Too good to be true? The unintended signaling effects of educational prestige on external expectations of team performance

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Abstract:

In this paper we report the results of two experimental studies designed to test how demographic characteristics affect outsiders’ assessments of a management team. We draw on theories of evaluation, status characteristics, and social identity to examine the interactive effects of racial characteristics and educational prestige on assessments of team competence and expectations of performance. We find that leaders’ race and the prestige of their educational background affected outsiders’ assessments of both a philanthropic project team and a company’s top management team. Outsiders gave lower assessments to the philanthropic project teams and made lower stock price projections for firms seeking funding when the teams were led by African Americans who had highly prestigious educational backgrounds, though they gave higher evaluations to Caucasian-led teams with similarly educated leaders. We posit that the moderating effect of educational prestige on the managerial teams’ racial characteristics stems from outsiders' assumptions that African American managers were preferentially selected by high-status schools.
The increasing reliance of organizations on teams has coincided with a period in which the U.S. workforce has become significantly more diverse (Johnston, 1991), prompting organizations to attempt to leverage the distinct reservoirs of knowledge possessed by their increasingly heterogeneous pools of employees to improve performance. This approach is consistent with the “value in diversity” hypothesis (Cox, Lobel, and McLeod, 1991), which argues that heterogeneity among team members will benefit a team's outcomes even though it might create challenges for the team's interaction processes. Scholars who study diversity in teams tend to focus on these internal processes – which include member participation, influence patterns, and conflict episodes – and their effects on team performance, but have given little consideration to how the demographic characteristics of team members might affect external perceptions of the team.

In reality, work teams do not operate in a vacuum. They are embedded and function within a larger organizational context, and any team working inside an organization is accountable to an individual or individuals outside the team. These external constituents often form their perceptions even before the team members have any opportunity to act, and their impressions are important. For example, when outsiders have a dim view of the project team or its leader, they might not provide the team with as much budget and material support as it needs to get the job done. The same goes for the broader marketplace: the consumer who doesn’t respect the visible partners of a law firm will not retain the firm’s services, the executive who is skeptical of the ability of a consulting team’s leader will not pay heed to the team’s counsel, and the investor who thinks poorly of a company’s management team won’t buy the company’s stock. Early assessments of a team can affect outsiders’ psychological commitment and allocation of
resources to the team, which can have a significant impact on its ability to perform. In our work, we focus on the effects of diverse demographic characteristics on outsiders' assessments of teams in order to gain a better understanding of this behavior.

Researchers who study organizational level phenomena have consistently adopted an external perspective in their work, considering how the larger context in which an organization is embedded affects the way in which the organization ‘behaves and performs (e.g., Lawrence and Lorsch, 1967; Aldrich and Pfeffer, 1976; Hannan and Freeman, 1977). Resource dependence theorists, for example, argue that organizations respond to external actors’ demands when the external actors control resources that the organizations need to survive (Pfeffer and Salancik, 1977). Institutional theorists, as well, have repeatedly argued that outside observers’ perceptions are important in that they affect the bestowal or withdrawal of organizational legitimacy (DiMaggio and Powell, 1983) which is critical to organizational success (Scott, 1992).

Recognizing the impact of organizational context on teams, groups researchers have also started to adopt an external viewpoint, seeking to identify behaviors outside the team that help groups succeed. One of the assumptions of this work is that a team’s capacity to manage its external boundaries affects its ability to discern organizational expectations and manage performance around those expectations, which are critical determinants of its ability to survive and thrive within an organization (Gladstein, 1984; Ancona, 1990; Ancona and Caldwell, 1992). Those team members who fulfill the boundary management role – usually the team’s leaders – become the focal point for outsiders looking in, and impressions of the leaders form the basis for impressions of the team as a whole. This assertion is supported by empirical work conducted by
Flynn and Staw (2004) in which they found that charismatic leaders made their organizations more attractive to outside investors, leading to higher levels of investment and greater appreciation of company stock. This argument is also consistent with the extensive body of research on top management teams - usually grounded in the upper echelons perspective (Hambrick and Mason, 1984) - which tells us that external evaluators pay particular attention to an organization’s managerial team when making their assessments of the organization.

Research that highlights the importance of considering a team's external interactions with its environment has largely focused on the behaviors of team members. However, sociological theories of groups suggest that prior to observing individuals’ actions and behaviors, group members begin to form their assessments of other members’ capabilities based on the observable personal characteristics they possess (Berger, Cohen, and Zelditch, 1972; Ridgeway and Correll, 2004). Consequently, we take a step back and focus our research on the initial impressions that outsiders form based not on managers’ behavior, but instead on externally observable characteristics of the management team. Specifically, we focus on the team’s racial characteristics and educational pedigree. Whereas a number of researchers have looked at the effects of top management team composition on the team’s likelihood of success, only a few have taken an external perspective (e.g., Higgins and Gulati, 2006). Most of the research in this area has focused instead on the effects of demography on the management team’s internal processes and subsequent performance (e.g., Eisenhardt and Schoonhoven, 1990; Hambrick and Daveni, 1992; Keck, 1997; Simons, Pelled, and Smith, 1999). The growing body of research on demography and internal team processes, however, provides rich theory upon which to draw in
considering the factors that affect outsiders’ formation of impressions of a diverse management team.

DEMOGRAPHIC CHARACTERISTICS AND TEAMS

Diversity in Teams

Given that organizations expect that their use of demographically diverse teams will improve organizational effectiveness, researchers have directed a considerable amount of attention toward understanding the effects of age, race, sex, and other types of diversity on team performance (see Williams and O'Reilly, 1998, for a review). While there is evidence that diversity can generate positive team processes and outcomes (Cox, Lobel, and McLeod, 1991; Sommers, 2006), the broader conclusions drawn from this vast body of research reveal that, in general, diversity in a workgroup often negatively affects group processes and performance. Specifically, Milliken and Martins (1996), in their review of the literature on diversity effects in organizational groups, concluded that demographic diversity negatively affects outcomes such as turnover and performance through its impact on affective, cognitive, communication, and symbolic processes. More recently, Chatman and Flynn (2001) found that the greater the demographic heterogeneity within a group, the less that group norms emphasized cooperation among teams of Master’s of Business Administration (MBA) students and financial services business officers alike. Furthermore, within diverse teams, those team members who contribute to the diversity bear the brunt of its negative effects. Studies have revealed that individuals who are demographically different from the rest of their group members are less integrated into the social fabric of the team.
(Tsui, Egan, and O'Reilly, 1992), receive lower performance evaluations (Sackett and Dubois, 1991; Lefkowitz, 1994), and are viewed more negatively (Flynn, Chatman, and Spataro, 2001).

Most of this work is grounded in social identity theory (Tajfel and Turner, 1986) and self-categorization theory (Turner, Hogg, Oakes, Reicher, and Wetherell, 1987), which are based on the premise that individuals in a group setting put themselves and others into categories based on observable differences, and, based on these categorizations, compare themselves with others and develop a favorable bias toward their own ingroup. The net result is that the more individuals are different from others within the group, the more likely they are to be categorized as outgroup members and subsequently derogated. This has led many researchers to suggest that it is this categorization of demographically different members as outgroup members that negatively affects group functioning (Brewer and Kramer, 1985; Messick and Mackie, 1989).

In an organizational context, however, simply being different is not the sole basis for receiving less favorable treatment within a group. Status characteristics theory tells us that interacting task groups form power and prestige orders based on the performance expectations held of individual members (Berger and Fisek, 1970; Berger, Cohen, and Zelditch, 1972). Performance expectations are initiated based on the status of group members’ personal characteristics that, over time, have become associated with certain levels of task competence (Berger, Fisek, Norman, and Wagner, 1985; Ridgeway and Erickson, 2000; Bunderson, 2003). Within organizational groups, status characteristics have a large impact on interpersonal dynamics because individuals defer to those members for whom the highest performance expectations are held. Researchers have found that individuals who possess characteristics associated with low
status are given fewer opportunities to participate (Meeker and Weitzel-O'Neill, 1977) and experience a diminished ability to exert influence on other group members (Thomas-Hunt and Phillips, 2004; Sheldon, Thomas-Hunt, and Proell, 2006). The increase in diversity within organizations results in situations in which the same characteristics that make some individuals demographically distinct may also ascribe them low status, so it is unclear whether the difference itself or the nature of the difference is more important.

Researchers divide status characteristics into two categories: those that provide specific cues or information about task competence on a well-specified domain (e.g., math or language skills) and those that provide diffuse cues or more generalized information about ability or performance across a wide array of activities (e.g., race, gender, or age). Outsiders are likely to have less reliable information about managerial team members’ specific cues and will therefore rely on more observable surface-level cues (Harrison, Price, and Bell, 1998), of which race and gender are often the most readily apparent.

**Race Matters**

Since the Civil Rights Act of 1964, government rules and regulations have ensured that race-based and gender-based policies and equal opportunity programs such as affirmative action or preferential selection exist in practically every organization in the United States. In our research we focus specifically on African Americans because of their long and unique history in the United States workforce. Furthermore, while gender is an observable and socially-relevant characteristic worthy of research, we focus solely on race, in large part because the progress of
racial minorities within organizations has lagged behind that of women. For example, despite representing 10.8% of the employed workforce in the United States, African Americans fill only 6% of management positions, and only 3% of all Chief Executive Officer (CEO) positions. By contrast, women comprise 46.4% of the employed workforce and fill 37.2% of management positions and 23.8% of CEO positions (U. S. Bureau of Labor Statistics, 2005). Furthermore, the controversy surrounding race-based policies has become particularly charged in recent years, as evidenced by the heated debates surrounding California’s Proposition 209, Washington state’s Initiative 200 (Crosby, Iyer, Clayton, and Downing, 2003), and the United States Supreme Court ruling in *Grutter v. Bollinger* (2003), which held that the University of Michigan Law School’s use of race preferences in admissions did not violate the Equal Protection Clause of the Fourteenth Amendment.

Clearly, race bears prominent consideration in all American organizations and institutions and is impossible to ignore (Hacker, 1992). This assertion is especially true as organizations grow more racially diverse, since members of demographically heterogeneous groups are more likely to categorize one another in terms of demographic characteristics than are members of homogeneous groups (Stroessner, 1996). Surprisingly little, however, is understood about the process by which race effects the value assigned to organizational contributions and assessments of managerial potential (for an exception, see Thomas and Gabarro, 1999). In addition, much of the organizational research that does consider race does so without consideration of the larger context in which race is embedded (i.e., the other attributes with which it is coupled).
Race is a highly salient status characteristic that has a significant impact on the outcomes that individuals experience in organizations. Evidence for the disparate outcomes for African Americans and Caucasians in the workplace exists at all stages of the employment process, starting at the recruiting and selection phase and progressing in severity over the length of individuals’ careers. In a study of job applicant bias, Dovidio and Gaertner (2000) found that when applicants were clearly qualified or unqualified, evaluators’ ratings were not influenced by race, but when qualifications were ambiguous, evaluators exhibited a bias against African American applicants. Similarly, in a field study of the effects of race on callback rates for job interviews, Bertrand and Mullainathan (2004) found that applicants with African American-sounding names received significantly fewer callbacks than applicants with Caucasian-sounding names. The bias against African Americans continues after they are admitted into organizations as well: in their research on job placement decisions, Braddock and colleagues found that personnel officers often assign African Americans to lower paying positions than their Caucasian counterparts (Braddock, Crain, McPartland, and Dawkins, 1986). Additionally, a long tradition of research on performance appraisal indicates that African Americans receive lower performance ratings than their Caucasian colleagues (Kraiger and Ford, 1985; Pulakos, Oppler, White, and Borman, 1989; Sackett and Dubois, 1991; Rotundo and Sackett, 1999; Elvira and Town, 2001; Stauffer and Buckley, 2005).

While it is difficult to completely rule out the possibility that the differential evaluation of African Americans is due to objective differences in performance, research evidence suggests this is not the case. For instance, Cox and Nkomo (1986) found that social behavioral factors are weighted more heavily in the assessment of African Americans than in the assessment of
Caucasians. These differential evaluations frequently translate into a divergence in the ratings of perceived promotability received by African Americans and Caucasians (Greenhaus, Parasuraman, and Wormley, 1990). Even when performance evaluations are comparable, African Americans receive lower bonuses and salary increases than their Caucasian peers in the same organization (Castilla, 2005). Nor are those African American executives who make it to the upper echelons of organizations immune to biased evaluation. In their study of leadership evaluation, Rosette and her colleagues found that African American CEOs are more likely to be personally blamed for organizational failures and receive less personal credit for organizational successes than similarly situated Caucasian executives (Rosette, Phillips, and Leonardelli, 2006).

The demonstrated importance of leaders’ characteristics on the team and organization evaluation process coupled with the empirical work on race and evaluation might lead us to predict that external evaluators will hold lower performance expectations for managerial teams led by African Americans than for teams led by Caucasians. This main effect of racial characteristics might hold if race were the only readily available status cue within organizations, but clearly this is not the case. Organizational members are also able to discern individuating information about others’ background and work experience through resumes, internal databases, and “water cooler chat,” so there are simultaneously available sources of information that provide multiple - potentially competing - status cues that may affect the assessments outsiders make of individuals. It is vitally important that we consider these multiple cues in order to recognize the impact of their potential interactions. Researchers, however, diverge in their assessment of the combined impact of multiple status cues on the expectations that are held of individuals. Some suggest that the net valence of an individual’s personal characteristics will determine his or her status within
a group (Berger, Cohen, and Zelditch, 1972), while others suggest that only the most salient characteristic will be used as a basis for determining status (Kramer, 1991).

Empirical work that examines the effects of multiple status cues has generated mixed results. A number of researchers have argued that providing individuating information that gives cues about task competence alleviates the detrimental effects on expectations of performance of possessing distinctive low status characteristics. On one hand, Pugh and Wahrman (1983) found that possession of some high status cues overcame the diminished influence associated with being female in a mixed-sex group. Similarly, Flynn and his colleagues (Flynn, Chatman, and Spataro, 2001) found that the impressions of demographically different work group members became more favorable as the members provided more individuating, task-relevant information. Further support for the mitigating impact of additional cues on the interpretation of low status cues is provided by Hollingshead and Fraidin (2003), who found that multiple examples of competence caused individuals to shift their status-based expectations of competence and allocate tasks based on actual competence rather than on stereotypes. On the other hand, Bertrand and Mullainathan’s (2004) work examining the effects of race on callbacks after resume submission indicates that possession of positive task-relevant status characteristics may not attenuate the detrimental effects of being of a low status race. In fact, in their investigation, the gap between Caucasians’ and African Americans’ callback rates actually widened as resume quality increased. The researchers speculate that employers pay less attention or discount more the quality characteristics listed on the resumes with African American sounding names. In light of these findings, the role of individuating information in determining status becomes less clear.
**Educational Prestige**

In organizations, individuals vary in both the quality and level of their educational attainment, and educational background becomes one of the most salient forms of individuating information available. Education is a form of human capital, and organizational members with elite educational backgrounds are often viewed as having acquired greater skills and ability, adding more value to a firm’s stock of human capital, than those members from less prestigious alma maters (Becker, 1964). Elite educational institutions are assumed to imbue their graduates with more knowledge and a greater ability to engage in tacit learning and acquire job specific information (Hitt, Bierman, Shimizu, and Kochhar, 2001). Not surprisingly then, higher investment in human capital, in the form of educational prestige, increases the firm's profitability (Hitt et al., 2001) and the likelihood of its success (Phillips, 2001). The prestige of organizational members’ educational backgrounds therefore becomes a signal of the knowledge available within the firm and generates expectations of the firm's performance (Spencer, 1973; Gibbons, 1992; Khessina and Jaffee, 2006).

**Competing Status Cues**

When we consider specific multiple status cues, however, the story becomes less straightforward. As salient as racial characteristics and educational background may be, neither will be considered alone when assessing a management team. The reality is that outsiders are simultaneously aware of both managers’ racial characteristics and cues that signal the prestige of their educational background, and these status characteristics will have interactive effects on
subsequent evaluations. A purely additive model would suggest that possession of low status racial characteristics lowers managerial assessments received and possession of a high prestige educational background increases the managerial assessments received. The resulting outsider assessments would be most positive when high status racial characteristics and a high prestige educational background are held and would be most negative when low status racial characteristics and low prestige educational background are possessed. However, in considering the effects of educational prestige and specific racial characteristics, the historical context in which African Americans and education are situated must be taken into consideration. African Americans' experiences in the educational domain diverge from Caucasians’ experiences, as evidenced by African Americans’ reduced ability to leverage the human capital provided by education. In a study of racial differences in family income, Thomas and Horton (1992) found that the gap in income between African Americans and Caucasians became more pronounced as educational level increased. Similarly, the income gap between African Americans and Caucasians was also wider within the professional and managerial occupational ranks than in the lower-tier occupations (Tomaskovic-Devey, Thomas, and Johnson, 2005).

So, despite suggestions that educational background serves as a form of human capital that can be leveraged to achieve greater outcomes, African Americans actually seem to accrue fewer educational benefits than their Caucasian counterparts. It is possible that African Americans are less able to leverage their educational experiences because educational background does not serve as a specific task characteristic that reflects the quality and usefulness of the training (i.e., their ability to perform) that a person has received, but rather, that it serves as a diffuse status cue that provides a more generalized construal of one’s ability and social capital. Consequently, it is
less concrete and more subject to interpretation than a true specific status cue, such as demonstrated task performance. As a result, other cues may be used to interpret the status value of the educational prestige of one’s background. Specifically, in contemplating the combined effects of racial characteristics and educational prestige on external assessments of teams, we must pay special attention to the societal portrait that has been painted of African Americans in prestigious educational institutions.

Despite the economic advancement of African Americans in recent years, negative stereotypes persist of African Americans as uninitiated (Sniderman and Piazza, 1993), associated with high crime rates (Quillian and Pager, 2001), and economically disadvantaged (Brezina and Winder, 2003). Given these negative images and the fact that visibly successful African American leaders are a rarity, any juxtaposition of African Americans and high prestige educational credentials may violate expectancies and cause individuals to try to make sense of the unexpected pairing (Hastie, 1984; Weiner, 1985; Hilton and Sligoski, 1986).

In recent years the debate over affirmative action has heightened awareness of its use in academic admissions and hiring and promotion processes and has fueled perceptions that affirmative action leads to preferential treatment of certain individuals (Garcia, Erskine, Hawn, and Casmay, 1981). Consequently, a readily accessible explanation for the coupling of African American managers with prestigious educational backgrounds is that they have been the recipients of preferential selection in the college admissions process (Heilman and Blader, 2001). As a consequence of this presumption, a prestigious educational background may not signal the same level of knowledge and accomplishment in African Americans as it does in Caucasians.
Instead, the assumption of preferential selection may lead to lower expectations of performance for African Americans. Therefore we predict that educational prestige will have a moderating effect on the relationship between a team leader's race and outsiders’ assessments such that:

**Hypothesis:** High educational prestige will have a less positive effect on managerial assessments for teams led by African Americans than for teams led by Caucasians.

**STUDY 1: GRANT APPLICATION**

**Method**

**Participants.** Participants for this study were 88 undergraduate students from two universities in the eastern United States. We focused on undergraduates because younger generations have been shown to have more liberal views and more exposure to a broader array of individuals than older generations (Greeley and Sheatsley, 1971; Jennings and Niemi, 1981; Dowden and Robinson, 1993). Consequently, support for our hypothesis using undergraduate participants would provide a conservative test. Sixty-two percent of our participants were female. Participants were predominantly Caucasian (78 percent) and between 18 and 22 years old (96 percent). The mean age for participants was 20.4 years old.

**Procedure.** We told participants that they had just been hired into a company that prides itself on its community involvement and that their new boss had asked them to serve on a committee that provides input on funding requests to the company’s philanthropic organization. We showed
each participant a fictitious grant application proposal said to be prepared by a three-member team of undergraduate students and instructed them to review the proposal and provide a funding recommendation to the board of directors. The grant proposal asked for funding in the amount of $50,000 to open a local chapter for the Family Reading Partnership program, a popular nonprofit organization operating in cities all around the country. The proposal included a project description, primary objectives, implementation plan and budget, and lastly, a picture and a short bio for each of the three members of the project team.

Participants were randomly assigned to one of four conditions that varied in team leader race (Caucasian / African American leader) and educational background (high prestige / average prestige institution) of the members of the project management team. We manipulated race of the leader by including a picture of either an African American or Caucasian project manager in the proposal. The other two team members were Caucasian in all conditions. All three team members were male in all conditions. We manipulated educational background by changing the stated university affiliation of the team members. All three members of the high-prestige teams were attending a university ranked among the top ten in the U.S. News & World Report (2003) list of America’s best colleges and universities; average-prestige members attended a university ranked between 50th and 75th. We conducted a pre-test of these target universities for perceived educational prestige using a separate sample of 130 undergraduates. On a nine point scale, participants consistently rated the top-ten university significantly higher on a number of dimensions, including perceptions of its overall prestige [mean scores = 6.41 vs. 3.42, t(129) = 21.80, p < .0001] and its students’ intelligence [means = 7.55 vs. 5.20, t(131) = 17.11, p < .0001], competence [means = 7.45 vs. 5.68, t(131) = 9.86, p < .0001], diligence [means = 7.08
vs. 5.49, $t(131) = 10.60, p < .0001$, and expected performance [means = 7.36 vs. 6.30, $t(131) = 7.59, p < .0001$].

**Dependent variable.** After reviewing the grant application proposal, participants answered a series of questions about the managerial team using a nine point Likert scale. We operationalized managerial assessment by asking participants to compare the team’s proposal relative to other proposals. Specifically, we asked: “how likely is it that this project will be a model for other similar projects in the future?” and “if you were to review eight project proposals submitted by undergraduate teams, in addition to this one, how would you expect this proposal to compare?” The items have a Cronbach’s alpha of .71.

**Analysis and Results**

Table 1 displays the means and standard deviations for the dependent measure for each condition, analyzed using one-way analysis of covariance (ANCOVA), controlling for the participant’s race. Inclusion of demographic variables in the analysis had no significant effect on the results.

- Insert Table 1 about here -

We found no main effect for racial characteristics, which is not surprising when we consider the significant between-subjects effects for the interaction of race and educational prestige on managerial assessment [$F(1,87) = 5.62, p < .05$]. As we predicted, the effect of attending a
highly prestigious educational institution was less positive for the team led by an African American leader than for the team with a Caucasian leader. In fact, not only was the effect less positive, it was significantly negative. For managerial teams led by a Caucasian leader, the effect of educational prestige on managerial assessment was not significant [mean for average prestige $= 5.98 (1.28)$ vs. mean for high prestige $= 6.43 (1.31)$, $F(1,43) = .69$, $ns$], but for managerial teams led by an African American, high educational prestige had a significant negative effect on managerial assessment [mean for average prestige $= 6.81(1.47)$ vs. mean for high prestige $= 5.76 (1.31)$, $F(1,43) = 6.25$, $p < .05$]. As the pattern of means in Figure 1 illustrates, far from being a compensating factor or signal of greater ability, attending a prestigious university was actually detrimental for teams led by African Americans. In essence, the entire project team was punished because of the team leader – not because he was African American, but because he was African American and had attended a highly prestigious university.

In addition, simple effects tests revealed that in assessing the team whose leaders attended an average-prestige educational institution, participants gave significantly higher assessments for the team with an African American leader than for the team with a Caucasian leader [mean for African American led team $= 6.81(1.47)$ vs. mean for Caucasian led team $= 5.98 (1.28)$, $t(40) = -1.96$, $p < .05$, one-tailed]. Such a finding is consistent with the shifting standards model proposed by Biernat and her colleagues (Biernat and Manis, 1994; Biernat and Kobrynowicz, 1997), which states that lower minimum standards are held for low status individuals relative to high status.
individuals. Essentially, the bar is lower for low status individuals and they are subsequently evaluated more positively.

Given our results, our next step was to determine whether our findings would generalize beyond the university setting in which the first study was situated. In particular, we sought to understand whether the predicted interaction effect for the race and educational prestige of the team leader would emerge in a business context in which the low numbers of African Americans in high power positions would provide few salient examples of African Americans’ achievement in the business arena. Additionally, we believed that any assumptions of preferential selection might be diluted by the numerous other factors present in a business context, including information on firms’ financial performance. Finally, we wanted to investigate the effects of educational prestige and team demographic characteristics on an additional outcome: assessment of managerial competence. The results of Study 1 suggest that outsiders were evaluating the competence of the team based on the leader's race. Study 2 was designed to test that idea explicitly, and involved evaluating the perceived competence as well as the expected performance of a company’s top management team.

For a more robust and more conservative test of our hypothesis, we wanted to draw from a pool of experts who are more experienced in dealing with complex information and who should therefore be less likely to be distracted by diffuse characteristics. To make the second study more representative of the real world, we drew our sample from a population that had more work experience and was also more representative of the managers of contemporary American organizations. We solicited finance professionals and MBA students who would have the
financial analysis experience needed to make a sophisticated assessment of a company’s top management team through a valuation of the company’s stock price.

**STUDY 2: STOCK VALUATION**

The purpose of Study 2 was twofold: first, we wished to replicate the findings of the earlier study regarding outsiders’ evaluations of a management team, and second, we wanted to extend our research by also explicitly examining the effects of demographic characteristics and educational prestige on other types of managerial assessments. The grant application task used in the first study provided minimal information on which to explicitly assess current managerial competence. Because participants were only given a project proposal, they were essentially asked to judge how they thought the project team would perform in the future. By contrast, the stock valuation task we used in the second study provided information about the management team's accomplishments and current undertakings that could be used to make assessments of current managerial competence.

**Method**

**Participants.** A total of 104 current and former MBA students from a major northeastern business school participated in this study. The responses from three participants who misunderstood the task instructions were removed from the final dataset, leaving 101 participants. We recruited participants via advertising in the alumni newsletter and in the business school, and our sample included first-year MBA students who had completed the requisite finance courses needed to develop stock-valuation skills (26 percent), second-year
MBA students who had completed corporate finance or investments banking immersions (51 percent), and MBA alumni (13 percent). Most participants (76 percent) were male, Caucasian (64 percent), and U.S. citizens (70 percent). The mean age of participants was 31 years old.

Most relevant to this study, the majority of the participants (67 percent) had work experience in the financial services sector or in financial analysis. Additionally, all participants were asked to rate their finance knowledge, and the mean score was 6.02 on a nine point scale. Consequently, we conclude that the study participants were well-equipped to complete the stock valuation task.

**Procedure.** Participants played the role of a financial analyst for a venture capital firm. We asked each to review information and assign a current value to the stock of a privately held company that might receive an equity investment from the venture capital firm.

A financial analyst tasked with assigning a share price to a particular company’s stock faces a complex multi-dimensional decision that requires an assessment of firm, industry, and macro-economic factors that can affect the future earnings performance of the company. Before making the decision, the analyst typically reviews a wide range of quantitative information about the company, including its historical performance, market share, and current balance sheet strength and accuracy, as well as prospective information such as management’s projections for sales growth, costs of goods sold, overhead, and cost of capital. The analyst also considers a wide range of qualitative information, such as the industry outlook, product line, marketing strategy, competitive position, potential legislative or legal opportunities and threats, and the top management team’s experience and abilities. All of this information – quantitative and
qualitative - is considered as the analyst develops a projection for the future earnings of the company.

After reviewing the available information, the analyst typically uses a financial valuation tool to assign a current value to the company’s stock. One of the most commonly used valuation tools, applicable across industries, is an estimate of Price to Earnings ratio. The analyst selects publicly traded companies that are comparable with respect to business lines, performance, and size (among other things) and calculates the average Price to Earnings ratio implied by those companies’ current stock price. This ratio is sometimes adjusted upward or downward if the target differs meaningfully from the comparable companies (i.e., much more profitable or growing much more slowly) and thus should be ascribed a higher or lower value. The analyst then applies the calculated average Price to Earnings ratio to the target company’s projected earnings for the next year to arrive at a reasonable estimate for the target company’s appropriate share price.

We gave each participant a 10-page “pitch book” that included a brief description of the industry and the company, its financial performance, projections prepared by the management team, and biographical information about the management team. We also provided an industry range for Price to Earnings ratio and a simple spreadsheet valuation tool. After reviewing the pitch book, participants entered a Price to Earnings multiple into the spreadsheet valuation tool, and the tool returned a resulting current price per share of stock. At the end of the valuation task, participants completed a debriefing questionnaire in which they assessed the competence of each of the four members of the management team.
Participants were randomly assigned to one of four conditions that varied in demographic characteristics (Caucasian leaders / African American leaders) and educational background (high prestige / average prestige) of the company’s senior management team. In each condition, participants saw a photograph and a short bio for each of the four senior managers: Chief Executive Officer (CEO), Chief Operating Officer (COO), Chief Financial Officer, and Head of Global Logistics. We manipulated demographic characteristics by changing the race of the two most senior managers (CEO and COO) to either African American or Caucasian. The two least senior managers were Caucasian in all conditions. All four team members were male in all conditions. We manipulated prestige of educational background by changing the undergraduate and graduate school alma maters of the CEO and COO. As in Study 1, high-prestige alma maters were universities ranked among the top ten in the *U.S. News & World Report* (2004) rankings; average-prestige schools were ranked between 50th and 75th. The educational background of the two least senior managers remained the same (average prestige) in all conditions. Managers’ names, professional experience, age, style of dress, and all other financial and descriptive information were held constant across all treatments.

**Dependent variables.** We operationalized managerial assessments in two ways: 1) a measure of the managerial team’s mean competence, and 2) valuation of the company’s stock. Participants assessed the competence of each of the four members of the management team using a nine point Likert scale. These ratings were combined to form a mean competence rating for the managerial team. The ratings had a Cronbach’s alpha of .74. Participants established a price for the company’s stock using a valuation tool. Ceteris paribus, differential performance expectations of
a management team can affect an investor’s valuation of a firm’s stock. Therefore, we deemed it appropriate to use stock price as a measure of expected managerial team performance.

Analysis and Results

Table 2 displays the means and standard deviations for both dependent measures, analyzed using one-way analysis of covariance (ANCOVA), controlling for the participant’s race. Inclusion of demographic variables in the analysis had no significant effect on the results.

Similar to the results in Study 1, the demographic characteristics of the project’s managerial team had no significant main effect on assessments of mean competence. As we predicted, ANCOVA analysis revealed a significant interaction effect of demographic characteristics and educational prestige on mean competence rating \( F(1,100) = 5.08, p < .05 \). The pattern of means displayed in Figure 2 indicates that for managerial teams led by Caucasian executives, the simple effect of educational prestige on assessments of competence was not significant [mean for average prestige = 6.46 (1.15) vs. mean for high prestige = 6.76 (1.07), \( F(1,48) = 1.36, ns \)]. For managerial teams led by African American executives, however, educational prestige had a significant negative effect on assessments of competence [mean for average prestige = 6.69 (.92) vs. mean for high prestige = 6.00 (1.23), \( F(1,51) = 4.82, p < .05 \)].
When we looked at stock price, we found no significant main effect for demographic characteristics on stock price. Once again, the absence of a main effect is not surprising when we consider the strength of the interaction between demographic characteristics and educational prestige. As we predicted, ANCOVA analysis revealed a significant interaction effect on stock price \[ F(1,100) = 5.20, p < .05 \], supporting our hypothesis.

In simple effects tests, we found that for managerial teams led by Caucasian executives, the effect of educational prestige was significant [mean for average prestige = $233.82 (78.40) vs. mean for high prestige = $268.65 (39.06), \( F(1,48) = 3.19, p < .05 \), one-tailed]. For managerial teams led by African American executives, the effect of higher educational prestige was not significant [mean for average prestige = $250.53 (54.05) vs. mean for high prestige = $227.31 (72.01), \( F(1,51) = 1.66, ns \)].

As Figure 3 illustrates, the effect of having a highly prestigious education was significantly negative for teams that were led by African American executives. Unlike participants in the first study, participants in the Study 2 had plenty of information available on which to base their assessments. But the addition of relevant information did nothing to change the pattern of results; the interactive effects of race and educational prestige remained.

**DISCUSSION AND CONCLUSION**
Two experiments investigated the effects of racial characteristics and educational prestige on assessments of expected performance and managerial team competence. Across considerably different group contexts and using different populations of participants, we found that possessing high educational prestige was not only less beneficial for teams led by African Americans than for teams with Caucasian leaders but consistently had a negative impact on the managerial assessments held for African American-led teams. Providing additional information does not change these effects: the pitch book used in the stock valuation task provided numerous cues about the management team’s skills and ability, but the outcomes remained the same. After reading at length about the company’s historical performance, current status, and future prospects, and after analyzing a whole slew of financial numbers, four small black and white photos alongside four short bios on the very last page of the pitch book should have had no effect on our analysts’ assessments, yet clearly they did. And this phenomenon occurred in both for-profit and non-profit contexts, among undergraduate students, graduate students, and experienced financial analysts alike, and with differential salience of low status racial characteristics (i.e. proportion of African American members).

These studies advance our understanding of the role that personal characteristics play in assessments of ability and expected performance in several important ways. In particular, our findings contribute to research on the external assessment of teams, person perception and evaluation, social identity, status characteristics theory, and affirmative action.

**Theoretical Implications**
External perspective. Unlike most of the research in the groups and teams field, these studies assume an outsider’s viewpoint in considering how team members' characteristics may have an impact on outsiders’ impressions of the team and potentially the resources that teams are allocated. Most research on status characteristics theory and the impact of demographic diversity has focused on the internal dynamics of the team - the interactions between group members and the perceptions held by individuals within the group (Milliken and Martins, 1996; Williams and O'Reilly, 1998). We posit that the negative impact of demographic diversity reported in this and other organizational literature may be due in part to an under-specification of the effect that external expectations have on team performance in terms of the potential resources to be allocated to the team.

Our research takes an external view of the effects of diffuse status cues and suggests that teams led by members possessing low status racial characteristics may be handicapped by outsiders’ initial expectations of competence and ability. Additionally, research that has considered the impact of teams’ interactions with their external environments has suggested that the way in which teams manage their external environment affects members’ perceptions of their team experience and actual team performance (Ancona and Caldwell, 1992). We extend this perspective by arguing that the expectations of performance held for teams, and potentially the resources they are allocated and evaluations of their performance, may be affected by outsiders’ impressions generated from the discernible characteristics of team members. This implies that we as researchers must pay close attention to hidden biases held by outside evaluators, in order to accurately assess the effects of status characteristics on any external assessments.
**Evaluation.** The results of these studies show that the effect of status cues on outsiders’ assessments can have a significant impact on organizations. We found that financial analysts’ assessments of a firm’s management team were significantly affected by diffuse status cues such that they valued the firm’s stock at a price lower than they would have if the managers were all Caucasian or if top executives who were African American had attended average prestige schools. If this were a real company, the analysts’ lower estimates would decrease the company’s value in the open market and lower the amount of capital the firm is able to raise by issuing company stock (by as much as 10 - 18%, based on our findings). Reduced capital investment would increase the likelihood that the firm would fail. In this scenario, the company’s failure would have had nothing at all to do with the behavior or actual performance of the management team; instead, the company would have fallen prey to the unfounded biases of outside assessors. However, to the uninitiated, the company’s poor performance might be attributed to the ineffectiveness of the top executives, rather than to outsiders’ biases. These biases are not explicit, nor do they represent simple discrimination – preference for Caucasians over African Americans. Instead the biases are more insidious; a product of the interaction between attitudes about race, education, selection, and evaluation.

As evidenced by our similar findings across both for-profit and not-for-profit contexts, it is plausible that the same phenomenon occurs in a multitude of situations where an external assessment takes place. A manager bearing low status racial characteristics coupled with a prestigious educational background may receive overly negative assessments of ability, and as a result their team could receive fewer resource allocations (budget, material support, headcount,
etc.). These decreased resources may in turn negatively affect the team’s ability to perform up to its potential, reducing the performance evaluations received by the manager and thereby seemingly confirming the outsiders’ original negative assessment. In fact, it is plausible that the negative impact of demographic diversity on team performance often reported in the organizational literature may in part be due to more negative external assessments of team potential and the diminished resource allocations that ensue, rather than internal factors such as conflict, in-group bias, and faultlines that are so often discussed.

**Social identity.** Previous work that has examined the impact of the demographic composition of groups on members’ interactions has relied on social identity theory, which argues that individuals give more favorable evaluations to those with whom they share group membership (Tajfel, 1982; Tajfel and Turner, 1986). Our findings qualify this work in three important ways. First, our work demonstrates that positive individuating information is not always sufficient to erase the gap between assessments given to members of one’s own and other groups. Second, our findings suggest that assumptions of shared group membership and similarity are more complicated than typically represented by social identity theorists. In our studies, the lowest evaluations were given to teams in which educational prestige was most comparable to that of our participants (who overwhelmingly had high prestige educational backgrounds) but possessed low status racial characteristics. Consequently, social identity theorists need to consider that the differential evaluation and treatment of members may be based on the distinctiveness of social categories, the value with which they are imbued, and the larger context in which the evaluation occurs. Finally, the divergent mechanisms by which educational prestige affects competence assessments and expected performance suggests that competence is not the sole means by which
status affects the performance expectations held of individuals. Potentially, the degree of similarity and familiarity between evaluator and evaluated also plays a significant role.

**Status characteristics.** Researchers who have investigated the effects of status characteristics on behavior in groups have found that those member characteristics associated with low societal status generate lower expectations of performance within groups. The result is that status characteristics of group members affect the extent to which they are allowed to participate and influence group decisions. Some work in this domain has suggested that the detrimental effects of diffuse low status characteristics can be moderated by the addition or increased salience of specific high status characteristics (Pugh and Wahrman, 1983; Shackelford, Wood and Worchel, 1996) or group oriented motivations (Ridgeway, 1982). We qualify previous results with our discovery that traditionally low status characteristics are not universally detrimental in a team context nor are traditionally high status characteristics always beneficial. Rather, the larger context in which people with those characteristics are embedded (i.e., the other characteristics with which they are coupled) affects the value they are assigned and their impact on team outcomes. Furthermore, educational prestige, which has more recently served as a measure of an individual’s academic achievement (Leonhardt, 2005), seems actually to be a diffuse status characteristic in that it does not impart sufficient cues about competence to override the effects of low status racial characteristics. Interestingly, the way in which a diffuse characteristic is interpreted is a function of the other characteristics possessed by an individual. This finding runs counter to suppositions that there is either a dominant status characteristic or that the assessments of competence or expectations of performance are aggregated and averaged. Instead, possession of one characteristic can have an impact on the attributions made about another characteristic.
Furthermore, whereas our findings for low status individuals with high prestige backgrounds are somewhat disheartening, we are encouraged by the absence of a decrement in assessments and expected performance of low status individuals with average prestige educational backgrounds. Our findings suggest that there is a decline in some contexts of more subtle forms of racism, such as aversive racism, which have remained prevalent over time, even as overt racism has diminished (Dovidio, Gaertner, and Bachman, 2001). Furthermore, we extend the domain in which status characteristics theory has previously been applied. Rather than constrain the effects of status characteristics to interacting groups, we considered their impact on the impressions formed by others external to the group. Our findings suggest that status characteristics theory is robust and may be generalized to explain the perceptions formed of individuals beyond the traditional interacting group context.

**Affirmative action.** Finally, the stigma of incompetence that previous research indicates plagues those individuals explicitly associated with affirmative action programs seems to also extend to low status individuals who simply appear within high status contexts in which they have previously not been represented in high numbers. For African Americans, post-secondary education is associated with affirmative action in college admissions. Consequently, our findings echo those of other scholars who assert that the potential benefits of affirmative action are somewhat muddied by the negative assumptions made about African Americans who have attended educational institutions whose prestige is inconsistent with African Americans’ generalized portrait in society (Crosby, 2004). In particular, we extend work by Heilman and colleagues, who found that ambiguity about the cause of superior performance of those associated with affirmative action diminishes evaluations of their competence and their salary
recommendations (Heilman, Block, and Stathatos, 1997). Our findings are also consistent with self-affirmation theory, which posits that when individuals experience a threat to their self-concept (e.g. encountering a low status person with a high prestige education), they respond by affirming their own competence or diminishing the competence of others in another arena (e.g. enacting a belief that affirmative action is a quota system that provides access to a high prestige education for less competent low status individuals) (Lowery, Unzueta, Knowles, and Goff, 2006). We are not suggesting that affirmative action is inherently bad; rather, we submit that there is a downside, and as long as individuals hold assumptions about the role affirmative action plays in selection processes, it is important to attend to these potential detrimental effects.

**Limitations and Directions for Future Research**

One alternative explanation for these findings is that outside assessors assume a gestalt view of the management team as a whole and make assumptions about the dynamics of the team members’ interaction. Outsiders might not question the competence or abilities of individual low status members, but instead, might be reticent to support a mixed race management team because they believe it is more susceptible to higher levels of conflict and lower levels of social integration. This intuition is consistent with Lau and Murnighan’s (1998) conception of demographic faultlines as a determinant of internal group conflict. The absence of main effects for either race or educational prestige across both of our studies leaves us skeptical of this line of reasoning, but future research should test this alternative explanation. A study using both racially heterogeneous and homogeneous teams and assessing outsiders’ perceptions of conflict, cohesion, group identity, and psychological safety would provide an adequate empirical test.
Our manipulation of low status racial characteristics was concentrated within the teams’ leadership. It is not clear whether the racial characteristics of non-leaders within the team would have as profound an impact on assessments of competence and expectations of future performance. Similarly, the number of team members with low status racial characteristics may have an impact on outsiders’ evaluations, but based on our findings we think it is unlikely. It is possible that the proportional racial composition might impact the internal dynamics or the member interactions within the team, but it doesn’t seem to affect external assessments. We studied teams of three and four members led by one and two African American managers and the pattern of results were consistent, therefore it is unlikely that different team compositions would lead to different assessment. However, this is a subject for more systematic empirical investigation.

Finally, an implication of these findings is that there is threshold of educational prestige for African Americans, above which assumptions of affirmative action and incompetence emerge. A low status race individual might be able to leverage a good or average education, but an exemplary or elite education which could be deemed “too good to be true.” This begs the question, at what point is an educational institution too prestigious? Similarly, it is likely that a preponderance of competence cues (in the form of awards, recognition, or high performance evaluations, for example) would erase the assumption of preferential selection. If so, there is probably also an individually-held minimum threshold above which other specific status cues eliminate the effects we saw in our studies. These remain interesting questions for future research.
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Table 1: Study 1: ANCOVA Results of Team Demographic Characteristics and Educational Background on Managerial Assessment

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Team led by Caucasian(s)</th>
<th>Team led by African American(s)</th>
<th>F - test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average Educational Prestige (N = 21)</td>
<td>High Educational Prestige (N = 23)</td>
<td>Average Educational Prestige (N = 21)</td>
</tr>
<tr>
<td>Managerial Assessment</td>
<td>5.98 (1.28)</td>
<td>6.43 (1.31)</td>
<td>6.81 (1.47)</td>
</tr>
</tbody>
</table>

*p < .05; two-tailed test.
Means. Standard deviations in parentheses.
Figure 1: Study 1: Effects of Team Demographic Characteristics and Educational Prestige on Managerial Assessment
Table 2: Study 2: ANCOVA Results of Top Management Team Demographic Characteristics and Educational Background on Assessments of Competence and Expected Performance

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Team led by Caucasian(s)</th>
<th>Team led by African American(s)</th>
<th>F - test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average Educational Prestige (N = 26)</td>
<td>High Educational Prestige (N = 24)</td>
<td>High Educational Prestige (N = 28)</td>
</tr>
<tr>
<td>Mean Competence</td>
<td>6.46 (1.15)</td>
<td>6.76 (1.07)</td>
<td>6.69 (.92)</td>
</tr>
<tr>
<td>Stock Price</td>
<td>233.82 (78.40)</td>
<td>268.65 (39.06)</td>
<td>250.53 (54.05)</td>
</tr>
</tbody>
</table>

* p < .05; two-tailed test.
Means. Standard deviations in parentheses.
Figure 2: Study 2: Effects of Top Management Team Demographic Characteristics and Educational Background on Assessments of Competence
Figure 3: Study 2: Effects of Top Management Team Demographic Characteristics and Educational Background on Stock Price