

Chapter 1

and refinement of that chapter. Additionally, we extend our sincere appreciation to our reviewers, Drs. Shiriki Kumanyika, Robert Goodman, Stephanie Tortu, and Ann Marie Myers. We thank Dr. Carl Kendall who remained an important source of expert advice, friendship, and encouragement throughout the project. And a wholehearted thank you goes to Dr. Victoria Taylor for her very competent assistance in the "Memphis Office."

We especially thank Ellen Meyer, Director of Publications for the American Public Health Association, and the APHA Publications Board for their endorsement and support of this book. We also thank every author who contributed to this volume; words are not sufficient to express our sincere appreciation for your willingness to join us in this endeavor.

We must also acknowledge the countless scholars of race and minority participation in health studies; we have learned from their work as we researched our topics. Most importantly, we have learned from the minority subjects of health studies whose experiences are chronicled in the literature. For their altruism and willingness to help advance medical science, we wish to formally acknowledge their past, present, and future participation in health research.

Last, but not least, we must thank our spouses, Dr. Derrick Beech and Dr. Alan Goodman. They have lived with us through this project, often enduring our ups and downs, but always ready to offer encouragement and advice.

We sincerely hope this book will make a contribution, however small, toward the design and conduct of health studies that invite and sustain greater minority participation.

Bettina Beech, DrPH, MPH
and Maurine Goodman, MA, MPH

Rubio, Mercedes and David R. Williams. (2004). "The Social dimension of race." In *Race and Research: Perspectives on minority participation in health studies*.

Beech, Bettina M. and Maurine Goodman (eds.).
Washington, DC: American Public Health Association:
pp. 1-25

THE SOCIAL DIMENSION of RACE

Mercedes Rubio, PhD,
and David R. Williams, PhD

Race is a routinely used and widely accepted category that has social, political, psychological, and economic implications. Although many scientists have abandoned the term as a valid taxonomy for capturing biological variation, the public continues to accept race as a way to understand perceived differences and variations between humans (Muir 1993). For many, "race" explains social and institutional arrangements since it provides an understandable basis for differences in mental abilities, aptitudes, and superiority and subordination of groups (Muir 1993). Assumptions about racial groups have profound implications for the way in which societal rewards and resources are distributed. In this chapter we examine race as a socially constructed phenomenon. We begin by providing an overview of how racial categories have been constructed by the census, both within the United States and in other countries. We then examine how the scientific understanding of race has changed over time, and we discuss social dimensions of race as part of the fabric of the American social context. An examination of societal dimensions of race in health and health care is also provided. Lastly, we provide guidelines for future research that promote a better understanding of race in health.

History of Measuring Race in the U.S.

The federal government has played a vital role in perpetuating the acceptance of race as a valid construct; over the last two centuries, the Census Bureau has regularly defined and redefined racial categories. In 1790, the first census taken in compliance with Article 1, Section 2, of the Constitution enumerated free persons, excluding Indians not taxed, and all others (that is, Black slaves) as three-fifths of a

person (Wright 1966). The Three-Fifths Rule was abandoned by the Thirteenth Amendment and the distinction continued to be made between "civilized Indians" and "Indians not taxed" until 1924 when Congress granted U.S. citizenship to American Indians (Anderson and Feinberg 1995). In each subsequent census, racial category options were expanded and shortened, often reflecting political, economic, and immigration policies of the time (Anderson 1988; Barrera 1979).

The inclusion of particular race categories in the census at certain times versus others has often reflected which immigrant groups were welcomed or unwelcomed on U.S. shores. As large numbers of Chinese migrated to the U.S. in the mid-19th century, Chinese was added as a new racial group in the 1870 Census; a little more than a decade later (1882), the Chinese Exclusion Act barred immigration from China. Similarly, Japanese was added as a new racial category in the 1890 Census to track these new immigrants, and, by 1908, the Gentlemen's Agreement restricted the number of Japanese immigrants.

The assessment of race throughout the 20th century continued to reflect larger social and political realities (Lee 1993). In 1900, the census recognized five racial groups—White, Black, Chinese, Japanese, and Indian. In both the 1910 and 1920 censuses, Mulatto was included as a race category. Census data continued to figure prominently in immigration policy (Barrera 1979). The Quota Law of 1921 established quotas for immigration based on the nationality of immigrants already in the U.S. based on the 1910 Census, and the 1924 Immigration Act set new quotas based on the proportion of various nationalities in the U.S. based on the 1890 Census. The 1930 Census included for the first time Mexican, Filipino, Hindu, and Korean as race options. The estimate of the Mexican-descent population in the 1930 Census coincided with the implementation of the Repatriation Act of 1930, which initiated a federally sponsored program to apprehend and deport Mexicans and Mexican-Americans who could not prove that they were legally in the U.S. (Barrera 1979). Whether intentionally racist or not, immigration policies have helped to reinforce long-standing racial ideology in the U.S.

However, by the 1940 Census, Mexicans were, for the first time, classified as White. The 1950 Census shortened the list of racial categories to include only White, Negro, American Indian, Japanese, Chinese, Filipino, and Other. The 1960 Census recognized eleven racial categories, adding Hawaiian, Part-Hawaiian, Aleut, and Eskimo to the 1950 classifications. Census enumerators were instructed to designate Puerto Ricans, Mexicans, and other persons of Latin descent as White when it was evident, based on observation, that they were definitely not Negro. The 1970 Census allowed respondents to choose which racial category they identified with, but the recognized racial categories were White, Negro or Black, American Indian, Japanese, Chinese, Filipino, Hawaiian, Korean, and Other.

In 1978, the federal government's Office of Management and Budget (OMB) published guidelines for the uniform assessment of race and ethnicity by federal statistical agencies. These guidelines recognized four racial groups, White, Black, American Indian or Alaskan Native, and Asian or Pacific Islander (API), and one ethnic category, Hispanic. The racial classifications for the 1980 and 1990 censuses used these

categories. The OMB guidelines are minimal standards, and the census has collected additional detail for some categories. For example, additional subgroups identified in the API category include Chinese, Filipino, Hawaiian, Korean, Vietnamese, Japanese, Asian Indian, Samoan, and Guamanian.

Prior to the 2000 Census, there was considerable debate regarding how race ethnicity should be conceptualized and measured (Evinger 1995). The OMB faced criticism that the official racial and ethnic categories no longer reflected the growing racial and ethnic diversity of the U.S. Some proposed the elimination of any attempt to classify persons by race. Additionally, there was disagreement over the optimal terminology to be used for various racial groups, whether a new multiracial category should be utilized for persons of mixed racial ancestry, whether new categories should be added for persons from the Middle East or the Cape Verde islands, whether Native Hawaiians should be classified with American Indians instead of with the API category, and whether Hispanic should be a racial or an ethnic category.

In an effort to address the concerns of various interest groups, the Census Bureau collaborated with other federal agencies to collect more information on the public's preferences for the assessment of race and ethnic origin in three major data collection efforts. One of the goals was to test the multiracial and "Hispanic" race categories (Tucker and Kojetin 1996). An important finding from this research was that the size of some racial and ethnic populations varied depending on how the race questions were asked. For example, almost 80% of those surveyed categorized themselves as White when race and Hispanic origin questions were asked separately compared to approximately 76% when Hispanic origin was included as a racial category. Also, a higher percentage of persons identified themselves as Hispanic when they were asked a separate Hispanic origin question than when there was a combined race and ethnic origin question. Similarly, including a multiracial category resulted in a 25% reduction in the size of the American Indian population.

The distribution within the Latino population also changed depending on how race was assessed. There were differences in the distribution of people of Mexican descent and of Cubans depending on how questions were asked. For example, 60% of Hispanic respondents identified with being Mexican when race and Hispanic origin were asked separately, compared to 67% when race and Hispanic origin were combined. In contrast, there was a decrease in the Cuban percentages; approximately 5% of Latinos identified as Cuban when race and Hispanic origin were assessed separately compared to 2% when the race and Hispanic origin questions were combined (Tucker and Kojetin 1996).

Based on the testing of racial and ethnic origin questions and other political considerations, OMB published new guidelines for "Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity" in the *Federal Register*, October 30, 1997. The most radical change in the new federal standard will allow persons of mixed-racial ancestry to list themselves in as many racial categories as apply. Data on multiracial status have been collected in earlier censuses. The 1890 Census included the mixed-race categories Mulatto, Quadroon, and Octoroon. These were dropped in 1900 but Mulatto reappeared as a race option in both the 1910 and 1920 Censuses

(Lee 1993). Other changes include the expansion of the racial categories by one, with Native Hawaiian and Other Pacific Islander constituting a new racial category separate from Asian. Hispanic has been retained as an ethnic category, and Hispanic origin will be assessed prior to race in the census. In addition, changes in terminology allow for "Black or African-American" and "Hispanic or Latino" to be utilized. These new guidelines are being utilized by the 2000 Census and will be implemented in all federal data systems by 2003. The federal classification of race and ethnicity reflect past and present political and ideological struggles, and they have important implications for popular conceptualizations of race, how different racial/ethnic groups interact and perceive one another, how resources are distributed, and how health status is measured (Lee 1993).

Race in Canada and the United Kingdom

Like the U.S., both Canada and the United Kingdom are dealing with challenges with regard to the assessment of race and ethnicity. Canada, like the U.S., has changed its racial/ethnic categories depending on social and political circumstances. As the population increased in diversity, the census racial/ethnic categories began to reflect it, albeit at a much slower pace. The 1871 Canadian Census used English, Irish, Scotch, African, Indian, German, and French as racial and ethnic origin categories (Kralt 1980). In the 1891 Census no racial questions were asked. However, the 1901 Census expanded the race options to include White (based on father's race), Japanese, Chinese, Negro, Indians (enumerated based on tribal affiliation), and individuals of mixed heritage (Kralt 1980). The 1971 Census measured ethnicity, based on paternal ancestry for all residents of Canada, except for Native Indians. White respondents were provided with options such as English, French, Scottish, Polish, German, Jewish, etc. However, only single ethnic origin responses were accepted (Kralt 1980; Pryor, Goldmann, and Royce 1991). By 1981, multiple racial/ethnic responses were tolerated; by 1986, they were encouraged. In 1986, changes were made to the ethnic origin question. Prior to 1986 respondents were asked the ethnic or cultural group to which they belonged "on first coming to this continent." In 1986 the phrase "on first coming to this continent" was dropped, and "Black" was reintroduced as a category (Pryor, Goldmann, and Royce 1991).

Like the U.S., the types of questions and categories used to assess race in the U.K. is a pragmatic compromise from among a variety of competing ideological pressures and interest groups. The 1991 U.K. Census was the first to assess race. Prior censuses collected data only on country of birth. The 1991 U.K. Census was surrounded with similar debates as those in the U.S. in the mid 1990s (Ballard 1997). One of the objectives of the 1991 U.K. Census was not so much to explore the ethnic diversity of the country, but to determine what percentage was non-European.

As such, the 1991 U.K. Census asked the population to identify as White (without any further specification of ethnic affiliation) or with one of six pre-assigned ethno-national categories: Black Caribbean, Black African, Indian, Pakistani, Bangladeshi, or Chinese. An additional 28 categories were developed in the census based on write-in responses to the "Black—Other" and the residual "Any Other

Ethnic Group" categories. Many tabulations of census data used the seven preset codes and three additional categories: Black Others, Other Asian, and Other. Ballard (1997) has criticized the approach taken by the U.K., arguing that:

while the census has certainly generated, as was intended, a convenient means of identifying the newer and more visible minorities, it has by no means cracked the broader issues. Indeed, given the built-in conceptual deficiencies in the whole process, which both reflect and reinforce the hegemonic impact of racist and anglocentric assumptions, it is hard to be confident that the new initiative will lead to a more accurate charting of the wider terrain. On the contrary, what we may be well witnessing is the construction and institutionalization of a conceptual vision which actually reinforces all the most misleading aspects of popular assumptions about racial and ethnic diversity (p. 193).

The assessment of racial and ethnic status in the U.S., Canada, and the U.K. tends to focus on classifying readily visible nondominant population groups, while the White category goes uncontested. This method of categorizing people can encourage the division of groups based on skin color, reinforce racial stereotypes, and obscure the heterogeneity that exists within the White label.

What Is Race? A Historical Perspective

Francois Bernier, a French physician, introduced the term race into science in 1684. Race, for him, captured differences in skin color, hair, and facial features, and value judgments were made based on these differences (Muir 1993). At about the same time when Bernier wrote about the "four or five species or races of men," many European powers were expanding their colonial empires, and the perceived differences between the "races of men" reinforced European notions that their social arrangements and culture (religion, moral codes, and sexual practices) were superior to those of groups of darker color. These notions of superiority provided, at least in part, the justification for the exploitation of groups regarded as inferior (Muir 1993; Jordan 1968).

When the Europeans arrived in America, they saw the indigenous people as a labor source. However, since many Native American tribes were victims of genocide by brutality and disease, White immigrants filled the labor shortage for a time by entering into a contractual agreement to serve as indentured servants for a specified number of years (Jordan 1968). As the colonies developed, indentured servitude did not meet the labor demands, and the Europeans turned to Africa as a source of labor, partly because of a perceived need for some kind of cheap, bound, labor and partly because Africa and Africans were devalued (Jordan 1968). The U.S. created a system where slave status was associated with dark skin color—first with indigenous people and then with Blacks—and where freedom was associated with White skin. This arrangement based on skin color was advantageous to the slave owners, who encouraged the development of stereotypes based on color. Therefore, it can be argued that from the inception of the United States, a racial ideology has existed with Whites at the top, Blacks at the bottom, and other groups in between. This racial ideology was, and continues to be, a system of beliefs where notions of superiority and inferiority are ascribed based on readily evident external characteristics.

Kreiger (1987) shows that 19th century medical research was used to reinforce the inferiority of Blacks and provide a "scientific" justification for slavery and economic exploitation. One research team falsified insanity rates from the 1840 census to show that rates of mental illness increased among Blacks as they lived further north. This was interpreted as strong evidence that Blacks were biologically suited for slavery such that freedom actually made Blacks crazy! Other specific psychiatric disorders of Blacks identified by 19th century medical researchers included "drapetomania," a virulent form of mental illness that led to a desire to escape from slavery, and "dysesthesia Ethiopia," a medical condition, easily identifiable by slave masters, that led to attempts to avoid work or to sleep during the day.

After the end of slavery in 1863, those who wanted to maintain control over their former slaves found new ways of doing so. To some extent they relied on science (biology, anthropology, medicine) to provide a "biological" justification for the subjugation of Blacks and other people of color. Common stereotypes from slavery are reflected in "images portraying Blacks as childlike and irresponsible, inefficient, lazy, ridiculous in speech, pleasure seeking, and happy" (Muir 1993, p. 343). Biological justifications coupled with stereotypes based on color were often used as the basis for assumptions about the culture, morality, behavior, and the intelligence of darker skinned peoples. Links between cultural and social status through perceived biological differences were the basis for "Jim Crow" and "separate but equal" laws defined by the color line. Thus, one's race became a central determinant of access to societal resources and rewards.

The scientific understanding of race has changed over time. It is important to note that the concept of race predates modern theories of genetics and well executed genetic studies. Instead, the term reflects a sociopolitical understanding of human diversity, rather than a biological one. The re-evaluation of race as a biological category (representing distinctive genetic make-up) is based on two grounds. First, there is no firm scientific basis or method for racial taxonomy (Montagu 1964), that is, there are no scientific criteria that can be uniformly used to classify persons into mutually exclusive racial categories. Second, phenotypic characteristics used to define race are not strongly associated with genotypic variations (Muir 1993). For example, phenotypic characteristics (i.e., facial features, hair and skin color, or any other external physical characteristic) are not related to biochemical or other genetic characteristics (Littlefield, Lieberman, and Reynolds 1982; Gould 1977). Differences that may exist between groups tend to reflect environmental adaptation, or genetic exchanges between groups, rather than static genetic differences. Lewontin (1991, p. 37) explains that "about 85 percent of all identified human genetic variation is between any two individuals from the same ethnic group. Another 8% of all the variations is between ethnic groups within a race and only 7% of all human genetic variations lies on the average between major races" (p. 37). As Kreiger and Bassett (1986) have cogently argued, the fact that we know what race we belong to tells us more about our society than about our genetic makeup.

LaVeist (1994) and Williams (1997) have shown that a change in the scientific understanding of race is readily evident by examining the definition of race in sci-

entific dictionaries. Social science dictionaries published in the 1960s or earlier tend to uniformly view race as a valid way of capturing biological and physical variations in human population groups. In contrast, more recent definitions of race question the traditional assumptions of biological homogeneity and propose that race is an unscientific term (e.g., Jary and Jary 1991). Other definitions indicate that race is socially constructed since available scientific evidence does not support the earlier biological view of race (e.g., Seymour-Smith 1986).

A study of physical anthropology textbooks published between 1932 and 1979 revealed that, while early textbooks viewed race as a valid taxonomy for describing human variation, later textbooks increasingly took the position that races do not exist (Littlefield, Lieberman, and Reynolds 1982). Physical anthropologists still agree that there is considerable biological variation in human populations. However, these biological traits are distributed across our "racial" boundaries, and cline is the preferred term to capture human genetic variations. Intriguingly, the scientific data discrediting race as a useful way to capture genetic homogeneity were available long before the race concept was abandoned (Montagu 1964). Goodman (1997) argues, for example, that "race should have been discarded at the turn of the century, when the American anthropologist Franz Boas showed that race, language, and culture do not go hand-in-hand, as raciologists had contended" (p. 21). It was changes in the discipline of physical anthropology (the number of departments, the social class background of the faculty, and the larger cultural context) that led to changes in the discipline (Littlefield, Lieberman, and Reynolds 1982).

Williams (1997) shows that although recent definitions of race in the social sciences have moved away from a biological view, dictionaries in medicine and public health have clung to the scientifically discredited biological position; for example, the third edition of the *Dictionary of Epidemiology* (Last 1995) defines race as "persons who are relatively homogeneous with respect to biological inheritance." Why do some scientific disciplines resist accepting well-established scientific evidence on the nature of race? Some ways of viewing race are more consistent with certain world views and more consonant with the status quo. Duster (1984) emphasizes that conceptions of race that emphasize biological differences are least threatening to the existing societal arrangements.

Thus, although not necessarily intended by individual researchers, a focus on biological sources for racial variations in health can play an important ideological role in the larger society. If racial ethnic differences in health result from innate biological differences, then social institutions and policies that may play a crucial role in determining health status are absolved from responsibility and can remain intact (Lewontin 1991). When problems of health and disease are located within the individual without any attention to the larger social context, the individual becomes the problem and the focus for intervention while attention is diverted from the social forces that can also contribute to disease. Thus, a biological perspective alone is inadequate to explain the unequal distribution of health across various social statuses, including race (Lewontin 1991). In fact, Cooper (1984) has demonstrated that diseases that have a strong genetic component explain less than one percent of the total

excess health burden of the Black population compared to the White population in the United States.

More generally, Duster (1984) emphasizes that science is not value-free and that preconceived opinions, cultural norms, and political agendas often shape scientific research by determining what questions are asked and what questions are neglected. He cites several historical instances where social influences played a large role in scientific agendas. The use of the IQ test is one example. At the turn of the 20th century, as the stream of European immigrants changed from persons of English, Scandinavian, and German background to those of Italian, Jewish, Polish, and Russian backgrounds, IQ tests were administered to the new immigrants and lower scores for Southern European immigrants were regarded as evidence of their genetic inferiority and feeble mindedness (Duster 1984; Liebertson 1980). Accordingly, in the 1920s U.S. immigration policy was changed in an effort to reduce the number of Southern European immigrants to the United States.

Later in the century, as a large number of Blacks migrated from the south to the north, Blacks became an increasing economic threat to working-class Whites (Liebertson 1980). IQ tests revealed that Blacks had lower scores than Whites. Duster (1984) notes that, at the same time, IQ tests also revealed that Gentiles tended to score more poorly than Jews. The trajectory of these two findings was very different. In the case of the Jewish/Gentile disparity, the differences were immediately dismissed as due to cultural factors and not widely publicized. In contrast, the Black/White difference was widely cited as evidence of the genetic inferiority of Blacks. New research agendas were developed and funded in this area of inquiry. Jensen (1969) and others argued that because the IQ differences were due to heredity, government-sponsored compensatory education programs intended to assist Blacks were a waste of time. The key point emphasized by Duster (1984) is that the social and political context explains the nature, direction, and trajectory of research on Black/White differences in intelligence.

Goodman (1997) cites research by Giles and Elliot (1962) as an example from forensic science that indicates the extent to which a particular body of scientific information consistent with societal understandings of race continues to be widely used and cited even when discredited by more recent scientific inquiry. These researchers measured the skulls of Black and White males that died in Missouri and Ohio at the turn of the century, and the skulls of Native Americans from a prehistoric site in Kentucky. The researchers developed a mathematical equation based on eight measurements that could be used to identify the race of an individual based on skull size once its gender was known, and that about 80 to 90 percent of the time their racial classification would match the one assigned at the time of death. These measurements have been widely used by forensic scientists and practitioners to identify racial status in forensic investigations. However, Goodman (1997) indicates that when Giles' and Elliott's formula was retested outside Missouri, Ohio, and Kentucky it was found to be less accurate than random assignment of race to various skulls. Given the degree of variation within racial and ethnic populations, many persons belonging to a given racial category diverge from the "ideal type."

The Tuskegee syphilis study also illustrates how normative beliefs about race can lead to hypotheses and the initiation of a research project that scientists would normally rule out (Brandt 1978). This study was initiated in 1932 to identify the health consequences of leaving syphilis untreated in Black males. Dr. Joseph Earl Moore, a key member of the Tuskegee research study team, published papers in which he advocated treatment of syphilis in its latent stages and the absence of any need for a study of untreated syphilis (Brandt 1978). His participation in the Tuskegee study was possible only because of the prevailing conceptualization of race at the time. Conventional scientific wisdom regarded Blacks as morally inferior to Whites with exaggerated libido, widespread sexual promiscuity, and a reluctance to seek treatment for latent syphilis because it was asymptomatic. Most importantly, though, the conventional scientific view was that Blacks and Whites were so different biologically that any disease, including syphilis, would be a different clinical entity in Blacks compared to Whites. Accordingly, the findings from the earlier Oslo study of untreated syphilis, which was the source of Dr. Moore's assertions, could not be generalized to Blacks because they came from a population of Whites. Accordingly, this long-term follow-up study of untreated syphilis in Black males used multiple strategies of deception to recruit subjects and ensure compliance. Moreover, it not only withheld treatment from participants but went to elaborate lengths to ensure that they did not otherwise receive treatment.

Social Dimensions of Race in Contemporary America

More than 50 years ago, Cox (1948) emphasized that stigmatizing a socially marginalized racial group as inferior was a critical step in justifying the exploitation of that group or its resources. Negative attitudes by Whites toward people of color have been longstanding in the U.S. These attitudes and the ideology of inferiority that has undergirded them have played a role in creating social policies that have determined the access of non-Whites to societal goods and ultimately to health status and health care.

Data on racial attitudes over time provide compelling evidence of major changes in racial prejudice in the U.S. (Shuman et al. 1997). These data reveal that an overwhelming majority of Whites now endorse egalitarian values and are, in principle, opposed to segregation in residential and educational contexts and discrimination in multiple domains of society. Two examples will suffice. In 1963, 60% of Whites agreed that they had the right to keep Blacks out of their neighborhoods if they wanted to, but only 13% of Whites supported that view by 1996. Similarly, in 1944, more than half of all Whites (55%) indicated that White people should have the first chance at any kind of job. By 1972, only 3% of Whites agreed with that view, with 97% indicating that Blacks should have as good a chance as White people to get any kind of job. This positive change in the attitudes of Whites toward Blacks concerning equal treatment in job opportunities, housing, and education is impressive.

Moreover, these positive shifts in public sentiments were given the force of law through various civil rights statutes. The Civil Rights Act of 1964 (which outlawed racial discrimination in employment), the Voting Rights Act of 1965, and the Civil

Rights Act of 1968 (which outlawed racial discrimination in the sale or rental of housing) are examples of laws that attempted to establish a color-blind society. Some believe that the combination of the legal system and the court of public opinion would eliminate widespread racism in the U.S. However, closer analysis reveals that the picture is more complex and that reports of the death of discrimination may be grossly exaggerated. First, although Whites support the principle of equality in general, they are less supportive of the policies that would implement them. For example, Shuman et al. (1997) show that in 1964, 38% of Whites indicated that the government in Washington should see to it that Black people got fair treatment in jobs, and 13% indicated that they lacked enough interest in the question to favor one side over another. By 1996, the percentage of Whites supporting federal intervention to ensure fair treatment in jobs declined to 28%, while the percentage expressing no interest in the question increased to 36%. Hence, Shuman et al. (1997) argue that this gap between principles and implementation is at the heart of the enduring inequality between the two populations.

Second, other data reveal that Whites continue to hold very negative views of Blacks and other minorities. Table 1 presents stereotype data from the 1990 General Social Survey, a highly respected national social indicators study (Davis and Smith 1990). The first column indicates that 44% of Whites perceive Blacks as lazy, and over 50% perceive that Blacks prefer to live on welfare and are prone to violence. Further, 20% or less of Whites endorsed positive stereotypes about African-Americans

Table 1. White Americans' Stereotypes
Percent Agreeing With Most Group Members...

	Blacks	Whites	Hispanics	Asians
Are Unintelligent				
Unintelligent	28.8	6.1	29.1	13.2
Neither	45.0	33.3	42.6	38.0
Intelligent	20.0	55.4	18.4	37.3
DKNA	6.2	5.2	9.8	11.5
Are Lazy				
Lazy	44.3	4.9	33.5	15.0
Neither	34.0	36.4	33.7	27.7
Hardworking	16.8	54.5	23.9	47.2
DKNA	4.9	4.2	9.0	10.1
Prefer Welfare				
Prefer welfare	56.1	3.7	41.6	16.3
Neither	26.5	21.5	30.5	31.6
Prefer self support	12.7	70.5	18.3	40.6
DKNA	4.7	4.3	9.7	11.5
Are Prone to Violence				
Violence prone	50.5	15.7	38.3	17.2
Neither	28.3	42.3	34.0	41.1
Not violence prone	15.2	36.6	17.8	29.6
DKNA	5.9	5.5	9.8	12.1

Source: Davis and Smith 1990.
DKNA: Don't know or no answer.

(only 20% believed that Blacks were intelligent, 17% that they were hardworking, 13 percent that Blacks were self-supporting, and 15% that Blacks were not prone to violence). In addition, a substantial percentage of White respondents opted for the socially acceptable "neither" response category.

These negative perceptions are especially striking when compared to how Whites view themselves. Comparatively, Whites believe that only 4% of Whites prefer to live on welfare, 16% are prone to violence, 6% are unintelligent, and 5% are lazy. Moreover, Whites viewed Blacks, Hispanics, and Asians more negatively than themselves, with Blacks being viewed more negatively than all other groups, and Hispanics twice as negatively as Asians. These data reveal that perceptions of inferiority about people of color continue to persist.

Such high levels of negative stereotypes are likely to have profound implications in situations ranging from personal day-to-day interactions to public policy. Research on stereotypes indicates that the endorsement of negative racial stereotypes leads to discrimination against minority groups (Devine 1995; Hilton and von Hippel 1996). Biases based on racial stereotypes occur automatically and without conscious awareness (Devine 1989; Hilton and von Hippel 1996). That is, the activation of these stereotypes and the discrimination linked to them is an automatic process with individuals spontaneously becoming aware of relevant stereotypes after encountering someone to whom the stereotypes are applicable. This means that much contemporary discriminatory behavior is unconscious—it occurs through behaviors that the perpetrator does not subjectively experience as intentional. Thus, the high level of negative stereotyping suggests that racial discrimination is a widespread societal problem and not just the aberrant behavior of a few "bad apples."

Institutional Discrimination and Access to Societal Rewards

This insight is critical to understanding the often paradoxical contemporary data on race in the U.S. An integral part of maintaining the social order and White structural privilege is racism—an organized system, rooted in an ideology of inferiority that categorizes, ranks, and differentially allocates societal resources to various population groups (Bonilla-Silva 1996); it may or may not be accompanied by prejudice at the individual level. Racism appears to have changed over time from blatant "Jim Crow racism" that emphasized biological differences between the races to a more subtle "laissez-faire racism" (Bobo, Kluegel, and Smith 1997). This new racism focuses on the perceived cultural inferiority of minorities (lack of the traditional values, motivation, and behavioral strategies required for success), but it occurs within the context of a strong endorsement of equality without a corresponding commitment to achieve it.

Although racial attitudes have changed, many of the institutional structures (such as residential segregation) that ensured that nondominant racial groups had differential access to power and desirable resources remain intact. Moreover, the persistence of racial stereotypes in the U.S. provides a critical reservoir for the maintenance of racial discrimination, and research reveals that racial stereotypes have

real-life consequences for minority groups' access to societal resources. Based on negative stereotypes of African-Americans, the majority of Whites express a strong preference for living in racially segregated neighborhoods (Williams et al. 1999; Bobo and Zubrinsky 1996), and Blacks in search of housing are steered toward neighborhoods having a greater number of minorities, lower home values, and lower median income (Fix and Struyk 1993). A review of the research on housing discrimination in the U.S. concluded that, "On any given encounter between a Black home-seeker and a realtor, the odds are at least 60 percent that something will happen to limit that Black renter or buyer's access to housing units that are available to Whites" (Massey, Gross, and Shibuya 1994, p. 443).

Studies of White employers reveal that racial stereotypes are used to deny employment opportunities to Black applicants (Kirschenman and Neckerman 1991; Neckerman and Kirschenman 1991). In addition, both U.S.-based and foreign companies explicitly use the racial composition of labor markets in deciding where to locate new plants (Cole and Deskins 1988). Other evidence suggests that such institutional discrimination has dire consequences for Blacks' access to employment. For example, a *Wall Street Journal* analysis of the employment records of over 35,000 U.S. companies found that African-Americans had a net job loss of 59,000 jobs during the 1990-91 economic downturn, compared to net gains of 71,100 for Whites, 55,100 for Asians, and 60,000 for Latinos (Sharpe 1993). These job losses reflected the relocation of employment facilities to areas of lower African-American concentration. Audit studies of employment discrimination also document racial differences in application submissions, in obtaining interviews, and in being offered jobs. In these studies, when trained Black and White job applicants with identical qualifications applied for jobs, discrimination favored the White over the Black applicants in one out of five audits (Fix and Struyk 1993).

Race still matters a lot in the U.S. Large racial differences exist in education, housing, health, criminal justice, labor force participation, retirement, pensions, and asset accumulation (Jaynes and Williams 1989; Smelser, Wilson, and Mitchell in press). More disturbing, three decades after the passage of civil rights legislation little advancement has been made in narrowing the racial gap in terms of income, housing, educational quality, and unemployment. The degree of residential racial segregation in 1990 was virtually identical to what it was when Congress passed the Fair Housing Act in 1968 (Massey 1996). Similarly, the unemployment rate for Blacks has been consistently about twice that of Whites from 1950 to the present (*Economic Report of the President* 1998). There has also been remarkable stability over time in the racial inequality in income. For example, the median income of African-Americans was 59 cents for every dollar earned by Whites in 1996—identical to what it was in 1978 (*Economic Report of the President* 1998).

There is also growing recognition that data on income understate racial differences in economic status. Income only captures the flow of economic resources into the household, but does not address the economic reserves of the household. Racial differences in wealth are larger than those for income. For example, White households have a median net worth that is 10 times that of African-American house-

holds, and 9 times that of Hispanic households (Eller 1994) these differences persist at all levels of income. Whites in the lowest quintile of income have a median net worth of \$10,257 compared to \$1 for comparable Blacks and \$645 for Hispanics. Similarly, Oliver and Shapiro (1995) found that White households headed by a college graduate had an average net worth of \$75,000 compared to \$20,000 for a similar Black household (controlling for number of earners in the household, age of head of household, and marital status). Much of the wealth of American families exists in the form of home equity, and the racial difference is thus linked to housing policies and institutional discrimination experienced in the past (Oliver and Shapiro 1995).

More generally, the evidence indicates that socioeconomic status (SES) indicators, whether at the level of the community, the household, or the individual, are not equivalent across racial groups. There is not one city among the 171 largest cities in the United States where Whites live under equivalent conditions to Blacks in terms of rates of poverty and single-parent households (Sampson and Wilson 1995). In many urban areas, the concentration of poverty linked to residential segregation, combined with high rates of male joblessness and residential instability, leads to few opportunities for marriage, high rates of family disruption, and high rates of violent crime. Sampson and Wilson (1995, p. 41) concluded that, "the worst urban context in which Whites reside is considerably better than the average context of Black communities."

Measures of education are not equivalent across race. National data reveal that at every level of education Blacks and Hispanics have lower levels of income than Whites (U.S. Census Bureau 1997). The purchasing power of a given level of income also varies across race. Blacks have higher costs for goods and services than Whites due to higher prices on average for a broad range of services in the central city areas where Blacks live than in suburban areas where most Whites reside (Williams and Collins 1995). There are also large racial differences in economic hardship. National data reveal that even after adjustment for a broad range of economic factors (income, education, transfer payments, home ownership, employment status, disability, and health insurance) and demographic factors (age, gender, marital status, the presence of children, and residential mobility), African-Americans were more likely than Whites to experience the following hardships: unable to meet essential expenses, unable to pay for rent or mortgage, unable to pay full utility bill, had utilities shut off, had telephone service shut off, and evicted from apartment or home (Bauman 1998).

Societal Dimensions of Race in Contemporary Health Care

Health Status of People of Color

Race continues to be a strong predictor of variations in health in the United States. Table 2 illustrates the racial differences in health by presenting death rates for Whites and minority/White ratios for the leading causes of death in 1997. The table shows that Blacks have a death rate from all causes that is 1.5 times higher than that of Whites. Of the 11 specific causes of death in Table 2, the death rates for African-Americans are higher than those of Whites for 9 of the 11 causes of death; pulmonary

Table 2. Age-Adjusted Death Rates for Whites for Leading Causes of Death in the United States for Minority/White Ratios, 1999

Causes	Whites non-Hispanics	White, Non-Hispanic/Minority Ratios			
		Black/ White Ratio	Amer. Indian/ White Ratio	API*/ White Ratio	Hispanic/ White Ratio
All	860.7	1.33	0.83	0.60	0.70
Diseases of the heart	263.3	1.28	0.65	0.59	0.67
Cancer	199.8	1.27	0.63	0.63	0.61
Cerebrovascular diseases	194.5	0.42	0.20	0.27	0.21
Chronic lower respiratory diseases	47.5	0.71	0.64	0.40	0.42
Injuries and accidents	35.5	1.15	1.72	0.50	0.88
Diabetes	22.8	2.20	2.21	0.81	1.47
Influenza and pneumonia	23.4	1.09	0.94	0.67	0.67
Suicide	11.5	0.50	1.03	0.56	0.53
Chronic liver disease and cirrhosis	9.7	1.05	2.91	0.39	1.59
Homicide	3.8	5.42	2.76	0.84	2.21
HIV/AIDS	2.9	8.31	1.07	0.28	2.48

Source: National Center for Health Statistics, 2001, pp. 167-168.

* API = Asian/Pacific Islander.

disease and suicide are the two exceptions. Higher death rates of Blacks compared to Whites range from 1.2 times higher for injuries and accidents to 8 times higher for homicide and legal intervention and 9.6 times higher for HIV/AIDS. This clear pattern of elevated death rates across a broad range of major health outcomes also suggests that no single gene or biological factor is implicated. Moreover, whatever the major underlying factors for the excess deaths of the African-American population are, they appear to remain potent over time. Our earliest mortality data reveal that Blacks in the United States have always had higher death rates than Whites, and some evidence suggest that the overall Black/White differences are widening with time. For example, Williams (1999a) recently showed that the Black/White ratios for death rates for heart diseases, cancer, diabetes, and cirrhosis of the liver were larger in 1995 than they were in 1950. This reflected a more rapid decline of death rates for some causes for Whites than Blacks (for example, heart disease) and relatively stable death rates for Whites for other causes compared with increasing death rates for Blacks (for example, cancer).

Native Americans have an overall death rate that is virtually identical to that of Whites. However, when we look at specific causes of death, some are considerably lower for the Native American population compared to the White population (for example, stroke, cancer, and pulmonary disease) while others are considerably higher. Compared to Whites, Native Americans are about 3 times more likely to die of heart disease, liver disease, and homicide and legal intervention, 2.7 times more likely to die of diabetes, and 2 times more likely to die from injuries and accidents. The Asian or Pacific Islander population and the Hispanic population have an overall death rate that is lower than that of the White population. For virtually all causes

of death, death rates for Asians are lower than those of Whites. The only exceptions are homicide and legal intervention, which is 1.2 times higher for Asians than the White population, and stroke, where both racial groups have equivalent rates. The Latino population, in contrast, has lower death rates for the leading causes of death (heart disease, cancer, and stroke) than the White population. At the same time, compared to the White population, Latinos have death rates that are 1.8 times higher for liver disease, 1.7 times higher for diabetes, and 3.2 times higher for HIV/AIDS and homicide.

Immigration plays an important role in the lower mortality rates for the Asian and Pacific Islander population and the Latino population. High proportions of both of these groups are immigrants to the United States, and immigrants of all racial and ethnic groups tend to have better health than their native-born counterparts, even when these immigrants are lower in socioeconomic status (Singh and Yu 1996; Hummer et al. 1999). However, with increasing length of stay, the health status of immigrants deteriorates as they often abandon traditional behaviors and values for U.S. mainstream culture (Vega and Amaro 1994).

Racial and ethnic populations are characterized by considerable heterogeneity, and focusing on overall rates for groups often obscures important variability. Table 3 illustrates some of this heterogeneity for infant mortality rates. It presents infant mortality rates for the major racial/ethnic populations in the United States and the minority White ratios. Importantly, it shows multiple subgroups for both the Asian and Pacific Islander and the Hispanic origin categories. The data reveal that compared to non-Hispanic Whites, infant mortality among Black infants is 2.4 times higher, and 1.7 times higher in Native American infants. The Asian or Pacific Islander population has an infant mortality rate that is lower than that of the White population, and the overall Hispanic origin rate is slightly higher than that of the White

Table 3. Infant Mortality Rates According to Race: United States 1996-1998

Race of Mother and Hispanic Origin of Mother	Rates*	White/Non-White Ratio
White, Non-Hispanic	6.0	
Black, Non-Hispanic	13.9	2.32
American Indian or Alaskan Native	9.3	1.55
Asian or Pacific Islander	5.2	0.87
Chinese	3.4	0.57
Japanese	4.3	0.72
Filipino	5.9	0.98
Hawaiian and part Hawaiian	8.2	1.37
Other Asian or Pacific Islander	5.5	0.92
Hispanic Origin	5.9	0.98
Mexican	5.8	0.97
Puerto Rican	8.1	1.35
Cuban	4.7	0.78
Central and South American	5.2	0.87
Other and unknown Hispanic	6.8	1.13

* Infant Deaths per 1,000 live births.

Source: National Center for Health Statistics, 2001, p. 153.

population. Some subgroups within the Asian category, such as Chinese and Japanese, have rates that are considerably lower than that of even the overall Asian category. However, native Hawaiians have an overall rate that is higher than the Asian and White populations, and Mexicans, Cubans, and Central and South Americans have an infant mortality rate that is lower than that of the overall Hispanic origin population and the White population. In contrast, Puerto Ricans and the Other Hispanic category have rates that are higher than the overall Hispanic origin group, as well as the White population.

The health status of a people is shaped by their social stratification, and thus their life circumstances (Engels 1993 [1884]; Turner, Wheaton, and Lloyd, 1995). Much of the disparity that exists between Whites and non-Whites reflects the life circumstances and social policies that have historically limited the opportunities of disenfranchised groups. Differences in health outcome as an effect of social position and race/ethnicity are not new or unique to the U.S. A robust inverse relationship exists between socioeconomic status and health outcomes in both industrialized and developing countries (Antonovsky 1967; Bunker, Gomby, and Kehrer 1989; Williams 1990; Adler et al. 1993; Marmot et al. 1991). Overall, better health outcomes are associated with higher levels of socioeconomic status.

A prominent hypothesis, in the health literature, is that social class standing accounts for racial variations in health, and this is largely due to SES being a correlate of race. Research has shown that Black/White health differentials are always substantially reduced and sometimes eliminated when social class is adjusted for (Williams and Collins 1995; Lillie-Blanton et al. 1996). Yet, even when indicators of SES such as education or income are statistically controlled, Blacks tend to have poorer health status than Whites (Williams 1999b; Navarro 1991). As noted earlier, all indicators of SES are not equivalent across racial groups, and income understates the true magnitude of racial differences in economic resources. In addition, focusing only on current SES does not address the dynamic nature of SES effects over the life course and the potential role that economic deprivation in early life can play in determining adult health status (Williams and Collins 1995). In addition, a growing body of research suggests that racism can also impact the health of minority populations (Krieger 1999; Williams 1999). Racism can affect health indirectly through SES by reducing employment and educational opportunities. It can also affect health and death directly through the stress of personal experiences of discrimination, via the negative consequences of residence in poor neighborhoods, and through racial bias in medical care.

Access to and Quality of Health Care

Two contributing factors to the higher death rates among non-Whites are access to and quality of health care. Economic factors are commonly cited barriers to health care (Estrada, Trevino, and Ray 1990). Without a doubt, there is a link between employment status and health coverage. High levels of unemployment and underemployment as well as the overrepresentation of people of color in jobs that offer no health coverage limits the access of Blacks and Latinos to adequate health care

(Blendon et al. 1989; Council on Ethical and Judicial Affairs, 1990). National data show that Blacks and Latinos are less likely than Whites to be insured. For example, of non-Hispanic Whites, 18.6% were uninsured for all or part of 1987, as were 29.8% of Blacks and 41.4% of Latinos (Short, Monheit, and Beauregard 1989; Short 1990). Often because of people of color's employment situation, many cannot afford to miss time from work to obtain medical care, so many enter the health care system at a point when their condition is advanced. This often requires a longer and more expensive hospital stay; in some cases, later detection often means poorer survival rates (Munoz 1988; Morris et al. 1989). Yet, there is a cyclical effect between being poor and health; that is, being poor often leads to poor health status, which tends to diminish earning capabilities, which contributes to poorer health (Dutton 1994). Other barriers to health care are cultural and language factors, especially for Latinos and other immigrant groups. Latinos often cite differences in culture and language as reasons for not practicing preventive care (Vega and Amaro 1994). According to Chang and Fortier (1998), in 1990 almost 32 million U.S. residents older than age 5 (about 14% of the population) spoke a language other than English at home. More than half of these non-English speakers (17 million) spoke Spanish, and other common languages were French, German, Italian, and Chinese (Chang and Fortier 1998). In addition, although Latinos constitute approximately 9% of the U.S. population according to the 1990 Census, less than 5% of all U.S. physicians and medical school students are Latinos (Vega and Amaro 1994; Council on Scientific Affairs 1991). The provider's familiarity with the patient's culture and language can foster a better doctor-patient relationship and affect the quality of health service received (Chang and Fortier 1998). Language is important because Latinos who speak English are more likely to have a regular source of medical care compared to those who speak only Spanish (Council on Scientific Affairs 1991). In addition, Latinos who are less assimilated (or acculturated) into U.S. society are less likely to seek medical attention and more likely to treat their illnesses using folk medicine or seeking folk healers (Anderson et al. 1981).

Overall, non-Whites tend to report higher levels of dissatisfaction with the quality of care they receive (Council on Ethical and Judicial Affairs 1990). Racial and ethnic minority populations often access medical care in non-optimal settings, and due to their health coverage, or lack thereof, people of color are more likely to seek medical attention at hospital emergency rooms or other organized care settings where they are likely to see a different provider at each visit (Blendon et al. 1989). Thus, Latinos and Blacks are more likely than Whites not to have a regular physician who provides primary and regular care. Because Latinos and Blacks tend to seek medical care at the emergency room they are also more likely to wait longer to receive care (Blendon et al. 1989; Council on Ethical and Judicial Affairs 1990). It is easy to understand why the lack of continuity in health care and time spent waiting to receive health care are sources for dissatisfaction.

Perceived racial differences and discrimination also affect the quality of medical care, treatment, and medical procedures available to Whites versus non-Whites. The Council of Ethical and Judicial Affairs (1990) of the American Medical Association

examined Black and White health disparities. They found that after controlling for health insurance, income, and clinical status, Whites are more likely to receive coronary angiography, bypass surgery, angioplasty, chemotherapy, intensive care for pneumonia, and kidney transplants than Blacks. This suggests that Blacks are less likely to have access to these kinds of medical treatments than Whites, economic reasons aside. Further, when Blacks are recommended to receive transplants they are more likely to wait longer than Whites (Sullivan 1991).

Satisfaction and quality of care are also influenced by the treatment patients receive at the doctor's office. For example, in the case of a non-English-speaking patient an interpreter often mediates the relationship with the doctor. It is not uncommon that when a non-English-speaking patient goes to see a doctor that anyone who is bilingual, such as an employee, family member (e.g., a child), or a friend, serves as an interpreter (Torres 1998). Typically, these individuals have no formal interpretation training. This can contribute to inaccuracies and to the inability of a patient to feel free to disclose important, personal, and relevant information. It is difficult to receive good quality health care when fundamental patient rights are violated when language barriers exist. Language barriers have also been found to play a role in compliance with medical recommendations and with continuation of treatment (Estrada, Trevino, and Ray 1990).

Evidence of systematic bias in medical care continues to accumulate. For example, Schulman et al. (1999) found that race and sex of patient independently influence how physicians manage chest pain. These researchers found that women and Blacks were less likely to be referred for cardiac cauterization than men and Whites, after adjusting for symptoms, the physicians' estimates of probability of coronary disease, and clinical characteristics. And Black women, overall, were least likely to be referred to cauterization. These findings are consistent with other epidemiological studies that report that differences in treatment exist according to race and sex (Carlisle, Leake, and Shapiro 1997; Ayanian and Epstein 1991; Wenneker and Epstein 1989). Williams and Rucker (in press) have recently argued that unconscious discrimination lies at the foundation of these differences in medical treatment and have outlined multiple strategies to address it.

Participation in Medical Research

The participation of people of color (irrespective of gender) in medical research studies is important for several reasons. First, as noted earlier, there is a disparity in health outcomes between Whites and non-Whites. Second, recruitment of people of color can directly contribute to the accuracy of estimating disease prevalence within and between groups, including gender (Welsh et al. 1994; Krieger et al. 1993). Medical research should also consider recruiting equal numbers of men and women of color; it is important to investigate how risk factors and diseases influence the health of men and women of color (Krieger et al. 1993). Finally, possible ethnic differences in metabolism of pharmacological agents need to be observed to ensure the safety and efficacy of new drugs for all individuals (Brawley and Tejeda 1995). Given that the biological characteristics of a social group are influenced by the habitual behaviors

of that group in response to the constraints of its environment (Jackson 1992), observed biological differences can reflect the adaptation of racial groups to their environmental conditions.

Although there is a need for people of color to participate as subjects in medical and clinical studies, two major reasons are often cited for the low representation of people of color. First, because it is often assumed that research findings on White males are generalizable and applicable to other populations, ethnic minorities have been actively excluded from recruitment for participation. Second, when people of color are recruited to participate they are less likely to consent, largely due to distrust (Brawley and Tejeda 1995). Communities of color tend to distrust government medical institutions because there is a history of using them for medical experimentation.

Fears of exploitation by the medical profession by Blacks date back to the antebellum period when slaves and free Blacks were used as subjects for dissection and medical experiments (Gamble 1997). We note two examples from the antebellum period. Dr. Thomas Hamilton used a slave to test remedies for heatstroke by subjecting his subject to sit nude in a pit that had been heated to a high temperature, where only the subject's head was above ground. The goal of the experiment was to find a remedy that would make it possible for masters to force their slaves to work longer hours during the hottest days of the year (Boney 1967). Similarly, Dr. J. Marion Sims, the father of modern gynecology, used three slave women to develop an operation to repair vesicovaginal fistulas. He performed surgery on one of these women 30 times during a four-year period. After he had perfected the procedure using slave women, he attempted it with anesthesia on White women (Sims 1889; Gamble 1997). However, the best documented and widely known racially biased government-sponsored health experiment against Blacks is the Tuskegee Syphilis Study (1932 to 1972). Its primary objective was to follow the natural progression of syphilis in approximately 400 Black men who were diagnosed with the disease compared to a control group of 200 uninfected men (Jones 1981). These men were never treated for syphilis, although penicillin was already an accepted treatment for the disease. An expanded role for the participation of people of color in health research must extend beyond the role of subject. Participation should be viewed more broadly to include people of color as investigators, analysts, and policy makers (Spigner 1994).

Practical Guidelines for Assessing Race

Although we have argued that race is not primarily biological, it is nonetheless an important construct in health-related research. There are several fundamental reasons why studying race is important. First, if race is perceived to be "real," then it is real in its consequences (Thomas 1928). That is, the established racial and ethnic categories capture an important aspect of the inequalities and injustices embedded in the U.S. social structure (See and Wilson 1988). Health outcomes reflect, at least in part, the differentials in power and status between groups.

Second, racial categories have historically reflected racism. As discussed previously, racism is an ideology of superiority that justifies the subjugation, exploitation, and domination of groups that are defined as genetically or culturally inferior (Krieger

et al. 1993; See and Wilson 1988). As such, in the U.S., racial categories capture the racial subordination and the system of power affording Whites domination over non-White groups and the unequal access of people of color to limited resources. Racism as an ideology has had a great influence on residential segregation, quality of education, labor participation, access to political office, inter-racial marriages, and health (Bobo, Kluegel, and Smith 1997).

Third, how racial categories are constructed has an effect on all aspects of daily lives of the groups. For example, it is not uncommon for non-Whites to endure racism in the form of daily hassles that include insults and demeaning treatment by Whites (Forman, Williams, and Jackson 1997). These experiences of discrimination adversely affect health and play a role in accounting for racial differentials in disease (Williams et al. 1997; Krieger 1999).

Fourth, race is a fundamental organizing principle in our society and it is central to identity formation (Omni and Winant 1994). An understanding of a shared history and common experiences stemming from immigration, discrimination, residential segregation, and occupational status and context often provides the basis for group solidarity and is manifested in lifestyle and struggles for limited resources (Williams 1997).

Current efforts to monitor the health status and well-being of groups of people within the United States include collecting and reporting data on racial and ethnic groups, but these methods of data collection are inadequate, stemming from the increasing diversity of the U.S. We make the following recommendations adopted from Williams (1999a):

1. There is a continuing need for uniform assessment of race and ethnicity by government-administered health surveys, as well as by the wider research community. Researchers need to move beyond a simple Black/White dichotomy and include other groups in their studies. Given the heterogeneity of the U.S., there is a critical need for the inclusion of identifiers for such groups as Asians and Latinos, as well as for the major subgroups of these categories. Researchers should use terms that are broadly recognized by a variety of people and that reflect the preferences of respondents. In addition, we recommend that identifiers be included to explore the heterogeneity within the White and Black population. In this fashion some of the uniqueness of these various groups can be explored.
2. Racial/ethnic data should be routinely utilized in the design, implementation, and evaluation of health studies and health programs. There tends to be inadequate data, especially morbidity data, for American Indians, Latinos, and Asian subgroups. Standard sampling strategies and designs fail to capture a representative number of these groups because of geographical distribution and potentially small numbers in the general population. Reliable estimates for the distribution of disease are often unavailable; hence, analysis of heterogeneity within a given racial group is unavailable.
3. Questionnaires should be translated and measurement instruments should be culturally appropriate. Often health researchers do not translate study instru-

ments into other languages, thus limiting their sample to those who have a proficiency in the English language. Researchers should also ensure that their new study instruments meet the test of conceptual, scale, and norm equivalence. Conceptual equivalence refers to similarities in the meaning of the concepts used in the assessment. Scale equivalence is the use of questionnaire items that are familiar to all groups, while norm equivalence ensures that the norms developed for the targeted group are appropriate and not arbitrarily assigned from another population.

4. Communication mechanisms should be built in conjunction with racial/ethnic communities to ensure that they receive findings from current studies and have input in future research and interventions.
5. Whenever racial/ethnic data are reported, more attention should be given to interpretation. Researchers need to indicate why race/ethnicity is being used, the limitations of racial/ethnic data, and how findings should be interpreted. The presentation of data on racial differences should routinely stratify them by socioeconomic status within racial groups. Failure to do this may misspecify complex health risks and may have unintended social consequences.
6. Studies of race and health should be abandoned in favor of studies that identify racial factors that influence health outcomes. For example, information that provides a broader context should be collected. This includes a better assessment of socioeconomic status and wealth, and economic and non-economic dimensions of discrimination. In addition to the aforementioned, data such as nativity, acculturation, and years since migration are key factors to understanding the health status of immigrants.
7. In studying race and health, gender should not be ignored. Often being a woman and being of color means that relevant intersections and complexities are ignored, especially as they relate to women's health. In this country, gender often translates into research on White women, and race means research on men of color; researchers need to be sensitive to this cleavage. A better understanding of the questions regarding the current health and mental health status of women of color in the United States is much needed. It is important to understand how economic circumstances, employment, stress, poor nutrition, poor sanitation, inadequate housing, family strains, motherhood, and the role of physical, emotional, and sexual abuse influence women of color's health. Gender should not be merely a variable in the data researchers collect. Rather, the consideration of women of color and their health status should flow from a strong research agenda that cuts across all of the recommendations listed above.

The challenge for the scientific community is to move away from traditional ways of researching race and health and to develop new tools and methods of analysis. Yet researchers should keep in mind that the legacy of the past—of conquest, slavery, exclusion, and removal—continues to shape the present. Historical and prevailing attitudes, conceptions, and beliefs about race govern social policy and social arrangements that limit the access to health care and the well-being of people of

color. This legacy also reveals that the health outcomes of different racial and ethnic groups are part of the socio-historical and political process in which race categories are created, transformed, changed, and ultimately destroyed.

References

- Adler NE, Boyce T, Chesney MA, Folkman S, Syme SL. Socioeconomic Inequalities in Health: No Easy Solution. *JAMA*. 1993;269:3140-3145.
- Anderson M, Feinberg SE. Black, white, and shades of gray (and brown and yellow). *Chance*. 1995;8(1):15-18.
- Anderson MJ. *The American Census: A Social History*. New Haven: Yale University Press; 1988.
- Anderson RM, Lewis SZ, Giachello AL, Chiu G. Access to Medical Care Among Hispanic Population of the Southwestern United States. *J Health Soc Behav*. 1981;22:78-89.
- Antonovsky A. Social Class, Life Expectancy, and Overall Mortality. *Milbank Memorial Fund Quarterly*. 1967;45:31-73.
- Avranian JZ, Epstein AM. Differences in the Use of Procedures Between Women and Men Hospitalized for Coronary Heart Disease. *N Engl J Med*. 1991;325:221-5.
- Ballard R. The Construction of a Conceptual Vision: Ethnic Groups and the 1991 UK Census. *Ethnic and Racial Studies*. 1997;20:82-194.
- Barraer M. *Race and Class in the Southwest: A Theory of Racial Inequality*. Notre Dame: University of Notre Dame Press; 1979.
- Bauman K. Direct measures of poverty as indicators of economic need: evidence from the survey of income and program participation. U.S. Census Bureau Population Division Technical Working Paper No. 30; 1998.
- Blendon RJ, Aiken LH, Freeman HE, Corey CR. Access to Medical Care for Blacks and White Americans: A Matter of Continuing Concern. *JAMA*. 1989;261:278-281.
- Robo L, Kluge J, Smith RA, LaSalle-Paire Racism: The Crystallization of Kinder, Gentler, and Antiracist Ideology. In: Tuch SA, Martin J, eds. *Racial Attitudes in the 1990s: Continuity and Change*. Westport, Conn: Praeger; 1997.
- Robo L, Zubrinsky CL. Attitudes on residential integration: Perceived status differences, mere in-group preference, or racial prejudice? *Soc Forces*. 1996;74(3):883-909.
- Roney FN, Doctor Thomas Hamilton: Two Views on a Gentleman of the Old South. *Phylon*. 1967;28:288-292.
- Bonilla-Silva E. Rethinking racism: toward a structural interpretation. *Am Soc Rev*. 1996;62:465-480.
- Brandt AM. Racism and research: the case of the Tuskegee Syphilis Study. *Hastings Cent Rep*. 1978;8(6):21-29.
- Brawley OW, Tejeda H. Minority Inclusion in Clinical Trials: Issues and Potential Strategies. In: *Journal of the National Cancer Institute Monographs*. 1995;17:55-57.
- Bunker JP, Gomby DS, Kehrer B, eds. *Pathways to Health: The Role of Social Factors*. Menlo Park, Calif.: Henry J. Kaiser Family Foundation; 1989.
- Carlie DM, Leake BD, Shapiro MF. Racial and Ethnic Disparities in the use of Cardiovascular Procedures: Associations with Type of Health Insurance. *Am J Public Health*. 1997;87:263-7.
- Chang PH, Fortier JP. Language Barriers to Health Care: An Overview. *J Health Care Poor Underserved*. 1998;9:S5-S20.
- Cole RE, Deskins Jr. DR. Racial factors in site location and employment patterns of Japanese auto firms in America. *Calif Mgmt Rev*. 1988;31(1):9-22.
- Coxer RS. A note on the biologic concept of race and its application in epidemiologic research. *Am Heart J*. 1984;108(3):715-723.
- Council on Ethical and Judicial Affairs. Black-White Disparities in Health Care. *JAMA*. 1990;263:2344-46.
- Council on Scientific Affairs. Hispanic Health in the United States. *JAMA*. 1991;265:248-252.
- Cox OC. *Caste, Class, and Race*. New York: Doubleday; 1948.
- Davis JA, Smith TW. *General Social Survey, 1972-1990 NORC*. Chicago: National Opinion Research Center; 1990.
- Devine PG. Prejudice and out-group perception. In: Tesser A. *Adv Soc Psychol*. 1995;467-524.
- Duster T. A Social Frame for Biological Knowledge. In Duster, T and Garrett K eds. *Cultural Perspectives on Biological Knowledge*. Norwood, NJ: Ablex Publishing; 1984.
- Dutton DB. Social Class, Health, and Illness. In: Schwartz HD. *Dominant Issues in Medical Sociology*. New York: McGraw-Hill; 1994.
- Economic Report of the President. Washington, D.C.: U.S. Government Printing Office; 1998.
- Eller TJ. *Household Wealth and Asset Ownership, 1991*. U.S. Bureau of the Census, *Current Population Reports*, P70-34. Washington, D.C.: U.S. Government Printing Office; 1994.
- Engels F. *The Condition of the Working Class in England*. New York: Oxford University Press; 1993.
- Estrada AL, Trevino F, Ray LA. Health Care Utilization Barriers Among Mexican Americans: Evidence from HHANES 1982-1984. *Am J Public Health*. 1990;80:275-315.
- Evinger S. How shall we measure our nation's diversity? *Chance*. 1995;8(1):7-14.
- Fix M, Struyk RJ. *Clear and Convincing Evidence: Measurement of Discrimination in America*. Washington, D.C.: Urban Institute Press; 1993.
- Forman TA, Williams DR, Jackson JS. Race, Place, and Discrimination. *Soc Problems*. 1997;9:231-261.
- Gamble VN. Under the Shadow of Tuskegee: African Americans and Health Care. *Am J Public Health*. 1997;87:1773-1778.
- Giles E, Elliot O. Race Identification from Cranial Measurements. *J Forensic Sci*. 1962;7:147-157.
- Goodman AH. Bred in the Bones? *Science*. 1997;37:20-5.
- Gould SJ. *Ever Since Darwin*. New York: W.W. Norton; 1977.
- Hahn RA. The state of federal health statistics on racial and ethnic groups. *JAMA*. 1992;267(2):268-271.
- Hilton JL, von Hippel W. Stereotypes. *Annu Rev Psychol*. 1996;47:237-271.
- Hummer RA, Rogers RG, Nam CB, LeClere FB. Race/Ethnicity, Nativity, and U.S. Adult Mortality. *Soc Sci Q*. 1999;80:136-153.
- Jackson FL. Race and ethnicity as biological constructs. *Ethn Dis*. 1992;2:120-125.
- Jay D, Jary J. *Collins Dictionary of Sociology*. Glasgow, Scotland: Harper Collins; 1991.
- Jaynes GD, Williams RM. *A common destiny: Blacks and American Society*. Washington D.C.: National Academy Press; 1989.
- Jensen AR. How Much Can We Boost IQ and Scholastic Achievement? *Harvard Educ Rev*. 1969;Winter: 1-123.
- Jordan WD. *White Over Black: American Attitudes Toward the Negro, 1550-1812*. Baltimore: Penguin Books; 1968.
- Kirschman J, Neckerman KM. We'd love to hire them, but...: the meaning of race for employers. In: Jencs C, Peterson PE, eds. *The Urban Underclass*. Washington, D.C.: The Brookings Institution; 1991:203-232.
- Kral, JM. Ethnic Origin in the Canadian Census, 1871-1981. In: Petryshyn WR, ed. *Changing Realities: Social Trends Among Ukrainian Canadians*. Edmonton: The Canadian Institute for Ukrainian Studies; 1980.
- Krieger N, Bassett M. The health of black folk: Disease, class, and ideology in science. *Monthly Rev*. 1986;38(3):74-85.
- Krieger N. Embodying Inequality: A Review of Concepts, Measures, and Methods for Studying Health Consequences of Discrimination. *Int J Health Serv*. 1999;29(2):295-352.
- Krieger N. Shades of Difference: Theoretical underpinnings of the medical controversy on black/white differences in the United States, 1830-1870. *Int J Health Serv*. 1987;17:259-278.
- Krieger N, Rowley DL, Herman AA, Avery B, Phillips MT. Racism, Sexism, and Social Class: Implications for Studies of Health, Disease, and Well-being. *Am J Prev Med*. 1993;9:82-122.
- Last JM, ed. *A Dictionary of Epidemiology*, 3rd Ed. New York: Oxford University Press; 1995.
- LaVeist TA. Beyond dummy variables and sample selection: What health services researchers ought to know about race as a variable. *Health Serv Res*. 1994;29:1-16.
- Lee SE. Racial Classifications in the U.S. Census: 1890-1990. *Ethnic Racial Stud*. 1993;16:75-94.
- Lewontin RC. *Biology as Ideology: The Doctrine of DNA*. New York: Harper Perennial; 1991.
- Lieberson S. *A Piece of the Pie: Black and White Immigrants since 1880*. Berkeley: University of California Press; 1980.
- Lillie-Blanton M, Parsons PE, Gayle H, Devler A. Racial Differentials in Health: Not Just Black and White, but Shades of Gray. *Annu Rev Public Health*. 1996;17:411-48.

- Littlefield A, Lieberman L, Reynolds LT. Redefining Race: The Potential Demise of a Concept in Physical Anthropology. *Curr Anthropol*. 1982;23:641-647.
- Mannor MG, Smith GD, Stansfeld S, Patel C, North F, Head J, White I, Brunner E, Feeney A. Health Inequalities Among British Civil Servants: The Whitehall II Study. *Lancet*. 1991;337:1387-93.
- Massey DA, Gross AB, Shibuya K. Migration, segregation, and the geographic concentration of poverty. *Am Soc Rev*. 1994;59:425-445.
- Massey DS. The age of extremes: concentrated affluence and poverty in the twenty-first century. *Demography*. 1996;33:395-428.
- Montagu A. *Man's Most Dangerous Myth: The Fallacy of Race*. New York: The World Publishing Co.; 1964.
- Morris DL, Lucero GT, Joyce EV, Hannigan EV, Tucker ER. Cervical Cancer, A Major Killer of Hispanic Women: Implications for Health Education. *Health Educ*. 1989;20:23-28.
- Mur DE. Race: The Myth of Racism. *Social Inquiry*. 1993;63:339-350.
- Munoz E. Care for the Hispanic Poor: A Growing Segment of American Society. *JAMA*. 1988;260:2711-2712.
- National Center for Health Statistics. *Health, United States, 1998 Health and Aging Chartbook*. Hyattsville, Md.: USDHHS. 1999.
- Navarro V. Race or Classes Versus Race and Class: Growing Mortality Differentials in the United States. *Int J Health Serv*. 1991;21:229-235.
- Neckerman KM, Kirschenman J. Hiring strategies, racial bias, and inner-city workers. *Soc Problems*. 1991;38:433-447.
- Oliver ML, Shapiro TM. *Black Wealth/White Wealth*. New York: Routledge; 1995.
- Omi M, Winant H. *Racial Formation in the United States: From the 1960s to the 1990s*. New York: Routledge; 1994.
- Pryor E, Goldman GJ, Royce DA. Future Issues for the Census of Canada. *Int Migration Rev*. 1991;25:167-75.
- Sampson RJ, Wilson WJ. Toward a theory of race, crime, and urban inequality. In: Hagan J, Peterson RD, eds. *Crime and Inequality*. Stanford, Calif.: Stanford University Press; 1995:37-54.
- Schulman KA, et al. The Effect of Race and Sex on Physicians' Recommendations for Cardiac Catheterization. *N Engl J Med*. 1999;340:618-26.
- See KO, Wilson WJ. Race and Ethnicity. In: Smelser NJ, ed. *Handbook of Sociology*. Beverly Hills, Calif.: Sage Publications; 1988.
- Seymour-Smith C, ed. *Macmillan Dictionary of Anthropology*. London: Macmillan; 1986.
- Sharpe R. In latest recession, only blacks suffered net employment loss. *Wall Street Journal*. 1993;LXXIV(233).
- Short PE, Monheit AC, Beauregard K. *National Medical Expenditure Survey: Estimates of the Uninsured Americans: Research Findings I*. Rockville, Md.: National Center for Health Services Research and Health Care Technology Assessment; 1989.
- Short PE. *National Medical Expenditure Survey: Estimates of the Uninsured Population, Calendar Year 1987: Data Summary 2*. Rockville, Md.: National Center for Health Services Research and Health Care Technology Assessment; 1990.
- Shuman H, Steeh C, Bobo L, Krysan M. *Racial Attitudes in America: Trends and Interpretations. Revised Edition*. Cambridge, Mass.: Harvard University Press; 1997.
- Sims JM. *The Story of My Life*. New York: Appleton; 1889.
- Singh GK, Yu SM. Adverse Pregnancy Outcomes: Differences between U.S. and Foreign-Born Women in Major U.S. Racial and Ethnic Groups. *Am J Public Health*. 1996;86:837-843.
- Smelser N, Wilson WJ, Mitchell F, eds. *America Becoming: Racial Trends and Their Consequences. Vols. I and II*. National Academies Press; 2001.
- Spigner C. Black Participation in Health Research: A Functional Overview. *J Health Educ*. 1994;25:210-214.
- Sullivan LW. Effects of Discrimination and Racism on Access to Health Care. *JAMA*. 1991;266:2674.
- Thomas WL, Thomas DS. *The Child in America: Behavior Problems and Programs*. New York: A.A. Knopf; 1928.
- Torres RE. The Pervading Role of Language on Health. *J Health Care for the Poor and Underserved*. 1998;9:S21-S25.

- Tucker C, Kojetic B. Testing Racial and Ethnic Origin Questions in the CPS Supplement. *Monthly Labor Rev*. 1996;119:3-7.
- Turner RJ, Wheaton B, Lloyd DA. The Epidemiology of Social Stress. *Am Soc Rev*. 1995;60:104-125.
- U.S. Bureau of the Census. *Income by Educational Attainment for Persons 18 Years Old and Over, by Age, Sex, Race, and Hispanic Origin: March 1996, Current Population Reports*. Washington, D.C.: U.S. Government Printing Office; 1997.
- Vega W, Amaro H. Latino Outlook: Good Health, Uncertain Prognosis. *Ann Rev Public Health*. 1994;15:39-67.
- Welsh KA, Ballard E, Nash F, Ratford K, Harrell L. Issues Affecting Minority Participation in Research Studies of Alzheimer Disease. *Alzheimer Dis Assoc Disord*. 1994;8:38-48.
- Wenkeker MB, Epstein AM. Racial Inequalities in the Use of Procedures for Patients with Ischemic Heart Disease in Massachusetts. *JAMA*. 1989;261:253-7.
- Williams DR. The Monitoring of Racial/Ethnic Status in the USA: Data Quality Issues. *Ethnicity and Health*. 1999a;4:121-137.
- Williams DR. Race, Socioeconomic Status, and Health: The Added Effect of Racism and Discrimination. *Ann N Y Acad Sci*. 1999b;896:173-188.
- Williams DR. Race and Health: Basic Questions, Emerging Directions. *Ann Epidemiol*. 1997;7:332-333.
- Williams DR. Race/Ethnicity and Socioeconomic Status: Measurement and Methodological Issues. *Int J Health Services*. 1996;26:483-505.
- Williams DR. Racism and Health: A Research Agenda. *Ethnicity and Disease*. 1990;6:1-6.
- Williams DR, Collins C. U.S. Socioeconomic and Racial Differences in Health. *Annu Rev Sociol*. 1995;21:349-86.
- Williams DR, Rucker TTD. Racial and Ethnic disparities in Healthcare: A Conceptual Framework and Research Directions. *Healthcare Financing Review* (under review).
- Williams DR, Jackson JS, Brown TN, Torres M, Forman TA, Brown K. Traditional and Contemporary Prejudice and Urban Whites' Support for Affirmative Action and Government Help. *Soc Problems*. 1999;46(4):1-25.
- Williams DR, Yu Y, Jackson J, Anderson N. Racial differences in physical and mental health: socioeconomic status, stress, and discrimination. *J Health Psychol*. 1997;2(3):335-351.
- Wright CD. *The History and Growth of the United States Census*. Washington, D.C.: Government Printing Office; 1966.