchid Cellmark promises only to produce a test showing only the continental origins of an individual’s DNA, and nothing that could be construed as a tribe-specific genetic profile.

As a tool for racial measurement, DNA can, for any given individual, determine their ancestral heritage in four mutually exclusive categories, and say for example that 23 percent of a persons DNA originated in Europe, 37 percent originated in east Asia, 25 percent from the western hemisphere, and 15 percent from Africa. Harkening back to Linnaeus and Blumenbach, the ability to identify the continental origins of a person’s DNA with a simple four category scheme does yield a tempting schematic for measuring race in a way that can be standardized, measured objectively, and invariant with respect to evolving attitudes and shifting public opinion. The metaphor is sufficiently powerful to motivate a Public Broadcasting Series hosted by a noted Harvard scholar, Louis Henry

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<sup>10</sup> Orchid Cellmark Inc <http://www.orchidcellmark.com/tribal.html>, September 18, 2009.

Gates, *African-American Lives*. The premise behind this program was that one could learn more about personal heritage through the use of DNA testing.

However, before grasping too quickly this approach to racial measurement, there are some noteworthy challenges and limitations to adopting this approach. First and foremost is that genotypes do not necessarily correspond to phenotypes. In other words, phenotypical traits, the ones observable in the everyday lived experience of race may or may not correspond to the continental origins measured by genetic testing. It is important to note that the proteins associated with continental origins are not necessarily the same ones responsible for producing melanin or hair texture. In an issue of *Current Anthropology*, biologists Marc Feldman and Paul Erlich (2003) take exception with the idea that behavior and particularly culture is connected with genes. They dismiss this sort of work by arguing that “It is only because people live in socially stratified societies and have a fascination with skin color (or height, or nose shape—after all, we are sight animals) that differences between certain groups are singled out for investigation via heritabilities.” (Feldman and Erlich 2003: 91).

There are at two significant conclusions that might be drawn from these observations. One is that if phenotype and genotype are not closely connected, and especially from the genomic sequence where continental origins are derived, one can wonder about the connection between this heritage and what can be described as the observed human differences associated with race. Second, if culture and behavior have few or limited connections with genes, what kinds of knowledge about the social world can be imparted from an assay of continental origins? While genes may have a great deal to say about the great migrations of human beings, they have little bearing on the everyday lived social experience surrounding racial differences. Likewise, while they may be a convenient way to standardize race as a feature of biology, assays of genetic ancestry are unlikely to be a productive strategy for the social sciences attempting to capture and understand human action based on perceived and self-understood differences.

### **Concluding Comments**

In the lore of some American Indian tribes, there is a being known as a “shape shifter.” A shape shifter is a phantom that can take the form of a human or an animal, a plant or an inanimate object such as a rock. It can transform itself as the need arises to achieve some end, usually nefarious. It is not too much of a stretch of the imagination to characterize the idea of “race” as a shape shifter across time and place. Although race may refer to some set of human differences, the exact nature of those differences has evolved and changed over time and can vary from place to place—and often for nefarious causes.

As a tool for social science research, some sort of device that was able to capture the dynamic and reflexive nature of race and ethnicity. Ideally, this tool would yield a standard unit of measure across time and space. But, surveying the extant literature devoted to the study of race and ethnicity, there are few, if any clues and how to devise

such an instrument. Simple lists of categories or even complexly constructed scales are unlikely to yield a useful tool for obtaining standard measures. It should be abundantly clear that categories can change and even the scales for a composite measure may fall into irrelevance. More importantly, a useful measure for scientific inquiry depends heavily on a clearly articulated definition, or understanding of the thing under study—what it is and what it is not—and this is something utterly lacking in the social sciences for the concept of race. One might argue that there is more consensus about the concept of ethnicity but a closer look might reveal that this consensus is more apparent than real. Or, put another way, given the dismal confusion surrounding the idea of race, ethnicity looks appealing by comparison.

One question not directly addressed in this paper is whether it is possible to ever measure race (or ethnicity) independent of its changing social context? Students of race and ethnicity have seldom if ever broached this question because race and ethnicity is so deeply embedded in real-time social experience, abstracting it from this experience seems virtually an incomprehensible task. Instead, a better metaphor might be a social scientific analog to Heisenberg's Uncertainty Principle in physics. That is, the fundamentally reflexive quality of race means that we change each and every time we study it, in ways large and small; that mode effects are causal rather than confounding, for example. Ultimately, this means that efforts to produce a standard invariant measure of race are an improbable task in the short term. In the long run, devising a measurement strategy is a daunting challenge at best, and at worst, little more than a fool's errand in the service of science.

## **Bibliography**