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# The Conceptualization and Measurement of Race: Confusion and Beyond

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Hypertension among black Americans “occurs with greater frequency, severity, and at an earlier age compared with whites” (Sica et al., 1998). Black Americans “eat more fried and high fat foods” (Patterson et al., 1995). African American families “offer long-standing cultural models . . . whereby multiple caregivers comprise . . . a kin network and mutual aid system . . . to dependent and needy family members” (Dilworth-Anderson, 1997).

Conclusions like these, from the scientific literature, suggest the potential analytic utility of race as a concept. What is it about race, the experience of being black or non-black, that shapes conclusions like these in the literature? Is it biology? Sociology? Psychology? In this report we seek to understand why we have to ask questions like these. Why do we have to ask the additional question of what a race effect means?

## A Problem in the Conceptualization and Measurement of Race

Joining recent calls for improved conceptualization of race (Williams, Lavizzo-Mourey, and Warren, 1994; LaViest, 1996), and following upon an earlier review of the measurement of race/ethnicity (Manuel, 1982a), the objective in this report is to document our thesis that much of the literature reporting race effects is ambiguous. Our task — finding sources for the conceptual confusion motivating this characterization of race, as an analytical concept — will alert us to how this ambiguity has led to a literature on race that often is of questionable reliability, atheoretical, and non-cumulative. Studying the sources for the conceptual confusion that surrounds race also points to several avenues by which to begin to move beyond the confusion highlighted. Ultimately, answers to the questions raised about the meaning of a race effect provide direction for rationally based solutions to practical problems: maximizing the effectiveness of optimal dietary promotional efforts, or family care-giving, or reducing the black disadvantage in hypertension prevalence.

## Conceptual Confusion: Sources for the Ambiguity of What Data about Race Mean

### Race Differences: Bio-genetic or Socio-cultural Differences?

Race differences, historically, have been used to highlight biological differences. Banton (1987) locates the first use of the term in early 1500s Europe. Then until today, among those following this perspective, race indicated bio-genetic differences. The exact meanings of the differences have varied, however. Race has been interpreted as distinct fixed lineage, but also has been seen to define subspecies of potential transferable genes. Corre-

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lates of race have been and are attributed to genotypic and phenotypic differences (Mead, 1968).

Reaction to Jensen and Johnson's (1994) recent emphasis on racial differences in head size and intelligence attests to the continuing controversy and confusion on the significance of interpreting racial data from a bio-genetic perspective. Reynolds (1992) notes a recent survey showing 65 of 191 sociologists and 162 of 300 physical anthropologists agreed that biologically defined race categories exist. Leading anthropologists sometime ago (see Montagu, 1942), however, rejected the utility of race as a useful concept inasmuch as consensus could not be established on how many races could be defined. Thus, while Dunn and Dobzhansky (1964) named over 150 racial categories, many still follow Cuvier's classic three-category division of the races (Caucasoid, Negroid, and Mongoloid). In short, the tangled web with which we use the concept race starts with a failure to gain consensus on what race means even among those who see race only for its biological significance.

Confusion at the biological level compounds when joining the possibility of additional conceptions of the same data — on whether one is black, white, mixed, etc. Sociologists, for example, emphasize the socio-cultural structures underlying human behavior. Social structures result from the recurrent, often institutionalized, interactions between humans. Sets of these enduring relations, organized as interdependent statuses and their associated roles (expected behavior) are called groups. Group boundary setting processes surrounding skin color or other phenotypic (racial) differences evolve from, and reinforce commonly accepted or forced definitions among groups in a society. These vary from how the group will be labeled, to who can or cannot be a member of the group, to the privileges available or unavailable by virtue of being in the group. To be black rather than white in the United States, thus, has associated with it a distinctive set of life experiences, life opportunities, and life chances. The higher prevalence of hypertension among black persons in the United States, for example, may be interpreted to reflect the race differences in the experience of race linked to discrimination (by law or by custom).

These same race differences, although interpreted for their social significance, may be interpreted also to reflect distinctive cultural experiences perhaps unrelated to discrimination. Landrine and Klonoff (1996), for example, argue that the degree of cultural integration is the central factor tapped when seeing black versus white differences in outcome variables. In short, the confusion continues. Does the race difference, though now studied for its social structural significance, reflect acculturation (race is ethnicity) or discrimination (race is minority status)? On the other hand, other investigators dismiss the existence of a reality to which race, ethnicity, or minority status could refer. Race and ethnicity, according to Miles (1982), or minority status, according to Meyer (1984), represent ideological constructions that hide com-

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monalties constituted by social class. Race differences, now, really reflect class differences. The racialization of class distinctions occurs when racial divisions obfuscate class similarities within the working class.

### **Race Differences: Status or Identity Differences?**

Sources for the muddled understanding of what a race difference means extend beyond the confusion seen between and within the biological and sociological realms. More confusion arises when considering a social psychological construct, identity. Racial identity now moves the level of abstraction to a behavioral one. The usual assumption, like the assumption following a social structural orientation, is that racial group membership means the person has had certain experiences. Now, the conceptualization is less on the social organization producing the experience and more on the personal meanings attached to the experiences. A person's membership in a group, objectively or subjectively defined, means the person identifies with the history, the culture, and the commonly assumed experiences known about that group.

The concept of identity has a long history in social psychology, both from a sociological and a psychological perspective. Following, for the moment, sociology's symbolic interactionist theoretical framework, identity, according to Stryker and Serpe (1994), refers to mental structures. These are sets of internalized, cognitive, symbolically held meanings or definitions of societal roles. Racial identity joins other identities, each deriving from various group memberships and the meanings attached to the experiences in those groups.

Symbolic interactionists champion the self as the link between these personal subjective mental images and the objectively occurring events and social circumstances on which they are based. The Twenty Statements Test (TST), for example, is used to operationalize the self by group membership acknowledgments. Verkuyten (1991), to illustrate, recently applied the TST to isolate the importance of ethnicity as a spontaneous self definition.

Concepts like the self, supposedly available to interlink both the social structural system and the personal system, still fail, however, to capture the content, on the one hand, defining the social structure and, on the other hand, the specific personal meanings shaped by the social structure. A question or so can best make the point. Does knowledge that a person says he is black — at once, taken to indicate structural based experience and personal identity, tell us more about identity or structure, or is it left to the investigator to assign the weight of importance to each — hence, still another source for conceptual confusion? If identity is what is captured, does knowledge, for example, that a person says he is black tell us anything about this person's cognitively held definitions or meanings about actual victimization (or lack of victimization) by

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race linked discrimination? In short, can we easily assume, without error, that belonging to a special race category necessarily implies having had a specific identity with the history, culture, and experiences of that group? Awareness of group category location, race or otherwise, may or may not mean an accompanying set of experiences that serve as the basis for an identity with the group. Certainly, given the relativity of experience, per person within the same group, isn't it reasonable to expect to tap, measurement-wise, relative degrees (per person) of any one meaning associated with these experiences?

The confusion surrounding race's biological and social structural significance simply extends now to its social psychological significance.

### **Race Differences: Identity or Consciousness?**

All is not doom and gloom in the measurement of race, however. Capturing individual variation in identity, while rare, is beginning to receive attention. Arguing that the essence of identity can be expressed on a continuum, Cross (1991) posits a continuum of psychological nigrescence among black Americans. Identity can vary across five discrete stages, per person. An Euro-centric stage (indicating unfamiliarity with black culture) anchors one end of the continuum. An Afro-centric stage defines the opposite end of the continuum. The Afro-centrally identified — persons at a more mentally healthy (self-esteem-wise) stage — accept their African heritage. Intermediate stages tap developmental degrees in achieving this sense of blackness. Perhaps the most cited operationalization of Cross' conceptualization is represented in the work of Helms (1990). Helms' short form (thirty indicators) of the Racial Identity Attitude Scale (RIAS), for example, can yield responses thought to represent the processual acceptance of one' racial heritage. Other operationalizations are as simple as that offered by Hecht and Ribeau (1991) and as complex as that offered by Sellers et al. (1997). For Hecht and Ribeau, a single indicator on whether black Americans identify themselves as black or African American or Afro-American can indicate a person's developmental stage on Cross' continuum. Sellers and his colleagues present a multi-continuum (dimensional) conceptualization and measurement strategy. Their model allows the observation of four dimensions, including centrality (relative importance of race to self, generally) and salience (relative importance of race to self, situationally) — two aspects of identity emphasized by symbolic interactionist. Additionally, they include ideological (e.g., nationalist versus humanist) and evaluative (e.g., extent of negative thoughts about the racial group) beliefs as part of racial identity.

Other investigators of black identity have also used continua. White and Burke's (1987) two dimensional typology of black ethnic role identity defines a blackness dimension that is either political (e.g., I am powerless) or cultural (I am musical).

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Thompson (1991) conceived identity to include a physical (e.g., I feel it inappropriate to wear a natural hairstyle to work), social-political (I am uncomfortable around African Americans wearing African style clothing) and psychological (African American culture is worth documenting) dimension.

Jackson (1991) and his colleagues, in various analyses of the National Survey of Black Americans, have also conceptualized various continua of identity. The racial belief system (Allen et al., 1989)), racial orientation (Ellison, 1992), and in-group/out-group orientation (Jackson, 1991) equate identity, variously, with feelings of closeness (e.g., closeness to lower class versus elite black persons) or beliefs about black separatism (Blacks should vote for blacks) or black stereotypes.

This recently emerging literature is without doubt the cutting edge in the study of black identity. Although it is unclear how much of it will or can be extended to race identity, generally, the literature represents a monumental step beyond literature applying the traditional single item indicator of race identity. We see multiple continua with multiple indicators, per continuum. The observation of individual variation is a step taken in the direction for reducing the measurement error that comes with the single item indicators. Nevertheless, new sources for conceptual confusion arise. Whether considering degrees of psychological nigrescence or racial pride (Helms, 1990) or blackness (White and Burke, 1987), or beliefs in black separatism (Allen et al., 1989) or nationalism (Sellers et al., 1997) or ingroup/outgroup orientation (Jackson et al., 1991), we must ask whether we are confusing identity with consciousness. Identity and consciousness are two separate social psychological concepts.

Gurin, Hatchett, and Jackson (1989) recall Kurt Levin's earlier guidance on what identity entails. Identity, following the field theoretical perspective in psychology, refers to the similarity of personal experiences and expected fate, with the group's typically assumed experience and expected fate. Consciousness, as opposed to identity and as used in the interactionist or field theoretical frameworks, refers to awareness of the group's relative position to other groups in the society (Gurin, Hatchett, and Jackson, 1989). We would do much to reduce the error in the measurement of race identity by careful consideration of whether the awareness of black culture or black stereotypes is identity or consciousness. Likewise, is the perceived need for black autonomy/separatism, or one's relative power as a black person, identity or consciousness — or something else, as in the case of feelings of closeness to other blacks? Feelings of closeness typically are associated with traditional social psychological definitions of cohesiveness (see Cartwright, 1968).

### **Moving Beyond Confusion**

Several reasonable conclusions emerge from a consideration of the sources of the

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conceptual confusion surrounding race. Each points to the direction for generating greater clarity, and thus the possibility of consensus, in the conceptualization and measurement of race. First, phenotypic distinctions exist among people. We risk being accused of stating the obvious here, but given voice to the obvious is appropriate in a time when many search for immediate colorblind legislation or posit that race has no reality to which it can refer.

Second, group boundary setting around these phenotypic distinctions is a social fact. Several observations lead to a third conclusion, the idea that it is the social significance, not the biological significance, of race that makes it a continuing useful analytical concept. Thus, we recall that consensus never has been established on how many ways the various phenotypic distinctions can be categorized. This reflects the fact that there is more variation within any one stratum than between strata (Williams, Lavizzo-Mourey, and Warren, 1994). As such, racial strata can be, and are, defined by social consensus, differently, depending on the society. Whereas the 1980 Brazilian census named close to 130 races (Andrews, 1991), the 1980 U.S. census named four. Even within the same society, racial definitions change overtime. The 1890 U.S. census distinguished black Americans as Mulatto, Quadroon, and Octoroon (Lee, 1993).

These observations have led some to conclude that race is a vacuous concept with no analytic utility (Miles, 1982). While such a conclusion may have merit for the consideration of the biological significance of race, it is shortsighted in that it does not address the greatly more substantiated and continuing social significance of race.

A fourth conclusion centers on the need to recognize that there are levels of abstraction when conceiving race's social significance. Researchers need to state clearly when the conceptualization is intended a social structural one and when the conception is a social psychological one. Indeed, within each of these levels, but especially the social psychological realm (because the efforts at addressing conceptualization and measurement issues surrounding race have at least started), researchers need to unconfound closely defined concepts. We, of course, are recalling the confusion in studies of identity that confound race identity, race consciousness, cohesiveness, and racial self-esteem.

Finally, the above discussion leads to a conclusion that underlies all others. We have too much conception for too little perception. Immanuel Kant, in his Critique of Pure Reason (1781) says it best: "perception without conception is blind, while conception without perception is empty." Kant's observation alerts us to the reality, and significance, of the conceptual confusion that surrounds race as an analytic concept. One perception, one piece of data — knowing a persons' racial category (whether self identified or used as a proxy for assumed social structural circumstance) — is the

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basis for a myriad of alternatively used interpretations as to what this information means. This tendency has led to the ambiguity of a central concept for analytically capturing the obvious group boundary setting processes in a society surrounding phenotypic differences. Most important, this ambiguity has resulted in a literature that is essentially noncumulative, atheoretical, and largely non-empirical. In other words a circumstance has been created where scientific work on a clearly socially significant concept is threatened.

How do we now respond to this state of affairs? What solutions can we begin to chart as a way out of this quagmire? Kant's observation points the way to respond to this query. Researchers need to give serious attention to the measurement of race. Reducing the measurement error associated with measuring race needs to become a central concern in all observations about race's effect.

Measurement, of course, is the assignment of numbers to observations, according to rules. For too long the conceptualization and measurement of race's significance has been locked on simply categorizing the observations made. Numbers are assigned simply to stand for the category, the racial category, to which a person belongs. This is measurement of the crudest sort, if it is measurement at all (see Duncan, 1984). To observe only at a categorical level prevents the possibility of seeing, per person, the specific meanings (in the case of identity) or actual social structures (attitudes/laws/customs/social organizations) for which the category stands. To assume, but not observe, each person's actual circumstance creates error in measurement. Measurement error inflates a variable's variance, leading to biased, often attenuated, coefficients when studying race in relation to other variables. Thus, finding race to offer little as an explanatory variable, we reason, potentially erroneously, that its importance is minimal. This is a serious matter. To conclude, say, in social or health care delivery that race is inconsequential, and then to proceed — policy-wise or programmatic-wise — as so, touches the lives, the well-being, of numerous people.

How do we begin to ensure better measurement of race? The review of sources for the disjunction between conception and measurement suggests the need to recognize, and provide for, multiple, unconfounded (unidimensional) definitions or dimensions of race related structures and meanings, along with multiple indicators per dimension, plus a concern for reliability of the data gathered using these indicators.

Measuring unidimensional conceptions of race's significance would seem a first step. We can suspect, simply by virtue of the rich conceptualization attributed to racial categories, that race is a multi-dimensional concept. Thus, while Landrine and Klonoff (1996) attribute distinctive African American outcomes to their cultural distinctiveness, Ogbu (1986) attributes distinctive African American joblessness to their minority status. Likely, distinctive black outcomes reflect both culture and minority status.

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Each constitutes a separate social structure (or source for meanings in the case of identity), each needing multiple indicators to tap its full domain of content. Indeed, Manuel's (1982b) exploratory factor analysis of 45 single item indicators of race and ethnicity's possible meanings for people suggests that there may be sub-sources of sources (i.e., factorial sub-dimensions) of identity. Manuel, for example, named two factors both related to perceived discrimination: "identity as a perception of lifelong victimization by social injustices," and "identity as a perception of current victimization by social injustices."

Measurement error would be reduced further if, within each dimension of what race means, we additionally ensured that individual differences are observed. Can we easily assume that all persons who acknowledge membership in a racial category, or live life in a highly racially stratified census tract, have experienced race related discrimination or similar levels of race discrimination? People experience more or less discrimination or subcultural infusion by virtue of their racial group. And, when we once allow for the measurement of individual experience, we quickly appreciate the need for multiple indicators. Thus, while I may not be able to report to an interviewer that I have been discriminated in housing, I may strongly feel that I have received poor quality medical care by virtue of my race.

Finally, all measurement should report the reliability of the measures. The questionable reliability of categorical data on race has been well documented. Williams and Collins (1995) cite evidence, for example, showing that a third of the U.S. population reported a different racial or ethnic status over the course of a year. We have said that unreliability of measurement attenuates the relationship of race studied in relation to other variables. The potentially biasing effects of measurement error must encourage us to apply methods that give attention to measurement. Thus, more attention must be given to modeling multiple indicators of race, or its hypothesized effect, inside the equations and models that we test. Ideally, these tests should be completed in a structural equation framework, where coefficients from the equations are available to express not only the importance of effects of the postulated causal or structural linkages, controlled for measurement error, but also the importance (or our lack thereof) of measurement related linkages.

Coefficients of measurement error in race, and this error relative to the error in variables studied in relation to race, can help quantify the success of untangling what now is nothing short of a bundled mass of chaotic conceptualization. At the core is a muddled, vacuous, unscientific concept — whose correlates, after decades of research, remain unclear. When, as in the case of the study of the sociology of African American aging, we find ourselves asking the same research questions, in large part, asked by DuBois (1909) in the early 1900s, we need to ask ourselves whether part of the problem is the conceptualization and measurement of the central concept with which



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we're working.

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