

# The White Standard: Racial Bias in Leader Categorization

Ashleigh Shelby Rosette  
Duke University

Geoffrey J. Leonardelli  
University of Toronto

Katherine W. Phillips  
Northwestern University

In 4 experiments, the authors investigated whether race is perceived to be part of the business leader prototype and, if so, whether it could explain differences in evaluations of White and non-White leaders. The first 2 studies revealed that “being White” is perceived to be an attribute of the business leader prototype, where participants assumed that business leaders more than nonleaders were White, and this inference occurred regardless of base rates about the organization’s racial composition (Study 1), the racial composition of organizational roles, the business industry, and the types of racial minority groups in the organization (Study 2). The final 2 studies revealed that a leader categorization explanation could best account for differences in White and non-White leader evaluations, where White targets were evaluated as more effective leaders (Study 3) and as having more leadership potential (Study 4), but only when the leader had recently been given credit for organizational success, consistent with the prediction that leader prototypes are more likely to be used when they confirm and reinforce individualized information about a leader’s performance. The results demonstrate a connection between leader race and leadership categorization.

*Keywords:* racial bias, prototypical leadership characteristics, stereotypes, leadership categorization, diversity

Substantial progress has been made by underrepresented minorities in Corporate America since the 1960s civil rights movement knocked down opaque racial barriers and championed equal opportunity in organizational settings. Over time, African Americans have come to occupy a greater percentage of entry-level positions and more middle management roles (Tomaskovic-Devey et al., 2006; U.S. Bureau of Labor Statistics, 2004). In addition, other racial minority groups, such as Asian Americans (Takaki, 1989; Woo, 2000) and Hispanic Americans (GAO Report, 2006), have also made noticeable inroads at lower and middle levels in business organizations. Although progress is evident at some positions, racial minorities are still less visible in top leadership positions

than would be expected on the basis of population base rates (The Alliance for Board Diversity, 2005; Corporate Board Initiative, 2006; Fortune, 2006; McCoy, 2007; Thomas & Gabarro, 1999). Given that explicit racial barriers no longer exist, what is preventing well-trained racial minorities from advancing within the organizational hierarchy to become leaders in U.S. companies?

One important determinant for whether employees advance to leadership positions is how their leadership skills and task competencies are evaluated (Connelly et al., 2000; DeVries, 2000; Hollander, 1960; Levinson, 1980; Lord, de Vader, & Alliger, 1986). Leadership evaluations are an assessment of an organization member’s ability to produce positive outcomes for the organization and affect who is appraised favorably and who is allowed to lead the organization (Calder, 1977; Lord & Maher, 1991; Meindl & Ehrlich, 1987; Meindl, Ehrlich, & Dukerich, 1985). According to leadership categorization theory, leaders will be evaluated as most effective when they are perceived to possess prototypical characteristics of leadership (Lord & Maher, 1991). Specifically, over time individuals develop a set of beliefs about the behaviors and characteristics of leaders. These beliefs develop into leadership categories, and from the various categories of leadership evolve a standard example or typical leader category known as a *leadership prototype*. Those leaders who possess characteristics that are most consistent with the evaluators’ leader prototype are appraised most favorably. Several studies have shown that the fit of individuals’ characteristics to evaluators’ leadership prototypes affects leadership perceptions and leadership ratings across several domains, including gender (Brenner, Tomkiewicz, & Schein, 1989; Eagly & Karau, 2002; Heilman, Block, Martell, & Simon, 1989; Nye & Forsyth, 1991; Schein, 1973; Scott

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Ashleigh Shelby Rosette, Fuqua School of Business, Duke University; Geoffrey J. Leonardelli, J. L. Rotman School of Management, University of Toronto, Toronto, Ontario, Canada; Katherine W. Phillips, Management and Organizations Department, Kellogg School of Management, Northwestern University.

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Correspondence concerning this article should be addressed to Ashleigh Shelby Rosette, Fuqua School of Business, Duke University, 1 Towerview Road, P.O. Box 90120, Durham, NC 27701-0120. E-mail: arosette@duke.edu

& Brown, 2006), culture (Ensari & Murphy, 2003), and politics (Foti, Fraser, & Lord, 1982), yet the connection between race and leadership prototypes has been largely ignored.

The purpose of this article is to fill that research gap and to examine leadership prototypes as one potential explanation for racial bias in top leadership positions. That is, top leadership positions are most frequently occupied by White leaders as opposed to racial minority leaders, and expectations regarding the prototypical characteristics of the race of the leader may help to explain why White leaders are preferred over racial minority leaders. By examining this type of racial bias in leadership positions, we can offer a more in-depth understanding of leadership categorization and leadership prototypes as applied to U.S. business leaders. We propose that race, and specifically “being White,” may be a prototypical attribute of leadership.

When asked to consider the career advancement and performance appraisals of others, many people in the United States believe they yield to principles of meritocracy (Castilla, in press; Rosette & Thompson, 2005) and practice a philosophy of colorblindness (Reitman, 2006; Wildman, 1996). That is, they believe that race is not important and does not affect their workplace evaluations of others (Rosette, 2006). In stark contrast to these assertions, we propose that race plays a critical role in organizational settings, particularly when leadership evaluations are considered. In this article, we explored the connection between leader race and leadership prototypes and tested whether, at least in the United States, Whites are perceived to be prototypical business leaders and, if so, whether more favorable evaluations of White relative to non-White leaders could be best explained by leadership categorization theory.

### Leadership Categorization Theory

Leadership categorization theory is largely based on traditional categorization theory, which describes how individuals develop categories to help themselves organize and process information efficiently (Rosch, 1978). Categories possess very distinct features (Crocker, Fiske, & Taylor, 1984), summarize images and labels by others in the environment (Cantor & Mischel, 1979), and are comprised of similar, yet nonidentical members (Lakoff, 1987). Previous empirical research has demonstrated that prototypes evolve from categories and represent an original type, form, or instance of something that serves as a typical example or standard of other things in the same category (Rosch & Mervis, 1975). Specifically, a prototype represents a central tendency or average characteristic of the members of a category (Rosch, 1978; Smith & Medin, 1981). For example, within the context of a business organization, the characteristics “a person” and “has followers” are common to most leaders. Characteristics such as these help to distinguish one category (i.e., leaders) from another category (i.e., nonleaders) and are said to be prototypical characteristics. That is, such characteristics provide a cognitive cue to the evaluator as to the likelihood that an entity falls in a particular category (Beach, 1964; Kruschke & Johansen, 1999; Martignon, Vitouch, Takezawa, & Forster, 2003; Reed, 1972).

Utilizing the basic concepts of categorization theory, Lord and his colleagues developed leadership categorization theory (Lord, 1985; Lord, Foti, & Phillips, 1982; Lord & Maher, 1991). In contrast to other leadership theories that focus on differences in

performance or influence, such as charismatic leadership (House, 1977), transformational leadership (Bass, 1985; J. M. Burns, 1978), and visionary leadership (Bennis & Nanus, 1985; Kouzes & Posner, 1987), leadership categorization theory investigates evaluators’ perceptions of leaders. According to the theory, evaluators compare a target person with already preexisting knowledge structures called leadership prototypes, which reflect the average characteristics of leaders in a given context. The process of comparing a target person with a leadership prototype is called a *recognition-based process* (Lord & Maher, 1990, 1991) and can influence evaluators’ perceptions of targets. This recognition-based process can lead to a match or mismatch between the target person’s traits and the traits that are common to the evaluators’ leadership prototype. With a match, the target individual is categorized as a leader, but with a mismatch, the target is not categorized as a leader. When a match occurs, target individuals who are perceived to be more prototypical leaders have been shown to be evaluated more favorably (Eagly & Karau, 2002; Ensari & Murphy, 2003; Nye & Forsyth, 1991; Phillips, 1984; Phillips & Lord, 1982; Rush & Russell, 1988; Scott & Brown, 2006). In this work, we sought to investigate whether a person’s race may be part of the business leader prototype.

### Race as an Attribute of the Leader Prototype

We posit that, at least in the United States, a central characteristic of leadership is “being White” and accordingly, that evaluators will perceive that White leaders are more prototypical business leaders than are leaders who are racial minorities. We argue that it is the development of evaluators’ leadership prototypes that likely leads to the incorporation of race into the leader prototype and, consequently, to the belief that prototypical business leaders are White leaders. According to Rosch’s (1978) categorization theory, prototypes develop from familiarity with examples from categories and encompass two distinct structural principles. Prototypes develop because people learn which characteristics are central among members of a category (first principle) and which are not as central among members of other categories (second principle). Lord and Maher (1991) summarized Rosch’s prototype development process in this way:

...category prototypes develop from experience with examples of categories. Over time, people learn which attributes are both widely shared among category members (being high in family resemblance) and relatively rare among nonmembers of a category (being high in cue validity). . . . Prior to the development of a category prototype, categories are often defined on the basis of exemplars—concrete examples of specific category members. For example, someone who has no experience with military leaders might define this category based on his or her knowledge of one salient military leader (for example, Eisenhower or Patton). But as experience with military leaders accumulates, a more general and representative composite of military leaders would define the category. (p. 43)

Empirical work supports this prototype development process. Through repeated interactions with examples of a given category, individuals have been shown to abstract characteristics from these observed examples to develop a prototype (Lord, Foti, & de Vader, 1984; Rosch & Mervis, 1975). We posit that the exemplars of leaders to which individuals are exposed are likely to be White,

and thus, when individuals abstract attributes that are common to examples of business leaders but are perhaps less common to examples of nonleaders, they will conclude that the average leader, the prototypical leader, must be White.

White exemplars of leaders may originate from two sources. First, evaluators are presently and persistently exposed to White individuals holding prominent leadership positions. Recent business statistics support this assertion. In the U.S. workforce, more than 87% of chief executive positions (U.S. Bureau of Labor Statistics, 2006), 84% of the seats on *Fortune* 100 Boards of Directors (The Alliance for Board Diversity, 2005), and more than 97% of *Fortune* 500 chief executive officer (CEO) positions were held by Whites (Corporate Board Initiative, 2006; *Fortune*, 2006; McCoy, 2007). Given the close alliance between politics and business, political leaders may also provide salient exemplars. In 2007, 96% of state governors (National Governors Association, 2007), 94% of U.S. Senators (U.S. Senate Statistics, 2007), and 83% of congresspersons in the U.S. House of Representatives were White (U.S. House of Representatives Statistics, 2007). It also should be noted that these percentages are above those predicted by the proportion of White individuals in the general U.S. population, especially when the Hispanic population is considered as a separate category (61%; U.S. Census Bureau, 2006).

Second, and perhaps more important, U.S. history may also influence leadership perceptions, as historically, both in politics and in business, prominent leaders (and perhaps, many individuals' first encounters with leadership exemplars) have been White. For example, all 43 U.S. presidents have been White. Moreover, the more noted historical examples of American business success are of White entrepreneurs: in the 19th century, Andrew Carnegie (steel) and John D. Rockefeller (oil); in the 20th century, Henry Ford (automobiles), Ray Kroc (McDonalds), Conrad Hilton (hotels), and Ross Perot (technology services); and in the 21st century, Bill Gates (computer technology) and Steven Forbes (media). Such historical perceptions of White individuals in leadership positions reinforce the assertion that being White is a primary and probable characteristic of leadership.

Thus, we posit that being White is a central characteristic of the business leader prototype. Moreover, we generate two novel overarching predictions based on this position. First, if being White is an attribute of the business leader prototype, then observers will assume that leaders more than nonleaders are White. Second, given that prototypical leaders are evaluated more favorably than nonprototypical leaders (Eagly & Karau, 2002; Ensari & Murphy, 2003; Nye & Forsyth, 1991; Phillips, 1984; Phillips & Lord, 1982; Rush & Russell, 1988; Scott & Brown, 2006), and because we propose that White leaders are perceived to be more prototypical than non-White leaders, race may lead to biased evaluations of leadership through the process of leader categorization. That is, leaders who are racial minorities receive worse performance evaluations than White leaders because White leaders are perceived to be more similar to the leader prototype. These race differences in the leader prototypes may help explain why leaders who are members of racial minorities receive worse performance-related evaluations than do White leaders (see Cox & Nkomo, 1986; Ford, Kraiger, & Schechtman, 1986; Greenhaus & Parasuraman, 1993; Greenhaus, Parasuraman, & Wormley, 1990; Jones, 1986; Powell & Butterfield, 1997; and Waldman & Avolio, 1991, for examples of race differences in performance evaluations).

Certainly, there may be other explanations of differences in the evaluations of White and non-White leaders. For example, some studies of leadership effectiveness have demonstrated that group prototypes play a significant role in leadership evaluations (Hains, Hogg, & Duck, 1997; Hogg et al., 2006; Martin & Epitropaki, 2001; Pierro, Cicero, Bonaiuto, van Knippenberg, & Kruglanski, 2005; Platow & van Knippenberg, 2001; Platow, van Knippenberg, Haslam, van Knippenberg, & Spears, 2006; van Knippenberg & van Knippenberg, 2005). The more a leader represents the prototypical characteristics of a group to which the evaluators belong, the more favorably that leader will be evaluated. From this perspective, White evaluators will rate White leaders more favorably because White leaders are more prototypical of the evaluators' racial group. By contrast, a leadership prototype explanation would predict that, regardless of their racial group, evaluators will be likely to perceive White leaders more favorably than non-White leaders.

Alternatively, the more negative racial stereotypes of some minorities could also be used to explain race differences in leadership evaluations. From this perspective, Whites and Asian Americans, who are both generally associated with positive racial stereotypes, such as being smart, industrious, and ambitious (Hurr & Kim, 1989; Kitano & Sue, 1975; Lee, 1994), would be evaluated more favorably than Hispanic Americans and African Americans, who are frequently associated with negative racial stereotypes, such as being lazy, ignorant, and incompetent (P. Burns & Gimpel, 2000; Devine & Elliot, 1995; Dixon & Rosenbaum, 2004; Krueger, 1996; Mackie, Hamilton, Susskind, & Rosselli, 1996; Marin, 1984; Plous & Williams, 1995). Some evidence supports this stereotype explanation. Chung-Herrera and Lankau (2005) demonstrated that White evaluators identified a higher correspondence between the stereotypical characteristics of White and Asian American managers and the characteristics of a leader prototype than between the stereotypical characteristics of African American and Hispanic American managers and characteristics of a leader prototype. In other words, differences in evaluations of managers could be due to differences in race stereotypes rather than fit with the leader prototype.

However, this negative racial stereotype explanation is not unique to leaders, as it has been shown to persist among evaluations of nonleaders as well. For example, empirical studies on *aversive racism*, a subtle form of racial bias that stems from negative race stereotypes, have demonstrated a consistent bias against racial minorities in favor of Whites in nonleadership positions (Aberson & Ettl, 2004; Dovidio & Gaertner, 2000). According to our leadership prototype prediction, the leader prototype includes the attribute "being White," not merely stereotypical characteristics that are associated with Whites in both leader and nonleader categories. Moreover, whereas a race stereotype explanation suggests that White and Asian American leaders would be evaluated more favorably than African American and Hispanic American leaders, it is our prediction that White leaders will be evaluated more favorably than Asian American leaders as well.

### Overview of Studies

Across four studies, we tested whether being White was part of the U.S. business leader prototype and, if so, how it might influ-

ence observers' leadership evaluations. In the first two studies, we investigated whether individuals were more likely to assume that business leaders rather than nonbusiness leaders were White and whether assumptions about a leader's race were inferred from the leader prototype or from race base rates in the overall organization (i.e., the racial composition of the organization's members; Study 1), race base rates in organizational positions, the leader's business industry, or the race of the racial minorities in the organization (Study 2). In the final two studies, we investigated whether a leader prototype explanation could best explain differences in White and non-White leader evaluations by investigating the consequences of a leader's race for evaluations of leader effectiveness (Study 3) and leadership potential (Study 4).

In these studies we tested our predictions with different sample populations (undergraduates, master of business administration [MBA] students, and graduate students), evaluating leaders in different roles (project leader, division leader, CEO), across different industries (social services, financial services), and with different racial characteristics (White, Black, Hispanic, and Asian). Altogether, we think the data contribute to the connection between leader race and a business leader prototype and have implications for workplace diversity, performance evaluation, and career management.

### Study 1: Base Rates and Leader Race

This study tested the two structural principles of prototype development: whether being White was perceived as a central characteristic to the business leader prototype (first principle) and whether being White was perceived as less central to a nonbusiness leader category, employees (second principle). We examined which race characteristic observers would attribute to a target person when that person was described as a leader or employee. According to the literatures on category accessibility (Bruner, 1957; Kunda & Spencer, 2003) and representativeness (Kahneman, 2003; Kahneman & Tversky, 1973), individuals are more likely to describe a target person in ways consistent with the person's category of membership. Specifically, in the absence of individuating information, when an observer encounters a target that is a member of a social group, the observer may assume that the target has the qualities of the group prototype as opposed to having qualities that are unique to the target (for a review, see Kunda & Thagard, 1996). For example, an engineer may be assumed to be a tad bit geeky and to possess a mechanical-like writing style, even though these characteristics may or may not accurately describe the target. Thus, if being White is more closely associated with the leader prototype, then observers will be more likely to perceive a leader rather than a nonleader to be White.

Also, we wanted to investigate the strength of the leader prototype by pitting the predicted recognition-based processes specific to prototype use against conflicting information regarding a person's statistical likelihood (also known as base rate) of being White (Kahneman, 2003; Kahneman & Tversky, 1973). When predicting an individual's personal characteristics, the existing base rates of a given characteristic have been considered reliable determinants of a person's characteristics. For example, if an organization's members are 20% White and 80% Hispanic American, then probabilistically, any given member is likely to be Hispanic American. However, previous work has found that ob-

servers are more likely to maintain consistency between their activated categories and trait inferences (Kahneman & Tversky, 1973), ignoring information about base rates. Thus, if being White is associated with the leader prototype, then there should be no interaction between the target person's role (employee, leader) and base rate information; instead, a main effect should occur whereby observers will consider leaders to be White more than nonleaders (e.g., employees), regardless of the base rate information (Hypothesis 1).

Furthermore, if being White is consistent with leader categorization, observers should perceive the leader to be White more frequently than the base rate would suggest. In the absence of an activated prototype, information about the organization's base rates is likely to be a useful determinant of the target's likelihood of being White. As a consequence, if a prototype was not activated, then observers' assumptions of race should reflect the base rates; however, if the prototype was activated, then it would be under these conditions that assumptions of race should deviate from base rates. Thus, if being White is associated with the leader prototype, then observers will be more likely to deviate from base rates in the leader than in the nonleader (e.g., employee) conditions when assessing the race of the target (Hypothesis 2). Both hypotheses were tested in the following study.

### Method

#### *Participants and Study Design*

A total of 146 undergraduate participants (68 White, 13 African American, 21 Hispanic, 37 Asians, 6 other, 1 did not respond) completed the study in exchange for extra credit in a business management course. At the time of the study, 60% of the participants were employed. Of the participants who reported not being currently employed, 95% had previously worked for a company or corporation (1 person did not respond to this question). Participants' work experience did not predict the dependent measure in this study, whether alone or in interaction with the experimental manipulations, and thus, it will not be discussed further. The study consisted of a 2 (interviewee role: leader, employee)  $\times$  3 (race base rate: no information, 50% White, 20% White) between-participants design.

#### *Procedure*

Participants were instructed to read a newspaper article and answer questions about what they read. The article described a fictitious company project (Selcom, Inc.'s Project NOVA) and included an interview with a business representative that described progress on a project as consistent with expectations (see the manipulation script in Appendix A). We manipulated the role of the organizational representative so that the representative was described as either the leader of the project or as an employee who worked on the project. We manipulated the racial composition of the organization such that the organization's workforce composition was either 50% White or 20% White, or no mention of the racial composition was provided. According to our leader prototype prediction, participants should be less likely to take into account the base rate information when determining the race of the person in the business leader category than in determining the race

Table 1  
Binary Hierarchical Logistic Regression for Perceptions of Leader Race Regressed on Interviewee Role and Base Rate (Study 1)

Variable	Step 0			Step 1			Step 2		
	<i>B</i>	<i>SE</i>	Wald	<i>B</i>	<i>SE</i>	Wald	<i>B</i>	<i>SE</i>	Wald
Constant	0.65	0.17	13.99***	0.11	0.33	0.11	0.00	0.38	0.00
Interviewee role				-0.76	0.38	3.90*	-0.51	0.57	0.81
Base rate						17.01**			10.47**
Interviewee Role × Base Rate									0.34

Note. Interviewee role and base rate were treated as categorical variables for the analysis. The leader role condition was used as the reference point for the interviewee role manipulation tests, and perceptions of leader race was coded dichotomously (1 = White, 0 = other races). Because base rate manipulation had three levels, its tests (either main effects tests or tests of interactions involving this variable) did not have a single condition that represented a reference point; rather, the table contains the overall test of this variable, the Wald statistic.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

of the person in the nonbusiness leader category (employee). For example, in the 20% condition, we expected individuals to attenuate their presumption that the leader was White less than their presumption that the employee was White.

After reading the article, participants answered questions that assessed the effectiveness of the interviewee role and base-rate manipulations. Then, participants answered the question "What do you think is the race of the person interviewed?" Participants could select one of the following randomized options: Hispanic/Latin American, Asian/Asian American/Pacific Islander, White/Caucasian American, Black/African American, or Native American/Alaskan Native.

### Results

All of the participants in the study correctly reported the manipulation checks for interviewee role and race base rates. Hypothesis 1 predicted that leaders would be perceived to be White more frequently than nonleaders regardless of the base rates. To test this prediction, we had participants record their decisions about the interviewee's race, discriminating between those who classified the interviewee as White (1) or non-White (0). Reclassifying the data in this way simplified analysis procedures, allowing us to use binary hierarchical logistic regression analysis (Kleinbaum, 1994; see summary of the regression analysis in Table 1). The first step of the analysis revealed a main effect of the interviewee role manipulation ( $B = -0.76$ ,  $SE = 0.38$ ,  $p < .05$ ,  $r = .17$ ).<sup>1</sup> In particular, independent of the base-rate manipulation, 72% of the participants perceived that the leader was White, whereas only 56% of the participants perceived that the employee was White. In addition, the analysis revealed a main effect in the base rate condition ( $Wald = 17.01$ ,  $p < .001$ ,  $r = .33$ ). Participants in the 20% condition perceived the interviewee as White less often (23 of 52 participants = 44%) than did those participants in the no-mention condition (40 of 48 participants = 83%) or the 50% condition (33 of 46 participants = 72%). The interaction between interviewee role and base rates, which was tested in the second step of the logistic regression analysis, was not significant ( $p > .36$ ). The presence of a base rate main effect illustrates that participants in the 50% White and 20% White conditions considered racial composition information when making assumptions about the interviewee's race, but the absence of an interaction reveals that regardless of base rate, observers were more likely to

perceive the leader than nonleader as being White. Thus, Hypothesis 1 was supported.

Hypothesis 2 predicted that the participants would perceive the leader to be White more frequently than the 50% base rate or 20% base rate would suggest (i.e., perceptions would deviate from base rates) but that this would not be the case for nonleaders (e.g., employees). That is, we expected the observed differences in percentages to be significantly different from the base rate in the leader conditions but not in the employee conditions. We used *Z* tests for proportion to examine this specific prediction, and Hypothesis 2 was supported. In the 50% base rate condition, participants presumed that the leader was White significantly more often than the base rate would have suggested (18 of 22 participants = 82%;  $Z = 2.23$ ,  $p < .03$ ), but this was not so when forming impressions of the employee (15 of 24 participants = 63%;  $Z = 0.88$ ,  $p = .38$ ). A similar pattern was noted in the 20% base rate condition (for the leader, 14 of 28 participants = 50%,  $Z = 2.35$ ,  $p < .02$ ; for the employee, 9 of 24 participants = 37.5%,  $Z = 0.54$ ,  $p = .59$ ). These analyses lend support to the prediction that participants relied on a prototype to form impressions of the interviewee's race in the leader condition but not in the employee condition.

### Discussion

The findings support the prediction that being White is an attribute of the business leader prototype. First, independent of the organization's race base rates, leaders more than employees were assumed to be White. This difference in leader perceptions provides support for the first structural principle of prototype development: that being White is characteristic of the business leader prototype. Second, in support of the second structural principle, when the nonleader category was considered, the rate at which employees were perceived to be White did not deviate from the race base rates in the two conditions where individuals were

<sup>1</sup> To place effect size estimates into a common metric across studies and analysis procedures, we opted to use the "r family" of effect size estimates, where we estimated  $r_{\text{contrast}}$  for ANOVAs (Rosenthal, Rosnow, & Rubin, 2000) and  $r_{\text{equivalent}}$  for logistic regression analyses (Rosenthal & Rubin, 2003). Estimates had unsigned (and thus positive) directions and could range from 0 to 1.

informed of race base rates. When Whites comprised a smaller percentage of the employees in the organization, they were less likely to be perceived as employees. When Whites comprised a larger percentage of the employees in the organization, they were more likely to be perceived as employees. Thus, being White is not likely to be very central to the nonbusiness leader category. Taken together, these results suggest that being White is an attribute of the business leader prototype. These findings are consistent with our predictions, and we sought to build more confidence into the reliability and generalizability of these effects by conducting a second study.

First, in addition to demonstrating that the structural principles of a leadership prototype are present, once a characteristic of a category has been identified as prototypical, inclusion of the characteristic as a prototype is also determined by comparing it to other stimuli (Rosch, 1973). In the case of a White leader prototype, that would include the consideration of other races, such as Hispanic Americans, Asian Americans, and African Americans. Second, U.S. businesses consist of a plethora of industries, and it is possible that Whites may be perceived as prototypical leaders in some business industries but not in others. Third, our sample consisted of undergraduates, and although most of the participants had work experience and likely were familiar with perceptions of leadership characteristics, a second, older, and more experienced sample would increase the generalizability of our findings.

### Study 2: Racial Minorities and Industry Type

This study sought to replicate Study 1 findings and to extend the findings in three ways. First, this study tested whether the type of racial minority in the firm affected individuals' beliefs that being White is a central characteristic to the business leader category. Different stereotypes are associated with different racial minorities. For example, Asian Americans are generally regarded as the model minority (Hurh & Kim, 1989; Kitano & Sue, 1975; Lee, 1994), whereas Hispanic Americans (P. Burns & Gimpel, 2000; Dixon & Rosenbaum, 2004; Marin, 1984) and African Americans (Devine & Elliot, 1995; Krueger, 1996; Mackie et al., 1996; Plous & Williams, 1995) are typically associated with more negative stereotypes. It could be that because of the negative stereotypes associated with racial minorities such as African Americans and Hispanic Americans that these racial groups may be particularly incompatible with the business leader category, but when firms comprise a significant population of less stigmatized minorities, such as Asian Americans, individuals may be less likely to perceive that being White is a characteristic of the business leader category. Thus, on the basis of the arguments associated with negative race stereotypes, business leaders will be perceived to be White more frequently than nonbusiness leaders when Hispanic and African Americans are represented in the organization than when Asian Americans are represented in the organization (Hypothesis 3a). However, if being White is a central characteristic of the business leader category as we predict, the perception of Whites as leaders more frequently than nonleaders will persist regardless of the racial minority that is present in the organization. Hence, business leaders will be perceived to be White more frequently than nonbusiness leaders when Hispanic, African, and Asian Americans are represented in the organization (Hypothesis 3b).

Second, whether a leader's race is viewed as central to the business leader category may be dependent on the type of business industry in which the leader works. Whites are especially visible in financial industries (GAO Report, 2006), whereas African Americans (Dorsey, 2005; Jones, 1986; Maume, 1999) and Hispanic Americans (Tienda & Mitchell, 2006) are often concentrated in community relations, human resources, nonprofit, and service sectors. Hence, it may be easier for observers to recognize racial minorities as central to the business leader category when social service or nonprofit sectors are considered. That is, Whites will be perceived to be leaders in the financial services industries more so than in the social services industries (Hypothesis 4a). However, if being White is central to the business leader category as we predict, the perception of Whites as leaders more frequently than nonleaders will persist regardless of the type of business industry. Thus, Whites will be perceived to be business leaders more so than business nonleaders in the financial services and social services industries (Hypothesis 4b). These competing hypotheses were tested in Study 2, which manipulated the type of business industry, the target's role (leader or nonleader), and the racial minority present in the organizational roles. In addition, the participants in this study had substantially more work experience than did the participants in Study 1, and thus this study investigated whether evidence collected in Study 1 would hold with this more experienced sample of individuals.

### Method

#### *Participants and Study Design*

A total of 167 MBA students (118 White, 14 African American, 5 Hispanic, 23 Asians, 7 other) completed the study as a course requirement in a business management course. Although demographics for the particular participants in this study were not attained, the participants represented 41% of their MBA class, which in aggregate had an average age of 29 years and 5.8 years of work experience. The study design consisted of a 2 (interviewee role: leader, assistant)  $\times$  2 (industry type: financial, social)  $\times$  3 (racial minority included in the base rate: African American, Hispanic American, Asian American) between-participants factor design.

#### *Procedure*

Participants followed the same procedures as those described in Study 1 (see the manipulation script in Appendix B). However, three changes were made to the materials to accommodate the predictions. First, we manipulated the industry in which the fictitious company Selcom, Inc. operated. Selcom, Inc. was described either as a financial services provider or as a nonprofit social services provider. Second, we held the level of base rates constant. Specifically, the base rate in this study remained the same across all of the conditions. Given that the strongest test of the White leader prototype prediction in Study 1 occurred when only 20% of the workforce was White, conservatively, we kept the base rate of 20% constant across all the conditions. Moreover, replicating the leader prototype effect under such extreme base rate conditions would be a more revealing test than if we used a more balanced base rate. We did, however, manipulate the type of racial minority

included in the base rate. The racial minority was described as 80% Asian/Asian American, 80% Hispanic/Latin American, or 80% Black/African American.

Third, instead of referencing base rates for the entire organization (as we did in Study 1), the racial minority manipulation was situated in the context of the interviewee role. For example, in the Asian leader condition, the racial composition was described as “Of the *project leaders* employed by Selcom, 20% are White/Caucasian whereas 80% are Asian/Asian American.” In the Asian assistant condition, the racial composition was described as “Of the *project assistants* employed by Selcom, 20% are White/Caucasian whereas 80% are Asian/Asian American.” We did this so that participants would have specific base-rate information about the organization position that they were evaluating as opposed to more general information about the overall workforce. The participants answered the same question from Study 1: “What do you think is the race of the person interviewed?” Participants could select one of the following randomized options: Hispanic/Latin American, Asian/Asian American/Pacific Islander, White/Caucasian American, Black/African American, or Native American/Alaskan Native.

*Results*

A total of 157 of the 167 participants (94%) correctly reported manipulation checks on interviewee role, industry type, and racial minority. We assessed manipulation checks for interviewee role and industry type before assessing the key dependent variable, whereas the manipulation check for the racial minority included in the base rate was assessed after the key dependent variable. This was done so as not to cue participants that the goal of the study may be race related. Analyses conducted with and without the 10 individuals who failed one or more manipulation checks revealed the same outcomes across samples. Thus, the analyses presented here are on the full sample.

*Discussion*

Just as in Study 1, responses to the interviewee race question were recoded as White (1) or non-White (0). Using standard procedures (Kleinbaum, 1994), we submitted this dichotomous variable to a binary hierarchical logistic regression analysis with interviewee role, industry type, and racial minority as between-participants factors (see the regression analysis in Table 2). Analysis revealed a significant main effect on interviewee role ( $B = -0.65, SE = 0.34, p = .05, r = .15$ ). Participants were more likely to believe that leaders (34 of 82 participants = 42%) rather than employees were White (23 of 85 participants = 28%). The analysis yielded no other main effects or interactions ( $ps > .14$ ). Hence, leadership perceptions did not vary by the third factor, racial minority group in the base rate, confirming Hypothesis 3b. Similarly, leadership perceptions did not vary by the type of business industry, confirming Hypothesis 4b.

In further support of our presumption that being White is a prototypical characteristic of leadership, participants in the leader conditions presumed that the leader was White significantly more often than the 20% base rate would have suggested ( $Z = 2.98, p = .003$ ), but this was not the case when the interviewee was an employee ( $Z = 1.03, p = .28$ ).

Taken together, the results of Studies 1 and 2 support our first prediction that a characteristic of the business leadership prototype is being White. However, perhaps the effect could be due to the group prototype explanation (Hogg, 2001). If so, then the participant’s race would moderate the extent to which the leader would be perceived as White. That is, non-White observers would be less likely to perceive a leader prototype effect than White observers, and instead they would assume that leaders just as much as employees were White. To test this alternative, we conducted post hoc analysis with the participants from Studies 1 and 2. If the effects were due to a group prototype effect, then the interaction

Table 2  
*Binary Hierarchical Logistic Regression for Perceptions of Leader Race Regressed on the Type of Racial Minority Included in the Base Rate, Interviewee Role, and Industry Type (Study 2)*

Variable	Step 0			Step 1			Step 2			Step 3		
	<i>B</i>	<i>SE</i>	Wald	<i>B</i>	<i>SE</i>	Wald	<i>B</i>	<i>SE</i>	Wald	<i>B</i>	<i>SE</i>	Wald
Constant	-0.66	0.16	16.23***	-0.05	0.37	0.02	-0.20	0.55	0.13	-0.56	0.63	0.80
Racial minority						2.78			0.69			0.57
Interviewee role				-0.65	0.34	3.64*	-0.19	0.66	0.09	0.43	0.81	0.28
Industry				-0.24	0.34	0.48	-0.20	0.64	0.10	0.36	0.77	0.22
Interviewee Role × Racial Minority									0.71			2.26
Industry × Racial Minority									0.22			0.45
Industry × Interviewee Role							-0.34	0.68	0.25	-1.53	1.14	1.81
Industry × Interviewee Role × Racial Minority												1.84

*Note.* Interviewee role, racial minority, and industry were treated as categorical variables for the analysis. The leader role was used as the reference point for the interviewee role manipulation tests, social services industry was used as a reference point for the industry manipulation, and perceptions of leader race was coded dichotomously (1 = *White*, 0 = *other races*). Because the racial minority manipulation had three levels, its tests (either main effects tests or tests of interactions involving this variable) did not have a single condition that represented a reference point; rather, the table contains the overall test of this variable, the Wald statistic. The racial minority group factor includes Asians/Asian Americans, Hispanics/Latin Americans, and Blacks/African Americans.

\* $p < .05$ . \*\*\* $p < .001$ .

between the participant's race and interviewee role should be significant. That is, Whites should be more likely to perceive the leader as opposed to the employee to be White, whereas racial minorities would be equally likely to consider the leader and employee to be White. By contrast, our leader prototype prediction would argue that being White is an attribute of the U.S. business leader prototype, and such prototypes are evident regardless of the observer's race. Hence, the interaction between participant's race and interviewee role would not be significant.

Participants' assessments of interviewees' race were submitted to a logistic regression analysis, with interviewee role and participant race (White, non-White) as predictors. Consistent with predictions, the analysis revealed a main effect of interviewee role ( $B = -0.68$ ,  $SE = 0.23$ ,  $p = .004$ ,  $r = .17$ ), where leaders were perceived to be White (57%) more than nonleaders (41%). The analysis also revealed a main effect of participant race ( $B = 0.61$ ,  $SE = 0.24$ ,  $p = .01$ ,  $r = .15$ ). White participants were less likely to perceive that the interviewee (regardless of role) was White (81 of 186 participants = 43%) than were racial minorities (72 of 126 participants = 57%). However, the two-way interaction between interviewee role and participant's race was not significant ( $B = -0.72$ ,  $SE = 0.48$ ,  $p > .12$ ); White and non-White participants both perceived leaders more than nonleaders as White.

We also conducted the logistic regression analysis with participant's race as a five-level variable (White, Black, Hispanic, Asian, and other) and interviewee role as between-subjects factors. This analysis revealed no significant effects of participant's race, either alone or in interaction with interviewee role ( $ps > .05$ ). Finally, we conducted a set of post hoc comparisons for each of the five participant race categories to determine whether any pairwise differences were revealed. Given that a five-level variable produces 10 different pairwise comparisons, 10 significance tests were to be evaluated, which greatly increases the family-wise error rate. Thus, to reduce the risk of making a Type I error (i.e., rejecting the null hypothesis when it should not be rejected), we set Alpha using a Bonferroni correction ( $.05/10 = .005$ ; Abdi, 2007). Thus, effects would be considered significant if the  $p$  values fell below .005. All tests involving pairwise comparisons of race and the interactions between pairwise race comparisons and interviewee role failed to reach this level of significance. In fact, all but one comparison ( $p = .02$ ) had significance levels greater than  $p = .05$ . This evidence is consistent with our prediction that the perception that leaders are White is a function of leader categorization processes rather than of a group prototype.

In sum, the first two studies lend support to the prediction that being White is a characteristic of the leader prototype. The next two studies sought to test our second overarching prediction, to investigate the potential implications of leader race for leadership evaluations and to see whether a leader prototype explanation could account for these effects. Specifically, we evaluated whether leader categorization could best explain perceptions of leader effectiveness (Study 3) and leadership potential (Study 4).

### Study 3: Evaluations of White and Non-White Leaders

Previous research has demonstrated that White managers are considered to have greater career advancement opportunities than African American managers (Greenhaus & Parasuraman, 1993; Maume, 1999). For example, in a comprehensive longitudinal

study across an array of industries, Maume (1999) showed that when personal and job-related factors were controlled, White men were 52% more likely to be promoted in their careers than African American men. Maume described the advancement of White men as *glass escalators* and that of African American men as *glass ceilings*. We sought to investigate whether race differences between Whites, African Americans, and other racial minorities in evaluations of leadership effectiveness could be explained by a White leader prototype.

We predicted that observers, when evaluating profiles of leaders in organizations, would perceive White targets to be more effective leaders than racial minority targets and that this perception would be due to leader categorization. That is, the favorable evaluations of Whites would occur because being White is more consistent with other pertinent prototypical leadership characteristics than being a racial minority. This prediction is derived from the recognition-based processes described in leadership categorization theory (Lord & Maher, 1990, 1991), whereby leaders are evaluated more favorably when the leader is perceived to be compatible with prototypical rather than nonprototypical characteristics, a prediction that has received a good deal of empirical support (Foti et al., 1982; Foti & Lord, 1987; Lord et al., 1986; Phillips, 1984), especially when salient identity characteristics, such as gender, have been considered (Eagly & Karau, 2002; Heilman et al., 1989; Lyness & Heilman, 2006; Nye & Forsyth, 1991; Schein, 1973; Scott & Brown, 2006). However, prototypical characteristics may not influence observers' perceptions if they are considered to be uninformative (Kunda & Spencer, 2003), such as when individualizing information about specific events and circumstances are present (Leyens, Yzerbyt, & Schadron, 1992; Yzerbyt, Schadron, Leyens, & Rocher, 1994). That is, in addition to prototypical and nonprototypical characteristics, leader evaluations often entail individualized analyses or summaries of the leader's performance, and such specific information may increase or decrease the relevance of the prototype in leader evaluations.

At first glance, it may be hard to believe that observers may rely on leader categorization processes at all when individualized information about the leader's performance record is available. However, existing theory and evidence suggests that the leader prototype may still affect observers' impressions as long as it does not disrupt comprehension or, more specifically, conflict with other information they have (Kunda & Spencer, 2003; see also Kunda, Davies, Hoshino-Browne, & Jordan, 2003). That is, when a target's categorization conflicts with individualized information that observers have about a target, observers will not use prototypes and instead will rely only on the available individualized information (Leyens et al., 1992; Yzerbyt et al., 1994). In contrast, prototypes are more likely to affect observers' evaluations of the target when the prototype categorization is perceived to confirm the individualized information the observers have about the target person; thus, the prototype facilitates comprehension (Kunda & Spencer, 2003).

As applied to our work, we predict that the leader prototype will lead to higher leader effectiveness ratings of White relative to non-White leaders, but only when the leader prototype confirms and reinforces individualized information about the leader's performance record, namely, when the leader has led the organization to success. Some evidence supports the idea that leadership prototypes are compatible with successful team and organizational

performances, as leadership effectiveness ratings are the highest when groups and organizations have performed successfully (Meindl & Ehrlich, 1987; Nye, 2002; Rush, Phillips, & Lord, 1981; Weber, Camerer, Rottenstreich, & Knez, 2001), and it is easier to associate success with a prototypical leader than with a nonprototypical leader and to subsequently infer leadership effectiveness (Ensari & Murphy, 2003; Phillips & Lord, 1981, 1982). However, when successful outcomes are considered, perceived responsibility for the performance becomes an elementary part of the evaluative process (Meindl & Ehrlich, 1987; Meindl et al., 1985). When managers are viewed as responsible for successful performances, then the perception that they are typical leaders is enhanced; but, if they are perceived not to be responsible for successful performances or responsible for poor performances, leader perceptions are lowered (Lord & Maher, 1991). Therefore, a White leader who is responsible for the success of the group or organization should be evaluated favorably because all three factors—race, organizational performance, and the appropriate attributions—are all well-matched leadership characteristics.

Conversely, when the leader is not given credit for organizational success (i.e., it is attributed to external causes) or the leader's organization performs poorly, then the leader prototype is incompatible with the individualized information and it will not be used. Under such performance conditions, White and non-White leaders will be rated equivalently. Thus, consistent with leader categorization, we predict that there should not be differences in evaluations between White and non-White leaders except when successful performances are attributed to the leader.

White leaders may be rated more favorably than non-White leaders for reasons other than leader categorization. One alternative prediction that likely comes to mind stems from the negative stereotypes that are frequently associated with racial minority groups. For example, African Americans are often stereotyped to be less determined and less competent than Whites. It is possible that a White leader may be evaluated more positively than an African American leader because of these negative stereotypes. However, if the negative stereotype explanation is valid and given the existing research on comprehension and individuating information (Kunda & Spencer, 2003), we would expect the emphasis to be on the negative evaluation of non-White leaders (e.g., African, Hispanic, Asian American) as opposed to the positive evaluations of White leaders. Whereas the White prototype explanation would be more likely to occur under conditions of success, the negative stereotype explanation would be more likely to occur under conditions of failure. That is, non-White leaders would be evaluated less favorably than White leaders only when the negative stereotype reinforced information about the leader's performance record, specifically, that the non-White leader was responsible for organizational failure. Thus, on the basis of the negative stereotype explanation, we predict a three-way interaction between race, organizational performance, and performance attributions: Non-White leaders will be evaluated less favorably than White leaders, but only when they are blamed for unsuccessful organizational performance (Hypothesis 5a). However, on the basis of our proposed White business leader prototype, we predict a competing three-way interaction: White leaders will be evaluated more favorably than non-White leaders, but only when they are given credit for successful organizational performances (Hypothesis 5b).

## Method

### Participants

A total of 479 undergraduates (270 women, 209 men) participated in the study in exchange for course extra credit or \$10. Of these participants, 131 were White, 75 were Black, 125 were Asian, 115 were Hispanic, and 33 classified their race as "other."

### Study Design

The study consisted of a 2 (organizational performance: failure, success)  $\times$  2 (performance attribution: internal, external)  $\times$  2 (leader race: African American, White) between-subjects factorial design. The decision to focus primarily on African Americans in this study as opposed to other racial minorities does not imply that one minority group is more important than another. It does, however, reflect that in the context of racial bias, social science research contrasts African Americans—more so than any other racial minority in the United States—to Whites.

### Procedure

Participants were told that they were to complete a task called "Reading between the Lines" and that the ostensible goal of the study was to examine how people make inferences about the newspaper articles they read. After reading the article, participants answered some questions about the article's content. The article was supposedly about a company called Dosagen, its CEO, and the recent performance of the company. The article contained the experimental manipulations of organizational performance, performance attribution, and leader race. After reading one of the eight versions of the article, the participants completed the postexperimental questionnaire, were debriefed, and then were dismissed (see the manipulation script in Appendix C).

*Organizational performance.* The corporation's performance was manipulated as being either successful or unsuccessful. In addition, the company's earnings were described as having increased (i.e., successful performance) or decreased (i.e., unsuccessful performance), and a graph noting a percentage change in earnings over the past 5 months was also included. For successful performance, the graph displayed a steady increase in company earnings over a 5-month period. For unsuccessful performance, the graph displayed a steady decline over a 5-month period.

*Attributions.* Quotes provided by an industry analyst in the article manipulated attributions for organizational performance. Internal attributions were manipulated by placing the credit or the blame for the performance on the CEO. Accordingly, the implication was that the CEO's abilities, behaviors, and decisions accounted for the company's performance. External attributions were manipulated by assigning credit or blame for the performance on the marketplace. Hence, the economic context of the industry accounted for the company's performance and not the CEO. The primary sentence included in the text of the newspaper article that manipulated attributions read as follows: "The performance of the company should be attributed to the performance of the [CEO/marketplace], not to the performance of the [marketplace/CEO]."

*Race of the CEO.* The race of the CEO was manipulated by the name and a picture of the CEO. According to research conducted by Bertrand and Mullainathan (2004), Todd is a "White-sounding"

name, whereas Tyrone is an “African American-sounding” name. To determine that Tyrone was principally used as an African American name and that Todd was principally used as a White name, Bertrand and Mullainathan used name-frequency data calculated from birth certificates. They then tabulated the names by race to determine which names were distinctly African American and which were distinctly White. These two names, Todd and Tyrone, had two of the highest frequencies for the names tested in their respective categories, White names and African American names. In addition, they conducted a survey in various public areas to assess the racial traits of the given names. The names led respondents to attribute Todd as White and Tyrone as African American. These two racially identifying names were paired with the neutral-sounding last name Smith.

To make the race of the CEO more salient, a headshot of a CEO dressed in a suit was also provided. To ensure that the photographs of the African American and White CEOs differed in terms of race but were similar on other potentially critical dimensions that we thought could bias participants’ evaluations of the leaders, we conducted a pilot test. Thus, 25 participants from the same sample population as the participant pool evaluated 10 photographs of male faces (5 African American, 5 White) on race (to confirm differences in race), age (to ensure comparability), and physical attractiveness and emotional expression (to confirm that the selected photos would be equally attractive and exhibit similar emotional expressions). Of the 10 photographs, two were selected because they were clearly recognizable as African American and White, were considered similar in age, and were not different in ratings of physical attractiveness or emotional expression ( $ps > .57$ ).

### Leadership Effectiveness Measure

Participants were asked to evaluate the CEO on intelligence, competence, confidence, and competitiveness (e.g., “I think the CEO is competent”). According to Kirkpatrick and Locke (1991) and Lord et al. (1984), these are characteristics that have been shown to represent effective leadership. These four items were measured on a 7-point Likert-type scale anchored by 1 (*strongly disagree*) and 7 (*strongly agree*). The four items shared a univariate factor structure, and interitem consistency was high (Cronbach’s  $\alpha = .88$ ). Thus, item ratings were averaged together, creating a single composite leadership evaluation score, where higher scores indicated more effective leadership. Scores ranged from 1 to 7 ( $M = 4.72$ ,  $SD = 1.13$ ).

## Results

### Manipulation Checks

Prior to assessing the primary dependent variable, leadership effectiveness, participants responded to two manipulation checks to confirm their awareness of the organizational performance and performance attribution manipulations. Responses confirmed that 99% and 97% of the sample correctly reported the organization’s performance and the performance attribution made by the industry analyst, respectively, as reported in the news article. After participants answered the leadership effectiveness questions, a final manipulation check evaluated participants’ awareness of the

CEO’s race with the question “What is the race of Mr. Smith, the CEO?” The participants were given six choices: (a) Black/African American, (b) Hispanic/Latin American, (c) Asian/Asian American/Pacific Islander, (d) Native American/Alaskan Native, (e) White/Caucasian American, or (f) Other. This question was placed near the end of the postexperimental questionnaire so as not to bias the measures of interest. Of the 479 students who participated in the study, 94% correctly identified the leader’s race. Given the high reliability on the manipulation checks, we included all respondents in our final analysis. In addition, analyses removing manipulation check failures revealed the same outcomes.

### Leadership Effectiveness

Scores were submitted to a three-way analysis of variance (ANOVA) with organizational performance, attribution, and leader race as between-participants factors. Analysis revealed a main effect for organizational performance,  $F(1, 471) = 270.86$ ,  $p < .001$ ,  $r = .60$ , whereby leaders were considered more effective after an organization’s success ( $M = 5.40$ ,  $SD = 0.96$ ) than failure ( $M = 4.09$ ,  $SD = 0.89$ ). Analysis also revealed a main effect of race,  $F(1, 471) = 3.92$ ,  $p < .05$ ,  $r = .09$ , where White leaders were considered more effective ( $M = 4.78$ ,  $SD = 1.13$ ) than African American leaders ( $M = 4.67$ ,  $SD = 1.13$ ). These main effects were qualified by two-way interactions between performance and attribution,  $F(1, 471) = 39.92$ ,  $p < .001$ ,  $r = .28$ , and another between leader race and attribution,  $F(1, 471) = 3.95$ ,  $p < .05$ ,  $r = .09$ . These in turn were qualified by a significant three-way interaction,  $F(1, 471) = 6.68$ ,  $p = .01$ ,  $r = .12$ . See the ANOVA results in Table 3.

The three-way interaction is presented in Figure 1. The top panel contains mean leader effectiveness ratings following organizational success, and the bottom panel contains ratings after organizational failure. To localize the effects of this three-way interaction, we conducted two-way interaction contrasts (Keppel, 1991) to determine whether interactions between leader race and attribution occurred within the failure condition, as predicted by Hypothesis 5a, or within the success condition, as predicted by Hypothesis 5b. Within the success condition, analysis revealed a significant interaction between attribution and leader race,  $F(1, 471) = 10.09$ ,  $p < .01$ . Whereas African American ( $M = 5.19$ ,  $SD = 0.94$ ) and

Table 3  
Analysis of Variance With Leadership Effectiveness on Organizational Performance, Attributions, and CEO’s Race as Between-Subjects Factors (Study 3)

Variable	$F(1, 471)$	$r$
Intercept	13,757***	.98
Performance	270.86***	.60
Attribution	2.94	.08
Leader’s race	3.92*	.09
Performance $\times$ Attribution	39.92***	.28
Performance $\times$ Leader’s Race	0.16	.00
Attribution $\times$ Leader’s Race	3.95*	.09
Performance $\times$ Attribution $\times$ Leader’s Race	6.68**	.12

Note. The racial minority in this study was African Americans. CEO = chief executive officer.  
\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

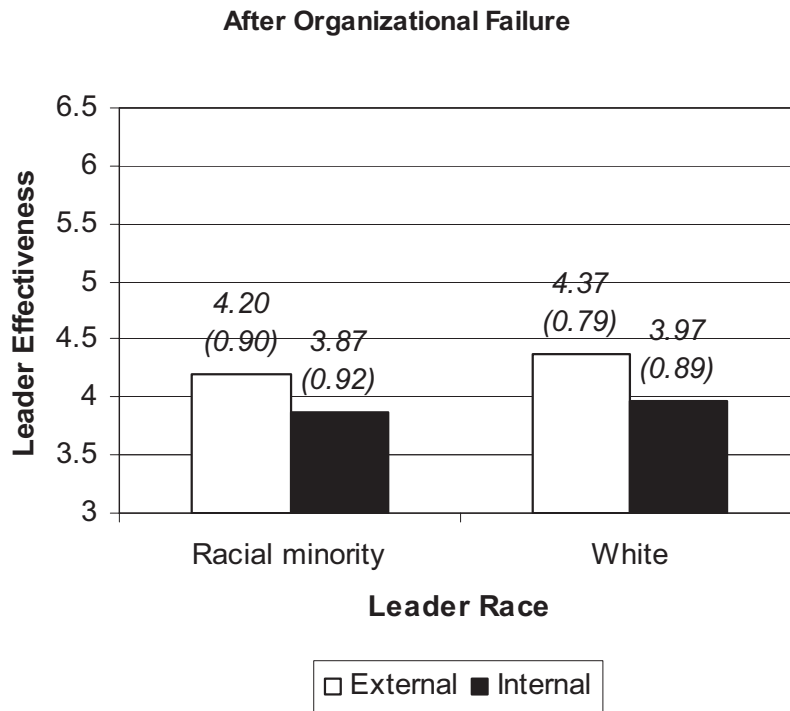
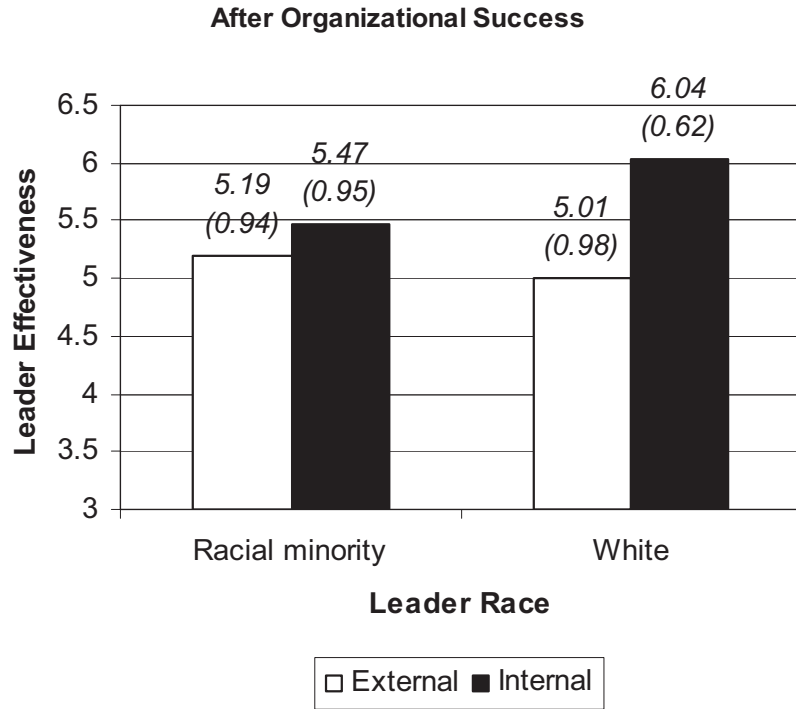


Figure 1. Mean ratings (and standard deviations) of leader effectiveness by organizational performance, performance attribution, and leader race (Study 3). The racial minority in this study was African Americans.

White leaders ( $M = 5.01$ ,  $SD = 0.98$ ) were perceived to be equally effective when an external attribution was given for the organization's success,  $F(1, 471) = 1.24$ , *ns*, White leaders ( $M = 6.04$ ,  $SD = 0.62$ ) were considered more effective than African American leaders ( $M = 5.47$ ,  $SD = 0.95$ ) when leaders were credited with the organization's success,  $F(1, 471) = 10.85$ ,  $p < .001$ . Thus, Hypothesis 5b was supported. By contrast, within the failure condition, analysis here yielded no Leader Race  $\times$  Attribution interaction ( $F < 1$ ). Rather, analysis yielded only an attribution simple effect,  $F(1, 471) = 10.99$ ,  $p < .001$ , where a leader's ratings were higher when organizational failure was blamed on the marketplace rather than on him. Thus, Hypothesis 5a was not supported. White leaders were evaluated more favorably than non-White leaders, but only when successful organizational performance was attributed to the leader.

#### *Participant's Race as a Moderator?*

According to a group prototype model of leader effectiveness (Hogg, 2001) or more generally, a social identification explanation (Tajfel & Turner, 1986), it is possible that individuals would be more likely to favor leaders from their own race over those from other races. If so, then White observers would replicate existing effects reported in the top panel of Figure 1, whereas African American participants would be more likely to rate African American leaders more favorably than White leaders. Thus, leadership effectiveness was resubmitted to the same ANOVA, but with participants' race as a fourth between-participants factor. Analysis revealed that none of the effects involving participants' race was significant on leadership effectiveness ( $F_s < 1.49$ ,  $ps > .20$ ). The means reported in Figure 1 were consistent across participant race.

#### *Discussion*

Overall, the evidence in Study 3 is consistent with predictions derived from the leader categorization literature that have shown that prototypical leaders are evaluated more favorably than non-prototypical leaders after a clearly successful performance (Ensari & Murphy, 2003). We found that White leaders were evaluated more favorably than African American leaders, but only when they were viewed as responsible for their organization's successful performance, not when success was attributed to external explanations (such as the marketplace) or when the leader's organization had failed. These findings suggest that the difference in evaluations between White and non-White leaders came about because of a White leader prototype as opposed to negative stereotypes toward African Americans. It also suggests that leader race will affect observers' evaluations when these evaluations could matter most to the leader's career advancement, specifically when the leader has accumulated a record of success.

In addition, in further support that being White is an attribute of the leader prototype, we demonstrated that racial bias was not merely limited to a group-derived prototype on the part of White observers. Rather, observers were more likely to evaluate successful White leaders more favorably than successful African American leaders regardless of the observers' race. The findings presented here provide support that Whites more than non-Whites are viewed as prototypical leaders and that these perceptions affected leadership evaluations. However, we conducted a fourth study to

determine whether our findings were more generalizable and to specifically assess evaluator's perceptions of leadership potential, not merely leadership effectiveness.

#### *Study 4: Leadership Potential of White and Non-White Leaders*

The question posed in the first paragraph of the introduction asks "What is preventing well-trained racial minorities from advancing within the organizational hierarchy to become leaders in U.S. companies?" To explicitly answer this question, we sought to demonstrate that racial bias due to leader categorization does not occur only once Whites and racial minorities are in leadership positions, as demonstrated in Study 3, but also when they are being considered for career advancement opportunities. Thus, the central purpose of Study 4 was to test Hypothesis 5b, with leadership potential as the variable of interest. That is, we sought to replicate Study 3's findings and to examine evaluations of midlevel leaders who are considered for top leadership positions.

Also, we set out to accomplish three additional goals. First, we sought to rule out the possibility that participants in Study 3 were making their evaluations on the basis of characteristics attributed to names. Consistent with the research of Bertrand and Mullainathan (2004), we chose to use names that are typically associated with racial minorities and Whites to manipulate race. However, according to Kasof (1993), names that are based on demographics can form impressions and communicate information such as attractiveness, age, and even intellect. Accordingly, the names used to manipulate race may have communicated attributes other than race. Second, Study 3 focused on only one racial minority group, African Americans. Although much of the research that examines racial bias contrasts Whites with African Americans, to demonstrate that a White prototype of leadership persists in U.S. business settings, it would be useful to consider evaluations of White leaders relative to leaders who belong to alternative racial groups, such as Asian and Hispanic Americans. Third, to increase the generalizability of our findings, we recruited a more experienced sample for participation in this study.

#### *Method*

##### *Participants and Study Design*

A total of 151 graduate students (106 Whites, 19 Hispanics, 14 Blacks, and 12 Asians and others) completed the study as a course requirement in a business management course or in exchange for snacks and a break from the Basketball Ticket Campout. Campout is a weekend-long event where students "camp out" so that they may be included in a lottery system for basketball tickets. There were no differences in the analysis between the data collected in conjunction with the management course and the data collected at the campout. Thus, the two sites are not discussed further. The participants (90 men, 61 women) had an average age of 27.33 years ( $SD = 2.78$ ) and 4.53 years of work experience ( $SD = 2.81$ ). Similar to Study 3, the study consisted of an Organizational Performance (failure, success)  $\times$  Performance Attribution (internal, external)  $\times$  Leader Race (White, Hispanic, Asian) between-participants design.

### Procedure

Participants were told that they were participating in a study called "Performance Evaluations" and that the goal of the study was to evaluate personnel who were candidates for top positions within an organization. Participants were instructed to read a personnel summary that included a brief profile and performance summary of a consulting services team leader employed in a fictitious company, Buygen, Inc. (see the manipulation script in Appendix D). Next, they were instructed to evaluate whether the team leader described in the profile had the potential to succeed if promoted to a more senior management position, specifically, a division leader within the organization. After reading the profile and performance summary, participants completed an evaluation of the target person described in the personnel summary that included manipulation checks and a measure of leadership potential.

**Manipulations.** The manipulations for organizational performance and attributions were similar to the manipulations in Study 3. First, the consulting team's performance was manipulated as either successful or unsuccessful. The team's performance was described as having increased or decreased. Second, comments in the performance appraisal were used to manipulate attributions to the team's performance. The primary sentence in the performance appraisal that manipulated internal and external attributions read as follows: "Last year's appraisal noted that the team's performance was due to the performance of the [marketplace/team leader], not to the [team leader/marketplace], and stated that 'it is the [availability of high profile clients in the marketplace/team leader's management skills] that explains the team's performance record.'"

Unlike in Study 3, where we used a picture and a name to manipulate the race of the leader, in Study 4 we manipulated the race of the team leader by a line-item description in the personnel file. Under the label *race*, the target was described as White/European American/Caucasian, Asian/Asian American, or Hispanic/Latin American. A pilot test revealed that when only this race label was used to manipulate race (e.g., no picture or name as in Study 3) and when the manipulation check for leader race was assessed after the dependent variable of interest, a significant number of participants (approximately 20%; 16 out of 84 pilot test participants) failed the leader race manipulation check. Thus, to make the leader race salient, the leader race manipulation check (as well as the organizational performance and attribution manipulation checks) were assessed prior to measuring leadership potential.

**Leadership potential.** We designed the leadership potential measure to evaluate participants' evaluations of the team leader's career expectations in the role of the division leader and used the following three items: "He has the competence to perform effectively in the division leader role," "He has what it takes to lead others in a division successfully," and "He will be an effective division leader." Participants rated their level of agreement using a 7-point response scale (1 = *strongly disagree*, 7 = *strongly agree*). The items shared a univariate factor structure, and inter-item consistency was high (Cronbach's  $\alpha = .89$ ). Responses were thus averaged together and ranged from 1 to 7 ( $M = 4.17$ ,  $SD = 1.06$ ).

### Results

Participants responded to three manipulation checks to confirm the team's performance, attributions made to the team leader, and the leader's race. A total of 97% of the participants correctly reported the team's performance, 99% correctly reported the attributions made to the leader, and 95% correctly reported the leader's race in the manipulation check. Given the robustness of the manipulations, the total sample was included in the analysis. Further, the results were the same when the manipulation failures were not included.

Participant's race did not significantly influence the findings when included as a covariate or as a fourth factor; hence, it will not be discussed further. In addition, planned comparison tests in which we used the entire sample that contrasted target Hispanic leaders with target Asian leaders in each of the performance and attribution conditions (i.e., internal/success, external/success, internal/failure, external/failure) yielded no significant differences. Thus, the Hispanic and Asian conditions were collapsed into one racial minority condition.

The leadership potential scores were submitted to an ANOVA with organizational performance, performance attributions, and leader race as between-participants factors (see ANOVA results in Table 4). Analysis revealed a significant main effect of organizational performance,  $F(1, 142) = 66.86$ ,  $p < .001$ ,  $r = .57$ ; a significant two-way interaction between organizational performance and attributions,  $F(1, 142) = 38.23$ ,  $p < .001$ ,  $r = .46$ ; and a significant interaction between attribution and leader's race,  $F(1, 142) = 2.08$ ,  $p < .05$ ,  $r = .12$ . These effects were qualified by a three-way interaction,  $F(1, 142) = 4.50$ ,  $p = .04$ ,  $r = .18$ . Means and standard deviations are presented in Figure 2. Consistent with Study 3, within the success conditions, the interaction contrast was significant,  $F(1, 142) = 6.26$ ,  $p = .01$ ,  $r = .32$ , whereas the interaction contrast for failure was not significant,  $F(1, 142) = 1.18$ ,  $ns$ ,  $r = .05$ . Moreover, simple effect comparisons revealed that White leaders ( $M = 5.15$ ,  $SD = 0.99$ ) received more favorable evaluations than did racial minority leaders ( $M = 4.45$ ,  $SD = 0.65$ ), a significant difference,  $F(1, 142) = 6.53$ ,  $p = .01$ ,  $r = .21$ , when success was internally attributed. However, White leaders ( $M = 4.00$ ,  $SD = 0.79$ ) were not evaluated more favorably than

Table 4  
*Analysis of Variance With Leadership Potential on Organizational Performance, Attributions, and CEO's Race as Between-Subjects Factors (Study 4)*

Variable	$F(1, 142)$	$r$
Intercept	370.57***	.85
Participant's race	0.90	.08
Performance	66.86***	.57
Attribution	1.61	.10
Leader's race	0.08	.03
Performance $\times$ Attribution	38.23***	.46
Performance $\times$ Leader's Race	1.98	.12
Attribution $\times$ Leader's Race	2.08*	.12
Performance $\times$ Attribution $\times$ Leader's Race	4.50*	.18

*Note.* The racial minorities in this study were Hispanic Americans and Asian Americans. CEO = chief executive officer.

\* $p < .05$ . \*\*\* $p < .001$ .

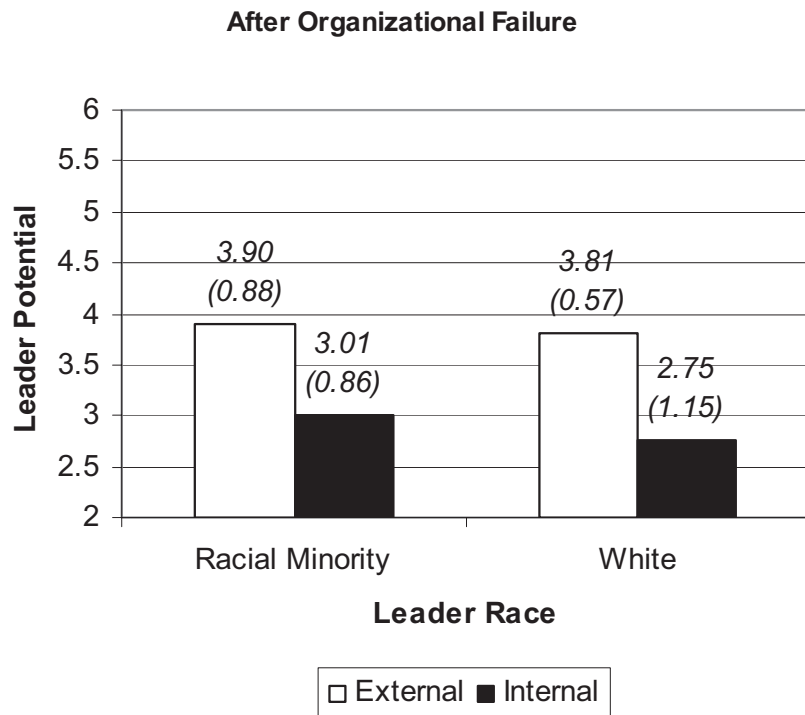
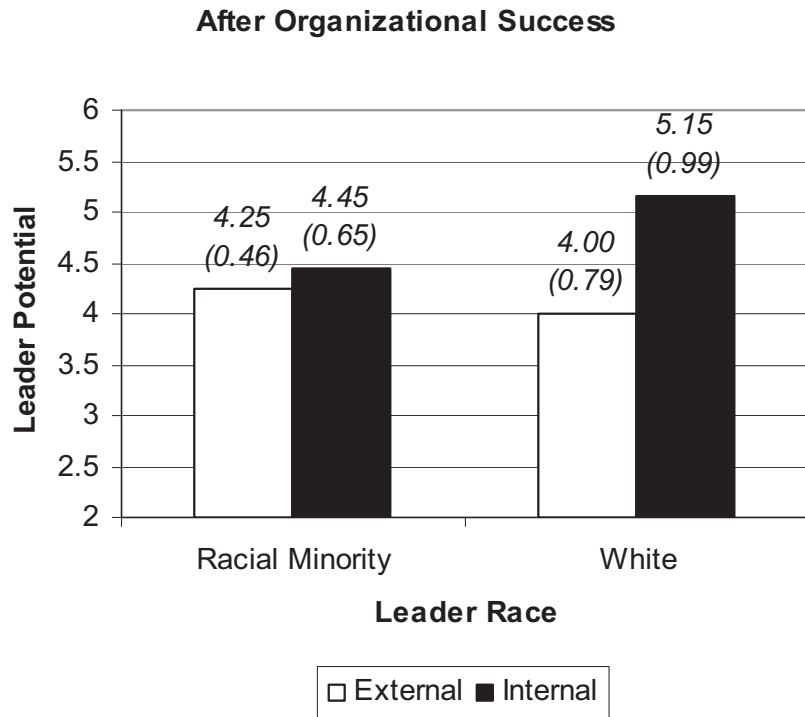


Figure 2. Mean ratings (and standard deviations) of leader potential by organizational performance, performance attribution, and leader race (Study 4). The racial minorities in this study were Hispanic Americans and Asian Americans.

racial minorities ( $M = 4.25$ ,  $SD = 0.46$ ),  $F(1, 142) = 0.89$ , *ns*, when success was externally attributed. Hypothesis 5b was thus supported: White leaders were rated more favorably than non-White leaders only when the team was successful and the leader deemed responsible for the success.

### Discussion

These findings support the idea that racial bias in the leader prototype can influence evaluations of leaders and their likelihood of career advancement. Taken together with Study 3 findings, these findings demonstrate that the career prospects of White targets were evaluated as higher than the prospects for African American, Hispanic American, and Asian American targets. Race differences occurred only when the leader was given credit for organizational success, evidence that is consistent with the leadership prototype prediction. It is precisely under these conditions, when leaders are held responsible for their organization's successful performance, that leaders should be able to capitalize on their accomplishments and use their excellent achievements as stepping stones to advance their career and as evidence of their ability to handle additional responsibilities. However, it appears that White leaders may be advantaged when such career advancement opportunities are considered.

### General Discussion

On the basis of leadership categorization theory, we predicted that Whites would be viewed as more prototypical leaders than racial minorities in U.S. business settings because the leadership prototype included the presumption that prototypical leaders were White. Across four studies, the evidence supported this overarching prediction. First, being White met the two structural principles of prototype development as prescribed by traditional categorization theory (Rosch, 1978) and leadership categorization theory (Lord & Maher, 1991). Being White was found to be more central to the business leader category and less central to the nonbusiness leader category (employees). This finding persisted regardless of the base rate of the work force, of the base rate of the racial minority that comprised the majority of the organization's positions, and of when the organization was situated in a financial services industry and a social services industry. Second, our findings revealed White individuals were perceived as more effective leaders and more likely to succeed than non-Whites but that these differences occurred only when these leaders were viewed as responsible for an organization's success. These findings persisted regardless of whether the comparison leader race was African, Hispanic, or Asian American, regardless of the participants' race and across participants with both high and low levels of work experience. We interpret these noted differences to be consistent with a leadership prototype explanation of race differences.

These findings advance organizational research in two important ways. First, not only do these studies corroborate existing categorization processes of leadership and inferential views of leadership effectiveness, but they introduce the idea that a leader's race, and not merely the stereotypical traits associated with race, could influence the evaluative process. Previous research has shown that leadership categorization and inferential processes of leadership provide efficient heuristics for appraising leaders be-

cause evaluators only have to compare a target leader with an existing knowledge base that includes prototypical traits and considers salient performance outcomes (Lord & Maher, 1991). Our findings suggest that the cognitive economy afforded by this simplistic evaluative process provides a way to efficiently and perhaps unintentionally evaluate White leaders as more likely to succeed and as more effective than racial minority leaders. Thus, we provide evidence that indeed there may be a White standard to which members of racial minorities are compared when leadership perceptions and leadership evaluations are considered.

Second, our findings offer a more in-depth understanding of racial bias in leadership evaluations than what may be presumed by alternative perspectives, such as negative racial minority stereotype or group prototype explanations. Our findings are consistent with the overarching tenets of a negative stereotype explanation because White leaders were evaluated more favorably than racial minority leaders. However, the results of Studies 3 and 4 suggest that the racial bias occurred because of a favorable leader prototype as opposed to a negative racial stereotype. It may be that negative racial stereotypes are less relevant in business contexts. For example, some research finds that under certain conditions, African American businessmen are considered to be a positive subtype of a broader, global African American racial stereotype (Devine & Baker, 1991). Further, empirical evidence based on current stereotype-based theories of subtle bias, such as aversive racism, suggest that negative bias against racial minority groups, such as African Americans, is more likely to occur when it is not clear what sort of evaluation is normative and when evaluations that stem from negative stereotypes can be justified or rationalized (Aberson & Ettlin, 2004; Dovidio & Gaertner, 2000; Frey & Gaertner, 1986; Murphy-Berman, Berman, & Campbell, 1998). These vague conditions are less likely to be present when leaders are evaluated because the situational norms for performance appraisals and evaluations are more apt to be obvious and salient. We showed that it is when these norms are strong and evident that a White leader prototype will influence leadership ratings, such as when successful performance outcomes occur and attributions for performance are clear.

In addition, our findings offer a more extensive explanation of racial bias than would likely be proposed by a group prototype explanation (Hogg, 2001). Contrary to group prototype studies, in our study the bias in favor of White leaders was evident in observers who belonged to other racial groups, including Asian, Hispanic, and African Americans. Accordingly, African Americans and Hispanic Americans were just as likely as Whites and Asian Americans to evaluate White leaders as more effective and as more likely to have favorable career opportunities.

We must, however, note study limitations that could potentially hinder the generalizability of our findings. First, in Studies 3 and 4, we focused only on male leaders and did not include an evaluation of White female leaders or racial minority female leaders. Considerable research has examined how gender differences contribute to a male prototype of leadership (Brenner et al., 1989; Eagly & Karau, 2002; Heilman et al., 1989; Nye & Forsyth, 1991; Schein, 1973; Scott & Brown, 2006); thus, future research should consider how gender differences and racial differences intersect to possibly form a specific White *male* prototype of leadership. Second, our research was limited to the evaluation of fictitious leaders. Evaluations of actual leaders in top management

positions in organizations could differ, as leaders in organizational settings have reputations and social relationships that may affect how they are perceived by observers. Third, the participants in our studies were students. The use of student participants may limit the generalizability of our findings. Our findings were consistent across student samples with little work experience and graduate student samples with a moderate amount of work experience (i.e., an average of 4 to 6 years) who presumably would have been exposed to actual leaders in their occupations prior to attending graduate school. However, the findings may differ for sample populations in which the evaluators have a substantial amount of work experience.

### Managerial Implications

In addition to contributing to organizational research, our findings may have managerial implications as well. Because organizational rewards and promotion to leadership roles are awarded on the basis of leadership evaluations and because our findings suggest that leadership evaluations are more likely to favor Whites than racial minorities, it follows that Whites may be more likely to be promoted to leadership positions more frequently than racial minorities. Accordingly, a multiplier effect may persist such that positive evaluations are given to White leaders, White leaders continue to be the prototype for effective leadership, and correspondingly, racial minority leaders are continually disadvantaged. In order to disrupt this perpetual cycle, managers and organizational members have to be made aware of the cognitive biases that persist in leadership evaluations that may favor Whites and hinder racial minorities. Awareness alone may not “correct” the bias against racial minority leaders and in favor of White leaders, but it may lead to a better understanding of the perceived differences. Without a thorough understanding of the skewed view of effective leadership, racial minorities will continue to be underrepresented in top leadership positions.

What should managers do when administering leadership evaluations? When continued racial disparity in positions of leadership persists in their organizations, managers should take a proactive stance, gauge the evaluative process, and ask the difficult questions, such as why are Whites congregated in leadership positions and minorities are not? Do racial minorities in lower organizational positions have similar qualifications as do Whites who were promoted to top management? Is it possible to institute a blind review process that omits or substantially reduces racial considerations? If racial minorities consistently attain objective achievements, but those accomplishments are not reflected by good leadership ratings or positive leadership perceptions, managers should attempt to rectify this disconnect and consider the presence of cognitive biases that may favor Whites over racial minorities.

### Conclusion

This study makes clear that the attitudes toward racial minority leaders and White leaders are complex and merit further investigation. Our results challenge the assumption that racial differences are no longer a critical issue in today’s organizations (Hurley, Fagenson-Eland, & Sonnenfeld, 1997). Although opaque racial barriers may no longer exist in U.S. organizations, transparent barriers likely persist that prevent racial minorities from rising to

the most esteemed positions of leadership in corporate environments.

### References

- Abdi, H. (2007). Bonferroni and Sidak corrections for multiple comparisons. In N. J. Salkind (Ed.), *Encyclopedia of measurement and statistics* (pp. 103–107). Thousand Oaks, CA: Sage.
- Aberson, C. L., & Ettl, T. E. (2004). The aversive racism paradigm and responses favoring African-Americans: Meta-analytic evidence of two types of favoritism. *Social Justice Research, 17*(1), 25–46.
- The Alliance for Board Diversity. (2005). *Women and minorities on Fortune 100 boards*. Retrieved March 1, 2007, from <http://www.catalystwomen.org/files/full/ABD%20report.pdf>
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.
- Beach, L. R. (1964). Cue probabilism and inference behavior. *Psychological Monographs: General and Applied, 78*(5), 1–20.
- Bennis, W., & Nanus, B. (1985). *Leaders: The strategies for taking charge*. New York: Harper & Row.
- Bertrand, M., & Mullainathan, S. (2004). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *The American Economic Review, 94*(4), 991–1013.
- Brenner, O. C., Tomkiewicz, J., & Schein, V. E. (1989). The relationship between sex role stereotypes and requisite management characteristics revisited. *Academy of Management Journal, 32*, 662–669.
- Bruner, J. S. (1957). Going beyond the information given. In J. S. Bruner, L. Festinger, F. Heider, K. F. Muenzinger, C. E. Osgood, & D. Rapaport (Eds.), *Contemporary approaches to cognition* (pp. 41–69). Cambridge, MA: Harvard University Press.
- Burns, J. M. (1978). *Leadership*. New York: Harper & Row.
- Burns, P., & Gimpel, J. (2000). Economic insecurity, prejudicial stereotypes, and public opinion on immigration policy. *Political Science Quarterly, 115*(2), 201–225.
- Calder, B. J. (1977). An attribution theory of leadership. In B. Staw & G. Salancik (Eds.), *New directions in organizational behavior* (pp. 179–204). Chicago: St. Clair Press.
- Cantor, N., & Mischel, W. (1979). Prototypes in person perception. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 12, pp. 3–52). New York: Academic Press.
- Castilla, E. (in press). Gender, race, and meritocracy in organizational careers. *American Journal of Sociology*.
- Chung-Herrera, B., & Lankau, M. (2005). Are we there yet? An assessment of fit between stereotypes of minority managers and the successful-manager prototype. *Journal of Applied Social Psychology, 35*(10), 2029–2056.
- Connelly, M., Gilbert, J., Zaccaro, S., Threlfall, K., Marks, M., & Mumford, M. (2000). Exploring the relationship of leadership skills and knowledge to leader performance. *Leadership Quarterly, 11*(1), 65–86.
- Corporate Board Initiative. (2006). *2005 update on the Committee of 100’s Asian & Asian Pacific American (APA) corporate board report card*. Retrieved March 2, 2007, from [http://www.committee100.org/initiatives/corporate\\_board/C-100\\_Corporate\\_Board\\_Update.pdf](http://www.committee100.org/initiatives/corporate_board/C-100_Corporate_Board_Update.pdf)
- Cox, T., & Nkomo, S. (1986). Differential performance appraisal criteria: A field study of Black and White managers. *Group & Organization Studies, 11*(1–2), 101–120.
- Crocker, J., Fiske, S. T., & Taylor, S. (1984). Schematic bases of belief change. In R. Eiser (Ed.), *Attitudinal judgment* (pp. 197–226). New York: Springer.
- Devine, P. G., & Baker, S. M. (1991). Measurement of racial stereotype subtyping. *Personality and Social Psychology Bulletin, 17*, 44–50.
- Devine, P. G., & Elliot, A. J. (1995). Are racial stereotypes really fading? The Princeton trilogy revisited. *Personality and Social Psychology Bulletin, 21*, 1139–1150.

- DeVries, R. (2000). When leaders have character: Need for leadership, performance, and the attribution of leadership. *Journal of Social Behavior and Personality, 15*(3), 413–430.
- Dixon, J., & Rosenbaum, M. (2004). Nice to know you? Testing contact, cultural, and group threat theories of anti-Black and anti-Hispanic stereotypes. *Social Science Quarterly, 85*(2), 2004.
- Dorsey, N. (2005). *The art of inclusion: Success stories of African Americans in the nonprofit sector*. Retrieved from Dissertation.com.
- Dovidio, J., & Gaertner, S. (2000). Aversive racism in selection decisions: 1989 and 1999. *Psychological Science, 11*(4), 315–319.
- Eagly, A., & Karau, S. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review, 109*(3), 573–598.
- Ensari, N., & Murphy, S. E. (2003). Cross-cultural variations in leadership perceptions and attribution of charisma to the leader. *Organizational Behavior and Human Decision Processes, 92*, 52–66.
- Ford, J., Kraiger, K., & Schechtman, S. (1986). Study of race effects in objective indices and subjective evaluations of performance: A meta-analysis of performance criteria. *Psychological Bulletin, 99*, 330–337.
- Fortune. (2006). *Key Fortune 500 findings*. Retrieved March 1, 2007, from [http://www.timeinc.net/fortune/information/presscenter/fortune/press\\_releases/20060403\\_fortune500.html](http://www.timeinc.net/fortune/information/presscenter/fortune/press_releases/20060403_fortune500.html)
- Foti, R., Fraser, S., & Lord, R. (1982). Effects of leadership labels and prototypes on perception of political leaders. *Journal of Applied Psychology, 67*(3), 326–333.
- Foti, R., & Lord, R. (1987). Prototypes and scripts: The effects of alternative methods of processing information on rating accuracy. *Organizational Behavior and Human Decision Making Processes, 39*, 318–340.
- Frey, D., & Gaertner, S. L. (1986). Helping and the avoidance of inappropriate interracial behavior: A strategy which perpetuates a nonprejudiced self-image. *Journal of Personality and Social Psychology, 50*, 1083–1090.
- GAO Report. (2006). *Financial services industry: Overall trends in management-level diversity initiatives, 1993–2004*. (GAO Report No. 06–843T). Washington, DC: U.S. Government Accountability Office.
- Greenhaus, J., & Parasuraman, S. (1993). Job performance attributions and career advancement prospects: An examination of gender and race effects. *Organizational Behavior and Human Decision Processes, 55*(2), 273–297.
- Greenhaus, J., Parasuraman, S., & Wormley, W. (1990). Effects of race on organizational experiences, job performance evaluations, and career outcomes. *Academy of Management Journal, 33*(1), 64–87.
- Hains, S. C., Hogg, M. A., & Duck, J. M. (1997). Self-categorization and leadership: Effects of group prototypicality and leader stereotypicality. *Personality and Social Psychology Bulletin, 23*(10), 1087–1099.
- Heilman, M., Block, C., Martell, R., & Simon, M. (1989). Has anything changed? Current characterizations of men, women, and managers. *Journal of Applied Psychology, 74*(6), 935–942.
- Hogg, M. (2001). A social identity theory of leadership. *Personality and Social Psychology Review, 5*(3), 184–200.
- Hogg, M., Fielding, K., Johnson, D., Masser, B., Russell, E., & Svensson, A. (2006). Demographic category membership and leadership in small groups: A social identity analysis. *Leadership Quarterly, 17*(4), 335–350.
- Hollander, E. P. (1960). Competence and conformity in the acceptance of influence. *Journal of Abnormal and Social Psychology, 61*, 365–369.
- House, R. J. (1977). A 1976 theory of charismatic leadership. In J. G. Hunt & L. L. Larson (Eds.), *Leadership: The cutting edge* (pp. 189–207). Carbondale, IL: Southern Illinois University Press.
- Hurh, W. M., & Kim, K. C. (1989). The “success” image of Asian Americans: Its validity, and its practical and theoretical implications. *Ethnic and Racial Studies, 12*, 512–538.
- Hurley, A. E., Fagenson-Eland, E. A., & Sonnenfeld, J. A. (1997). Does cream always rise to the top? An investigation of career attainment determinants. *Organizational Dynamics, 26*(2), 65–71.
- Jones, E. W. (1986). Black managers: The dream deferred. *Harvard Business Review, 64*, 84–93.
- Kahneman, D. (2003). A perspective on judgment and choice: Mapping bounded rationality. *American Psychologist, 58*(9), 697–720.
- Kahneman, D., & Tversky, A. (1973). On the psychology of prediction. *Psychological Review, 80*, 237–251.
- Kasof, J. (1993). Sex bias in the naming of stimulus persons. *Psychological Bulletin, 113*(1), 140–163.
- Keppel, G. (1991). *Design and analysis: A researcher's handbook*. Upper Saddle River, NJ: Prentice-Hall.
- Kirkpatrick, S. A., & Locke, E. A. (1991). Leadership: Do traits matter? *Academy of Management Executive, 5*(2), 48–60.
- Kitano, H., & Sue, S. (1975). The model minorities. *Journal of Social Issues, 29*, 1–9.
- Kleinbaum, D. G. (1994). *Logistic regression: A self-learning text*. New York: Springer-Verlag.
- Kouzes, J. M., & Posner, B. Z. (1987). *The leadership challenge: How to get extraordinary things done in organizations*. San Francisco: Jossey-Bass.
- Krueger, J. (1996). Personal beliefs and cultural stereotypes about racial characteristics. *Journal of Personality and Social Psychology, 67*, 35–47.
- Kruschke, J. K., & Johansen, M. K. (1999). A model of probabilistic category learning. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 25*(5), 1083–1119.
- Kunda, Z., Davies, P., Hoshino-Browne, E., & Jordan, C. (2003). The impact of comprehension goals on the ebb and flow of stereotype activation during interaction. In S. J. Spencer, S. Fein, M. P. Zanna, & J. M. Olson (Eds.), *Motivated social perception: The Ontario Symposium* (Vol. 9, pp. 1–20). Mahwah, NJ: Erlbaum.
- Kunda, Z., & Spencer, S. (2003). When do stereotypes come to mind and when do they color judgment? A goal-based theoretical framework for stereotype activation and application. *Psychological Review, 129*(4), 522–544.
- Kunda, Z., & Thagard, P. (1996). Forming impressions from stereotypes, traits, and behaviors: A parallel constraint satisfaction theory. *Psychological Review, 103*, 284–308.
- Lakoff, G. (1987). *Women, fire, and dangerous things*. Chicago: University of Chicago Press.
- Lee, S. (1994). Behind the model-minority stereotype: Voices of high- and low-achieving Asian American students. *Anthropology & Education Quarterly, 25*(4), 413–429.
- Levinson, H. (1980). Criteria for choosing chief executives. *Harvard Business Review, 58*(4), 113–120.
- Leyens, J., Yzerbyt, V., & Schadron, G. (1992). The social judgeability approach to stereotypes. *European Review of Social Psychology, 3*, 91–120.
- Lord, R. G. (1985). An information processing approach to social perceptions, leadership, and behavioral measurement in organizations. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 7, pp. 87–128). Greenwich, CT: JAI Press.
- Lord, R. G., de Vader, C. L., & Alliger, G. M. (1986). A meta-analysis of the relation between personality traits and leadership perceptions: An application of validity generalization procedures. *Journal of Applied Psychology, 71*, 402–410.
- Lord, R. G., Foti, R. J., & de Vader, C. D. (1984). A test of leadership categorization theory: Internal structure, information processing, and leadership perception. *Organizational Behavior and Human Decision Making Processes, 34*, 343–378.
- Lord, R. G., Foti, R. J., & Phillips, J. S. (1982). A theory of leadership categorization. In J. G. Hunt, U. Sekaran, & C. Schriesheim (Eds.),

- Leadership: Beyond establishment views* (pp. 104–121). Carbondale, IL: Southern Illinois University Press.
- Lord, R., & Maher, K. (1990). Leadership perceptions and leadership performance: Two distinct but interdependent processes. In J. Carroll (Ed.), *Applied social psychology and organizational settings* (pp. 129–154). Hillsdale, NJ: Erlbaum.
- Lord, R., & Maher, K. (1991). *Leadership and information processing*. New York: Unwin Hyman.
- Lyness, K. S., & Heilman, M. E. (2006). When fit is fundamental: Performance evaluations and promotions of upper-level female and male managers. *Journal of Applied Psychology, 91*(4), 777–783.
- Mackie, D., Hamilton, D. L., Susskind, J., & Rosselli, F. (1996). Social psychological foundations of stereotype formation. In C. N. Macrae, C. Stangor, & M. Hewstone (Eds.), *Stereotypes and stereotyping* (pp. 41–78). New York: Guilford Press.
- Marin, G. (1984). Stereotyping Hispanics: The differential effect of research method, label, and degree of contact. *International Journal of Intercultural Relations, 8*, 17–27.
- Martignon, L., Vitouch, O., Takezawa, M., & Forster, M. R. (2003). Naive and yet enlightened: From natural frequencies to fast and frugal decision trees. In D. Hardman & L. Macchi (Eds.), *Thinking: Psychological perspectives on reasoning, judgment and decision making* (pp. 198–211). New York: Wiley.
- Martin, R., & Epitropaki, O. (2001). Role of organizational identification on implicit leadership theories, transformational leadership and work attitudes. *Group Processes and Intergroup Relations, 4*(3), 247–262.
- Maume, D. J. (1999). Glass ceilings and glass escalators. *Work and Occupations, 26*(4), 483–509.
- McCoy, F. (2007, January/February). Kings of the mountain. *Hispanic-Business.com*. Retrieved March 1, 2007, from <http://www.hispanicbusiness.com/news/newsbyid.asp?id=54516&cat=Today's+Most+Popular+Stories&more=/news/newspopular.asp>
- Meindl, J. R., & Ehrlich, S. B. (1987). The romance of leadership and the evaluation of organizational performance. *Academy of Management Journal, 30*, 91–109.
- Meindl, J. R., Ehrlich, S. B., & Dukerich, J. M. (1985). The romance of leadership. *Administrative Science Quarterly, 30*, 78–102.
- Murphy-Berman, V. A., Berman, J. J., & Campbell, E. (1998). Factors affecting health-care allocation decisions: A case of aversive racism. *Journal of Applied Social Psychology, 28*, 2239–2253.
- National Governors Association. (2007). *Governors of the American states, commonwealths and territories* [Bio book]. Retrieved March 3, 2007, from <http://www.nga.org/Files/pdf/BIOBOOK.pdf>
- Nye, J. (2002). The eye of the follower: Information processing effects on attributions regarding leaders of small groups. *Small Group Research, 33*(3), 337–360.
- Nye, J., & Forsyth, D. (1991). The effects of prototype-based biases on leadership appraisals: A test of leadership categorization theory. *Small Group Research, 22*, 360–379.
- Phillips, J. (1984). The accuracy of leadership ratings: A cognitive categorization perspective. *Organizational Behavior and Human Performance, 33*, 125–138.
- Phillips, J. S., & Lord, R. G. (1981). Causal attributions and perceptions of leadership. *Organizational Behavior and Human Performance, 28*, 143–163.
- Phillips, J. S., & Lord, R. G. (1982). Schematic information processing and perceptions of leadership in problem-solving groups. *Journal of Applied Psychology, 67*(4), 486–492.
- Pierro, A., Cicero, L., Bonaiuto, M., van Knippenberg, D., & Kruglanski, A. (2005). Leader group prototypicality and leadership effectiveness: The moderating role of need for cognitive closure. *Leadership Quarterly, 16*(4), 503–516.
- Platow, M., & van Knippenberg, D. (2001). A social identity analysis of leadership endorsement: The effects of leader ingroup prototypicality and distributive intergroup fairness. *Personality and Social Psychology Bulletin, 27*(11), 1508–1519.
- Platow, M., van Knippenberg, D., Haslam, A., van Knippenberg, B., & Spears, R. (2006). A special gift we bestow on you for being representative of us: Considering leader charisma from a self-categorization perspective. *British Journal of Social Psychology, 45*(2), 303–320.
- Plous, S., & Williams, T. (1995). Racial stereotypes from the days of American slavery: A continuing legacy. *Journal of Applied Social Psychology, 25*, 795–817.
- Powell, G., & Butterfield, A. (1997). Effect of race on promotions to top management in a federal department. *Academy of Management Journal, 40*(1), 112–128.
- Reed, S. K. (1972). Pattern recognition and categorization. *Cognitive Psychology, 3*(3), 382–407.
- Reitman, M. (2006). Uncovering the white place: Whitewashing at work. *Social and Cultural Geography, 7*(2), 267–282.
- Rosch, E. (1973). On the internal structure of perceptual and semantic categories. In T. E. Moore (Ed.), *Cognitive development and the acquisition of language* (pp. 111–144). New York: Academic Press.
- Rosch, E. H. (1978). Principles of categorization. In E. Rosch & B. B. Lloyd (Eds.), *Cognition and categorization* (pp. 27–48). Hillsdale, NJ: Erlbaum.
- Rosch, E., & Mervis, C. B. (1975). Family resemblances: Studies in the internal structure of categories. *Cognitive Psychology, 7*, 573–605.
- Rosenthal, R., Rosnow, R. L., & Rubin, D. B. (2000). *Contrasts and effect sizes in behavioral research: A correlational approach*. New York: Cambridge University Press.
- Rosenthal, R., & Rubin, D. B. (2003).  $r_{\text{equivalent}}$ : A simple effect size indicator. *Psychological Methods, 8*(4), 492–496.
- Rosette, A. S. (2006). Unearned privilege: Race, gender, and social inequality in U.S. organizations. In M. Karsten (Ed.), *Gender, ethnicity, and race in the workplace* (pp. 253–268). Westport, CT: Praeger.
- Rosette, A. S., & Thompson, L. (2005). The camouflage effect: Separating achieved status and unearned privilege in organizations. In M. Neale, E. Mannix, & M. Thomas-Hunt (Eds.), *Research on managing teams and groups* (Vol. 7, pp. 259–281). San Diego, CA: Elsevier.
- Rush, M. C., Phillips, J. S., & Lord, R. G. (1981). Effects of a temporal delay in rating in leader behavior descriptions: A laboratory investigation. *Journal of Applied Psychology, 66*, 442–450.
- Rush, M., & Russell, J. (1988). Leader prototypes and prototype-contingent consensus in leader behavior descriptions. *Journal of Experimental Social Psychology, 24*, 88–104.
- Schein, V. (1973). The relationship between sex role stereotypes and requisite management characteristics. *Journal of Applied Psychology, 57*, 95–100.
- Scott, K., & Brown, D. (2006). Female first, leader second? Gender bias in the encoding of leadership behavior. *Organizational Behavior and Human Decision Making Processes, 101*, 230–242.
- Smith, E., & Medin, D. (1981). *Categories and concepts*. Cambridge, MA: Harvard University Press.
- Tajfel, H., & Turner, J. C. (1986). The social identity of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7–24). Chicago: Nelson.
- Takaki, R. (1989). *Strangers from a different shore: A history of Asian Americans*. New York: Little, Brown, & Co.
- Thomas, D. A., & Gabarro, J. J. (1999). *Breaking through: The making of minority executives in corporate America*. Boston: Harvard Business School Press.
- Tienda, M., & Mitchell, F. (Eds.). (2006). *Multiple origins, uncertain destinies: Hispanics and the American future*. Washington, DC: National Academies Press.

- Tomaskovic-Devey, D., Zimmer, C. R., Stainback, K., Robinson, C., Taylor, T., & McTague, T. (2006). Documenting desegregation: Segregation in American workplaces by race, ethnicity, and sex, 1966–2003. *American Sociological Review*, *71*, 565–588.
- U.S. Bureau of Labor Statistics. (2004). *Current Population Survey*. Washington, DC: Author.
- U.S. Bureau of Labor Statistics. (2006). *Employed persons by detailed occupation, sex, race, and Hispanic or Latino ethnicity* [Table]. Retrieved March 1, 2007, from <http://www.bls.gov/cps/cpsaat11.pdf>
- U.S. Census Bureau. (2006). *American Community Survey*. Retrieved March 20, 2008, from [http://factfinder.census.gov/servlet/ADPTable?\\_bm=y&-geo\\_id=01000US&-qr\\_name=ACS\\_2006\\_EST\\_G00\\_DP5&-ds\\_name=&-\\_lang=en&-state=adp&-redoLog=false&-format](http://factfinder.census.gov/servlet/ADPTable?_bm=y&-geo_id=01000US&-qr_name=ACS_2006_EST_G00_DP5&-ds_name=&-_lang=en&-state=adp&-redoLog=false&-format)
- U.S. House of Representatives Statistics. (2007). *U.S. House of Representatives statistics: Demographics*. Retrieved March 2, 2007, from <http://www.house.gov/daily/hpg.htm>
- U.S. Senate Statistics. (2007). *U.S. Senate statistics: Biographical characteristics: Ethnic diversity in the Senate*. Retrieved March 2, 2007, from [http://www.senate.gov/artandhistory/history/common/briefing/minority\\_senators.htm](http://www.senate.gov/artandhistory/history/common/briefing/minority_senators.htm)
- van Knippenberg, B., & van Knippenberg, D. (2005). Leader self-sacrifice and leadership effectiveness: The moderating role of leader prototypicality. *Journal of Applied Psychology*, *90*(1), 25–37.
- Waldman, D. A., & Avolio, B. J. (1991). Race effects in performance evaluations: Controlling for ability, education, and experience. *Journal of Applied Psychology*, *76*(6), 897–901.
- Weber, R., Camerer, C., Rottenstreich, Y., & Knez, M. (2001). The illusion of leadership: Misattribution of cause in coordination games. *Organization Science*, *12*(5), 582–598.
- Wildman, S. (1996). *Privilege revealed: How invisible preference undermines America*. New York: New York University Press.
- Woo, D. (2000). *Glass ceilings and Asian Americans: The new face of workplace barriers*. New York: Alta Mira Press.
- Yzerbyt, V., Schadron, G., Leyens, J., & Rocher, S. (1994). Social judgeability: The impact of meta-informational cues on the use of stereotypes. *Journal of Personality and Social Psychology*, *66*, 48–55.

## Appendix A

### Study 1 Manipulation Script

#### Selcom, Inc.'s Project NOVA

Selcom, Inc. recently announced an update on the progress of the project NOVA, an ongoing research program. In an interview with [an employee/the leader] of project NOVA, the team [member/leader] claimed that project NOVA has maintained budget expectations and is progressing according to the anticipated timeline to be completed within the next five years. "I expect project NOVA to continue according to the schedule," commented the project [employee/leader]. "The development is no worse or better than what we expected."

Selcom's workforce is made up of several thousand employees who live and work in the United States. Of the workers employed by Selcom, [50% are White and/20% are White and] all are committed to serving the customers. *Please see NOVA. Page C7*

## Appendix B

### Study 2 Manipulation Script

#### Project Nova on Track

Associated Press

Selcom, Inc., [a financial services provider/a non-profit social services provider], recently announced an update on the progress of the project NOVA, an ongoing research program. In an interview with [the leader/an assistant] of project NOVA, the [leader/assistant] claimed that project NOVA has maintained budget expectations and is progressing according to the anticipated timeline to be completed within the next five years.

"I expect project NOVA to continue according to the schedule," commented the project [leader/assistant]. "The development is no worse or better than expected."

Selcom's workforce is made up of several thousand employees who live and work in the United States. Of the project [leaders/assistants] employed by Selcom, [20% are White/ Caucasian/ European-American whereas 80% are Asian/Asian-American and; 20% are White/ Caucasian/European-American whereas 80% are Hispanic/Latin American and; 20% are White/Caucasian/European-American whereas 80% are Black/ African-American and] all are committed to serving the customers. *Please see NOVA. Page C7*

## Appendix C

Study 3 Manipulation Script

## Reconsidering Dosagen Corporation's Earnings

By *Staff Reporter*

The financial state of Dosagen Corporation has changed since Todd [Tyrone] Smith arrived last May and [NOT] for the better.

Photo  
Here

At that time, Todd [Tyrone] Smith was hired as chief executive officer to lead the company through the tumultuous events and uncertain economic times. As of this month, company earnings have increased [DECREASED] 34% over the last 5 months (see Figure).

"There are clear explanations for what has happened to Dosagen Corp.," states Chris Johnson, chief analyst at Smith Barney Citigroup. "The performance of the company should be attributed to the performance of the CEO [MARKETPLACE], not to the performance of the marketplace [CEO]. For Dosagen Corporation, the responsibility for this performance clearly falls on Mr. Smith [THE ECONOMIC CONTEXT]"

Please see **DOSAGEN CORP.** Page C7

## Appendix D

Study 4 Manipulation Script

### PERSONNEL SUMMARY

#### Buygen, Inc.

##### Organization Profile

Buygen, Inc. is a large corporate conglomerate that provides consulting services. The company is comprised of regional divisions (Northern, Southern, Eastern, and Western). Each of these consulting divisions is divided into project teams managed by team leaders. Each division has a division leader who oversees all of the project teams.

##### Candidate Profile

Address: 1734 River Street

Marital status: Married

Gender: Male

Race: *[White/European-American/Caucasian; Asian/Asian-American; Hispanic/Latin-American]*

Start date: October 2, 1998 (employed at Buygen, Inc. for 9 yrs)

Buygen Division: NORTHERN DIVISION

Current position: LEADER, CONSULTING SERVICES TEAM

##### Performance Appraisal

This team leader has led a consulting services team in the Northern Division for over three years. Over the team's three annual performance appraisals, it is clear that there has been *[a decrease/an increase]* in the team's profitability as the consulting services team has experienced *[a decrease/an increase]* in the number of profitable projects completed each year. Last year's appraisal noted that the team's performance was due to the performance of the *[marketplace/team leader]*, not to the *[team leader/marketplace]*, and stated that "it is the *[availability of high profile clients in the marketplace/ team leader's management skills]* that explains the team's performance record."

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