

Perspectives on Racial Phenotypicality Bias

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This article reviews research examining racial phenotypicality bias—within-category stereotypes, prejudice, and discrimination based on race-related phenotypic characteristics of the face. A literature review of research examining skin tone bias, drawing largely from work examining perceptions of Blacks in the United States, reveals that individuals with features typical of members of their racial category are perceived and treated more negatively by social perceivers. Furthermore, this treatment has broad implications for social status and health. Despite this evidence, the tendency to attend to and use within-race variation in phenotypic appearance has been overlooked in social psychological models of impression formation. However, several theoretical frameworks have recently been proposed to explain the role of phenotype-based expectancies in social representation and judgment. Drawing on the strengths of each perspective, a rudimentary model of racial phenotypicality bias is proposed. This analysis suggests that future examinations guided by the current framework (or similar others) can complement existing evidence toward a greater understanding of the role of phenotypic variation in social perception.

Many of us are familiar with vivid examples of racial bias—negative treatment exhibited toward various individuals as a function of racial category membership. Generally, this bias reflects a negative disposition toward non-White individuals. At its core, racial bias stems from the idea that White Eurocentric phenotypic characteristics (e.g., lighter skin and eye color, longer and straighter hair, narrower nose, and thinner lips) are preferable to features toward the other end of the continuum (e.g., darker skin color, kinkier hair, broader nose, fuller lips). As a consequence, White and non-White members of many societies are exposed to this ideal and adhere to it in their evaluations of themselves and others under many circumstances. A great deal of research in social psychology has explored the antecedents and consequences of race-based stereotyping, prejudice, and discrimination (Brigham, 1971; Fiske, 1998; Hamilton, 1981). This research has demonstrated the important role of racial categorization in social perception. The phenotypic facial characteristics we possess determine the racial category memberships that are ascribed to us. These memberships have implications for interpersonal thoughts, feelings, and behavior (Fiske, 1998; Fiske & Taylor, 1991; Hamilton, 1981).

As the criterion for racial group membership, perceived phenotypic variation across individuals plays an extremely important in social perception. But our understanding of this role may be incomplete. A number of investigations have examined the possibility that within-race variation in phenotypic appearance may have consequences for social perception beyond the “mere” determination of racial category membership. These investigations suggest that interpersonal outcomes are also based on the extent to which an individual’s physical facial characteristics resemble what is believed to be typical of a racial category. Racial group members whose appearance most closely resembles our representation of the “typical” category member are more likely to be viewed through the lens of the category stereotypes and evaluations. This phenomenon could be termed *racial phenotypicality bias*.

Using the literature as a barometer, most social psychologists seem unfamiliar with incidents of phenotypicality bias distinguishing members of the same racial category. In the past, the idea that within-category variation in physical features could have a meaningful influence on race perception had been either ignored or rejected in the development of social psychological theory governing person perception. However, a glance beyond the disciplinary boundary reveals an existing and expanding body of historical, anthropological, sociological, and medical evidence indicating that within-race phenotypic variation makes a significant contribution to social perception. The lack of attention from social psychological theory is somewhat surpris-

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ing given that this approach has provided a number of useful insights on racial stereotyping, prejudice, and discrimination. Similar ideas have been explored with respect to gender, suggesting that men described as having more “masculine” appearance and women with more “feminine” appearance more closely resemble their respective category stereotypes (Deaux & Lewis, 1984). However, traditional social psychological perspectives fail to account for the consequences that variation in racial phenotypic appearance has for the interpersonal and societal outcomes of others.

The following review of research exploring racial phenotypicity bias suggests that the ways that social psychologists have thought about racial stereotyping in the past can be elaborated by considering racial phenotypicity. The review begins with a consideration of historical and empirical evidence providing perspective on the scope of the phenomenon. This evidence describes a long history of discrimination and conflict, the existence of damaging, negative stereotypes, and measurable disparity in societal status among individuals as a function of phenotypic appearance—within racial categories. The similarity to existing disparities between racial groups is striking, suggesting the usefulness of a social psychological perspective. This is followed by discussion of several theoretical perspectives that have been offered to explain various aspects of racial phenotypicity bias. These approaches offer suggestions for a rudimentary integrative framework that can account for the existing data regarding the role of racial phenotypicity in social perception. Finally, directions for future research that may be useful toward exploring the nature and impact of racial phenotypicity bias are discussed. Although multiple racial and ethnic groups are considered, the review is skewed heavily toward research regarding Black Americans because this group has been a major focus of attention. Importantly, the evidence reviewed here covers only the social perceiver’s viewpoint. Several investigations that have considered the target’s perspective are outside the scope of the current goals and therefore are not covered (for a review, see Brown, Ward, Lightbourn, & Jackson, 1999).

A Brief History of Racial Phenotypicity Bias Research

Phenomena falling under the rubric of racial phenotypicity bias have been labeled *Afrocentric bias* (Blair, Judd, Sadler, & Jenkins, 2002), the *bleaching syndrome* (Hall, 1994, 1995), *colorism* (Okazawa-Rey, Robinson, & Ward, 1987; Russell, Wilson, & Hall, 1992), *perceptual prejudice* (Livingston & Brewer, 2002), *phenotyping* (Codina & Montalvo, 1994), *skin color bias* (Hall, 1998), *skin tone bias* (Brown et al., 1999; Maddox & Gray,

2002), and *subgroup prejudice* (Uhlmann, Dasgupta, Elgueta, Greenwald, & Swanson, 2002). All of these terms reflect differential attitudes, beliefs, and treatment of individuals based on variation in phenotypic characteristics of the face traditionally associated with particular racial categories. Some of these terms emphasize skin color or tone among those features, reflecting an assumption by the researchers that skin tone (as opposed to variation in other features of the face) is the most salient or important dimension on which distinctions among group members may be made. Accordingly, skin tone is often the only phenotypic variable measured. Other terms do not reflect assumptions concerning the primacy of skin tone. Researchers adopting these terms tend to use global measures of phenotypic appearance. In the following review, terms reflect the specificity of the measures that were used.

Historical and Anecdotal Accounts

Historical and anecdotal accounts of skin tone bias among Black Americans abound (Drake & Cayton, 1945; Frazier, 1957; Parrish, 1944; Russell et al., 1992).¹ In general, these episodes suggest that the influence of skin tone was widespread, extending to many areas of life experience and achievement. Early historical evidence suggests that both Blacks and Whites in the United States exhibited bias based on skin tone as early as the slavery era. White Eurocentric facial features in Blacks were seen as evidence of White ancestry, leading to inferences of racial superiority (Russell et al., 1992). After the abolition of slavery, lighter skin provided better social, educational, and economic opportunities (Neal & Wilson, 1989; Russell et al., 1992). During this time, employment and educational opportunities were finally becoming available for all Blacks, but the intragroup manifestation of skin tone bias became more evident. All-Black schools and social organizations used a variety of methods to weed out undesirable applicants as a function of skin tone. Typically, these methods sought to exclude darker Blacks from positions of higher status, thus maintaining the social, educational, and economic distance between Blacks with light and dark skin (Hall, 1992; Maddox & Gray, 2002; Russell et al., 1992).

¹Because most of the empirical research has focused on Black Americans, I chose to reflect that same focus in the following review by first considering the historical context in which skin tone biases toward Blacks developed. Although a few studies that have examined members of other racial categories are considered, their racial histories in the United States are not elaborated here. I suggest that these histories share a similar theme—that of racial discrimination in the United States. However, one should keep in mind that a consideration of the unique histories of these groups may be important toward developing a comprehensive understanding of the phenomenon.

Empirical Accounts: Evaluations and Beliefs

In general, people have exhibited a preference for lighter skin and Eurocentric facial features in their mates, friends, acquaintances, and, at times, even themselves. Lighter skin tone is preferred to darker skin tone in general (Livingston, 2001; Livingston & Brewer, 2002; Porter, 1991; Seeman, 1946) and in close relationships (Averhart & Bigler, 1997; Bond & Cash, 1992; Hill, 1944; Robinson & Ward, 1995; Ross, 1997). Ross investigated Black college students' attitudes toward dating and mate selection. Men were more likely to prefer lighter skinned mates in dating and marriage. Bond and Cash found that 70% of their Black college student participants indicated that they thought that men preferred lighter skin tone in their mates.

People also tend to associate more positive personality traits to those with light skin, and negative characteristics to those with dark skin (Anderson & Cromwell, 1977; Bayton & Muldrow, 1968; Blair et al., 2002; Maddox & Gray, 2002, Study 2; Marks, 1943; Sciara, 1971, 1983). Anderson and Cromwell surveyed Black teenagers about their beliefs concerning positive and negative traits that correspond to individuals having very light, light-brown, dark-brown, and black skin. Results showed that light-brown skin was associated with positive characteristics (e.g., the prettiest skin, the smartest girl, the children father likes best). Black skin was associated with more negative characteristics (e.g., the person one would not like to marry, the color one would prefer not to be, the dumbest person).

Averhart and Bigler (1997) examined Black children's memory for stereotype-related information about light- and dark-skinned Blacks. These participants were read stories that included light- and dark-skinned Black characters paired with stereotypic and counterstereotypic traits and occupations. They found that children were more likely to remember stories in which characters were portrayed in stereotype consistent ways (e.g., light-skinned Blacks with positive traits and high-status occupations; dark-skinned Blacks with negative traits and low-status occupations). Similar evidence was found in White participants' stereotyping of faces as a function of the degree to which faces were perceived to reflect Afrocentric physical features (Blair et al., 2002). Further evidence comes from the fact that we may be explicitly aware of cultural stereotypes distinguishing Blacks as a function of skin tone. Maddox and Gray (2002, Study 2) found that both Black and White participants more closely associated darker skinned Blacks with the negative cultural stereotype associated with the representation of Blacks.

Other investigations, although not focused directly on skin tone, show that phenotypic variation also con-

tributes to implicit evaluations. Highly prototypic Black faces were associated with more negative implicit evaluations than less prototypic faces (Livingston & Brewer, 2002). Furthermore, highly prototypic Black faces primed implicitly led to more negative judgments of a race-ambiguous target than less prototypical Black faces (Livingston, 2001). Uhlmann et al. (2002) found implicit preference for less typical Hispanic faces over more typical Hispanic faces among both light-skinned and dark-skinned Hispanic participants. Furthermore, these beliefs may be exaggerated as a function of the cultural context in which they are measured. Uhlmann et al. found that implicit preferences for less phenotypic faces was stronger among Chilean Hispanics compared to Hispanics in the United States. However, individuals of different racial categories residing in the same culture may tend to show similar patterns (Maddox & Gray, 2002, in press).

Stereotyping and prejudice based on phenotypic appearance are not always revealed empirically (Atkinson et al., 1996; Secord, 1959; Secord, Bevan, & Katz, 1956). Atkinson et al. found no differences in Black and White clinicians' diagnoses, trait ratings, or feelings toward a hypothetical light- or dark-skinned client. These findings suggest the existence of factors limiting the expression of phenotypicity biases.

Empirical Accounts: Life Experiences

Sociological and anthropological research corroborates historical accounts, showing that lighter skinned Blacks enjoy higher status in society than darker skinned Blacks (Edwards, 1959; Frazier, 1957; Freeman, Ross, Armor, & Pettigrew, 1966; Hill, 2000; Hughes & Hertel, 1990; Hunter, 1998; but see Kreiger, Sidney, & Coakley, 1998; Ransford, 1970; Seltzer & Smith, 1991). These findings have led some authors to suggest that the socioeconomic status gap between light- and dark-skinned Blacks in the United States is as large as the gap between Whites and Blacks (Hughes & Hertel, 1990; Hunter, 1998; Keith & Herring, 1991). In a study typical of this approach, Keith and Herring examined data from the 1979–1980 National Survey of Black Americans and found that Blacks with lighter skin had higher educational attainment, occupational status, and income levels than Blacks with darker skin. Furthermore, these relationships remain when controlling for many other factors that would likely create or augment status differences such as parents' socioeconomic status, gender, region of residence, urbanicity, age, marital status, and inheritance of wealth. Similar patterns of social and economic stratification are evident among Mexican Americans (Arce, Murguía, & Frisbie, 1987; Relethford, Stern, Gaskill, & Hazuda, 1983; Telles & Murguía, 1990).

These findings suggest a continuing influence of racial phenotypicity bias on interpersonal outcomes

that mirrors the impact of racial bias. Compared to Whites, Black Americans experience greater racial discrimination and are disadvantaged on many indicators of morbidity, mortality, and access to health care (Dressler, 1993). Similarly, darker skinned Blacks are more likely than lighter skinned Blacks to report having experienced discrimination (Edwards, 1973; Keith & Herring, 1991; Klonoff & Landrine, 2000). Klonoff (2000) found that darker skinned Blacks reported more racial discrimination in the past year and over their lifetimes. Darker skinned Blacks were also more likely to perceive the racism they experienced as stressful. Studies suggest that darker skin tone is associated with higher diastolic and systolic blood pressure, perhaps due to stress resulting from a higher incidence of discrimination (Gleiberman, Harburg, Frone, Russell, & Cooper, 1995; Harburg, Gleibermann, Roeper, Schork, & Schull, 1978). These findings are consistent with a biopsychosocial model that conceptualizes perceived racism as a significant environmental stressor for Black Americans resulting in a variety of negative physical and psychological health outcomes (Clark, Anderson, Clark, & Williams, 1999). Similarly, dark-skinned Chicano men born in the United States show higher levels of depression compared to their lighter counterparts (Codina & Montalvo, 1994).

Summary

The evidence reviewed here suggests the broad scope and impact of racial phenotypicity bias. Within-race variation in skin tone and other aspects of phenotypic appearance have a significant impact on our beliefs, feelings, evaluations, and treatment toward others with consequences for their interpersonal, economic, and physical health outcomes. As phenotypicity moves away from a White Eurocentric norm, negative evaluations and outcomes increase. When considering the scope of the phenomenon, several other tendencies are notable. First, the preference for lighter skin exists when evaluating both African and Hispanic Americans. Second, this bias is revealed in the perceptions of adults and children. Third, phenotypicity biases are not limited to ingroup members' evaluations of each other—racial outgroup members are also susceptible. Fourth, phenotypicity bias seems to be reflected in both implicit and explicit evaluations of others. Fifth, perceived typicality of features is strongly related to the degree to which category stereotypes and prejudices are applied to a social target. Finally, there are occasions when racial categorization overrides more fine-grained distinctions based on phenotypicity. From an examination of the literature, these findings elude the grasp of traditional perspectives in social psychology. The next section considers the role of phenotypicity in traditional models of social representation and judgment.

The (Limited) Role of Phenotypic Variation in Social Psychological Theory

Evidence suggests that racial phenotype-based perceptions influence the social, physical, and psychological outcomes of others. This suggests that a framework of social judgment involving racial categorization, stereotyping, and prejudice derived from social psychological theory may be useful in understanding racial phenotypicity bias. However, models of category representation and impression formation have placed no particular emphasis on the role of within-race variation in phenotypic appearance. Still, this fact does not preclude these models from providing some perspective on the role of phenotype in social perception.

Traditional Models of Social Representation and Judgment

There are multiple social psychological models that can describe the implications of a particular mental representation for judgments about social targets. Many of these (e.g., Bodenhausen & Macrae, 1998; Kunda & Thagard, 1996) have their bases in two extremely influential models of impression formation. The dual-process (Brewer, 1988) and continuum models (Fiske & Neuberg, 1990), of impression formation have been compared, contrasted, and extensively tested in the literature (Brewer & Feinstein, 1999; Fiske, Lin, & Neuberg, 1999). Although theoretically distinct, both provide a great deal of explanatory power across the range of studies examining person perception. The similarities among the two models, particularly with respect to category-based processing, provide the focus for this discussion. Each model begins with a stage of initial identification of the social target's attributes that act as cues to salient category dimensions such as age, sex, and race. If importance to self or motivation to process is low, subsequent categorization (or recategorization) occurs. Through a comparison of the target attributes and a relevant mental representation, perceivers attempt to establish some degree of fit between the target and the representation, with a bias toward determining subcategory membership. Once satisfactory fit is established, this representation will guide the processing of information about and behavior toward the target. If fit is sufficiently poor, perceivers will individuate the target, essentially developing a unique representation.

Traditionally, discussions of the role of skin tone in stereotyping, prejudice, and discrimination have assumed that skin tone is simply one of many physical attributes that contributes to the determination of racial category membership. Subsequently, racial category-based stereotyping potentially determines the infer-

ences and judgments made about an individual. This idea was explicit in the writings of some theorists. Take, for example, the model of stereotype change proposed by Rothbart and John (1985):

By extension, individual Blacks may differ as to how prototypical they are as examples of Black People. What would be the criteria for determining the goodness of fit of an individual to a social category such as Blacks? We suspect prototypicality for that group is not strongly related to variations in "defining" attributes, such as skin color, but rather to stereotypic attributes already associated with the category. (pp. 89–90)

For these theorists, typicality of Blacks is determined by personality traits and behavior rather than variation in physical attributes such as skin tone. Fiske and Taylor (1991) expressed a similar belief in their comprehensive and influential integration of the social cognitive literature. "Once a person is categorized as Black or White, male or female, young or old, the stereotypic content of the schema is likely to apply regardless of how much or how little the person looks like the typical category member" (p. 121). A similar sentiment was expressed by Secord (1958), who stated that "as long as an individual is categorized as a Negro, his place on a continuum of Negro-White features makes little difference in impressions formed" (p. 303). Thus, skin color variation was considered to be of great importance to racial categorization. But its contribution to representation and judgment beyond categorization was not deemed meaningful.

Seminal Investigations

The neglect of the role of within-race variation reflected in social psychological research and theory is based on early experimental research that failed to find a relation between phenotypic features and stereotyping. Secord et al. (1956) were interested in whether White participants associated stereotype-related personality traits to dark- and light-skinned Blacks to different degrees. Participants were asked to rate photographs of Black and White men on personality and physiognomic trait scales. Secord et al. predicted that categorization by race, not variation in features, would determine stereotyping. As predicted, they found that the presence of Eurocentric phenotypic features in photographs did not reduce racial stereotyping. Apparently, White participants did not make distinctions based on phenotypic features and lightness or darkness of skin tone: Once a target was categorized as Black, he was stereotyped according to that categorization.

Secord (1959) conducted a follow-up experiment to address the possibility that the influence of phenotypic variation in Blacks may have been masked by the presence of Whites in the rating task. In this study, half of

the participants were assigned to make ratings of the Black photographs alone. The other half were assigned to make ratings of those photographs, as well as photographs of Whites interspersed among the Blacks. In comparing these two groups, there were no differences in stereotype use based on the skin tone of the Black targets. The absence of the White target contrast category did not facilitate greater within-category differentiation of Black targets, supporting the previous evidence that skin tone variation was not meaningful to White observers.

The conclusions of these investigations reflect the perceived role of phenotypic variation in influential social psychological theories of category representation and impression formation. Although this may have been the dominant perspective, it was not necessarily ubiquitous. Zebrowitz (1996) was not specifically concerned with racial phenotypic variation in discussing her ecological theory of social perception and its relation to stereotyping. Yet, she explicitly supported the idea that "physical qualities can serve as a basis for social impressions in the absence of explicit categorization processes, and that variations in physical qualities should lead to within-category variations in social impressions" (p. 109, Footnote 1).

Racial Phenotypicality Revisited

The Secord investigations are unique and important in their focus on phenotypic variation and stereotyping of Blacks. However, their conclusions stand in contrast to the majority of published empirical research since that time documenting various consequences of racial phenotypicality bias. The conclusions drawn from these seminal investigations have been critiqued elsewhere and are not repeated here (Blair et al., 2002; Maddox, 1998; Zebrowitz, 1996). One example may illuminate a general concern. In the Secord (1959) study, there was evidence that the Black targets with the most Eurocentric appearance were often categorized as White, not Black. After completing the rating task, participants were asked to provide their opinion of racial group membership. The photographs of the three Black targets with the most extreme European features were categorized as White by 33 of 39 participants. Follow-up analyses showed that the participants who thought the person in the photograph was White stereotyped them less than the four participants who thought the person was Black. The article did not clearly state how the ratings of these incorrectly categorized photos of Blacks compared with ratings of White photos, although their similarity is implied. However, it does state that the four participants who categorized those photos as Blacks stereotyped them to the same degree as the most unambiguously Black photograph. Thus, the study as a whole does not address the situation where Blacks of varying skin

tones are spontaneously (and “correctly”) categorized as Black.

Consider an alternative interpretation: When participants were allowed to work with their spontaneous categorizations, many “incorrectly” perceived the photographs to be White and stereotyped them accordingly.² If so, the study does not address the perception of photographs of light-skinned Blacks that are spontaneously categorized as Black. More important, these criticisms call into question the empirical underpinnings of the theoretical discussion outlining a limited role of skin tone in social psychological judgment processes.

Alternative Perspectives on Racial Phenotypicity Bias

The evidence reviewed here suggests that racial categorization does not necessarily imply a terminal stage in processing race-related phenotypic features for social perception and judgment. In light of this growing body of cross-disciplinary evidence, several perspectives have been proposed, or could be applied, to reconcile the divergence of social psychological theory and social reality. These approaches, focusing on the areas of category representation, impression formation, and social judgment, have explored how variation in phenotypic appearance may determine interpersonal treatment and outcomes. This section explores each perspective, describes evidence concerning points of theoretical distinctiveness, and discusses strengths and weaknesses of each perspective in accounting for the available data.

Skin Tone Bias

Theory

Maddox and Gray (2002) proposed that discrimination based on skin tone and phenotypic features can be explained with existing models of category representation (e.g., Brewer & Feinstein, 1999; Fiske et al., 1999). This perspective was not elaborated in that article, so it is described in some detail here.

The primacy of skin tone. This perspective emphasizes the assumption that skin tone is of primary salience and importance among the many phenotypic features used to determine racial category membership. The important role of skin tone is supported by the language choices in the Black and Hispanic com-

munities. Black Americans who display the tendency to use phenotype to differentiate within a racial category are sometimes referred to as “color struck,” “color conscious,” or said to have a “color complex” (Okazawa-Rey et al., 1987; Russell et al., 1992). These terms suggest that variation in skin tone is primarily important. Blacks often use terms such as “light-skinned” and “dark-skinned” to describe one another (Maddox & Gray, 2002; Russell et al., 1992). This is also true of Hispanics, who use the terms “blancos” and “morenos” to distinguish between lighter and darker category members (Uhlmann et al., 2002). These terms emphasize skin color, but also capture perceived correlations between skin color and other features. The general category “race” and specific group labels like “Black” and “White” act as proxies not only for color, but also for dimensions of the nose, hair, and lips. Similarly, labels such as “light-skinned,” “blanco,” “dark-skinned,” and “moreno” bring to mind individuals who differ not only in skin tone but also in other physical features.

Considering phenotypicity. The model begins with a stage of initial identification of the target’s attributes (e.g., phenotypic features, clothing, behavior) that act as cues to salient category dimensions such as age, sex, and race. Perceivers compare these attributes to a salient mental representation (e.g., race) with the goal of determining goodness of fit, with a bias toward determining subcategory membership. Once satisfactory fit is established, this representation will determine the processing of information and behavior. Targets whose physical characteristics are more typical of the category will be more likely to be viewed through its conceptual lens. Less typical targets are also viewed through that lens, but with less conceptual clarity. In other words, the same category stereotypes and prejudices will be applied, but to a lesser extent. If fit between the racial category and the target is sufficiently poor, perceivers will individuate the target, essentially developing a unique representation. Cognitive psychologists have long recognized the important role of physical typicality in object category representation (e.g., Medin, 1989). Understandably, social psychologists have focused on the role of behavioral typicality in past formulations (e.g., Rothbart & John, 1985). This model suggests an integration of the two emphases—racial phenotypicity is also an important contributor to the process of social representation and judgment. The degree of category fit increases as a person’s phenotypic appearance becomes more typical of the racial category representation. Assuming that darker skin tone is more typical of the representation of Blacks, the darker a Black person’s skin tone, the more likely he will be viewed through the lens of the cultural stereotype (i.e., characteristics associated with the representation of Blacks). Because the cultural stereotype

²Curiously, when these same photographs were labeled as Black, the labels did not facilitate use of the stereotype associated with Blacks. This finding contradicts similar research examining the influence of ethnic labels (e.g., Razran, 1950).

of Black Americans is predominantly negative, Blacks should also be perceived more negatively as skin tone darkens.

Phenotype-based subcategories. In addition to suggesting a linear relation between goodness of category fit and stereotyping, the skin tone bias model also suggests the existence of salient, phenotype-based subcategories. In traditional models, perceivers use target attributes to establish fit with meaningful, salient subtypes of the superordinate category based on social roles and occupational status (Devine & Baker, 1991) or stereotypicality of their behavior (Rothbart & John, 1985). Subtyping, the clustering of individuals by whether they confirm or disconfirm the stereotype, has been linked to the perception of typicality of group members (Maurer, Park, & Rothbart, 1995; Park, Wolsko, & Judd, 2001). In this model, subtyping based on phenotype may similarly occur through recategorization processes (cf. Fiske & Neuberg, 1990). Less phenotypical targets are more likely to be subcategorized. As a result, the category representation of Blacks can be differentiated by various subcategories of group members based on their phenotypic appearance.

Essentialist theories of racial category membership. Beliefs about skin tone and physical features are proposed to originate from our naïve biological theories about racial category membership. Our current system of racial classification was developed largely based on perceived variation in skin color and other physical dimensions of the face and body (Gould, 1994). However, genetic and anthropological research suggests that any understanding of human racial categories as a biological certainty is flawed. More accurately, racial categories arise as a function of social construction processes (American Anthropological Association, 1998; American Association of Physical Anthropologists, 1996). In part because of our unchallenged education concerning the biological bases of race, this social construction of race has a very strong lay theoretical basis in biological thinking. Coupled with any knowledge of distinct cultural practices, people are disposed to believe that external physical and behavioral differences between groups are correlated, each reflecting stable genetic differences (Eberhardt, Dasgupta, & Banaszynski, 2003; Haslam, Rothschild, & Ernst, 2002; Hirschfeld, 1996; Rothbart & Taylor, 1992). This idea is consistent with theories and evidence in the cognitive literature suggesting that implicit causal theories are an important component of many of our category representations (Keil, 1989; Medin, 1989; Medin & Ortony, 1989). Implicit causal theories represent perceiver's beliefs about causal relations among a target's attributes. From an essentialist or implicit causal theory perspective, people are likely to assume that increasing darkness of skin is a reflec-

tion of a person's genetic makeup and/or cultural heritage. In the United States, legal definitions to determine Black racial category membership hinges on knowledge of a person's Black racial ancestry. Historically, this was known in the South as the "one drop rule," meaning that a single drop of Black blood was sufficient to make someone Black (Davis, 1991). A person with dark skin tone might be assumed to have two Black parents, whereas light skin tone may suggest one Black and one White parent. These beliefs could influence both biological and social notions of race. A biological construction of race would lead a perceiver to assume that someone with darker skin tone is more "purely" Black. A social construction of race may lead another perceiver to infer that being raised by mixed race parents might dilute a "purely" Black cultural upbringing. In other words, if one drop of Black blood makes you Black, two drops makes you Blacker, both genetically and culturally.

Evidence

Existence of phenotype-based subcategories.

The category-based model also suggests that degree of physical typicality is associated with the formation of subcategories. Maddox and Gray (2002, Study 1) examined the antecedents of skin tone-based stereotyping using the category confusion paradigm (Taylor, Fiske, Etcoff, & Ruderman, 1978). The results of the memory task revealed that participants made more within-skin tone than between-skin tone errors, suggesting that they attended to, encoded, and used the skin tone of the discussants in making their statement assignments. Furthermore, contextual factors may operate to make skin tone more or less salient. Guided by the model of social category salience proposed by Blanz (1999), which considers both person and contextual factors, Maddox and Gray (in press) used the category confusion paradigm to investigate contextual influences on the salience of skin tone-based subcategories. Two experiments demonstrated that a manipulation of issue relevance during a group discussion among light- and dark-skinned Blacks enhanced the category salience of skin tone, revealed in the pattern of within- and between-category errors. Discussion topics relevant to the racial politics of skin tone (race relations in the United States) led to increases in the salience of skin tone compared to neutral topics (potential leisure activities or environmental issues). These findings should be interpreted with caution. Evidence for within- and between-category confusions does not provide direct evidence of categorization (or subcategorization) because participants were never asked to categorize the photographs. Nonetheless, there are reasons to believe that these data have implications for the role of skin tone in the mental representation of Black Americans. The confusion measure used here has been

found to be a reliable indirect measure of subtyping. A similar pattern of confusion errors occurs when participants are given explicit instructions to sort individuals using a subtyping process (Park et al., 2001).

Casual role of skin tone. Simply asking participants to consider Blacks described as light-skinned and dark-skinned is sufficient to elicit differences in perceived cultural stereotypes (Maddox & Gray, 2002, Study 2). As for the causal role of skin tone in social perception, encoding and use of skin tone (Maddox & Gray, 2002, Study 1; in press) occurred in the context of efforts to manipulate skin tone while holding constant other facial characteristics that may naturally covary with skin tone. In those studies, the skin tone of the discussants was manipulated digitally across multiple replications. However, no direct evidence for the causal role of skin tone has been offered in studies examining impression formation and judgment of individuals belonging to the same racial category. Atkinson et al. (1996) used a digital manipulation of skin tone, yet found no differences in Black and White clinicians' diagnoses, trait ratings, or feelings toward a hypothetical light- or dark-skinned client. Dixon and Maddox (in press) also used a digital manipulation of skin tone and race among a varied-race sample of participants. There were no differences in impression judgments as a function of skin tone. They did find that a brief exposure to a photo of a dark-skinned Black perpetrator during a crime story led to more emotional discomfort about the story than exposure to a White perpetrator associated with the same story. No differences surfaced when comparing dark Black and light Black perpetrators, or when comparing light Black and White perpetrators. Dixon and Maddox suggested that compared to the light-skinned Black perpetrator, the dark-skinned perpetrator achieved a certain threshold to activate category stereotypes associating Blacks and criminality. Bolstering this idea was the finding that the aforementioned results distinguishing dark Black and White targets occurred only among heavy television news viewers who are more likely to be exposed to Blacks as criminals (Dixon & Linz, 2000). So, although there is evidence that supports the causal role of skin tone in category representation studies and priming of emotional concern, there is no existing support for its causal role in impression judgments. Future evidence of this nature is crucial to determining just how important skin tone is for racial phenotypicity bias.

Implicit causal theories. Only one study has attempted to delineate the importance of various phenotypic features for racial categorization. When asked, participants emphasize skin color among other aspects of phenotypic appearance in determining racial group membership (Brown, Dane, & Durham, 1998). Others have attempted to measure individual differences among

those who link phenotypic appearance and racial category membership to stable genetic or cultural causes. Livingston and colleagues have found more extreme differences in automatic evaluation (Livingston & Brewer, 2002) and susceptibility to priming effects (Livingston, 2001) for low- versus high-prototypic Black faces among individuals who scored high on a scale measuring reliance on perceptual cues in impression formation. Eight of the nine items on this scale reflect phenotypic qualities (facial and vocal) and half of those items refer to race or ethnicity. Thus, this scale seems to include some consideration of the race theories of the respondents suggesting the importance of lay theories of race in social perception. However, other research has failed to find a strong relation between essentialist thinking and racial prejudice (Haslam et al., 2002). It may be the case that the consideration of racial phenotypicity is important in linking essentialist beliefs with racial stereotyping and prejudice.

Afrocentric Bias

Theory

Blair et al. (2002) also proposed that traditional models of social perception fail to recognize the influence of within-category phenotypic variation. This model suggests that the presence of Afrocentric features contribute to social perception above and beyond that of category-based processing. In this view, a process of reverse generalization characterizes stereotyping and prejudice directed toward individuals as a function of race-related phenotypic features. Racial phenotypicity bias represents a direct linkage between Afrocentric appearance and cultural stereotypes about Blacks. This association is created and fortified through the repeated pairing of dark skin tone, broad noses, full lips, and short, tightly curled hair with the stereotypes about the group members who possess those features. As a result, those individuals who exhibit Afrocentric features, regardless of group membership, may come to be seen through the lens of the Black American stereotype.

Evidence

Unique contributions of category- and feature-based processes. Blair et al. (2002) examined the role of Afrocentric features and perceived racial typicality in stereotyping of Blacks and Whites. In the first study, White participants were asked to rate photographs of Black and White men for the presence of Afrocentric facial features (dark skin, broad nose, full lips, and coarse hair). Across three additional studies, separate groups of participants rated subsets of these photographs for their degree of fit with descriptive scenarios that varied in their valence and stereotypicality of traits distinguishing Blacks and Whites. In addition,

the presence of Afrocentric features contributed to stereotyping and prejudice even when the effect of category accessibility was controlled. This finding suggests that both category-based process and feature-based processes are useful in explaining judgments based on racial phenotype.

Direct linkage between Afrocentric features and cultural stereotypes. The results of Blair et al. (2002) consistently revealed that positive and negative stereotyping of photographs of both Blacks and Whites was positively correlated with the presence of Afrocentric features. Stereotyping of Whites on stereotypically Black personality traits must reflect a direct linkage between those features and the traits of the group most closely associated with them. However, the process linking features to traits seems to be asymmetrical. The descriptions that were used in this investigation were constructed from previous investigations that contrasted stereotypic conceptions of Blacks relative to Whites. Thus, descriptions that were counterstereotypic of Blacks were stereotypic of Whites and vice versa. Blair et al. reported that ratings of Eurocentric features in White faces did not predict stereotyping of Whites in Study 3. It is not clear why the presence of Eurocentric features in Black and White faces does not predict stereotyping, but the presence of Afrocentric features does.

Perceptual Prejudice

Theory

Livingston and Brewer (2002) proposed a theory that governs automatic responses to faces of Blacks. Similar to the Afrocentric bias perspective, this theory suggests that the influence of phenotypic variation is not mediated through conceptual knowledge about Blacks. Instead, the influence occurs through cue-based, affective responses to the physical features of the face. This perspective asserts that faces and the features they possess do not necessarily activate the social categories to which they may belong. According to the dual-process model, the identification stage reflects simple, automatic recognition of perceptual features. Therefore, tasks that measure automatic responses to faces are necessarily cue-based (evaluative), but not category-based (semantic). Automatic evaluations of faces that are highly typical of the category should be more negative than evaluations of faces that are less typical.

Livingston and Brewer (2002) proposed two processes to explain the linkage between high prototypicality and negative evaluations. In the first, they suggest that initially strong prejudices against the racial category as a whole may become dissociated from category-based beliefs and attitudes over time.

Early emotional conditioning of negative affect with Blacks will be less intense as cues to racial category membership become weaker (i.e., less typical). This mechanism suggests that affective information associated with the larger racial category becomes associated with less prototypical members of the racial category. Livingston and Brewer also posited a familiarity-based mechanism for the origins of perceptual prejudice. Unfamiliar stimuli may elicit strong anxiety and discomfort that might be expected to decrease with additional exposure. They suggest that Whites might be more familiar with low-prototypic Blacks than high-prototypic Blacks for several reasons. Whites living in relatively racially segregated communities may get more frequent exposure to positive images of low-prototypic than high-prototypic Blacks through media and entertainment sources. Furthermore, given that skin tone has been demonstrated as a limiting factor in social and economic mobility, Whites might be more likely to encounter low-prototypic (i.e., light-skinned) Blacks than high-prototypical Blacks in occupational and educational settings. Any of these processes would perpetuate an existing tendency to favor low-prototypic over high-prototypic Blacks.

Evidence

Automatic evaluation of low- and high-prototypic faces. In a series of experiments, Livingston and Brewer (2002) presented participants with a sequential priming paradigm that measured affective reactions to Black faces that were high and low in racial prototypicality. In two experiments, automatic evaluative responses indicated negative evaluations of Black faces that were high in racial prototypicality compared to those that were low in racial prototypicality (Experiments 1 & 5). Similar evidence using Hispanic faces in an implicit association task was discussed earlier (Uhlmann et al., 2002).

Failure to activate semantic knowledge. Evidence from another experiment (Livingston & Brewer, 2002, Experiment 3) suggests that skin tone and phenotypic facial characteristics elicit preconscious cue-based processing prior to or instead of category-based processing. Under task goals designed to encourage category activation, participants completed a conceptual judgment task involving stereotype-relevant words instead of the evaluative task used in other experiments. Responses to these words were not affected by a manipulation of racial prototypicality—a finding that suggests semantic category knowledge was not recruited. Although plausible, this point may be subject to some debate. Livingston and Brewer present convincing evidence that automatic categorization and stereotyping does not necessarily occur automatically. But this does not mean that it cannot occur under the right conditions.

The results of Experiment 3 also failed to show evidence of automatic stereotyping based on race. This represents a failure to replicate a number of investigations that have demonstrated that automatic responses to facial stimuli can in fact reflect category-based processing through manipulations of processing goals (e.g., Macrae, Bodenhausen, Milne, Thorn, & Castelli, 1997; Wittenbrink, Judd, & Park, 1997, 2001). This raises questions about the interpretation of the results.

Direct linkage between prototypical features and group-based evaluations. There is no direct evidence that suggests the existence of this linkage. In theory, it is very similar to the feature-trait conditioning process proposed by Blair et al. (2002) where both evaluative and conceptual knowledge become directly associated with physical features typical of Blacks over time. However, the process described here suggests that only evaluative knowledge becomes associated with prototypical features. It is unclear how this process would dissociate affective from semantic knowledge as Livingston and Brewer (2002) suggest.

Increased familiarity with low-prototypic Blacks. Again, no direct evidence exists. Although this mechanism seems plausible, some elements seem counterintuitive. For example, although low-prototypic Blacks have been regarded more positively than high-prototypic Blacks, it seems unlikely that these individuals would be more familiar as a function of mere exposure. Whites are readily exposed to both negative images of high-prototypic Blacks and positive images of low-prototypic Blacks in the media. Whereas educational and occupational settings may also provide disproportionate (and greater) exposure to low-prototypic Blacks, other settings provide disproportionate exposure to high-prototypic Blacks. In addition, low-prototypic Blacks likely make up a smaller proportion of the Black population than those with darker skin tone. Using data collected in large sample studies, one might infer that low-prototypic (specifically light-skinned) Blacks comprise between 14–21% of the Black American population (Hill, 2000; Hunter, 1998; Keith & Herring, 1991; Ransford, 1970). Thus, statistically, it is less likely that anyone will encounter a Black person with lighter skin tone. Furthermore, this mechanism would not be able to explain Black perceivers' preferences for lighter skin tone. Even if Whites may have greater familiarity with light-skinned Blacks, there is no reason to believe that dark-skinned Blacks would also have greater familiarity with light-skinned Blacks.

Physical Attractiveness

Theory

Others have explored the hypothesis that differential outcomes among Black Americans are based on

perceptions of physical attractiveness (Brelaud, 1998; Wade, 1996). Compared to unattractive people, attractive people are generally associated with positive personality characterizations (Dion, Berscheid, & Walster, 1972) with some negative caveats (Dermer & Thiel, 1975). In other words, what is beautiful is good, but self-centered. From this perspective, lighter skin tone and Eurocentric features imply attractiveness, leading to perceptions of higher status, financial success, vanity, lack of sympathy, and arrogance. This explanation suggests that the inferences made about light-skinned persons may reflect attractiveness stereotyping rather than racial stereotyping.

Evidence

Correlation between skin tone and physical attractiveness. Anecdotally, techniques to make physical features less Afrocentric and more Eurocentric such as hair straightening, skin bleaching, colored contact lenses, and plastic surgery are often employed by Blacks and others to augment physical attractiveness. Consistent with anecdotal accounts, recently published data suggested that there is a correlation between perceived attractiveness and skin tone. Using data from the 1979–80 NSBA, Hill (2002) examined ratings of physical attractiveness and skin tone made by the study's Black interviewers. Results indicated that lighter skin tone was related to higher ratings of physical attractiveness for men and women. This relation was strong and monotonic for women; ratings of attractiveness steadily increased from "very dark" to "very light." The relation for men was weaker, but followed the same general pattern. In addition, research has shown that Black and White men, as well as men across various cultures, find women with a more Eurocentric appearance to be more attractive than women with a more Afrocentric appearance (Cunningham, Roberts, Barbee, Druen, & Wu, 1995; Hamilton & Troler, 1986; Martin, 1964). However, empirical evidence for the perceived relation between lighter skin tone and greater physical attractiveness is not uniform. Blair et al. (2002) found the reverse relation in White male and female participants' ratings of photographs of men, possibly indicating divergence in the consequences of phenotypic variation for men and women (Hunter, 1998; Maddox, 1998).

Stereotypes and prejudice as a function of physical attractiveness. Assuming that lighter skin tone is perceived as more physically attractive, perceived attractiveness may explain the evidence favoring light-versus dark-skinned Blacks. In one study, ratings of physical attractiveness were associated with family income levels that were three or more times greater than the poverty level (Hill, 2002). Similar to attractive targets, positive characteristics have also been attributed

to light-skinned Blacks (e.g., Anderson & Cromwell, 1977). The negative characteristics of attractive targets are consistent with historical evidence that suggests that light-skinned Blacks have enjoyed higher status and, adopting a bourgeois attitude, have acted to maintain a status differential through discriminatory practices (e.g., Russell et al., 1992). Despite this evidence, physical attractiveness does not predict racial stereotyping in judgments of faces. Blair et al. (2002) found that ratings of physical attractiveness predicted general evaluation of faces, but not racial stereotyping. Only category accessibility and Afrocentric appearance predicted evaluation and stereotyping. Automatic evaluation effects distinguishing high- and low-prototypic faces reported by Livingston and Brewer (2002) were obtained when controlling for perceived attractiveness of faces, suggesting unique contributions of phenotypicity and attractiveness. Finally, it's not clear that differences in physical attractiveness can explain the magnitude of disparity in social and economic outcomes. Hill (2002) found that, compared to skin tone, perceived physical attractiveness was only weakly associated with educational attainment among Blacks.

The Ecological Perspective

Theory

Zebrowitz and her colleagues (McArthur & Baron, 1983; Zebrowitz, 1996) explored an ecological perspective to social perception. From this perspective, information such as physical appearance, movements, and vocal characteristics provide useful and accurate information about a person's underlying qualities and disposition. These qualities provide us with information about a person's behavioral affordances—characteristics that communicate the boundary conditions governing how stimulus and perceiver may interact. Group stereotypes may be explained by the fact that the information that these stimulus qualities convey can be overgeneralized to other individuals who share those qualities. With respect to skin tone and other aspects of phenotypic appearance, this perspective suggests that variation in these features conveys meaningful information that can be overgeneralized to other individuals as a function of their phenotypic appearance.

Evidence

Zebrowitz (1996) effectively argued that variation in physical appearance, specifically the degree of babyish appearance, can account for the content of a variety of group stereotypes. Although no explicit effort has been made to examine this theory with respect to stereotyping as a function of racial phenotype, it is plausible. One crucial tenet of the ecological theory is that, at their core, these perceptions are also accurate. This remains an open question due to the fact that accu-

racy is rarely addressed in empirical research (Lee, Jussim, & McCauley, 1995) and difficult to measure (Judd & Park, 1993). Thus the plausibility of the ecological perspective rests on future research examining the accuracy of information provided by race-related phenotypic features. But it has certainly been demonstrated that even inaccurate perceptions can have self-fulfilling effects on behavior (e.g., Chen & Bargh, 1997; Word, Zanna, & Cooper, 1974). Determining accuracy may be difficult when considering the (sometimes) self-fulfilling nature of social perception.

Metaphorical Associations

Theory

In contrast to the bottom-up process described by the ecological perspective, other approaches emphasize how existing conceptual knowledge from other domains may determine how we interpret the information provided by facial features in social perception. These approaches have not been specifically examined with respect to racial phenotypicity bias. However, they suggest that our positive associations with lighter colors and negative associations with darker colors map onto our beliefs about individuals with lighter or darker skin tones. Gergen (1967) highlighted cross-cultural evidence suggesting that white and light are usually associated with things good, whereas black and dark are associated with things bad. Zebrowitz (1996) suggested that cultural associations with various colors become transferred metaphorically to our beliefs about racial categories (for a similar argument, see Gergen, 1967; Secord, 1958). This metaphorical overgeneralization perspective is similar to one proposed by Williams, Boswell, & Best (1975), who provided insight concerning the origin of our light and dark color associations. They suggested that these associations stem from the diurnal nature of human beings and our experiences during early childhood. Children's early learning experiences teach them that daytime is associated with clarity and safety, whereas nighttime is associated with obscurity and danger (see also Gergen, 1967; Goldberg, 1973).

Evidence

Color bias and person perception. Anecdotally, the tendency to make discriminations based on skin tone emerges among people of many different ethnicities in the United States, as well as in a number of countries around the world including Japan (Wagatsuma, 1967), Northern Africa (Brown, 1967), South Africa (Legum, 1967), and India (Beteille, 1967). Williams and his colleagues have conducted extensive cross-cultural research that suggests negative connotations with the color black and positive connotations with the color white among children in the United

States, Europe, and Asia (Best, Field, & Williams, 1976; Iwawaki, Sonoo, Williams, & Best, 1978; Williams, Boswell, & Best, 1975; Williams, Morland, & Underwood, 1970). Empirical research by Williams and others also suggests that adults and children in the United States evaluate human figures with black skin or darker black skin tones more negatively than individuals with white skin or lighter black skin tones (e.g., Filler & Williams, 1971; Williams, Williams, & Beck, 1973). Similar evidence comes from doll studies examining children's preferences for lighter or darker skin. These studies usually, but not always, equate skin color with race. In a study typical of this genre, Clark and Clark (1958) found that Black and White children were more likely to show preferences for White dolls and reject Black dolls.³ These approaches can explain evaluative distinctions as a function of skin tone. However, they cannot alone explain differences in the degree to which stereotypes are applied.

Rapprochement

General Conclusions

The perspectives discussed here vary in their ability to account for phenomena associated with racial phenotypicity bias. Although none stands out as a clear front-runner, the existing evidence does not yet warrant elimination of any of the various perspectives from consideration. Each perspective attempts to explain different aspects of racial phenotypicity bias. Each perspective reveals strengths and weaknesses in accounting for the available data. This section considers these strengths and weaknesses, drawing several conclusions from the existing evidence. It next considers a rudimentary theoretical model of racial phenotypicity bias and offers some suggestions for research that may help to illuminate aspects of this model.

Racial Phenotype-Based Stereotyping and Prejudice Exists

Individuals with racial phenotypes that are increasingly typical of a particular racial category are more likely to be viewed through the lens of category-specific beliefs and evaluations. Furthermore, sensitivity to variation in racial phenotype is not limited to perceivers who are members of that racial category. These points converge with the skin tone bias, Afrocentric bias, and ecological perspectives. The physical attractiveness perspective diverges from this point. It

assumes that impressions are based on stereotypes about physical attractiveness rather than racial category membership. Perceptions of physical attractiveness may influence, but cannot wholly explain, racial phenotypic bias. The metaphorical association perspective suggests that evaluations, not beliefs, may vary as a function of phenotype. Thus, given evidence of racial phenotype-based stereotyping, the metaphorical perspective can also be ruled out as a sole contributor to this process. This is also problematic for the perceptual prejudice perspective, which discounts semantic associations with phenotypic appearance. However, this perspective does not make predictions about controlled judgments. It was introduced to explain relatively automatic responses to faces.

Automatic Evaluation Differs as a Function of Racial Phenotype

The perceptual prejudice perspective alone predicts that variation in phenotypic appearance can influence automatic evaluative responses to category members, but not semantic responses. This is somewhat inconsistent with the skin tone bias and Afrocentric bias perspectives, which would predict that variation in phenotype would elicit both evaluative and semantic knowledge associated with the racial category the target's features resemble. However, it may be possible that evaluations govern relatively automatic judgments whereas beliefs influence relatively controlled judgments.

Racial Phenotypicity Contributes to Racial Subtyping

The skin tone bias perspective alone suggests that racial phenotypicity can be a cue to the formation and use of phenotype-based subcategories (e.g., light-skinned and dark-skinned Blacks) and that the salience of phenotypic-based subcategories can be influenced by the perceptual context. This perspective also suggests that individual phenotypic features, (e.g., skin tone) are more important than others are in determining racial typicality. This idea does not conflict with any of the perspectives.

Racial Phenotypicity Affects Category-Based and Feature-Based Processes

The skin tone bias perspective suggests that phenotypicity influences category-based judgments. The Afrocentric bias and ecological perspectives each suggest that racial phenotypicity can also influence responses to individuals (category members and non-category members alike) outside of traditional category-based routes through direct feature-trait associations. The two perspectives differ in the mechanism of

³This research paradigm has been criticized for methodological artifacts potentially limiting the interpretation of the results (Banks, 1976). More contemporary research using this paradigm has found that this tendency still holds, although it is subject to mitigating influence, such as portraying Blacks in positive roles (Powell-Hopson & Hopson, 1988).

that influence. The Afrocentric bias perspective suggests that the association with a target group's physical features and their personality traits is conditioned over time through activation of the group stereotype, whereas the ecological perspective suggests that this connection an inherent property of the physical features themselves and contribute to the stereotype. Importantly, these perspectives are not inconsistent with one another; both processes may occur.

Conceptual Knowledge Influences Racial Phenotypicality Bias

Each of the perspectives attempts to explain possible origins of racial phenotypicality bias. The skin tone bias perspective emphasizes the importance of essentialist beliefs about racial category membership. The Afrocentric bias and perceptual prejudice perspectives suggest conditioned associations between physical features and personality traits mediated by racial category beliefs and/or evaluations. The physical attractiveness perspective suggests that cultural standards of beauty govern judgments based on racial phenotype. The metaphorical perspective suggests that associations with colors or early childhood experiences with day and night are applied to people. The ecological perspective describes how the behavioral affordances of physical features are overgeneralized to other category members. Although the veracity of each approach may be questioned in future research, the common element among them is the idea that conceptual knowledge concerning physical characteristics either implicitly or explicitly influences representations and judgments about members of a racial category.

A Rudimentary Model of Racial Phenotypicality Bias

Considering the available evidence, the following section explores a rudimentary model of racial phenotypicality bias (see Figure 1).

The model is an interpretation of suggested revisions to traditional models of person perception (Blair et al., 2002; Maddox & Gray, 2002; Zebrowitz, 1996). Processing begins at the left of Figure 1 with a cursory consideration of a social target's physical appearance. This represents an initial identification of the target's attributes that act as cues to salient category dimensions such as age, sex, and race. At this stage, the nature of feature processing diverges. The evidence reviewed earlier suggests that phenotypic features may have an influence on social judgment through two routes of information processing that operate simultaneously and largely independently.

The Category-Based Route

The top path depicts a category-based route as proposed by Maddox and Gray (2002) with general attributes that are consistent with traditional approaches to social representation and judgment (Brewer, 1988; Fiske & Neuberg, 1990). Through this route, processing of the target's phenotypic features results in racial categorization, with the possibility that the individual will be placed into a relevant subcategory (e.g., light-skinned or dark-skinned) as a function of racial phenotypicality. Racial phenotypicality may be determined through a balanced, global assessment of all race-relevant features (Blair et al., 2002; Livingston & Brewer, 2002), or more heavily influenced by a single feature or subset of features (Maddox & Gray, 2002). Only salient subcategory representations are viable candidates in the process of determining fit. Subcategory use is more or less likely depending on person characteristics or contextual cues present in the judgment context (Maddox & Gray, 2003).

The Feature-Based Route

The bottom path depicts a feature-based route that influences social perception apart from the traditional

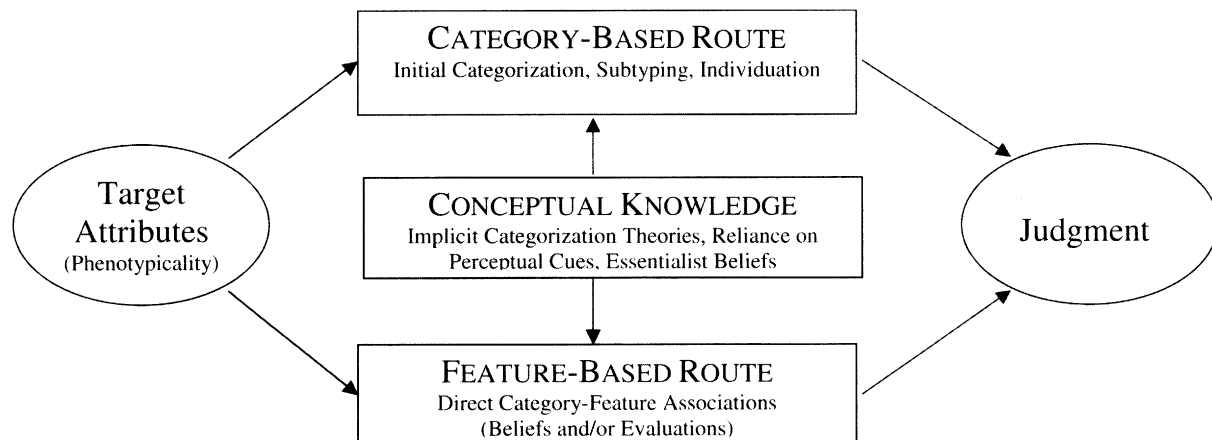


Figure 1. A rudimentary model of racial phenotypicality bias.

range of category based processing. This route occurs through the product of direct associations between phenotypic features and stereotypic traits (Blair et al., 2002) or race-based evaluations (Livingston & Brewer, 2002) formed over time through repeated exposure to category members. Alternatively, the features may directly convey social information that may be over-generalized to other individuals with similar features (Zebrowitz, 1996). An important aspect of this route is that the information that features convey will be applied regardless of the target's racial category membership (Blair et al., 2002; Secord, 1958; Zebrowitz, 1996). In addition, phenotype may continue to influence target judgments through the feature-based route (Blair et al., 2002) in situations when racial categorization overrides within-race variation through the category-based route.

The Role of Conceptual Knowledge

Several varieties of conceptual knowledge may guide the processing of target attributes through both the category-based route and the feature-based route. Possibilities include metaphorical associations with various colors (Secord, 1958), early childhood experiences with light and dark (Williams et al., 1975), essentialist beliefs (Haslam et al., 2002), implicit causal theories (Medin & Ortony, 1989), cultural standards of physical attractiveness (Brelend, 1998; Wade, 1996), and beliefs about the relation between physical features and personality (Livingston, 2001). Each of these and others may contribute to category-based and feature-based processing. Alternatively, certain types of theories may influence specific routes. For example, essentialist beliefs or implicit causal theories that guide judgments of racial category membership may influence the category-based route. On the other hand, implicit knowledge concerning the importance of phenotypic cues in judging personality may influence the feature-based route.

Summary

The model was constructed in an attempt to incorporate the strengths of various theories and the observed outcomes reviewed earlier. The model is meant to be integrative. It elaborates on traditional models of social representation and judgment through a consideration of racial phenotypicity. It also includes elements to account for data suggesting phenotypic features have an influence on judgments that is distinct from traditional category-based processing. Finally, it considers how various types of conceptual knowledge may influence category-based and feature-based processing. Although sacrificing great specificity and detail, the model may serve as a guide for future investigations.

Future Directions

Pondering Dual Processes

Based on the available evidence suggesting unique influences of category- and feature-based processes, the current model assumes that these represent distinct routes of social information processing. This may not necessarily be the case. There may be other conceptualizations of how features and categories may operate to produce judgments. Several extensive discussions concerning the nature of dual processes in social perception can be found elsewhere, and are not considered here in detail (Chaiken & Trope, 1999). The question of dual processes is a difficult one because the category- and feature-based processes lead to similar outcomes in many situations. To examine whether they qualify as a dual-process distinction, future researchers might create and examine situations where the two processes may lead to divergent outcomes. For example, in situations where racial category membership must compete with another more salient nonracial dimension (e.g., gender), feature-based judgments may continue to reveal stereotypic judgments.

Considering Interactions with Nonphenotypic Characteristics

To date, the bulk of social psychological research examining racial category representation has focused on the presence or absence of stereotype-relevant behaviors. This review of research indicates that perceived racial phenotypicity of the face also contributes importantly to the representation, perception, and treatment of category members. Future work may be done to expand the list of characteristics that may also determine racial typicality and integrate them into our models of person perception. Among these are non-facial phenotypic features, style of dress, and style of speech. It seems obvious that all of these features likely contribute to a determination of racial typicality and category membership, but few are studied empirically. Future investigations might investigate the interaction between these physical characteristics and behavioral typicality in producing judgment. For example, subtyping or individuation through the category-based route may be exaggerated when a target's physical typicality does not match behavioral typicality with respect to his racial category (e.g., a dark-skinned Black student acing a difficult biochemistry exam).

Implications for Stereotype Change

One implication of the subtyping hypothesis involves stereotype change. *Subtyping* refers to the mental clustering of atypical individuals who disconfirm the group stereotype, thus preserving the stereotype from change (e.g., Maurer et al., 1995; Rothbart & John, 1985). Through the category-based route, racial

phenotypicality is one characteristic that individuals use in a controlled determination of category fit. Therefore, all things being equal, individuals who are less phenotypical should have less impact on stereotype change, thus preserving any pre-existing beliefs about the group as a whole.

Reconsidering the Black Male Norm in Stereotyping Research

To date, the literature examining skin tone bias and racial bias has focused heavily on perceptions of Black men. More empirical studies that include women, Hispanics, Asians, and Whites as targets and perceivers will be crucial to establishing generalizable models of racial phenotypicality bias. As an example, very few studies attempting to isolate skin tone-based perceptions and outcomes of men from those of women (e.g., Hunter, 1998; Keith & Herring, 1991; Maddox & Gray, 2002, Study 2; Thompson & Keith, 2001). Each of these investigations indicates that skin tone variation plays a slightly different role as a function of gender. Here is one instance where perceptions of physical attractiveness could play a meaningful role. Human beings place a great deal of value on physical attractiveness, particularly in women. Therefore, the interaction of skin tone bias and perceptions of physical attractiveness may be more important in the outcomes of women than men (Russell et al., 1992). The results of the study by Hill (2002) mentioned earlier suggest that skin tone plays a larger role in the perception of physical attractiveness for women than men. This is also consistent with findings from Maddox and Gray (2002), where participants listed physical attractiveness as a distinguishing characteristic among light and dark women, but not men.

Intragroup Intergroup Dynamics

One of the assumptions in this analysis is that the discrimination from racial ingroup and outgroup members has led to negative material, physical health, and psychological effects for dark-skinned Blacks. It is possible that greater racial discrimination from a White actor toward a dark-skinned Black target might have different psychological implications for a target, compared to similar discrimination from a Black actor. Going a step further, conceptualizing light and dark skin tone as an intragroup category marker allows one to ask how this influence might be different depending on whether the Black actor has skin tone similar to or different from that of the Black target. In other words, what is the contribution of skin tone bias that comes from an actor who belongs to the target's racial ingroup, but varies with respect to their membership in the target's skin tone ingroup?

This perspective comes partly as an experimental strategy to facilitate the study of skin tone effects. My

own work has investigated skin tone variation as a categorical distinction among light- and dark-skinned Blacks. But there is one difficulty with this approach. Clearly, skin tone varies on a continuum from light to dark; to dichotomize this continuum may be considered artificial. However, a social construction perspective on racial group membership reveals that race is a similarly continuous dimension that human beings parse into artificial categories. With respect to skin tone, this perspective is supported by the anecdotal accounts that have historically characterized skin tone bias as a dichotomous conflict that mirrors racial bias. In the film *School Daze*, director Spike Lee illustrates this dichotomy in a scene in which the members of two Black sororities torment each other over the virtues and pitfalls of "good and bad hair." Although one sorority is dominated by dark-skinned women with "bad" Afrocentric features, the other consists of light-skinned women with "good" Eurocentric features (they refer to each other using the derogatory terms "Jigaboos" and "Wannabes," respectively). The "Wannabes" derogate the "Jigaboos" for their perceived lack of physical attractiveness. The "Jigaboos" retaliate by criticizing the "Wannabes" for their perceived lack of Black consciousness (they "wannabe" White and do not "wannabe" Black).

Intragroup membership may moderate the relation between phenotype and evaluation. Blacks with dark skin tone likely do not uniformly display patterns of skin tone outgroup favoritism. This intragroup perspective on skin tone bias is reflected in empirical research suggesting that light skin tone is not uniformly perceived as a positive characteristic. Anderson and Cromwell (1977) found a general preference for lighter skin tone over dark skin tone, but extremely light skin tone was also associated with negative characteristics. Contextual factors may influence whether light or dark skin tone is preferred (Celious & Oyserman, 2001). In a context that emphasizes material wealth, light skin tone may provide advantages (e.g., Keith & Herring, 1991), but dark skin tone may be perceived positively in a context that emphasizes racial identity (e.g., Brown et al., 1999). Thus, although categorizing skin tone variation along a continuum may seem artificial, it may accurately reflect the categorization processes that characterize human thought and interaction. Although the category-based perspective in the study of racial bias may have masked important variation within-race, there is no doubt that a category-based perspective has been useful in illuminating our understanding of racial bias. The study of skin tone bias would benefit in a similar fashion.

Conclusion

Despite some of the conclusions drawn from early experimental investigations, several social psychologi-

cal models of category representation and impression formation make clear predictions about the role of skin tone in social perception. These models suggest that people consider racial phenotypicity in the construction and use of their mental representations of racial groups. Perceived racial phenotypicity mediates affective, cognitive, and behavioral responses to individuals. Specifically, those with more typical phenotypic appearance are more likely to be negatively stereotyped, evaluated, and discriminated against than those with less typical appearance. This analysis suggests that phenotype-based stereotypes, prejudice, and discrimination have broad implications for the treatment and outcomes of Black Americans and members of other racial and ethnic groups. Evidence that Blacks, Hispanics, and Whites use race-related phenotypic features in judgments about themselves and others reinforces the idea that race-related prejudice has the potential to affect us all—regardless of racial category membership. Acceptance of this reality may have implications for the way our society talks about race, and how we eventually act to deal with it.

Interest in racial phenotypicity bias is slowly beginning to re-emerge among social psychological investigators. Future investigations will continue to provide descriptions of the outcomes of phenotypic bias and an understanding of the processes through which skin tone and/or other phenotypic features play a role in the perceptions and outcomes of Blacks and members of other racial and ethnic groups. This article focuses on a sample of issues that might be explored when examining skin tone and phenotypic appearance from the perceiver's perspective. But we should not forget the implications for the targets of discrimination. Additional evidence suggests that skin tone plays a significant role in the development of racial identity (e.g., Brown et al., 1999) that, in turn, may influence susceptibility to threats to self-esteem and self-efficacy (e.g., Thompson & Keith, 2001). Ultimately, both perceiver-based and target-based perspectives are necessary if we are to develop our understanding of the complex role of racial phenotypicity in social relations.

The future holds daunting challenges for students of person perception. With increasing levels of racial integration and the growing number of interracial children in the United States, the diversity in skin tones among U.S. residents will continue to grow. Over time, racial category distinctions will continue to blur in our population, perhaps magnifying the role of phenotypic variation in interpersonal perception (e.g., Hall, 1999). Even today, a great deal of discussion and research explores the experience and identity development of multiracial individuals (Cunningham, 1997; Root, 1996) but much less on how these individuals are perceived and treated by others (but see Blascovich, Wyer, Swart, & Kibler, 1997; Eberhardt et al., 2003). Because of our focus on racial categories, racially ambiguous social

targets are typically ignored in social perception investigations. Theory and research in social psychology must remain flexible to the changing characteristics of the population it seeks to describe. These investigations of racial phenotypicity represent initial steps toward addressing the complexities involved in describing the relationships among the ever-growing numbers of multiracial and multiethnic individuals in this country. Through increased discussion and further research we will continue to learn of the consequences of our preoccupation with physical types.

References

- American Anthropological Association. (1998). *American Anthropological Association statement on "Race."* American Anthropological Association. Retrieved July 18, 2002, from <http://www.aaanet.org/stmts/racepp.htm>
- American Association of Physical Anthropologists. (1996). AAPA statement on biological aspects of race. *American Journal of Physical Anthropology*, 101, 569–570.
- Anderson, C., & Cromwell, R. L. (1977). "Black is beautiful" and the color preferences of Afro-American youth. *Journal of Negro Education*, 46, 76–88.
- Arce, C. H., Murguia, E., & Frisbie, W. P. (1987). Phenotype and life chances among Chicanos. *Hispanic Journal of Behavioral Sciences*, 9, 19–32.
- Atkinson, D. R., Brown, M. T., Parham, T. A., Matthews, L. G., Landrum-Brown, J., & Kim, A. U. (1996). African American client skin tone and clinical judgments of African American and European American psychologists. *Professional Psychology: Research and Practice*, 27, 500–505.
- Averhart, C. J., & Bigler, R. S. (1997). Shades of meaning: Skin tone, racial attitudes, and constructive memory in African American children. *Journal of Experimental Child Psychology*, 67, 363–388.
- Banks, W. C. (1976). White preference in Blacks: A paradigm in search of a phenomenon. *Psychological Bulletin*, 83, 1179–1186.
- Bayton, J. A., & Muldrow, T. W. (1968). Interacting variables in the perception of racial personality traits. *Journal of Experimental Research in Personality*, 3, 39–44.
- Best, D. L., Field, J. T., & Williams, J. E. (1976). Color bias in a sample of young German children. *Psychological Reports*, 38, 1145–1146.
- Beteille, A. (1967). Race and descent as social categories in India. *Daedalus*, 96, 444–463.
- Blair, I. V., Judd, C. M., Sadler, M. S., & Jenkins, C. (2002). The role of Afrocentric features in person perception: Judging by features and categories. *Journal of Personality & Social Psychology*, 83, 5–25.
- Blanz, M. (1999). Accessibility and fit as determinants of the salience of social categorizations. *European Journal of Social Psychology*, 29, 43–74.
- Blascovich, J., Wyer, N. A., Swart, L. A., & Kibler, J. L. (1997). Racism and racial categorization. *Journal of Personality and Social Psychology*, 72, 1364–1372.
- Bodenhausen, G. V., & Macrae, C. N. (1998). Stereotype activation and inhibition. In R. S. Wyer, Jr. (Ed.), *Advances in social cognition* (Vol. 11, pp. 1–52). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Bond, S., & Cash, T. F. (1992). Black beauty: Skin color and body images among African-American college women. *Journal of Applied Social Psychology*, 22, 874–888.

- Breland, A. M. (1998). A model for differential perceptions of competence based on skin tone among African Americans. *Journal of Multicultural Counseling & Development*, 26, 294-311.
- Brewer, M. B. (1988). A dual-process model of impression formation. In T. K. Srull & R. S. Wyer (Eds.), *Advances in social cognition: A dual process model of impression formation* (pp. 1-36). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Brewer, M. B., & Feinstein, A. S. H. (1999). Dual processes in the cognitive representation of persons and social categories. In S. Chaiken & Y. Trope (Eds.), *Dual-process theories in social psychology* (pp. 255-270). New York: Guilford.
- Brigham, J. C. (1971). Ethnic stereotypes. *Psychological Bulletin*, 76, 15-38.
- Brown, K. T., Ward, G. K., Lightbourn, T., & Jackson, J. S. (1999). Skin tone and racial identity among African Americans: A theoretical and research framework. In R. L. Jones (Ed.), *Advances in African American psychology: Theory, paradigms, and research* (pp. 191-215). Hampton, VA: Cobb & Henry.
- Brown, L. C. (1967). Color in northern Africa. *Daedalus*, 96, 464-482.
- Brown, T. D., Dane, F. C., & Durham, M. D. (1998). Perception of race and ethnicity. *Journal of Social Behavior and Personality*, 13, 295-306.
- Celious, A., & Oyserman, D. (2001). Race from the inside: An emerging heterogeneous race model. *Journal of Social Issues*, 57, 149-165.
- Chaiken, S., & Trope, Y. (Eds.). (1999). *Dual-process theories in social psychology*. New York: Guilford.
- Chen, M., & Bargh, J. A. (1997). Nonconscious behavioral confirmation processes: The self-fulfilling consequences of automatic stereotype activation. *Journal of Experimental Social Psychology*, 33, 541-560.
- Clark, K. B., & Clark, M. P. (1958). Racial identification and preference in Negro children. In E. E. Maccoby, T. M. Newcomb, & E. L. Hartley (Eds.), *Readings in social psychology* (pp. 603-611). New York: Holt.
- Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. *American Psychologist*, 54, 805-815.
- Codina, G. E., & Montalvo, F. F. (1994). Chicano phenotype and depression. *Hispanic Journal of Behavioral Sciences*, 16, 296-306.
- Cunningham, J. L. (1997). Colored existence: Racial identity formation in light-skin Blacks. *Smith College Studies in Social Work*, 67, 375-400.
- Cunningham, M. R., Roberts, A. R., Barbee, A. P., Druen, P. B., & Wu, C.-H. (1995). "Their ideas of beauty are, on the whole, the same as ours": Consistency and variability in the cross-cultural perception of female physical attractiveness. *Journal of Personality & Social Psychology*, 68, 261-279.
- Davis, F. J. (1991). *Who is Black?: One nation's definition*. University Park: Pennsylvania State University Press.
- Deaux, K., & Lewis, L. L. (1984). Structure of gender stereotypes: Interrelationships among components and gender label. *Journal of Personality & Social Psychology*, 46, 991-1004.
- Dermer, M., & Thiel, D. L. (1975). When beauty may fail. *Journal of Personality & Social Psychology*, 31, 1168-1176.
- Devine, P. G., & Baker, S. M. (1991). Measurement of racial stereotype subtyping. *Personality and Social Psychology Bulletin*, 17, 44-50.
- Dion, K., Berscheid, E., & Walster, E. (1972). What is beautiful is good. *Journal of Personality & Social Psychology*, 24, 285-290.
- Dixon, T. L., & Linz, D. (2000). Overrepresentation and underrepresentation of African Americans and Latinos as lawbreakers on television news. *Journal of Communication*, 50, 131-154.
- Dixon, T. L., & Maddox, K. B. (in press). Skin tone, crime news, and social reality judgments: Priming the schema of the dark and dangerous Black criminal. *Journal of Applied Social Psychology*.
- Drake, S. C., & Cayton, H. R. (1945). *Black metropolis*. New York: Harcourt Brace Jovanovich.
- Dressler, W. W. (1993). Health in the African American community: Accounting for health inequalities. *Medical Anthropology Quarterly*, 7, 325-345.
- Eberhardt, J. L., Dasgupta, N., & Banaszynski, T. L. (2003). Believing is seeing: The effects of racial labels and implicit beliefs on face perception. *Personality & Social Psychology Bulletin*, 29, 360-370.
- Edwards, G. F. (1959). *The Negro professional class*. Glencoe, IL: Free Press.
- Edwards, O. (1973). Skin color as a variable in racial attitudes of Black urbanites. *Journal of Black Studies*, 3, 473-483.
- Filler, J. W., & Williams, J. E. (1971). Conditioning the connotative meanings of color names to human figures. *Perceptual & Motor Skills*, 32, 755-763.
- Fiske, S. T. (1998). Stereotyping, prejudice, and discrimination. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., Vol. 2, pp. 357-411). Boston: McGraw-Hill.
- Fiske, S. T., Lin, M., & Neuberg, S. L. (1999). The continuum model: Ten years later. In S. Chaiken & Y. Trope (Eds.), *Dual-process theories in social psychology* (pp. 231-254). New York: Guilford.
- Fiske, S. T., & Neuberg, S. L. (1990). A continuum of impression formation, from category-based to individuating processes: Influences of information and motivation on attention and interpretation. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 23, pp. 1-74). San Diego, CA: Academic.
- Fiske, S. T., & Taylor, S. E. (1991). *Social cognition* (2nd ed.). New York: McGraw-Hill.
- Frazier, E. F. (1957). *The Negro in the United States*. New York: Macmillan.
- Freeman, H. E., Ross, J. M., Armor, D., & Pettigrew, T. F. (1966). Color gradation and attitudes among middle-income families. *American Sociological Review*, 31, 265-274.
- Gergen, K. J. (1967). The significance of skin color in human relations. *Daedalus*, 96, 390-406.
- Gleiberman, L., Harburg, E., Frone, M. R., Russell, M., & Cooper, M. L. (1995). Skin colour, measures of socioeconomic status, and blood pressure among Blacks in Erie County, NY. *Annals of Human Biology*, 22, 69-73.
- Goldberg, F. J. (1973). The question on skin color and its relation to Japan. *Psychologia: An International Journal of Psychology in the Orient*, 16, 132-146.
- Gould, S. J. (1994, November). The geometer of race. *Discover*, 15, 64-69.
- Hall, R. (1995). The bleaching syndrome: African-Americans' response to cultural domination vis-à-vis skin color. *Journal of Black Studies*, 26, 172-184.
- Hall, R. E. (1992). Bias among African-Americans regarding skin color: Implications for social work practice. *Research on Social Work Practice*, 2, 479-486.
- Hall, R. E. (1994). The "bleaching syndrome": Implications of light skin for Hispanic American assimilation. *Hispanic Journal of Behavioral Sciences*, 16, 307-314.
- Hall, R. E. (1998). Skin color bias: A new perspective on an old social problem. *Journal of Psychology*, 132, 238-240.
- Hall, R. E. (1999). The myth of third world solidarity: Hypergamy by skin colour as a vehicle of racism vis-à-vis African Americans. *Ife Psychologia: An International Journal*, 7, 1-23.
- Hamilton, D. L. (1981). Stereotyping and intergroup behavior: Some thoughts on the cognitive approach. In D. L. Hamilton (Ed.), *Cognitive processes in stereotyping and intergroup behavior* (pp. 333-354). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

- Hamilton, D. L., & Trolier, T. K. (1986). Stereotypes and stereotyping: An overview of the cognitive approach. In J. F. Dovidio & S. L. Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 127–163). Orlando, FL: Academic.
- Harburg, E., Gleibermann, L., Roeper, P., Schork, M. A., & Schull, W. J. (1978). Skin color, ethnicity, and blood pressure I: Detroit Blacks. *American Journal of Public Health*, 68, 1177–1183.
- Haslam, N., Rothschild, L., & Ernst, D. (2002). Are essentialist beliefs associated with prejudice? *British Journal of Social Psychology*, 41, 87–100.
- Hill, M. (1944). Social status and physical appearance among Negro adolescents. *Social Forces*, 23, 443–448.
- Hill, M. E. (2000). Color differences in the socioeconomic status of African American men: Results of a longitudinal study. *Social Forces*, 78, 1437–1460.
- Hill, M. E. (2002). Skin color and the perception of attractiveness among African Americans: Does gender make a difference? *Social Psychology Quarterly*, 65, 77–91.
- Hirschfeld, L. A. (1996). *Race in the making: Cognition, culture, and the child's construction of human kinds*. Cambridge, MA: MIT Press.
- Hughes, M., & Hertel, B. R. (1990). The significance of color remains: A study of life chances, mate and ethnic consciousness among Black Americans. *Social Forces*, 68, 1105–1120.
- Hunter, M. (1998). Colorstruck: Skin color stratification in the lives of African American women. *Sociological Inquiry*, 68, 517–535.
- Iwawaki, S., Sonoo, K., Williams, J. E., & Best, D. L. (1978). Color bias among young Japanese children. *Journal of Cross-Cultural Psychology*, 9, 61–73.
- Judd, C. M., & Park, B. (1993). Definition and assessment of accuracy in social stereotypes. *Psychological Review*, 100, 109–128.
- Keil, F. (1989). *Concepts, kinds, and cognitive development*. Cambridge, MA: MIT Press.
- Keith, V. M., & Herring, C. (1991). Skin tone and stratification in the Black community. *American Journal of Sociology*, 97, 760–778.
- Klonoff, E. A., & Landrine, H. (2000). Is skin color a marker for racial discrimination? Explaining the skin color–hypertension relationship. *Journal of Behavioral Medicine*, 23, 329–338.
- Kreiger, N., Sidney, S., & Coakley, E. (1998). Racial discrimination and skin color in the CARDIA study: Implications for public health research. *American Journal of Public Health*, 88, 1308–1313.
- Kunda, Z., & Thagard, P. (1996). Forming impressions from stereotypes, traits, and behaviors: A parallel-constraint-satisfaction theory. *Psychological Review*, 103, 284–308.
- Lee, Y. T., Jussim, L. J., & McCauley, C. R. (Eds.). (1995). *Stereotype accuracy: Toward appreciating group differences*. Washington, DC: American Psychological Association.
- Legum, C. (1967). Color and power in the South African situation. *Daedalus*, 96, 483–495.
- Livingston, R. W. (2001). What you see is what you get: Systematic variability in perceptual-based social judgment. *Personality & Social Psychology Bulletin*, 27, 1086–1096.
- Livingston, R. W., & Brewer, M. B. (2002). What are we really priming? Cue-based versus category-based processing of facial stimuli. *Journal of Personality & Social Psychology*, 82, 5–18.
- Macrae, C. N., Bodenhausen, G. V., Milne, A. B., Thorn, T. M. J., & Castelli, L. (1997). On the activation of social stereotypes: The moderating role of processing objectives. *Journal of Experimental Social Psychology*, 33, 471–489.
- Maddox, K. B. (1998). *Cognitive representations of light- and dark-skinned Blacks: Structure, content, and use of the African American stereotype*. Unpublished doctoral dissertation, University of California, Santa Barbara.
- Maddox, K. B., & Gray, S. A. (2002). Cognitive representations of Black Americans: Reexploring the role of skin tone. *Personality & Social Psychology Bulletin*, 28, 250–259.
- Maddox, K. B., & Gray, S. A. (in press). Manipulating subcategory salience: Exploring the link between skin tone and social perception of Blacks. *European Journal of Social Psychology*.
- Marks, E. S. (1943). Skin color judgments of Negro college students. *Journal of Abnormal and Social Psychology*, 38, 370–376.
- Martin, J. G. (1964). Racial ethnocentrism and judgment of beauty. *Journal of Social Psychology*, 63, 59–63.
- Maurer, K. L., Park, B., & Rothbart, M. (1995). Subtyping versus subgrouping processes in stereotype representation. *Journal of Personality & Social Psychology*, 69, 812–824.
- McArthur, L. Z., & Baron, R. M. (1983). Toward an ecological theory of social perception. *Psychological Review*, 90, 215–238.
- Medin, D. L. (1989). Concepts and conceptual structure. *American Psychologist*, 44, 1469–1481.
- Medin, D. L., & Ortony, A. (1989). Psychological essentialism. In S. Vosniadou & A. Ortony (Eds.), *Similarity and analogical reasoning* (pp. 179–195). New York: Cambridge University Press.
- Neal, A. M., & Wilson, M. L. (1989). The role of skin color and features in the Black community: Implications for Black women and therapy. *Clinical Psychology Review*, 9, 323–333.
- Okazawa-Rey, M., Robinson, T., & Ward, J. V. (1987). Black women and the politics of skin color and hair. *Women and Therapy*, 6(1–2), 89–102.
- Park, B., Wolsko, C., & Judd, C. M. (2001). Measurement of subtyping in stereotype change. *Journal of Experimental Social Psychology*, 37, 325–332.
- Parrish, C. (1944). *The significance of color in the Negro community*. Unpublished doctoral dissertation, University of Chicago.
- Porter, C. P. (1991). Social reasons for skin tone preferences of Black school-age children. *American Journal of Orthopsychiatry*, 61, 149–154.
- Powell-Hopson, D., & Hopson, D. S. (1988). Implications of doll color preferences among Black preschool children and White preschool children. *Journal of Black Psychology*, 14, 57–63.
- Ransford, E. H. (1970). Skin color, life chances, and anti-White attitudes. *Social Problems*, 18, 164–179.
- Razran, G. (1950). Ethnic dislikes and stereotypes: A laboratory study. *Journal of Abnormal and Social Psychology*, 45, 7–27.
- Relethford, J. H., Stern, M. P., Gaskill, S. P., & Hazuda, H. P. (1983). Social class, admixture, and skin color variation among Mexican Americans and Anglo Americans living in San Antonio, Texas. *American Journal of Physical Anthropology*, 62, 97–102.
- Robinson, T. L., & Ward, J. V. (1995). African American adolescents and skin color. *Journal of Black Psychology*, 21, 256–274.
- Root, M. P. P. (Ed.). (1996). *The multiracial experience: Racial borders as the new frontier*. Thousand Oaks, CA: Sage.
- Ross, L. E. (1997). Mate selection preferences among African American college students. *Journal of Black Studies*, 27, 554–569.
- Rothbart, M., & John, O. P. (1985). Social categorization and behavioral episodes: A cognitive analysis of effects of intergroup contact. *Journal of Social Issues*, 41, 81–104.
- Rothbart, M., & Taylor, M. (1992). Category labels and social reality: Do we view social categories as natural kinds? In G. R. Semin & K. Fiedler (Eds.), *Language, interaction and social cognition* (pp. 11–36). Thousand Oaks, CA: Sage.
- Russell, K. Y., Wilson, M., & Hall, R. E. (1992). *The color complex: The politics of skin color among African Americans*. New York: Harcourt Brace Jovanovich.
- Sciara, F. J. (1971). Perceptions of Negro boys regarding color and occupational status. *Child Study Journal*, 1, 203–211.
- Sciara, F. J. (1983). Skin color and college student prejudice. *College Student Journal*, 17, 390–394.
- Secord, P. F. (1958). Facial features and inference processes in interpersonal perception. In R. Tagiuri & L. Petrullo (Eds.), *Person perception and interpersonal behavior* (pp. 300–315). Stanford, CA: Stanford University Press.

- Secord, P. F. (1959). Stereotyping and favorableness in the perception of Negro faces. *Journal of Abnormal and Social Psychology*, 59, 309–314.
- Secord, P. F., Bevan, W., & Katz, B. (1956). The Negro stereotype and perceptual accentuation. *Journal of Abnormal and Social Psychology*, 53, 78–83.
- Seeman, M. (1946). Skin color values in three all-Negro school classes. *American Sociological Review*, 11, 315–321.
- Seltzer, R., & Smith, R. C. (1991). Color differences in the Afro-american community and the differences they make. *Journal of Black Studies*, 21, 279–286.
- Taylor, S. E., Fiske, S. T., Etcoff, N. L., & Ruderman, A. J. (1978). Categorical and contextual bases of person memory and stereotyping. *Journal of Personality and Social Psychology*, 36, 778–793.
- Telles, E. E., & Murguia, E. (1990). Phenotype discrimination and income differences among Mexican Americans. *Social Science Quarterly*, 71, 682–696.
- Thompson, M. S., & Keith, V. M. (2001). The blacker the berry: Gender, skin tone, self-esteem and self-efficacy. *Gender & Society*, 15, 336–357.
- Uhlmann, E., Dasgupta, N., Elgueta, A., Greenwald, A. G., & Swanson, J. (2002). Subgroup prejudice based on skin color among Hispanics in the United States and Latin America. *Social Cognition*, 20, 198–226.
- Wade, T. J. (1996). The relationships between skin color and self-perceived global, physical, and sexual attractiveness, and self-esteem for African Americans. *Journal of Black Psychology*, 22, 358–373.
- Wagatsuma, H. (1967). The social perception of skin color in Japan. *Daedalus*, 92, 407–443.
- Williams, J. E., Boswell, D. A., & Best, D. L. (1975). Evaluative responses of preschool children to the colors white and black. *Child Development*, 46, 501–508.
- Williams, J. E., Morland, J. K., & Underwood, W. L. (1970). Connotations of color names in the United States, Europe, and Asia. *Journal of Social Psychology*, 82, 3–14.
- Williams, K. H., Williams, J. E., & Beck, R. C. (1973). Assessing children's racial attitudes via a signal detection model. *Perceptual & Motor Skills*, 36, 587–598.
- Wittenbrink, B., Judd, C. M., & Park, B. (1997). Evidence for racial prejudice at the implicit level and its relationship with questionnaire measures. *Journal of Personality & Social Psychology*, 72, 262–274.
- Wittenbrink, B., Judd, C. M., & Park, B. (2001). Spontaneous prejudice in context: Variability in automatically activated attitudes. *Journal of Personality & Social Psychology*, 81, 815–827.
- Word, C. O., Zanna, M. P., & Cooper, J. (1974). The nonverbal mediation of self-fulfilling prophecies in interracial interaction. *Journal of Experimental Social Psychology*, 10, 109–120.
- Zebrowitz, L. (1996). Physical appearance as a basis of stereotyping. In C. N. Macrae, C. Stangor, & M. Hewstone (Eds.), *Stereotypes and stereotyping* (pp. 79–120). New York: Guilford.