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EXPLORING THE INFLUENCE OF DECISION MAKERS' RACE AND GENDER ON ACTUAL PROMOTIONS TO TOP MANAGEMENT

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The effects of decision makers' race and gender on promotion decisions about applicants of diverse race and gender for 51 top management positions in a cabinet-level U.S. federal department over a 12-year period were examined. Promotion decisions were made in a 2-stage process. First, a review panel decided which applicants to refer for the position. Second, the selecting official selected one of the referred applicants for the position. Overall, decisions by review panels of different race and gender composition and by selecting officials of different race and gender were to the advantage of female applicants and to the disadvantage of African American and Hispanic male applicants. These effects were not fully accounted for by race or gender differences in applicant qualifications, or by any of several theoretical explanations for the effects of race and gender on promotions to top management.

In Western societies, few women and people of color hold top management positions in work organizations (Davidson, 1997; Powell, 1999; Thomas & Gabarro, 1999; Wirth, 2001). For example, the proportion of women in corporate officer positions in Fortune 500 corporations is only 13% (Catalyst, 2000), and the proportion of people of color is less than 5% for both male and female senior executives (Federal Glass Ceiling Commission, 1995b). Such statistics suggest that a "glass ceiling" may be restricting the access of women and people of color to the executive ranks. Morrison and Von Glinow (1990, p. 200) defined the glass ceiling

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as "a barrier so subtle that it is transparent, yet so strong that it prevents women and minorities from moving up in the management hierarchy."

Whether a glass ceiling actually exists in a given organization depends on whether promotion decisions for top management positions favor White and/or male applicants simply because of their race and/or gender. Some theories for the glass ceiling suggest that the personal characteristics of decision makers such as their race and gender may consciously or unconsciously influence how they take into account the personal characteristics of others in their decisions. However, the influence of decision makers' personal characteristics on promotion decisions about top management positions has received little empirical attention. The purpose of the present study was to explore the influence of decision makers' race and gender on the outcomes of actual promotion decisions for top management positions.

Specifically, this study examined promotion decisions made for top management positions, known as Senior Executive Service (SES) positions, in a Cabinet level department of the United States federal government. Promotion decisions for open SES positions are made in a 2-stage process. First, a review panel reviews all applications for an open position and decides which applicants to refer to the official who will make the selection decision. The review panel consists of senior department members who are familiar with the demands of the position. Second, the selecting official decides which of the referred applicants to select for the position. Thus, decisions by both review panels acting as teams and selecting officials acting as individuals determine who is promoted into SES positions. Theoretical models of both individual and team decision making may be applied to these respective decisions.

We previously examined promotion decisions for top management positions in the same federal department, focusing on the effects of gender and race respectively. Powell and Butterfield (1994) found that applicant gender directly and indirectly influenced referral decisions by review panels and indirectly influenced selection decisions by selecting officials, all to the advantage of female applicants. The gender of decision makers did not moderate the relationship between applicant gender and promotion decision outcomes. That is, the gender composition of the review panel (all male or mixed gender) did not moderate the relationship between applicant gender and referral decision outcomes, and selecting official gender did not moderate the relationship between applicant gender and selection decision outcomes. Powell and Butterfield (1997) found that applicant race (coded as White or of color) indirectly influenced referral decisions by review panels to the disadvantage of applicants of color. However, female applicants of color did not experience the negative effects of race that were experienced by male applicants of

color. In addition, the race of decision makers (all-White or mixed-race review panel, White selecting official or selecting official of color) did not moderate the relationship between applicant race and promotion decision outcomes.

Our earlier analyses of the moderating effects of decision makers' gender and race were limited in two ways. First, in coding applicants' and decision makers' race, we grouped all "men of color" and "women of color" together. This coding may have masked differences in the outcomes of promotion decisions *about* applicants from the different racial groups collectively categorized as applicants of color and *by* decision makers from the different racial groups collectively categorized as review panel members or selecting officials of color. Second, we examined the moderating effect of decision makers' gender (Powell & Butterfield, 1994) separately from the moderating effect of decision makers' race (Powell & Butterfield, 1997). Thus, it was not possible to determine whether the outcomes of promotion decisions differed according to the combination of decision makers' race and gender.

The present study was designed to address these limitations. Using data from Powell and Butterfield (1994, 1997) in addition to newly obtained data, it examined the combined influence of decision makers' race and gender on promotion decisions about applicants of diverse race and gender. In doing so, it coded race in the same manner as the federal department in its internal records (White, African American, Hispanic, Asian, or Native American,[1]) rather than in the more restrictive manner (White or of color) used in Powell and Butterfield (1997). Further, the study considered a broader range of theoretical explanations for the influence of decision makers' race and gender than that considered by Powell and Butterfield (1994, 1997).

Theory

Theoretical models of individual decision making such as the Brunswik lens model (Brunswik, 1955, 1956) make two general assumptions (Ilgen, Major, Hollenbeck, & Sego, 1995). First, individuals base their decisions on one or more pieces of information or cues. Second, individuals combine these cues in some manner to reach their decisions. The cues relevant to this study include personal characteristics of applicants such as their race and gender and measures of applicants' qualifications

[1] Of course, "race" is more complex than these categories suggest. Also, these categories combine race and ethnicity, although many scholars use the terms interchangeably (Betancourt & López, 1993). In this study, we use the term race to refer to "a group of people who share biological features that come to signify group membership and the social meaning such membership has for the society at large" (J. Jones, 1991, p. 9).

such as their education, work experience, and current level in the organizational hierarchy.

Team decision making is even more complex. Individual team members may place different weights on the same cues. In addition, team-level processes such as power or status differences among team members may influence the relative influence of different members on team decisions; increased weight may be given to the preferences of high status team members (Ilgen et al., 1995). Further, the nature of the societal and organizational contexts within which individuals and teams operate may influence the outcomes of their decisions (Jackson, May, & Whitney, 1995).

Various theoretical explanations for the glass ceiling have suggested an influence of race and gender on promotion decisions for top management positions. Explanations differ in their emphasis on the race and/or gender of individual applicants and decision makers and on the race and/or gender composition of the applicant pool and decision-making team. In the remainder of this section, several of the most prominent explanations in the literature are briefly summarized, predictions following from these explanations are compared, and a research question is posed.

Explanations

1. *Discrimination.* Western societies are characterized by social systems that are both patriarchal (Marshall, 1984; Powell, 1993) and White-centric (Essed, 1991; Hooks, 1989). White men, the dominant group in such societies, seek to preserve their power and authority as individual decision makers by consciously discriminating against women and people of color when making promotion decisions for top management positions (Morrison & Von Glinow, 1990); all-White-male teams of decision makers consciously discriminate in the same manner. This explanation does not suggest how individual decision makers who belong to other race/gender groups (e.g., White women, African American women and men, Hispanic women and men, Asian women and men, Native American women and men) take the race and gender of applicants into account. However, individual members of other race/gender groups could seek to enhance their power and authority by consciously discriminating against applicants who are not members of their own race/gender group, or at least against White male applicants. In addition, a group competition perspective (Tolbert, Graham, & Andrews, 1999) suggests that mixed-race and mixed-gender teams are characterized by power struggles that affect team decision making. The outcome of such competitions is influenced by the relative size of the competing groups (Blalock,

1967; Davis, Strube, & Cheng, 1995); as the subordinate group increases in size, the dominant group perceives it as a greater threat and engages in discriminatory acts to protect its dominance. The tendency of individual decision makers to make discriminatory decisions is also influenced by the relative size of competing groups. For example, Prewett-Livingston, Feild, Veres, and Lewis (1996) found a same-race bias in ratings of applicants for promotion to police sergeant by individual African American and White interviewers in racially balanced panels.

2. *Jobholder schemas.* Even if they do not consciously discriminate against applicants for top management positions on the basis of race or gender, decision makers unconsciously develop a schema or mental model (Fiske & Taylor, 1991) about the attributes of jobholders. This schema in turn influences promotion decisions. A jobholder schema may be either gender based, incorporating the gender of jobholders in some way, or gender neutral, ignoring the gender of jobholders (Perry, Davis-Blake, & Kulik, 1994); similarly, a jobholder schema may be either race based or race neutral. Race and gender are incorporated into decision makers' jobholder schemas when people who are primarily of one race and gender occupy the job under consideration and/or the pool of applicants for such jobs. Thus, when White men hold the majority of top management positions and/or dominate the applicant pool for such positions, individual decision makers and decision-making teams are more likely to see White men as possessing the personal qualities necessary to be successful executives.

3. *Similarity–attraction processes.* The similarity–attraction paradigm (Byrne, 1971; Byrne & Neuman, 1992) suggests that people are more attracted to and thereby prefer to associate with people whom they see as similar to themselves. Kanter (1977), in her analysis of promotion processes in a large corporation, characterized the results of such a preference as "homosocial reproduction." She argued that the primary motivation of corporate managers is to minimize uncertainty. Uncertainty is present whenever individuals are relied upon, and the effects of uncertainty are greatest when the individuals being relied upon hold significant responsibility for the direction of the organization. One way to reduce uncertainty in the executive suite is for the predominantly White male occupants to close it to people who are different from themselves in highly visible and immutable demographic characteristics such as race and gender. The similarity–attraction paradigm also suggests that individual decision makers in top management positions who belong to other race/gender groups seek to promote people whom they see as similar to themselves. However, the effects of similarity and attraction on team decisions are smaller for diverse teams (e.g., mixed-race and/or mixed-gender teams) than for homogeneous teams (e.g., same race and gender

teams; Lin, Dobbins, & Farh, 1992). A team of decision makers who differ themselves in race and/or gender is unlikely to agree on exactly what constitutes similarity to themselves when presented with applicants of diverse race and gender. Thus, diverse teams are less likely than homogeneous teams to expect applicants from any one race/gender group to provide greater certainty in the top management ranks than applicants from other groups.

4. *Social identities.* Social identity theory (Ashforth & Mael, 1989; Capozza & Brown, 2000; Tajfel & Turner, 1986) and self-categorization theory (Turner, 1985) suggest that people seek to achieve and maintain a positive self-identity by classifying themselves and others into social categories and then making favorable comparisons between members of their own group (ingroup) and outgroup members. People are generally presumed to identify with people who are similar to themselves (Williams & O'Reilly, 1998). However, people may be similar or dissimilar to others along several dimensions (e.g., race, gender, sexual orientation, class) and thereby have multiple social identities (Frable, 1997). When faced with conflicting social identities, individual decision makers identify with and thereby favor applicants for top management positions who are similar along the dimensions that are salient to them. Salience is determined by both personal and situational factors (Ashforth, 2001; Wharton, 1992). For example, the salience of gender and/or race may be enhanced by personal experiences with sexism and/or racism (a personal factor). It may also be enhanced by a low proportion of women and/or people of color in top management positions (a situational factor). Thus, when making decisions about promotions to top management positions, individuals are influenced by the salience of race and gender in their social identities. However, members of decision-making teams may differ in the dimensions of social identity that are personally salient because of differences in their personal experiences with sexism and racism. Diverse teams are less likely to agree on and utilize processes of social identification in evaluating applicants for top management positions than homogeneous teams.

5. *Status.* Decision makers are influenced by the nature of the societal context within which they make promotion decisions. Status characteristics theory (Berger, Fisek, & Norman, 1998; Berger, Wagner, & Zelditch, 1985) suggests that people form expectations about the competence of others based either on information about their past performance or inferences from the status value assigned by the society as a whole to their personal characteristics. Status value is assigned to a personal characteristic when consensual societal beliefs suggest that people who have one state of the characteristic are more worthy than those with a different state of the characteristic (Ridgeway, 1991). In Western

societies, race and gender are personal characteristics with clearly established status value. White people and men are held in higher honor and esteem and seen as more able and competent than people of color and women respectively, thereby granting them higher social status (Berger et al., 1985; Berger et al., 1998; Elsass & Graves, 1997; Ridgeway, 1991; Ridgeway & Diekema, 1992). As a result, individual decision makers favor White male applicants for top management positions because White men hold the highest status and are thereby seen as the most competent candidates.

In addition, members of decision-making teams may differ in status, resulting in differential distributions of power and prestige within the group. Higher status members exert greater influence on team decisions than lower status members (Berger et al., 1985; Ilgen et al., 1995; Tolbert et al., 1999). Thus, decisions by teams reflect the personal preferences of individual high status members, which in turn may be influenced by processes of similarity and attraction, social identification, and other cognitive processes. Women and people of color are especially likely to be granted low status in decision-making teams (Carli & Eagly, 1999; Elsass & Graves, 1997). However, whatever the internal influence processes may be, team decisions favor applicants for top management positions who hold the highest status in the given society, for example, White male applicants in Western societies.

6. *Organizational culture regarding equal employment opportunity.* Decision makers are also influenced by the nature of the organizational context. Many countries have made significant commitments to equal employment opportunity (EEO) by passing antidiscrimination laws and mandating affirmative action programs (Hodges-Aeberhard & Raskin, 1997; Konrad & Linnehan, 1999). However, despite government mandates, organizations vary in the extent to which their internal culture promotes EEO. Some organizations are proactive in setting and pursuing EEO goals, other organizations are reactive in seeking to achieve minimal compliance with EEO laws, and still other organizations ignore EEO laws in the hope that they will not be enforced (Powell, 1993). When the organizational culture places a strong emphasis on EEO, whether for proactive or reactive reasons, and decision makers are rewarded according to their achievement of EEO goals, individual decision makers and decision-making teams seek to maximize their rewards by favoring members of protected groups (e.g., women and people of color) in their promotion decisions for top management positions. However, when the organizational culture does not promote EEO or avoids the mandates of EEO laws, decision makers, whether acting as individuals or teams, are freer to act on their personal inclinations.

Comparison of Predictions Based on Explanations

The predictions that follow from these theoretical explanations for the glass ceiling compete in some ways and overlap in other ways. Two of the explanations, those based on jobholder schemas and status, suggest that White male applicants for top management positions are most favored by all decision makers, regardless of the race and gender of individual decision makers and the race/gender composition of the decision-making team; the status explanation further suggests that high status members have greater influence on team decisions than low status members. In contrast, the explanation based on the organizational culture regarding EEO suggests that in certain organizations, White male applicants are least favored by all decision makers, regardless of the race and gender of individual decision makers and the race/gender composition of the decision-making team. The explanations based on similarity–attraction processes and social identities suggest that individual decision makers favor applicants from their own race/gender group, especially if race and gender are salient in their social identities; however, diverse decision-making teams are less likely than homogeneous teams to favor applicants of a particular race and gender. Finally, the explanation based on discrimination suggests both that individual decision makers favor applicants from their own race/gender group and that the numerically dominant race/gender group prevails in team decisions to the advantage of applicants from its own group. Thus, in the absence of a single theoretical framework, the literature does not provide clear guidance for the formation of predictions regarding (a) whether an influence of decision makers' race and gender on promotion decisions for top management is present or (b) the nature of the influence if it is present.

The absence of a unifying theoretical framework has been exhibited in the debate over whether women of color experience a "double advantage" or "double whammy" in management and other professions. Women of color may be said to benefit from a double advantage if organizational cultures that promote EEO propel them ahead of members of other groups to count them as a "double minority" (Bell, Denton, & Nkomo, 1993). They may be said to suffer from a double whammy if they are subjected to the negative effects of both sexism and racism, thereby finding it harder to advance to top management than either men of color or White women (Davidson, 1997; Sokoloff, 1992). In a sense, the debate over the merits of these two opposing views reflects the competing predictions suggested by the above explanations. However, the intersection of race and gender may be more complex than either the double advantage or double minority view suggests. For example, depending on the dimension of comparison, the contemporary experiences of African

American female managers may be similar to those of African American male managers or White female managers, or their experiences may be unique (Bell et al., 1993; Nkomo, 1988).

We should note that this study examined promotion decisions for top management positions made in an organization that publicly and strongly supports equal employment opportunity, the U.S. federal government (Federal Glass Ceiling Commission, 1995a, 1995b). By investigating promotion decisions made in one organization, it controlled for the influence of organizational culture on outcomes. Thus, any results that were not consistent with what would be predicted for such a culture would be particularly worthy of note.

Research Question

Given the absence of a single theoretical framework to serve as a guide, this study was necessarily exploratory in nature. Thus, specific hypotheses were not formulated. Instead, the following research question was examined:

> What is the influence of the race and gender of individual decision makers and the race/gender composition of decision-making teams on promotion decisions about applicants of diverse race and gender for top management positions?

Methods

Procedures and Sample

In the U.S. federal government, the Senior Executive Service (SES) consists of all top management positions that can be attained without political sponsorship. Approximately 1% of all positions are SES positions. For earlier studies (Powell & Butterfield, 1994, 1997), we obtained archival data from promotion files for decisions about open SES positions made by a Cabinet-level federal department between January 1987 and December 1994; see Powell and Butterfield (1997) for further information on the promotion process. Information on applicant race, which was not in promotion files in accordance with federal law, was obtained for employees of the hiring department from the department's separate internal records and for employees of other federal departments from the U.S. Office of Personnel Management. The present study used these data in addition to newly obtained data on promotion decisions about SES positions made by the same department between January 1995 and November 1999.

From January 1987 to November 1999, the department filled 51 open SES positions. An announcement was circulated for each position that specified the criteria by which applicants would be judged; anyone could apply for the position. The personnel office in the department agency in which the position was located screened out applicants who did not meet minimum eligibility criteria. The initial screening yielded 578 applicants who were regarded as at least minimally qualified for the position they applied for. Race data were available for 357 (61.8%) of the 578 applicants. Most of the missing data on race were for applicants from federal departments that had not fully reported data on employee race to the U.S. Office of Personnel Management; data on race were also missing for applicants who had not been or were no longer federal employees at the time of data collection. Data for the 357 applicants for whom race data were available were subjected to further analyses.

Of these 357 applicants, 16.0% were female. According to the race categories used by the federal department, 77.3% of the applicants were White, 14.6% were African American, 3.6% were Hispanic, 3.6% were Asian, and 0.9% were Native American. The mean age of applicants was 47.3 years and mean full time work experience was 22.8 years. The hiring department employed 67.8% of applicants. The highest degree obtained was a graduate degree for 63.9%, a bachelor's degree for 34.7%, and a lower degree for 1.4% of applicants. The highest federal grade achieved was grade 13 or lower for 1.1%, grade 14 for 12.8%, grade 15 for 75.6%, and SES for 10.5 percent; grades 13 to 15 are considered the "pipeline grades" to the SES. The mean time at the highest grade was 6.2 years.

Organizational Culture and Composition of Top Management Ranks

The U.S. federal government has an expressed commitment to equal employment opportunity and strongly encourages private sector organizations to make the same kind of commitment (Federal Glass Ceiling Commission, 1995a, 1995b). Further, the department from which data were obtained is especially committed to EEO. It was the first Cabinet level department to prepare a report on its internal glass ceiling in 1991. As a result, the study examined decisions that were made in an organizational culture that was highly sensitive to issues of race and gender in personnel decisions.

According to departmental records, 66.5% of 170 Senior Executive Service positions in the department in 1991 were held by White men, 19.4% by White women, 5.3% by African American men, 4.7% by African American women, 2.9% by Hispanic men, and 1.2% by Native American men. In the pipeline grades, 62.0% of 4,725 positions in the department were held by White men, 18.7% by White women, 6.8% by

African American men, 6.6% by African American women, 3.2% by Hispanic men, 0.8% by Hispanic women, 0.9% by Asian men, 0.5% by Asian women, 0.4% by Native American men, and 0.1% by Native American women. The department has about 17,000 full time employees.

Decision Makers

Review panels were responsible for making the initial referral decision for each applicant. Each review panel consisted of one to four members. No review panel was appointed for two positions with a total of nine applicants; all of these applicants were automatically referred to the selecting official. In addition, information on the race of review panel members was not available for three positions with a total of 38 applicants. Of the remaining 310 applicants in the sample, 36.5% (113) were reviewed by an all-White-male panel, 24.5% (76) by an all-White mixed-gender panel, 24.5% (76) by an all-male panel with White and African American members, 6.1% (19) by a mixed-gender panel with White and African American members, 5.8% (18) by a mixed-gender panel with White and Hispanic members, and 2.6% (8) by an all-female panel with White and African American members. Other possible race/gender groups of review panels were not represented (e.g., no applicants were reviewed by an all-White-female panel or by a panel with no White members).

Selecting officials were responsible for making the final selection decision for each position from the pool of applicants referred for the position. Of the 357 applicants in the sample, 78.2% (279) were referred to a selecting official for consideration. Of the 279 referred applicants, 47.3% (132) were reviewed by a White male selecting official, 14.4% (40) by a White female selecting official, 8.6% (24) by an African American male selecting official, 22.2% (62) by a Hispanic male selecting official, and 7.5% (21) by a Hispanic female selecting official.

Measures

Two measures of the outcomes of promotion decisions about top management positions for each applicant served as dependent variables: referral by the review panel (0 = *no*, 1 = *yes*) and, if the applicant was referred, selection by the selecting official (0 = *no*, 1 = *yes*).

Applicant race (coded according to the particular analysis) and applicant gender (1 = *male*, 2 = *female*) were included in analyses as predictors of both outcome measures. In addition, three measures of applicant qualifications were included in analyses as predictors. In our earlier analysis of data for applicants for 39 SES positions, referral decisions

were positively influenced by employment in the hiring department and the highest grade achieved and negatively influenced by years of full-time work experience (Powell & Butterfield, 1997). Selection decisions for referred applicants were not influenced by any measure of applicant qualifications included in the earlier analysis. In this study, employment in the hiring department (0 = *no*, 1 = *yes*), the highest grade achieved (coded on a 4-point scale), and years of full-time work experience were included as predictors of both referral and selection decisions.

Analysis

Analyses were performed to examine the effect of the race and gender composition of review panels serving as decision-making teams and the race and gender of selecting officials serving as individual decision makers on the outcomes of decisions about applicants of diverse race and gender. The effects of interactions between these variables as well as their main effects on promotion decision outcomes warranted attention. However, the number of applicants in many of the possible cells was too small to allow inclusion of multiple terms pertaining to the interactions between decision maker race/review panel race composition, decision maker gender/review panel gender composition, applicant race, and applicant gender that would be necessary to perform moderated regression analyses. In addition, the number of applicants in some of the racial categories was too small to allow testing for the main effect of applicant race with these categories included. Analyses were decided upon with these considerations in mind.

Regarding decisions by review panels, we noted that 91.3% of the 310 applicants for whom applicant and review panel race information was available were either White or African American and that 94.2% of the same applicants were reviewed by either an all-White panel or a mixed-race panel with White and African American members. The proportions of Hispanic applicants (3.5%) and of applicants who were reviewed by a panel with a Hispanic member (5.8%) were both small. The proportions of Asian (4.2%) and Native American (1.0%) applicants were also small, and no review panels had an Asian or Native American member. Thus, we decided to analyze referral decisions about White and African American applicants made by review panels that consisted only of White and/or African American members. The sample for these analyses consisted of 265 applicants: 17.0% (45) were African American and 17.4% (46) were female.

Logistic regression analysis was used to assess the effects of applicant qualifications, race (1 = *White*, 2 = *African American*), and gender on the dichotomous refer/do-not-refer decision made about each

applicant. Referral decisions were regressed first on the three measures of applicant qualifications. Applicant race, applicant gender, and the interaction between these two terms (standardized before calculation of the interaction as recommended by Aiken & West, 1991) were entered into the regression equation in a second step. These regressions were performed for all review panels combined and separately for review panels of different race and gender composition.

Regarding decisions by selecting officials, we noted that 93.2% of the 279 referred applicants for whom race information was available were either White or African American, but that only 70.3% of selection decisions about the same applicants were made by White or African American selecting officials. Although the proportion of referred applicants who were Hispanic was small (3.9% of the 279 applicants), the proportion of selection decisions made by Hispanic selecting officials was large (the remaining 29.7% of selection decisions). The proportions of Asian (2.5%) and Native American (.4%) referred applicants were both small, and no selecting officials were Asian or Native American. Thus, we decided to analyze selection decisions about referred White, African American, and Hispanic applicants made by White, African American, or Hispanic selecting officials. The sample for these analyses consisted of 271 applicants; 14.0% (38) were African American, 4.1% (11) were Hispanic, and 18.8% (51) were female.

Logistic regression analysis was used to assess the effects of applicant qualifications, race, and gender on the dichotomous select/do-not-select decision made about each referred applicant. Effects coding (Cohen & Cohen, 1975) was used to represent applicant race in regression analyses. Two variables were used to represent the three categories of applicant race. The first, labeled *Race–African American*, was coded –1 for White applicants, 0 for Hispanic applicants, and 1 for African American applicants. The second, labeled *Race–Hispanic*, was coded –1 for White applicants, 0 for African American applicants, and 1 for Hispanic applicants. Selection decisions were regressed first on the three measures of applicant qualifications. The two applicant race variables, applicant gender, and the interaction between applicant gender and each of the applicant race variables were entered into the regression equation in a second step. These regressions were performed for all selecting officials combined and separately for selecting officials of different race and gender.

Cell means were also examined to explore the influence of interactions between decision maker and applicant race and gender on both outcome measures. Pearson chi-square values are reported for all comparisons of cell means. For 2×2 tables, the probability of obtaining the observed results was calculated using Fisher's exact test.

TABLE 1

Number of White/African American Applicants Reviewed by Panels Consisting of White/African American Members

Race and gender composition of review panel	Applicant *n*
Homogeneous review panels (same race and gender):	
All-White-male	108
Diverse review panels (mixed-race and/or mixed-gender):[a]	
All-White mixed-gender	67
All-male mixed-race	66
Mixed-race and mixed-gender	16
All-female mixed-race	8
	157
All review panels combined	265

[a] Listed in descending order by number of applicants reviewed.

Results

Referral Decisions

The influence of applicant qualifications, race, and gender on the outcomes of referral decisions was examined for applicants who were either White or African American and were reviewed by panels that consisted only of White and/or African American members. Of the 265 such applicants, 2.6% (7) were reviewed by a one-member panel, 84.5% (224) by a two-member panel, 11.0% (29) by a three-member panel, and 1.9% (5) by a four-member panel. Thus, two-member review panels made most referral decisions. The outcomes of referral decisions did not differ according to panel size for White, African American, male, or female applicants or for all applicants combined. Given its lack of variation and lack of main effect on the outcome of referral decisions about applicants of different race and gender, review panel size was not included as a predictor of referral decisions in further analyses.

Referral decisions were examined for all review panels combined and separately examined for homogeneous panels (i.e., panels with members of the same race and gender, in this case all-White-male panels) and diverse panels (i.e., mixed-race and/or mixed-gender panels; see Table 1). Additional analyses were conducted to determine whether results differed between the two largest race/gender groups of diverse panels: all-White, mixed-gender panels and all-male, mixed-race panels. Table 2 presents the results of logistic regression analysis for all review panels combined, homogeneous panels, and diverse panels. Table 3 presents corresponding cell means for referral decisions by applicant race and gender.

TABLE 2

Referral Decisions About White/African American Applicants by Review Panels Consisting of White/African American Members: Logistic Regression Analysis

Variable	All panels combined			Homogeneous panels [a]			Diverse panels [b]		
	b	s.e.	ΔR^2	b	s.e.	ΔR^2	b	s.e.	ΔR^2
Applicant qualifications:			.13***			.05			.20***
Employed in hiring department	.94***	.19		.05	.41		1.28***	.24	
Years of full-time work experience	−.44*	.19		−.37	.31		−.46†	.25	
Highest grade achieved	.55**	.21		.55†	.32		.66*	.29	
Applicant demographics:			.02			.07*			.01
Race	.11	.66		−.43	2.68		.28	1.03	
Gender	.50	.76		2.47	7.49		.32	1.17	
Race • gender	.65	1.68		.16	6.92		.73	2.63	
Constant	1.16***	.34		2.55	2.92		1.04*	.50	
χ^2_6	45.21***			14.66*			41.19***		
Pseudo R^2	.15			.12			.21		
n	265			108			157		

[a] All-White male panels

[b] Mixed-race and/or mixed-gender panels

***p <.001 **p <.01 *p <.05 † p <.10

TABLE 3

Referral Decisions About White/African American Applicants by Review Panels Consisting of White/African American Members: Cell Means

Race and gender of applicant	All Panels Combined		Homogeneous Panels [a]		Diverse Panels [b]	
	n	Percent referred	*n*	Percent referred	*n*	Percent referred
White men	181	79	74	84	107	76
White women	39	90	17	100	22	82
African American men	38	63	13	61	25	64
African American women	7	100	4	100	3	100
All applicants	265	79	108	84	157	75
χ^2		10.27*		9.00*		3.20
df		3		3		3

[a] All-White male panels [b] Mixed-race and/or mixed-gender panels.
*$p < .05$

According to logistic regression analyses (Table 2), applicant qualifications explained a significant amount of variance in referral decision outcomes for all review panels combined ($\Delta R^2 = .13, p < .001$) and for diverse panels ($\Delta R^2 = .20, p < .001$) but not for homogeneous panels ($\Delta R^2 = .05, p < = ns$). In contrast, applicant demographics (race, gender, and the interaction between race and gender) explained a significant amount of additional variance in decision outcomes beyond that explained by applicant qualifications for homogeneous panels ($\Delta R^2 = .07, p < .05$) but not for all review panels combined ($\Delta R^2 = .02, p = ns$) or for diverse panels ($\Delta R^2 = .01, p = ns$). The results of logistic regression analysis for all-White, mixed-gender panels and all-male, mixed-race panels, the two largest types of diverse panels, were similar to those for diverse panels as a whole (results not shown). In both cases, applicant qualifications explained a significant amount of variance in referral decision outcomes ($\Delta R^2 = .23$ and .14 respectively, $p < .01$) and applicant demographics did not explain a significant amount of additional variance in outcomes ($\Delta R^2 = .04$ and .03 respectively, $p = ns$).

According to comparisons of cell means (Table 3), the outcomes of referral decisions significantly differed across the four race/gender groups of applicants for all panels combined ($\chi^2_3 = 10.27, p < .05$) and for homogeneous panels ($\chi^2_3 = 9.00, p < .05$) but not for diverse panels ($\chi^2_3 = 3.20, p = ns$). For all panels combined, referral decisions significantly differed according to applicant gender, with female applicants (91%) referred to a greater extent than male applicants (76%; $\chi^2_1 = 5.17, p < .05$). In addition, there was a marginally significant trend for White applicants (81%) to be referred to a greater extent than African American applicants (69%; $\chi^2_1 = 3.24, p < .10$). However, the

referral rate for African American men (63%) was significantly lower than that for White men (79%; $\chi^2_1 = 4.36, p < .05$) and White women (90%; $\chi^2_1 = 7.60, p < .01$), and there was a marginally significant trend for African American men to be referred to a lesser extent than African American women (100%; $\chi^2_1 = 3.74, p < .10$).

Similar results were obtained for comparisons of cell means for homogeneous panels, although the results of specific comparisons were less likely to be significant due to the smaller ns than for all panels combined. For homogeneous panels, referral rates significantly differed according to applicant gender, with the perfect referral rate for female applicants higher than that for male applicants (80%; $\chi^2_1 = 4.87, p < .05$). Also, White applicants (87%) tended to be referred to a greater extent than African American applicants (71%; $\chi^2_1 = 2.84, p < .10$). The referral rate for African American men (61%), lowest for all race/gender groups of applicants, was significantly lower than the referral rate for White women (100%; $\chi^2_1 = 7.85, p < .01$). In addition, the difference in referral rates for White men (84%) versus African American men was marginally significant ($\chi^2_1 = 3.48, p < .10$).

In contrast, according to comparisons of cell means for diverse panels, there were no applicant gender or race differences in referral decision outcomes. The referral rate for African American men (64%), although the lowest of all four race/gender groups of applicants, was not significantly lower than that for members of other groups. Similar results (not shown) were obtained for comparisons of cell means for the two largest race/gender groups of diverse panels, all-White, mixed-gender panels and all-male, mixed-race panels.

For all review panels combined, there was a discrepancy between results of logistic regression analysis and comparisons of cell means. Logistic regression analysis (Table 2) suggested that applicant race and gender had no main or interaction effects on referral decision outcomes beyond that of applicant qualifications. However, comparisons of cell means (Table 3) suggested that actual outcomes differed according to applicant race and gender. This discrepancy could have been due to race and/or gender differences in the three measures of applicant qualifications that positively influenced referral decisions: being employed in the hiring department, having less work experience, and being at a higher grade.

There were no gender differences in the qualifications of applicants reviewed by all panels combined. However, African American applicants (60%) were less likely to be employed in the hiring department than White applicants (78%; $\chi^2_1 = 6.22, p < .01$). In addition, African American men (53%) were less likely to be employed in the hiring department than African American women (100%; $\chi^2_1 = 5.53, p < .05$), White women (77%; $\chi^2_1 = 4.99, p < .05$), and White men

TABLE 4

Number of Referred White/African American/Hispanic Applicants Evaluated by White/African American/Hispanic Selecting Officials

Race and Gender of Selecting Official[a]	Applicant *n*
White male	130
Hispanic male	61
White female	37
African American male	23
Hispanic female	20
All selecting officials combined	271

[a] Listed in descending order by number of applicants evaluated.

(78%; $\chi^2_1 = 10.30$, $p < .01$). Further, African American applicants (24.0 years) had greater work experience than White applicants (21.8 years; $t_{258} = -2.00$, $p < .05$). African American men (23.9 years) had more work experience than White women (19.9 years; $t_{74} = -2.83$, $p < .01$) but did not differ in work experience from that of White men (22.2 years; $t_{213} = -1.41$, $p = ns$) or African American women (24.6 years; $t_{43} = -.24$, $p = ns$). Thus, for all review panels combined, differences in employment in the hiring department and work experience may have contributed to differences in referral decision outcomes to the advantage of women and to the disadvantage of African American men.

For homogeneous panels, there was a marginally significant effect of the highest grade achieved on referral decision outcomes (Table 2). However, there were no race or gender differences in the highest grade achieved. In addition, the highest grade achieved by African American men did not differ from that achieved by members of other race/gender groups of applicants. Thus, referral decisions by homogeneous (i.e., all-White-male) review panels favored women and disfavored African American men in a way that could not be explained by race and/or gender differences in the measures of applicant qualifications included in this study.

Selection Decisions

The influence of applicant qualifications, race, and gender on the outcomes of selection decisions was examined for referred applicants who were either White, African American, or Hispanic; all such decisions were made by selecting officials who were either White, African American, or Hispanic (see Table 4). Table 5 presents the results of logistic regression analyses for all selecting officials combined and for White male and Hispanic male selecting officials, the two largest race/gender groups of selecting officials. The numbers of referred applicants who were evaluated by selecting officials from other race/gender groups—White females, African American males, and Hispanic females—

TABLE 5

The Competency by Exercise Matrix Used for the Assessment Center

	Team meeting	Customer meeting	In-tray	Interview	Video	Overall	ICC	Alpha
Team leadership	2.8 (0.35)		2.0 (0.37)		3.9 (0.29)	2.9 (0.22)	.13	.32
Managing relationships			2.2 (0.36)	3.6 (0.14)		2.8 (0.32)	−.07	−.15
Coaching people	2.6 (0.40)				4.0 (0.26)	3.3 (0.25)	.03	.06
Developing people			1.8 (0.37)	3.6 (0.16)	3.8 (0.44)	3.0 (0.27)	.13	.31
Working with people	3.0 (0.32)	2.9 (0.44)	2.6 (0.46)			2.9 (0.27)	.16	.38
Managing information	2.7 (0.39)	2.7 (0.46)	1.9 (0.30)			2.4 (0.28)	.25	.50
Planning & organizing	2.6 (0.38)		2.3 (0.45)			2.5 (0.30)	.03	.06
Making decisions	2.7 (0.46)	2.7 (0.39)	2.4 (0.43)			2.6 (0.30)	.25	.50
Seeking improvement	2.2 (0.37)	2.4 (0.53)			4.1 (0.25)	2.9 (0.26)	.08	.21
Managing self	2.8 (0.33)			3.5 (0.21)	3.3 (0.58)	3.2 (0.29)	−.01	−.02
Customer focus		2.8 (0.46)	2.1 (0.33)	3.6 (0.18)		2.8 (0.25)	.03	.09
Overall	2.7 (0.30)	2.7 (0.36)	2.2 (0.30)	3.6 (0.12)	3.8 (0.17)	2.8 (0.18)		
Intra-class correlation	.59	.54	.53	.40	−.01			
Coefficient alpha	.92	.85	.90	.73	−.001			

Notes: Blank cells indicate where a competency was not measured by a particular exercise. Filled cells show the Mean and (*SD*). The figures in the final two column and rows are single-measure intra-class correlations and coefficient alphas for that competency or exercise.

were too small to proceed with separate regression analyses. Table 6 presents cell means for selection decisions by applicant race and gender for all selecting officials combined and for all five race/gender groups of selecting officials.

According to logistic regression analyses (Table 5), applicant qualifications explained a significant amount of variance in selection decision outcomes for all selecting officials combined ($\Delta R^2 = .03, p < .05$), but not for White male ($\Delta R^2 = .02, p = ns$) or Hispanic male ($\Delta R^2 = .07$, $p = ns$) selecting officials. In addition, applicant demographics (the two race variables, gender, and the interaction between each of the race variables and gender) explained a marginally significant amount of additional variance in selection decision outcomes beyond that explained by applicant qualifications for all selecting officials combined ($\Delta R^2 = .03$, $p < .10$), but not for White male ($\Delta R^2 = .02, p = ns$) or Hispanic male ($\Delta R^2 = .08, p = ns$) selecting officials. For Hispanic male selecting officials, the lack of significance associated with the incremental amounts of variance explained in selection decisions by applicant qualifications and demographics was most likely due to the smaller n than for all selecting officials combined.

According to comparisons of cell means (Table 6), the outcomes of selection decisions marginally differed across the six race/gender groups of applicants for all selecting officials combined ($\chi^2_5 = 9.91, p < .10$) and for Hispanic male selecting officials ($\chi^2_5 = 9.26, p < .10$). In addition, outcomes of selection decisions significantly differed according to applicant race and gender for African American male selecting officials ($\chi^2_4 = 14.92, p < .01$). Outcomes did not differ according to applicant race and gender for White male ($\chi^2_4 = 1.66, p = ns$), White female ($\chi^2_4 = 3.03, p = ns$), or Hispanic female selecting officials ($\chi^2_3 = 2.22$, $p = ns$). It should be noted that the ns in many of the cells on which these comparisons were based were small, particularly for the smaller race/gender groups of selecting officials.

For all selecting officials combined, selection rates did not differ according to applicant race ($\chi^2_2 = 1.44, p = ns$). However, selection rates significantly differed according to applicant gender, with female applicants (27%) selected to a greater extent than male applicants (16%; $\chi^2_1 = 3.72, p < .05$). In particular, the gender difference in outcomes was marginally significant for Hispanic applicants ($\chi^2_1 = 11.00, p < .10$); the sole Hispanic female applicant, but none of the ten Hispanic male applicants, was selected. The zero selection rate for Hispanic men also was marginally lower than that for African American women (33%; $\chi^2_1 = 3.96, p < .10$) and White women (24%; $\chi^2_1 = 3.03, p < .10$).

These differences in decision outcomes for all selecting officials combined could have been due to race and/or gender differences in applicant

TABLE 6

Selection Decisions About Referred White/African American/Hispanic Applicants by White/African American/Hispanic Selecting Officials: Cell Means

Race and gender of applicant	All selecting Officials combined		White male selecting officials		Hispanic male selecting officials	
	n	Percent selected	n	Percent selected	n	Percent selected
White men	181	16	96	19	37	8
White women	41	24	21	24	6	17
African American men	29	21	10	30	9	22
African American women	9	33	2	0	4	25
Hispanic men	10	0	1	0	4	0
Hispanic women	1	100	0	–	1	100
All applicants	271	18	130	20	61	13
χ^2		9.91†		1.66		9.26†
df		5		4		5

Race and gender of applicant	White female selecting officials		African American male selecting officials		Hispanic female selecting officials	
	n	Percent selected	n	Percent selected	n	Percent selected
White men	26	19	12	8	10	20
White women	7	43	4	0	3	33
African American men	2	50	4	0	4	0
African American women	1	0	2	100	0	–
Hispanic men	1	0	1	0	3	0
Hispanic women	0	–	0	–	0	–
All applicants	37	24	23	13	20	15
χ^2		3.03		14.92**		2.22
df		4		4		3

**$p < .01$ †$p < .10$

qualifications. Being employed in the hiring department was marginally associated with positive selection decision outcomes for referred applicants (Table 5). The proportions of female (82%) and male (74%) referred applicants who were employed in the hiring department did not differ ($\chi^2_1 = 1.69, p = ns$). In addition, the sole Hispanic female and five of the Hispanic male applicants were employed in the hiring department, whereas the other five Hispanic male applicants were employed elsewhere in the federal government ($\chi^2_1 = .92, p = ns$). However, the proportion of Hispanic men who were employed in the hiring department (50%) was significantly lower than that for African American women (100%; $\chi^2_1 = 6.11, p < .05$) and marginally lower than that for White women (78%; $\chi^2_1 = 3.18, p < .10$). Thus, for all selecting officials combined, differences in employment in the hiring department may have contributed to differences in selection decision outcomes to the advantage of women and the disadvantage of Hispanic men.

According to comparisons of cell means for Hispanic male selecting officials, selection rates did not differ according to applicant race ($\chi^2_2 = 1.89, p = ns$) or gender ($\chi^2_1 = 2.36, p = ns$). The sole Hispanic female applicant, who was selected, fared marginally better than White male applicants in selection decisions by Hispanic male selecting officials (8%; $\chi^2_1 = 8.73, p < .10$). None of the four Hispanic male applicants was selected. However, the gender difference in selection decision outcomes for Hispanic applicants to the advantage of the Hispanic woman and the disadvantage of Hispanic men failed to reach significance ($\chi^2_1 = 5.00, p = ns$).

For African American male selecting officials, selection rates also did not differ according to applicant race ($\chi^2_1 = 2.98, p = ns$) or gender ($\chi^2_1 = 2.95, p = ns$). However, there was a marginally significant gender difference for African American applicants ($\chi^2_1 = 6.00, p < .10$); the two African American women evaluated by African American male selecting officials were selected, whereas none of the four African American men was selected. Further, because none of the four White women was selected either, there was a marginally significant race difference for female applicants ($\chi^2_1 = 6.00, p < .10$).

In contrast, there were no applicant gender or race differences in the outcomes of decisions by White male, White female, or Hispanic female selecting officials. The results of all pairwise comparisons of cell means for each of these race/gender groups of selecting officials failed to reach significance.

Discussion

The influence of applicant race and gender on actual promotion decisions for top management positions in a U.S. federal department

differed according to decision makers' race and gender at both stages of a two-stage promotion process. At the first stage, referral decisions about White and African American applicants made by review panels with White and/or African American members were examined. For all review panels combined, applicant race and gender influenced referral decisions to the advantage of female applicants and the disadvantage of African American male applicants. These effects were explained in part by differences in applicant qualifications, especially employment in the hiring department and work experience. However, effects of applicant race and gender on referral decisions were exhibited only for homogeneous (in this study, all-White-male) panels; referral decisions by diverse (mixed-race and/or mixed-gender) panels were influenced only by applicant qualifications. Further, the effects for homogeneous panels were not explained by race or gender differences in the applicant qualifications that were measured.

At the second stage of the promotion process, selection decisions about White, African American, and Hispanic referred applicants made by White, African American, and Hispanic selecting officials were examined. For all selecting officials combined, applicant race and gender influenced selection decisions to the advantage of female applicants and the disadvantage of Hispanic male applicants. These effects were explained in part by differences in employment in the hiring department. In addition, decisions by African American male selecting officials were to the disadvantage of African American male applicants. Applicant race and gender did not influence decisions by other race/gender groups of selecting officials.

The finding that effects of applicant race and gender were present for referral decisions by homogeneous panels but not diverse panels was a unique contribution of the study. Powell and Butterfield (1994) tested only whether the gender composition of the review panel influenced the effect of applicant gender on referral decisions and found that it did not. In addition, Powell and Butterfield (1997) tested only whether the race composition of the review panel influenced the effect of applicant race on referral decisions and found that it did not. In contrast, the present study suggested that the race composition and the gender composition of the review panel, considered simultaneously, influenced the effects of applicant race and gender on referral decisions. Decisions by homogeneous panels favored female applicants and disfavored African American male applicants, whereas decisions by diverse panels did not favor or disfavor any race/gender group of applicants.

The specific findings pertaining to decision maker and applicant race were also a unique contribution of the study. The present study coded race, in accordance with categories used by the federal department

examined, as White, African American, Hispanic, Asian, or Native American (there were no Asian or Native American decision makers), whereas Powell and Butterfield (1997) coded race as White or of color. The more precise coding of race permitted finer grain analyses of race and gender effects on promotion decisions. These analyses suggested that selection decisions by African American male selecting officials disfavored African American male applicants, whereas selection decisions by other race/gender groups of selecting officials did not favor or disfavor any race/gender group of applicants. However, selection decisions by all selecting officials combined favored female applicants and disfavored Hispanic male applicants. In contrast, Powell and Butterfield (1997) concluded that the race of selecting officials did not influence the effect of applicant race on selection decisions. Further, due to their coding of the race variable, they could only reach conclusions about the adverse impact of promotion decisions on applicants of color as a general group.

Influence of Applicant Race and Gender

Results regarding the influence of applicant race and gender on promotion decisions about top management positions by individual decision makers and decision-making teams offered little support for most of the theoretical explanations for the glass ceiling summarized earlier. They did not support predictions based on the influence of jobholder schemas and status, as White male applicants were not favored in referral decisions by review panels of any race and gender composition acting as decision-making teams or in selection decisions by individual selecting officials of any race or gender. In addition, the results did not support predictions based on the influence of discrimination, similarity–attraction processes, and social identities. Although referral decisions by homogeneous panels were influenced more by applicant race and gender than decisions by diverse panels, there was no evidence to suggest that panel members' desires to preserve or enhance their own power, work with people who were similar to themselves, or work with people who belonged to groups with which they identified influenced their decisions. In addition, although selection decisions by African American male selecting officials were influenced more by applicant race and gender than decisions by selecting officials from other race/gender groups, these decisions were to the disadvantage, not advantage, of applicants who belonged to the same race/gender group as the selecting official.

In contrast, results offered partial support for the influence of the organizational culture regarding equal employment opportunity. In an organization and department with a culture that strongly supported EEO,

female applicants were favored over male applicants in referral decisions by all review panels combined and by homogeneous panels and in selection decisions by all selecting officials combined.

However, African American men at the referral stage of the promotion process, and African American and Hispanic men at the selection stage, were not beneficiaries of this culture. These results were consistent with other results in the literature. For example, in a study of biracial groups, Adams (1983) found that African American women were more readily accepted in roles of influence than African American men. She argued that White society has historically allowed more assertive behavior from African American women than African American men because females of any race are regarded as less dangerous than males. E. Jones (1986, p. 91) concluded, "If personal comfort levels are a main criterion for advancement, black women are less threatening and therefore more acceptable to white male executives and so will advance faster and farther than black men."

Thus, we have another possible explanation for the influence of applicant race and gender on referral decisions by all White male review panels, the relative threat posed by members of other race/gender groups. The organization's EEO culture and the perceived lack of threat posed by women in general may explain why all-White-male review panels preferred women of all races over men of all races. In addition, the perceived threat posed by men from other racial groups may explain why such panels preferred African American male applicants least of all.

Although the organization's EEO culture may explain why women were favored in selection decisions by all selecting officials combined, it does not explain why these decisions disfavored Hispanic men. Further, there is no ready explanation for why selection decisions by African American men were to the disadvantage of African American men. Such lack of support for applicants of the same race and gender was the opposite of what would be predicted by the similarity–attraction paradigm (Byrne, 1971; Byrne & Neuman, 1992) and social identity theory (Ashforth & Mael, 1989; Capozza & Brown, 2000; Tajfel & Turner, 1986). It was also contrary to what would be expected in an organizational EEO culture that officially considered all people of color, not just those who are female, as members of protected groups. Some theories of racial identity suggest that negative racial stereotypes are internalized by individuals at particular stages of their development of a self-identity (see Murrell, 1998, for a review). However, there seemed little reason to expect African American male selecting officials, who were already members of top management, to have internalized negative stereotypes about people like themselves. Perhaps, contrary to what would result from processes of similarity and attraction or social identification, they enjoyed

their special status as top executives in such a culture and did not want to diminish it by adding to their numbers. Further research is needed to increase our understanding of why applicants from different protected groups may differentially benefit from promotion decisions for top management positions made by decision makers of diverse race and gender in an organizational culture that strongly promotes equal employment opportunity.

Influence of Applicant Qualifications

Although we have thus far focused on the influence of applicant race and gender on promotion decisions, the influence of what are construed to be "applicant qualifications" warrants close attention. In this study, three objective measures of applicants' credentials that appeared in promotion files were included as predictors: employment in the hiring department, years of full-time work experience, and the highest grade achieved. All three of these measures predicted referral decisions by all review panels combined; the influence of work experience was negative, whereas the other two influences were positive. These effects were exhibited in referral decisions by diverse panels but not homogeneous panels. In addition, employment in the hiring department marginally predicted selection decisions by all selecting officials combined. Three other objective measures of applicants' credentials that appeared in promotion files—years at the highest grade, highest degree obtained, and summary rating on the most recent performance evaluation—did not predict either referral or selection decisions in an earlier analysis of a subset of the data (Powell & Butterfield, 1997) and thus were not included as predictors in this study. It should be noted that other subjective or objective measures of applicants' credentials (e.g., job-relevant knowledge, skills, abilities, or experiences they had) that were not assessed may have influenced promotion decision outcomes.

It would seem that an appropriate way for organizations to reduce the likelihood of biased promotion decisions is to focus primarily on applicant qualifications (Stumpf & London, 1981). In the present study, diverse review panels appeared to meet this objective. These results offer support for the benefits of diversity in decision-making teams (Elsass & Graves, 1997; Jackson et al., 1995; Milliken & Martins, 1996; Williams & O'Reilly, 1998); more diverse teams have the potential to consider a wider range of perspectives and to make higher quality decisions than less diverse teams. When evaluating the relative merits of applicants for SES positions, diverse review panels may have had more in-depth discussion of which applicants were qualified in which way, leading to a greater focus on applicant qualifications in their referral decisions. On the other

hand, homogeneous review panels may have had more superficial discussion of applicants and made decisions that were more influenced by organizational cues or personal biases than by applicant qualifications.

However, having better scores on objective measures of credentials does not necessarily make applicants more qualified. Good scores on these measures need to be job related and essential to the safe and efficient operation of the organization. Otherwise, the measures are not assessing applicants' actual qualifications, and decision makers who rely on them in making personnel decisions are engaging in disparate impact discrimination (Ledvinka & Scarpello, 1991). According to the federal government's Uniform Guidelines on Employee Selection Procedures, a selection rate for any race/gender group that is less than four-fifths of the rate for the group with the highest rate may be regarded as evidence of adverse impact (Sedmak & Vidas, 1994). In this study, differences in employment in the hiring department and work experience influenced referral decisions by all review panels combined to the disadvantage of African American men; differences in employment in the hiring department also influenced selection decisions by all selecting officials combined to the disadvantage of Hispanic men. Thus, unless justified by job relevance and business necessity, the use of employment in the hiring department and work experience as criteria in promotion decisions would have had adverse impact on the promotion prospects of both African American and Hispanic men.

Limitations and Conclusions

This exploratory study was subject to several limitations. First, results regarding the outcomes of promotion processes for Hispanic and African American applicants were based on referral and selection decisions made about small numbers of such applicants. Only a slight change in the outcomes of these decisions would have had a notable impact on the results. In addition, certain kinds of analyses (e.g., moderated regression analyses) that may have shed further light on the effects of complex interactions between decision makers' race and gender and applicants' race and gender on promotion decisions could not be performed. The numbers of Asian and Native American applicants were even smaller, precluding their inclusion in any analyses. Thus, the results must be interpreted with extreme caution.

One way to deal with the scarcity of non-White applicants for top management positions would have been to group all "men of color" together and "women of color" together as we did earlier (Powell & Butterfield, 1997). In this case, applicants from all racial groups could have been included in analyses. However, results about the overall treatment

of male and female applicants of color would have masked differences in the treatment of applicants from specific groups. For example, members of one racial minority group could have differentiated themselves from members of another group according to processes of similarity and attraction, social identification, or status assessment in a way that would not have been captured by classifying members of both groups as "people of color." Unfortunately, however individuals are classified, very few members of racial minority groups are included in samples in most field studies of organizational phenomena (Cox, 1990). This was especially likely to be true when promotions to top management were examined.

In addition, the results may have been influenced by self-selection processes. All open SES positions were publicly announced, and anyone could apply for an open position. However, most applicants came from what were considered to be the pipeline grades (grades 13–15) for such positions in the federal government. Thus, the proportions of applicants from various race and gender groups were likely to be influenced, but not fully determined, by their proportions in the pipeline grades. For example, although 26.7% of department employees in the pipeline grades were female, only 18.6% of applicants from the department for SES positions (16.0% overall) were female. Perhaps only women who were exceptionally high performers applied for an open SES position, whereas other women were deterred by perceptions of a glass ceiling in the department. In addition, individual women may not have applied for SES positions because of family considerations. Tharenou, Latimer, and Conroy (1994) found that being a spouse and parent were negatively associated with women's managerial advancement but positively associated with men's managerial advancement. Women who anticipated a negative effect of their family status on their advancement may have refrained from applying for SES positions, whereas men would have no such reason to refrain from applying. Such considerations, if they affected women's decisions to apply for SES positions more than men's decisions to apply, may have contributed to the positive results for female applicants as a group. However, if relatively few women tended to apply for top management positions in the department, the proportion of women in such positions was likely to remain low. Thus, processes of self-selection for women and members of racial minority groups may have both contributed to and been influenced by perceptions of a glass ceiling in a way that affected the results reported.

Data were not available about the specific types of jobs about which referral and selection decisions were made. Such data, if incorporated into analyses, might have influenced the results. For example, if homogeneous (all-White-male) panels were more likely to review applicants for positions in certain types of jobs than diverse panels, the differen-

tial results for homogeneous versus diverse panels may have been attributable to panel members' job schemas rather than panel composition. Thus, it would be desirable for future research on promotions to top management to incorporate measures of the specific job context.

Data were collected in a public sector organization that has a highly structured procedure for making promotions to top management positions and keeps detailed records of the process, thereby holding decision makers accountable for how promotion decisions are made. In contrast, most private sector organizations do not have a systematic procedure for making such promotions and keep no records of the process. In addition, the organization displays a particularly high concern for EEO, whereas many other organizations are less concerned about EEO as an issue. The nature of this organization and its promotion practices must be kept in mind when considering the generalizability of the results to the private sector, although private sector organizations could adopt similar promotion practices and display a similarly high concern for EEO. Nonetheless, effects to the disadvantage of Hispanic and African American male applicants were found that could not be explained by the organization's EEO culture and were not prevented by the organization's structured promotion procedure. Further research in private sector organizations is recommended to examine the effect of variations in promotion practices as well as organizational culture on promotion decisions for top management positions.

Finally, the study drew inferences about the psychological processes operating in decision makers that may mediate the relationships between demographics and promotion decision outcomes without actually measuring such processes. Demographic variables are not perfect predictors of psychological processes, though they may suggest that certain kinds of psychological processes are operating for individuals (Lawrence, 1997). Decision makers may have had their own reasons for making decisions that were not captured in this archival study by applicant race and gender or by the objective measures of applicant qualifications that were available. Inclusion of measures of review panel members' and selecting officials' expressed reasons for their decisions may have increased the overall amounts of variance explained in decisions, which tended to be low. Future research should go beyond the present study, which examined predictors of promotion decisions gathered from official files and records, to examine the psychological processes by which promotion decisions about top management positions are made.

In conclusion, decisions by review panels of different race and gender composition and by selecting officials of different race and gender were to the advantage of female applicants and to the disadvantage of African American and Hispanic male applicants. These effects were not

fully accounted for by race or gender differences in available measures of applicant qualifications, or by any of several theoretical explanations for the effects of race and gender on promotions to top management. Further research is needed to increase our understanding of the relationship between promotion processes for top management positions, the race and gender of decision makers, and the race and gender composition of the applicant pool.

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