

Searching for Common Threads: Understanding the Multiple Effects of Diversity in Organizational Groups

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## SEARCHING FOR COMMON THREADS: UNDERSTANDING THE MULTIPLE EFFECTS OF DIVERSITY IN ORGANIZATIONAL GROUPS

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In this article, we review and evaluate recent management research on the effects of different types of diversity in group composition at various organizational levels (i.e., boards of directors, top management groups, and organizational task groups) for evidence of common patterns. We argue that diversity in the composition of organizational groups affects outcomes such as turnover and performance through its impact on affective, cognitive, communication, and symbolic processes.

The term *diversity* often provokes intense emotional reactions from people who, perhaps, have come to associate the word with ideas such as "affirmative action" and "hiring quotas"; yet it is a word that simply means "variety" or a "point or respect in which things differ" (*American Heritage Dictionary of the English Language*, 1993; *Webster's Dictionary of the English Language*, 1992). As organizations increasingly operate in a multinational and multicultural context, understanding how diversity in the composition of organizational groups affects outcomes such as satisfaction, creativity, and turnover will be of increasing importance. For example, as organizations globalize their operations, it is likely that the frequency with which employees will interact with people from different countries will increase. Further, the U.S. population is becoming more ethnically diverse (Johnston & Packer, 1987; U.S. Bureau of the Census, 1994), suggesting that organizations operating in the United States will need to learn how to manage more heterogeneous workgroups than they have managed previously. In addition, the trend toward using teams to coordinate and manage work in organizations is increasing the amount of time that employees spend with people outside their particular functional or product groups, thereby bringing them into contact with people who may have very different training, skills, functional background, and even values.

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The results of research on heterogeneity in groups suggests that diversity offers both a great opportunity for organizations as well as an enormous challenge. On the one hand, some research suggests that more diverse groups have the potential to consider a greater range of perspectives and to generate more high-quality solutions than less diverse groups (e.g., Hoffman & Maier, 1961; McLeod & Lobel, 1992; Watson, Kumar, & Michaelsen, 1993). On the other hand, the greater the amount of diversity in a group or an organizational subunit, the less integrated the group is likely to be (O'Reilly, Caldwell, & Barnett, 1989) and the higher the level of dissatisfaction and turnover (e.g., Jackson et al., 1991; Wagner, Pfeffer, & O'Reilly, 1984). Diversity thus appears to be a double-edged sword, increasing the opportunity for creativity as well as the likelihood that group members will be dissatisfied and fail to identify with the group.

In this article, we review recent management research on how different types of diversity affect outcomes for individuals, groups, and organizations. The purpose of this review is to surface evidence of "common threads" in the processes by which different types of diversity have an impact on outcomes as well as to uncover differences in how various types of diversity operate. Following this review, we provide an organizing framework for thinking about the common patterns in the findings of management research on diversity.

We organized the article into three major sections. In the first section, we briefly discuss different types of diversity that might exist within organizational groups. In the second section, we review and attempt to integrate findings of recent empirical research on the effects that these different types of diversity have on individuals, groups, and organizations. We examine a wide range of research, including research on boards of directors and top management groups as well as research on organizational task groups, superior-subordinate dyads, and small decision-making groups. In the third section, we search for "common threads" in both the outcomes of diversity as well as in the processes by which diversity affects these outcomes. We highlight points of convergence and points of divergence in the findings across the various streams of management research as well as identify key areas in need of further research development.

## TYPES OF DIVERSITY

In an effort to organize thinking about different types of diversity, several researchers (Cummings, Zhou, & Oldham, 1993; Jackson, 1992; Jackson, May, & Whitney, 1995; Maznevski, 1994; Tsui, Egan, & O'Reilly, 1992) have suggested ways of categorizing different types of diversity. One common distinction is between diversity on *observable or readily detectable attributes* such as race or ethnic background, age, or gender, and diversity with respect to *less visible or underlying attributes* such as education, technical abilities, functional background, tenure in the organization,

or socioeconomic background, personality characteristics, or values (Cummings et al., 1993; Jackson et al., 1995; Tsui et al., 1992).

One reason for differentiating between *observable* and *nonobservable* types of diversity is that when differences between people are visible, they are particularly likely to evoke responses that are due directly to biases, prejudices, or stereotypes. We should note, though, that these two types of diversity are not mutually exclusive. For example, ethnic differences may be associated with differences on underlying attributes (e.g., socioeconomic status, education, values), but this is not necessarily true.

There are many ways in which groups can be diverse with respect to *underlying attributes* or *nonobservable characteristics*. One type of diversity on underlying attributes relates to *differences in personality characteristics* or *values* of the members of a group. Although not readily observable, these differences can create major differences in orientations toward issues and in preferred interaction styles. A type of diversity that is particularly relevant in organizational settings is *diversity of skills or knowledge* (e.g., educational background, functional background, occupational background, range of industry experience).

Yet another way in which organizational groups might be diverse is in terms of *organizational cohort membership* (Pfeffer, 1983). Pfeffer (1983) argued that people who join organizations or subunits at the same time may not only develop similar skill sets, but they may also develop similar identification and communication patterns based on their common time of entry into the organization. Diversity in the membership of a group with respect to time of entry into the organization or subunit thus may affect patterns of interaction among group members.

Although we generally tend to think of diversity in terms of differences on *observable* or *readily detectable* variables such as race, ethnic background, and gender, one of the major reasons why diversity of any type creates difficulty for groups is attributable to complex, and often implicit, differences in perspectives, assumptions, and causal beliefs with which the more superficial or observable differences are correlated. A group that is diverse could be expected to have members who may have had significantly different experiences and, therefore, significantly different perspectives on key issues or problems (Jackson et al., 1991). Underlying differences in the *schemas*, or the conscious and unconscious preconceptions and beliefs, that organize people's thinking can create serious coordination difficulties for groups.

### **IMPACTS OF DIVERSITY ON INDIVIDUAL, GROUP, AND ORGANIZATIONAL OUTCOMES: AN EXAMINATION OF RECENT FINDINGS IN ORGANIZATIONAL RESEARCH**

Research on diversity is a challenge to review, because it spans multiple disciplinary boundaries, assesses the effects of various types of diversity, focuses on many different dependent variables, and employs a wide

range of types of groups and settings. In selecting articles to include in our review of research findings on the effects of diversity, we scanned the last six years (1989–1994) of 13 leading research journals that publish empirical research in the management area<sup>1</sup> and chose empirical articles that referred to diversity as we have defined it above. We also used a form of snowball sampling and added empirical articles cited in our initial group of articles, but not published in these journals, to our review. The resulting group of 34 studies included examinations of diversity in groups at various levels of organizational functioning: boards of directors, top management groups, and organizational task groups, including studies of diversity in group composition, studies of superior-subordinate dyads, as well as some more general studies of minority attitudes and performance in organizations. We do not claim this to be an exhaustive review of the literature but rather a review that focuses on recent management research on diversity and its effects in *organizational settings*.

We organize this review by the type of diversity studied, as we believe this can help point out trends in the results of studies. Within each type of diversity, we have attempted to group the studies by the nature of the dependent variables (e.g., turnover, affective reactions like commitment or satisfaction, cognitive outcomes like creativity of solutions, communication-oriented outcomes, performance).

### Observable Individual Differences

**Diversity in race/ethnic background of group members.** Most researchers who examine how diversity in race or ethnic background affects groups have studied racial diversity in terms of the experiences of individuals who are dissimilar from the majority in the group or from their supervisor. Findings suggest that individuals who are different from their work units in racial or ethnic background tend to be less psychologically committed to their organizations, less inclined to stay with the organization, and more likely to be absent (Tsui et al., 1992). In a similar vein, Greenhaus, Parasuraman, and Wormley (1990) found that blacks tended to be less satisfied with their careers than whites, perceived themselves to be less accepted by their organizations, and felt that they had less discretion than whites in the same organization.

Further, research on racial differences in performance ratings by supervisors indicates that blacks are generally rated lower than whites by supervisors (Lefkowitz, 1994; Mount, Hazucha, Holt, & Sytsma, 1995; Pulakos, Oppler, White, & Borman, 1989; Sackett & DuBois, 1991; Sackett, DuBois, & Noe, 1991; Waldman & Avolio, 1991) and that blacks are rated

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<sup>1</sup> We examined the *Academy of Management Journal*, *Administrative Science Quarterly*, *American Journal of Sociology*, *American Sociological Review*, *Human Relations*, *Journal of Applied Psychology*, *Journal of Cross-Cultural Psychology*, *Journal of International Business Studies*, *Journal of Management*, *Journal of Management Studies*, *Organizational Behavior and Human Decision Processes*, *Organization Science*, and the *Strategic Management Journal*.

<sup>2</sup> See Appendix for more details on the variables studied in each of the articles.

lower than whites on both task- and relationship-related dimensions of performance (Greenhaus et al., 1990). Greenhaus and colleagues (1990) also found that blacks were assessed as having lower potential for promotion and were more likely to have plateaued in their careers. What is not entirely clear in the literature is whether the effects of race on performance ratings remain after ability and education are controlled for.

In a recent study, Lefkowitz (1994) found evidence that recent hires who were black tended to be assigned to black supervisors more frequently than to white supervisors, a finding also reported by Waldman and Avolio (1991). Lefkowitz (1994) also found evidence that this segregation grew over time in that, when reassignments occurred, the likelihood of blacks ending up with black supervisors became even higher. He labeled this phenomenon *ethnic drift*.

We were only able to find two studies that considered the effects of ethnic or racial diversity on group-level cognitive outcomes. Cox, Lobel, and McLeod (1991) found that ethnically diverse groups made more cooperative choices than all-Anglo groups in a two-party prisoner's dilemma game, a finding they suggest may reflect the fact that Anglos tend to be individualistic in their orientation, whereas members of other racial and ethnic groups tend to be more collectivist in their orientation (Earley, 1989). In another study, McLeod and Lobel (1992) found that groups that were heterogeneous with respect to the ethnic backgrounds of their members produced higher quality ideas in a brainstorming task than more homogeneous groups did, although they did not necessarily produce more ideas or a greater number of unique ideas.

In sum, the results of research on racial diversity in organizational groups suggest that people who are different from the majority race in an organization may not only experience less positive emotional responses to their employing organizations, but they are also likely to be evaluated less positively by their supervisors, and they are more likely to turn over. It seems likely that lower levels of attachment to the organization and lower performance ratings for minorities combine to drive minorities out of organizations at a faster rate than majority group members. There is also recent evidence of "ethnic drift" within organizations, with minorities disproportionately likely to end up in certain departments within the organization. However, the results of a couple of studies suggest that racial diversity may be positively associated with some group-level cognitive outcomes such as quality of ideas. Finally, we believe it is important to note that we could find no research on the effects of racial diversity on top management groups or boards of directors.

**Diversity in nationality of group members.** In a study of workers in the Netherlands, Verkuyten, de Jong, and Masson (1993) found that individuals who were not Dutch tended to be less satisfied with their jobs than their Dutch counterparts. The more time they spent with colleagues of similar ethnic backgrounds, however, the higher their level of satisfaction was.

In a study in Australia, Bochner and Hesketh (1994) found that people from countries that were different from Australia on Hofstede's dimensions of power distance and collectivism perceived more discrimination in their workplace than members of the in-group, but they valued cultural diversity more highly.

In a longitudinal laboratory study of decision making in the United States, Watson and colleagues (1993) found that group diversity in nationality/ethnic background had different impacts on group process and performance at different time points in the experiment. Homogeneous groups reported significantly more effective processes than diverse groups for the first three periods, but the two types of groups were equal by the fourth period. Further, in the first time period, homogeneous groups scored higher than diverse groups on all performance measures, but in the last period, diverse groups scored higher on two aspects of performance (range of perspectives and alternatives generated), and overall performance was the same for both types of groups.

The results of this research suggest that diversity in ethnic background may have negative effects on individual and group outcomes early in a group's life, presumably because it takes some time for group members to get over their interpersonal differences on observable dimensions that tend to be associated with lower levels of initial attraction and social integration (O'Reilly et al., 1989). However, after this stage, once a certain level of behavioral integration (Hambrick, 1994) has been achieved, groups may be able to obtain benefits from the greater variety of perspectives inherent within a diverse group.

**Gender diversity.** Research on the effects of gender diversity in groups points to a similar set of processes and results as those found in the case of racial diversity. Cummings and colleagues (1993) found that women were more likely to be absent and to experience turnover than were men. Tsui and colleagues (1992) found that people who were different from other members of their work unit in gender were less likely to be attached to their organizations, had higher frequencies of absence, and lower intentions to stay. They also found that belonging to the minority gender in workgroups appeared to have more negative effects on men than on women.

Tsui and O'Reilly (1989) found that subordinates who were dissimilar from their supervisors in terms of gender experienced higher levels of role conflict and role ambiguity than subordinates who were of the same sex as their boss. In terms of performance evaluations, supervisors reported greater positive affect for subordinates of the same gender and tended to rate their performance more highly (Tsui & O'Reilly, 1989). Sackett and colleagues (1991) found that when women formed less than 20% of the group, they received lower performance ratings than the men did, but when their proportion was greater than 50%, they were rated higher than were men. They did not find any parallel effects of proportion of representation on the performance ratings of men.

In a study of the effects of gender diversity on observers of a group, Ely (1994) found that women associates in law firms behaved differently toward their peers in firms that were male dominated than they did in firms that were more sex integrated at the partner level. In sex-integrated firms, women viewed female partners more positively and behaved in more supportive ways toward their peers. Ely (1994) argued that differences in the representation of women at the top altered the perceptions of lower level women about the likelihood of advancement in the firm, thereby affecting their behavior. The findings reported by Ely (1994) and Sackett and colleagues (1991) draw attention to Kanter's (1977) idea that the proportion of representation is likely to be an important variable in predicting the outcomes of diversity.

In the time period we examined (1989–1994), we could find no studies of the impact of gender diversity on a group's cognitive functioning. Earlier research (Hoffman & Maier, 1961), however, found that gender diversity in groups facilitated creativity.

**Diversity in the ages of group members.** Similar to groups that are diverse in race or gender, groups that have more diversity in terms of ages represented tend to have higher turnover rates (Jackson et al., 1991; O'Reilly et al., 1989; Wagner et al., 1984; Wiersema & Bird, 1993). Not surprisingly, the people who are different from their group members in terms of age are more likely to turn over (Cummings et al., 1993; O'Reilly et al., 1989; Wagner et al., 1984). Cummings and colleagues (1993) also found that people who were different from the group in terms of age tended to be absent more frequently and tended to receive lower performance ratings than people who were more similar in age. Also, subordinates who are dissimilar from their supervisors in age appear to experience higher levels of role ambiguity (Tsui & O'Reilly, 1989). Similar to racial and gender differences, age differences between a supervisor and a subordinate appear to be related to lower levels of positive affect for the subordinate on the part of the supervisor and indirectly to lower performance evaluations (Judge & Ferris, 1993).

Zenger and Lawrence (1989) reported that a project group's diversity on age was negatively related to the frequency of communications within the project group. Research on the effects of age-related diversity on cognitive outcomes (i.e., innovation) suggests that there are few, if any, significant effects of age heterogeneity in top management groups (Bantel & Jackson, 1989; Wiersema & Bantel, 1992).

**Summary.** The results of research on *directly observable attributes* appear to be fairly consistent. In general, the more diverse a group is with respect to gender, race, or age, the higher its turnover rate and the more likely it is that dissimilar individuals will turn over and be absent. Jackson and colleagues (1991) suggested that diversity may lead to discomfort for all members of a group, leading to lower integration within the group and a higher likelihood of turnover. There is also some evidence of negative affective reactions to observable differences on the part of supervisors—in



that supervisors tend to perceive dissimilar subordinates less positively and tend to give them lower performance ratings.

Three studies offer evidence that there may be benefits in terms of the number of alternatives considered in a decision-making task and the degree of cooperation within the group that accrue to groups that are diverse with respect to race or ethnic background (Cox et al., 1991; McLeod & Lobel, 1992; Watson et al., 1994). Watson and colleagues (1994) found, however, that these benefits occur only after a diverse group has been together for a while. The turnover of dissimilar members of groups suggests, however, that organizational groups may not be fully capitalizing on the potential cognitive benefits of diversity. Further, prior to turning over, it is likely that individuals who feel that they are distant from other group members may feel alienated and withhold contributions to the group.

### **Differences in Personality Characteristics and Values**

Although there are numerous studies of how underlying attitudes, personality characteristics, or cultural values may be associated with different patterns of behavior, in fact, very few organizational studies actually focus on how diversity in the composition of a group with respect to these characteristics affects outcomes for individuals or groups. Although we could try to infer how a group of individuals that was diverse with respect to these underlying attributes might behave, we thought that such inferences were beyond the scope of this article.

We found two studies that may shed light on how diversity in values affects outcomes. Meglino, Ravlin, and Adkins (1989) found that value congruence between workers and their supervisors was positively related to satisfaction and commitment and marginally related to punctuality of the subordinate. An unexpected finding of this study was that value congruence was negatively related to performance, a finding that may be partially attributable to the fact that the job performance of these factory workers was more determined by machine speed than subjective evaluations made by supervisors. Also, as mentioned previously, Bochner and Hesketh (1994) found that people who were different from others in their work groups on Hofstede's dimensions of power distance and collectivism perceived that they were discriminated against more frequently but valued their differences more highly.

### **Differences in Skills and Knowledge**

**Educational background.** Being different from one's colleagues in terms of level, or type, of education seems to increase the probability of turnover in both work groups as well as in top management teams (Cummings et al., 1993; Jackson et al., 1991). Jackson and colleagues (1991) noted, however, that this finding only held true for what they called non-elite top management team members. Unlike Jackson and colleagues (1991), Wiersema and Bantel (1993) failed to find significant effects of educa-

tional curriculum heterogeneity on top management team turnover in a sample of U.S. firms, after controlling for mean team tenure. In a study of Japanese firms, Wiersema and Bird (1993) found, however, that top management teams which had members who were dissimilar in terms of the prestige of the university from which they graduated had higher rates of turnover and it was the members who were most dissimilar who were more likely to turn over. Tsui and O'Reilly (1989) also found that similarity on educational level was positively related to supervisor affect for the subordinate.

On the organizational level of analysis, Wiersema and Bantel (1992) found that top management team heterogeneity on educational curriculum was positively related to firms' change in diversification strategies. They attribute this to the notion that diversity in educational perspectives is likely to facilitate organizational adaptation. In a later study (Smith et al., 1994), top management team heterogeneity with respect to educational level was found to be positively related to a firm's return on investment (ROI) and to growth in sales, a finding that presumably operates through some cognitive benefits of educational heterogeneity. However, Bantel and Jackson (1989) found that diversity in educational specialization had no effect on innovativeness of the top management team. Simons (1995) elaborated on these findings by suggesting that top management diversity in educational level would be advantageous only when the team used a process that allowed the team to surface its diversity in open debate. His results appear to support this hypothesis.

**Functional background.** In reviewing the research on functional diversity in organizational groups, one is immediately struck by the absence of research on affective outcomes or turnover. In general, research on diversity in functional backgrounds focuses only on the question of whether functional diversity provides any cognitive advantages to a group.

In a study of the top management groups of banks, Bantel and Jackson (1989) found, for example, that the more diverse the group was in terms of functional background, the greater the number of administrative innovations the bank had made. They did not, however, find any relationship between functional heterogeneity of the top team and the number of technical innovations the bank made. Ancona and Caldwell's (1992) study of 45 product teams indicated that functional diversity had a negative direct effect on innovation and team-rated performance, but it had a countervailing positive indirect effect on innovation through its association with an increased frequency of communication with those outside the project group. The negative direct effect of functional diversity on innovation may reflect the existence of greater process losses on diverse teams, which may slow the team's decision making. One of the benefits of functional diversity in project teams, however, may lie in the creation of linkages to those not on the team. Glick and colleagues (1993) found that functional

diversity in top management groups was associated with more frequent communication within the team as well.

Korn, Milliken, and Lant (1992) found that increasing the functional diversity of the top management team was associated with positive performance returns (as measured by increases in returns on assets [ROA]) in the furniture industry but not in the software industry. This finding suggests that functional diversity in management teams may add value in terms of dealing with environmental complexity but that it may not facilitate coping with environmental volatility. This argument is consistent with the logic Smith and colleagues (1994) used in predicting that heterogeneity in functional backgrounds on top management teams would increase the use of bureaucratic control mechanisms, thereby slowing decision making and impeding firm performance in volatile industries. Their empirical results, however, did not support their predictions. They found that functional heterogeneity of the top management team had no effect on organizational performance (i.e., ROI, sales growth), nor did it have any effect on communication patterns or social integration. Simons (1995) might explain this finding by arguing that functional diversity will only be positively associated with organizational performance when the team uses decision processes that allow debate.

Overall, research suggests that more functionally diverse teams may be better linked into external networks, allowing them greater access to information. However, they also may suffer from larger "process losses" than less functionally diverse teams. The results of research, however, are not entirely consistent across contexts, which may reflect the need to think more carefully about the conditions under which the functional diversity of a team can be expected to yield decision-making or performance benefits. Notably missing is research on the effects of functional diversity on affective outcomes.

**Occupational background.** Management research on the effects of diversity in occupational backgrounds has focused exclusively on top management teams and boards of directors. Murray (1989), for example, found that occupational heterogeneity within the group of top level executives was negatively related to short-term performance in the oil industry. In the case of boards, heterogeneity in the occupational backgrounds of board members was found to be negatively related to resistance to greenmail (Kosnik, 1990) as well as to the likelihood that hospitals would make strategic changes (Goodstein, Gautam, & Boeker, 1994). These findings suggest that occupational diversity may create interaction difficulties and a low level of *behavioral integration* (Hambrick, 1994), thereby impeding action taking in groups of top managers or directors.

**Industry experience.** The findings on the effects of diversity in industry experience appear to parallel the findings on diversity in occupational backgrounds in that the research is almost exclusively done on upper level organizational groups. Jackson and colleagues (1991) found that the more heterogeneous a top management team was with respect to experi-

ence outside the industry, the higher the rate of turnover on the team. Top management team members who were different from their counterparts on outside experience were more likely to turn over if they were so-called non-elite members of the team.

Smith and colleagues (1994) found that the more heterogeneous a top management team was with respect to *time in the industry*, the lower the firm's ROI. This effect of diversity in experience appeared to operate through the negative association between diversity of this type and social integration as well as informality of communication. In other words, diverse groups communicated more formally and were less well integrated, which presumably handicapped their ability to make high-quality strategic decisions for their firms.

**Organizational membership.** Diversity in organizational membership is relevant for cross-organizational groups like boards of directors. The proportion of outside directors has been found to be positively related to resistance to greenmail (Kosnik, 1990) as well as to the degree of board involvement in corporate restructurings (Johnson, Hoskisson, & Hitt, 1993). A possible explanation for these results is that the presence of outside directors brings in a variety of extraorganizational perspectives that enhance the potential for environmental analysis and more creative solutions to organizational problems (Rindova, 1994). Relatedly, outside directors introduce a balance of power into the upper echelons of organizational functioning by representing shareholder interests that might not receive as much attention if the board was composed only of insiders. Goodstein and colleagues (1994), however, did not find any effect of the proportion of outside directors on the frequency of changes in hospital services.

**Summary.** In contrast to the literature on observable types of diversity, most of which is done on lower level organizational groups, most research on skill-based diversity has been conducted at the top management team or board of directors level.

Diversity along skill- or knowledge-based dimensions seems to have some positive cognitive outcomes for top management groups and project teams. One reason may be that diversity along these skill-based dimensions translates into a greater variety of perspectives being brought to bear on decisions and, thereby, increases the likelihood of creative and innovative solutions to problems. Also, problems such as those that a top management group deals with often require information input from a variety of functional areas within the organization. Communication between the top management group and nonmembers may be more frequent and of higher quality when the team has representatives from many different areas of the organization (Ancona & Caldwell, 1992). However, there is also some evidence that groups that are diverse with respect to background and skills may have integration problems similar to those of other diverse groups in that people who are different from their peers tend to be more likely to turn over.

## Organizational Cohort Effects

**Organizational tenure.** Arguments for cohort effects are based on the assumption that individuals identify with others who enter an organization or a department at the same time (Tsui et al., 1992) and that this identification, in turn, influences behavior. Consistent with this logic, Cummings and coauthors (1993) reported that individuals who were different from others in their job classification on tenure were more likely to turn over. Similarly, managers who are members of top management teams that are diverse with respect to tenure are more likely to turn over (Wagner et al., 1984). Tsui and colleagues (1992), however, found that being different in organizational tenure from the members of one's work unit was positively related to psychological commitment and intentions to stay and negatively related to frequency of absences. These authors explained their findings by arguing that the findings are an artifact of the fact that employees with the shortest tenure (those who could be expected to have high difference scores) were engaging in "good-employee" behaviors.

At the supervisor-subordinate dyad level, similarity on job tenure was positively related to supervisor affect for the subordinate (Judge & Ferris, 1993; Tsui & O'Reilly, 1989) and to performance ratings by supervisors (Tsui & O'Reilly, 1989). Tsui and O'Reilly (1989) also found that similarity on job tenure related negatively to subordinates' role ambiguity. This finding suggests that supervisors may identify with subordinates who have been with the company a similar amount of time, and this level of identification may influence behaviors such as how long they spend explaining the work as well as their evaluations of subordinates.

Ancona and Caldwell (1992) found that variation in organizational tenure was positively related to task-related group processes (i.e., ability to define goals, develop workable plans, and prioritize work) and had an indirect positive impact (through group process) on team-rated performance and a direct negative impact on adherence to budgets and schedules. Further, they found that variation in organizational tenure was not related to communication outside the group. Zenger and Lawrence (1989), however, found that diversity in organizational tenure was negatively related to frequency of outside communication. Both of these findings are inconsistent with the results of studies on skill-based diversity, which suggest that diversity in the composition of groups may facilitate communication with individuals outside the group.

Diversity in organizational tenure also has been found to affect organizational performance. Murray (1989) found that temporal diversity (a combination of variation in age, organizational tenure, and top management group tenure) within both the exclusive (all executives listed in the *Dunn & Bradstreet Reference Book of Corporate Managements*) and inclusive top management groups (only top executives) was positively related to long-term performance in the oil industry but not in the food industry, a finding that Murray (1989) attributes to the fact that the top management team is

more important in setting strategy in the oil industry than it is in the food industry, where the key group is the marketing department. In a study of firms in multiple industry settings, Wiersema and Bantel (1992), however, found no significant effects of top management team organizational tenure heterogeneity on the likelihood of changes in organizational strategy. Similarly, Bantel and Jackson (1989) found no effects of organizational tenure diversity on innovativeness of top management teams.

**Group tenure.** Wiersema and Bantel (1993) found that top management team tenure heterogeneity did not significantly affect the likelihood of top management team turnover in a sample of *Fortune* 500 firms, but Wiersema and Bird (1993) found that it did have a significant effect on turnover in a sample of Japanese firms, controlling for retirement. O'Reilly and coauthors (1989) found that heterogeneity in members' time of entry did not affect an individual's likelihood of turning over directly but rather affected it indirectly through turnover's relationship with group-level integration. Diversity in group tenure was negatively related to group-level social integration as well as to individual integration.

Arguments for the impact of team tenure heterogeneity on organizational actions are based on the idea that tenure heterogeneity reduces groupthink and increases creativity. Wiersema and Bantel (1992), however, did not find any significant effects of top management team tenure heterogeneity on changes in organizational strategy. Further, Johnson and coauthors (1993) found that board tenure heterogeneity and top management team tenure heterogeneity were not significantly related to the likelihood of the board's involvement in corporate restructuring. Smith and colleagues (1994) reported no relationship between organizational performance indicators (return on assets, sales growth) and the diversity of the top management team in terms of tenure. Finally, diversity in outside directors' tenure was found to be negatively related to resistance to greenmail when top management had low equity interests (Kosnik, 1990).

**Summary.** The studies we reviewed showed evidence that diversity in tenure may reduce social integration among group members and increase turnover. Consistent with these arguments is the finding that supervisors tended to display greater attraction toward subordinates who were similar to themselves regarding job tenure. The effects of diversity in organizational tenure on group cognitive tasks are mixed.

## DISCUSSION

When we reviewed this literature, we were struck by certain common patterns in the processes by which diversity affected individual, group, and organizational outcomes. In this section, we discuss four types of mediating variables that seem to affect the long-term outcomes (e.g., turnover, performance) of diverse groups.

### Common Threads: The Role of Mediating Variables

**Affective consequences of diversity.** Diversity in observable attributes has consistently been found to have negative effects on affective outcomes

(e.g., identification with the group, satisfaction) at both the individual and group levels of analysis. Further, greater negative effects have been found for diversity on race and gender than for diversity on age (Tsui et al., 1992), suggesting the possibility that the deep-seated prejudices some people hold against people who are different from themselves on race and gender may be adding to the difficulty of interaction for these groups.

There is also clear evidence that groups with skill-based diversity seem to have greater coordination costs than groups composed of people with more homogeneous skills or backgrounds. In addition, diversity in organizational and group tenure also appears to be associated with lower social integration and higher turnover for the group as well as greater turnover for individuals who are different from the group. Further, supervisors appear to prefer subordinates who have similar organizational tenure and give them higher performance ratings.

These findings are consistent with the idea that the more similar people are in background variables such as socioeconomic status or attitudes, the more attracted they are likely to be to each other, at least initially (Kanter, 1977; Pfeffer, 1983; Ziller, 1972), a phenomenon that when observed in friendship patterns is called *homophily bias* (McPherson & Smith-Lovin, 1987). One reason for this phenomenon is that people who are similar in backgrounds may have similar values, share common life experiences, and, therefore, find the experience of interacting with each other positively reinforcing. Even similarity on a variable such as time of entry into an organization may be important in affecting interaction frequency and attraction between people (Ancona & Caldwell, 1992; O'Reilly et al., 1989; Pfeffer, 1983; Zenger & Lawrence, 1989). Group heterogeneity, thus, may have a negative impact on individuals' feelings of satisfaction through decreasing individuals' sense of identification or social integration within the group (Ancona & Caldwell, 1992; O'Reilly et al., 1989; Smith et al., 1994).

An interesting avenue for future research would be to explore the relative effects of different types of diversity in group composition on the affective reactions of group members. One might speculate, for example, that diversity on observable attributes creates more serious negative affective reactions than diversity on underlying attributes such as functional background or tenure. Another key area for research would lie in exploring the exact nature of the mediating processes connecting diversity with affective reactions such as decreased identification and satisfaction. For example, do members who are different than the majority identify less completely with the group because they are communicated with less frequently, or do they withdraw first and thereby decrease their availability for communication? It also would be useful to conduct research that directly examined diversity in underlying beliefs, values, and prejudices (e.g., attitudes toward women).

An interesting and important finding in this area is that negative affective outcomes of diversity in observable attributes appear to decrease

with the amount of time that the group stays together (Watson et al., 1993). In the future, researchers should try to replicate this finding in organizational groups; however, the turnover of dissimilar individuals must somehow be controlled for in these field studies.

**Cognitive consequences of diversity.** The cognitive consequences of diversity refer to the effects diversity might have on the group's ability to process information, perceive and interpret stimuli, and make decisions. Research suggests that diversity in observable attributes (ethnicity and nationality) may affect the cognitive outcomes (number of alternatives considered, quality of ideas, degree of cooperation in complex tasks) in groups in potentially positive ways (Cox et al., 1991; McLeod & Lobel, 1992; Watson et al., 1993). Similarly, diversity on skill-based dimensions such as education, occupation, functional background, and industry experience also has generally been found to be associated with some cognitive benefits at the board, top management group, and organizational task group levels. There is, however, relatively little evidence for cognitive benefits of tenure diversity. Perhaps this is because tenure diversity is usually studied in boards and top management teams. The benefits of tenure diversity at this level may not be cognitive ones per se but symbolic ones, stemming from the ability of groups that are diverse with respect to tenure to secure cooperation from multiple cohort groups in the organization.

The results of recent research on the impact of diversity on a group's decision-making capacity are consistent with several arguments that have been made in the literature for why diverse groups may be able to make higher quality decisions. The potential cognitive benefits of having a heterogeneous group stem from arguments that have to do with the impact of diversity on creativity (i.e., Hoffman & Maier, 1961; Nemeth, 1986) and requisite variety (Morrison, 1992; Weick, 1979). Nemeth (1986), for example, argued that the quality of reasoning in majority opinions is enhanced by the existence of consistent counterarguments from a minority. Further, it has been argued that advantages accrue to organizations that match their internal complexity to the level of complexity in the external environment (Lawrence & Lorsch, 1969), an argument that is similar to the notion of *requisite variety* (Weick, 1979). Morrison (1992), for example, argued that organizations need to become more diverse with respect to their employees' characteristics to match the increased diversity of backgrounds represented in their markets. Diversity in organizational decision-making groups may lead to higher quality decisions being made because the group thinks in more realistic and complex ways about its context.

There are a number of unanswered questions, however. It is not clear, for example, whether the positive effects on cognitive outcomes of group diversity in observable attributes such as race or gender are due to differences in these attributes per se or whether they are due to diversity in underlying attributes, such as cultural values, personalities, and so on, that may be associated with observable attributes. More research is needed that explores the exact mechanisms by which diversity on observ-



able attributes affects outcomes, both affective and cognitive. Further, it is not clear how much of the performance advantage of diverse groups is due to the advantages that diversity has for creating linkages with individuals outside the team.

**Symbolic consequences of diversity.** In addition to affecting the quality of task performance and members' affective reactions, diversity can have important effects on organizational outcomes because the composition of some organizational groups has symbolic significance for both internal and external stakeholders (Ely, 1994; Hambrick, 1994; Pfeffer, 1981).

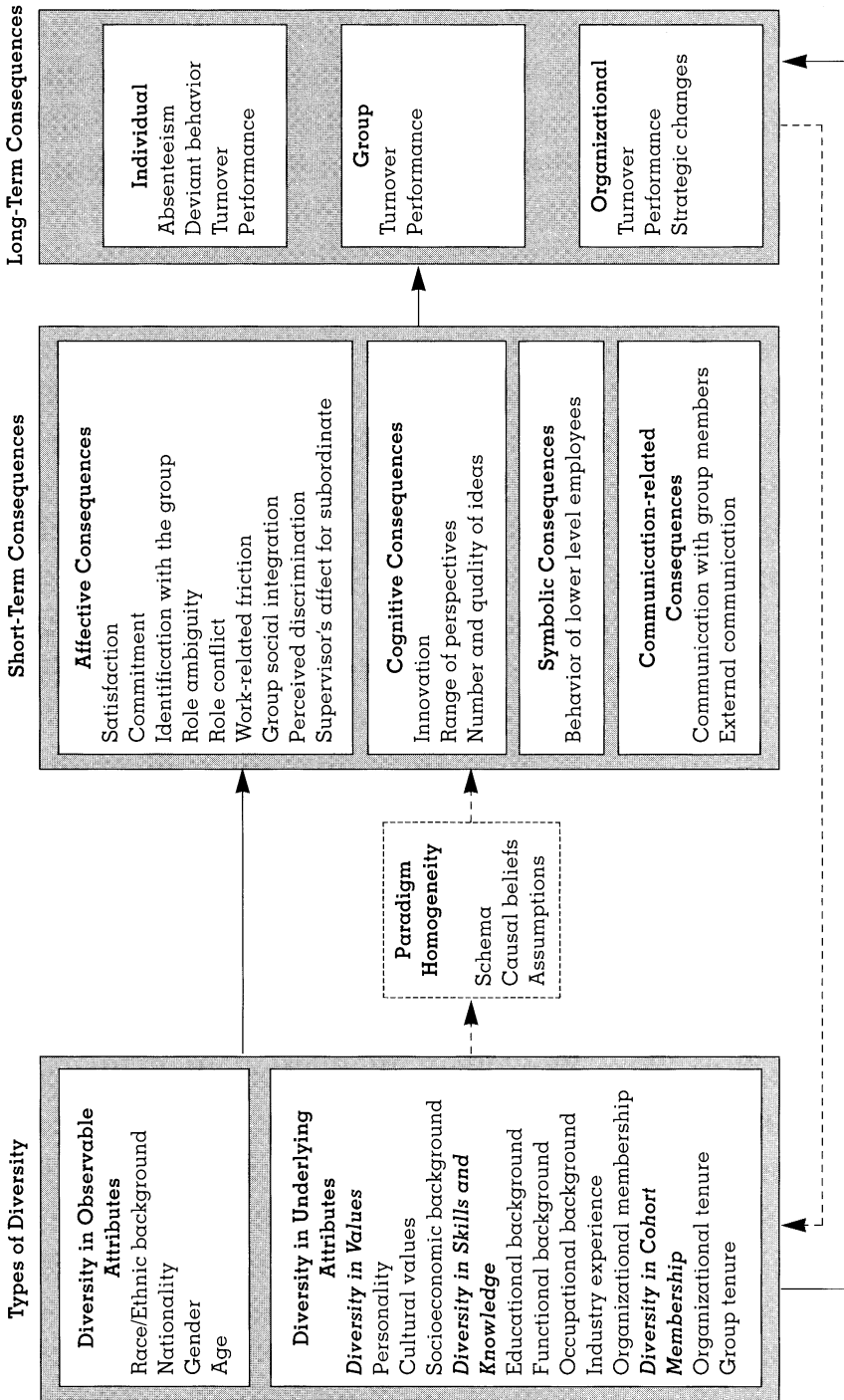
We found only one researcher who examined the symbolic effects of diversity in observable attributes (Ely, 1994), suggesting rich possibilities for future research in this area. Ely's (1994) study of gender diversity suggests that one reason why achieving diversity in the composition of organizational groups, and in top management groups in particular, may be important is that people behave differently when they perceive that they have access to power and opportunity than they do when the organization seems less supportive of their advancement (Ely, 1994; Kanter, 1977).

In the future, researchers could look at symbolic outcomes of other types of observable diversity (e.g., race, nationality) and extend the range of dependent variables (e.g., examine the impact on external constituents such as consumers). Another interesting question is whether the effects of observing a lack of representation of people with one's skills, education, and functional background at the top are the same as the effects of observing few people of one's type in terms of race and gender (Ely, 1994; Kanter, 1977).

**Communication-oriented consequences of diversity.** Members of diverse groups appear to communicate more formally and, perhaps, less frequently with each other than members of less diverse groups, but they may communicate more frequently with those outside the group. One of the ways in which groups may benefit from skill-based diversity is the greater communication with nongroup members displayed by members of diverse groups (e.g., Ancona & Caldwell, 1988). This finding suggests that diversity may allow a group to better fulfill any boundary-spanning role it might have as well as to manage relations with the outside constituents on whom the group depends for resources, information, and/or acceptance (Ancona & Caldwell, 1988). Additionally, such groups may be better able to benefit from the various "thought worlds" that characterize different departments within an organization (Dougherty, 1992).

Figure 1 depicts a model of how diversity in the makeup of a group or an organization can affect individual-, group-, and organization-level outcomes. It depicts diversity as having direct effects on long-range outcomes such as performance and turnover as well as having effects that are mediated by the impact of diversity on the cognitive functioning of the group, the affective reactions of members, the communication processes, and the responses of observers or outsiders to the group, as well as the interaction of these factors.

**FIGURE 1**  
**Effects of Diversity in Organizational Groups**



### More Future Research Directions

**Linkages between outcomes.** A rich area for future management research lies in the exploration of how the mediating variables discussed above interact. For example, individuals' affective reactions to their groups are likely to affect their willingness to contribute effort and ideas to the group. People who feel less psychologically linked with other members of their group may not only be more inclined to leave the group, but they may also be less willing to take on assigned tasks and to participate in discussions. They also may engage in a kind of self-censorship, whereby they hold themselves back from contributing their thoughts to the group (Li, 1994). In such a case, a group might be said to have a level of *realized diversity* of inputs that was substantially lower than its *potential diversity* of inputs, given the group's composition.

In addition, a group's performance and attribution processes are likely to be important in determining how people feel about their membership in a diverse group. If the group does well and members attribute their success to their diversity, they may begin to feel proud of their accomplishments as a group, which could foster higher levels of satisfaction and social integration within the group. Thus, receiving positive feedback about a group's performance may help to counteract some of the initial negative effects diversity can have on members' affective reactions to the group.

The actions of observers also can have significant impacts on the affective and cognitive outcomes for a group. The primary means by which observers can affect the quality of a group's thinking and decisions is through their willingness to provide relevant and timely information and input to the discussions. This willingness is likely to be dependent on whether observers perceive the group as representing their interests. Further, prior research suggests that observers' reactions can also have an impact on members' affective reactions to the group. If the members of a group feel that observers of the group are reacting positively to them, then they are likely to feel higher levels of satisfaction with the group (Dutton & Dukerich, 1991). Internal and external observers may initially react more positively to a diverse group because more of them see themselves *represented* in the group.

**The perception of diversity and the role of context.** The context in which the group is interacting is a critical, and understudied, variable likely to affect how the diversity or heterogeneity of a group affects outcomes at all levels of analysis. Wiersema and Bird (1993: 1003) illustrated this in their study of the effects of diversity in Japanese versus U.S. companies. They stated that although "there is less demographic variation in Japanese than in U.S. organizations . . . , because of sociocultural values and organizational processes specific to Japanese organizations, variation is actually *noticed and acted upon* more in Japanese than in U.S. organizations."

Wiersema and Bird's (1993) finding that demographic differences seemed to matter more in Japanese than in U.S. organizations suggests that the amount of diversity or heterogeneity that will generate notice will vary as a function of the baseline. Thus, the perception of diversity may be a relative phenomenon (Blau, 1977). To the extent that perceived dissimilarity is a relative phenomenon, then equal values on a diversity measure may have different effects in different settings. The idea that the context may affect whether differences are noticed and how they are reacted to is an important area for future research. It suggests that not only may proportions matter in determining people's reactions to dissimilar others in a group, but that people's sensitivity to differences may be a function of more general distributions in the social context in which organizations exist. The more heterogeneous or diverse an organization, the less likely diversity will be associated with integration problems in a group in that organization.

The fact that diversity seems to have both a greater negative impact on whites than it does on nonwhites and on men than it does on women also suggests an important role for context in determining how people react to diversity (Tsui et al., 1992). These findings come from studies that have been conducted in the United States, a country in which white men traditionally have been the dominant group in society. As members of the majority group, incremental changes in the composition of the workforce actually may be more noticeable, and more disturbing, to white men than to women and minorities, who are accustomed to operating in an environment in which they are not the majority. This change may help explain the backlash against diversity and diversity training programs in organizations (Mobley & Payne, 1993). The findings of these studies may have been different if they had been conducted in a context in which there was no dominant societal group.

**The tendency of groups and organizations to drive out diversity.** One of the most striking and most important findings of research on diversity is that groups that are diverse have lower levels of member satisfaction and higher rates of turnover than more homogeneous groups. This is true across a wide range of types of diversity, including age, gender, racial/ethnic background, and tenure. Similarly, people who are different from others in their groups tend to be less satisfied, and individuals who are unlike their supervisors on these characteristics tend to receive lower performance evaluations. The consistency of these findings suggests the presence of a systemic problem, namely, that groups and organizations will act systematically to drive out individuals who are different from the majority, unless this tendency to drive out diversity is managed (Schneider, 1987).

This finding is a manifestation of the tendency of people to identify with particular groups and then define these groups as the in-group and all other groups as out-groups, and it is the outcome of natural social processes. In the context of organizations, however, such processes will

tend to create what Kanter (1977) referred to as *homosocial reproduction*, resulting in the creation of very homogeneous top management groups that are not representative of the workforce. Maintaining diversity in organizations, however, may be important for requisite variety and creativity and for achieving benefits associated with the symbolic processes of representation and access to power. Not only does the organization lose possible cognitive benefits of having diversity in the membership of its management teams, but the organization may be systematically affecting the behavior of all members who observe this homogeneity at the top and react to it in ways that are detrimental to the achievement of organizational goals (Ely, 1994). This tendency to drive out diversity is an extremely serious and systematic force that organizations that value diversity will have to develop mechanisms to counteract (Schneider, 1987).

It is clear that there are cognitive and symbolic benefits of diversity. However, diversity also leads to serious affective costs. Is this a trade-off that organizations must make? If so, are there ways in which organizations can perform a balancing act between the costs and benefits of diversity? On the other hand, is it possible for organizations to get the best of both worlds by minimizing the affective costs and maximizing the cognitive and symbolic benefits of diversity? We believe that more research on the processes underlying the effects of diversity may hold the answers to these questions.

## REFERENCES

- Adler, N. J. 1991. *International dimensions of organizational behavior*. Boston: PWS-KENT.
- American heritage dictionary of the English language* (3rd ed.). 1993. New York: Houghton-Mifflin.
- Ancona, D. G., & Caldwell, D. F. 1988. Beyond task and maintenance: Defining external functions in groups. *Group and Organization Studies*, 13: 468-494.
- Ancona, D. G., & Caldwell, D. F. 1992. Demography and design: Predictors of new product team performance. *Organization Science*, 3: 321-341.
- Bantel, K. A., & Jackson, S. E. 1989. Top management and innovations in banking: Does the composition of the top team make a difference? *Strategic Management Journal*, 10: 107-124.
- Blau, P. M. 1977. *Inequality and heterogeneity*. New York: Free Press.
- Bochner, S., & Hesketh, B. 1994. Power distance, individualism/collectivism, and job-related attitudes in a culturally diverse work group. *Journal of Cross-Cultural Psychology*, 25: 233-257.
- Cox, T. H., Lobel, S. A., & McLeod, P. L. 1991. Effects of ethnic group cultural differences on cooperative and competitive behavior on a group task. *Academy of Management Journal*, 34: 827-847.
- Cummings, A., Zhou, J., & Oldham, G. R. 1993. *Demographic differences and employee work outcomes: Effects on multiple comparison groups*. Paper presented at the annual meeting of the Academy of Management, Atlanta, GA.
- Dougherty, D. 1992. Interpretive barriers to successful product innovation in large firms. *Organization Science*, 3: 179-202.

- Dutton, J. E., & Dukerich, J. M. 1991. Keeping an eye on the mirror: Image and identity in organizational adaptation. *Academy of Management Journal*, 34: 517–554.
- Earley, P. C. 1989. Social loafing and collectivism: A comparison of the United States and the People's Republic of China. *Administrative Science Quarterly*, 34: 565–581.
- Ely, R. J. 1994. The effects of organizational demographics and social identity on relationships among professional women. *Administrative Science Quarterly*, 39: 203–238.
- Glick, W. H., Miller, C. C., & Huber, G. P. 1993. The impact of upper echelon diversity on organizational performance. In G. P. Huber & W. H. Glick (Eds.), *Organizational change and re-design: Ideas and insights for improving performance*: 176–124. New York: Oxford University Press.
- Goodstein, J., Gautam, K., & Boeker, W. 1994. The effects of board size and diversity on strategic change. *Strategic Management Journal*, 15: 241–250.
- Greenhaus, J. H., Parasuraman, S., & Wormley, W. M. 1990. Effects of race on organizational experiences, job performance evaluations, and career outcomes. *Academy of Management Journal*, 33: 64–86.
- Hambrick, D. C. 1994. Top management groups: A conceptual integration and reconsideration of the “team” label. In B. M. Staw (Ed.), *Research in organizational behavior*, vol. 16: 171–213. Greenwich, CT: JAI Press.
- Hoffman, L. R., & Maier, N. R. F. 1961. Quality and acceptance of problem solutions by members of homogeneous and heterogeneous groups. *Journal of Abnormal and Social Psychology*, 62: 401–407.
- Jackson, S. E. 1992. Consequences of group composition for the interpersonal dynamics of strategic issue processing. In J. Dutton, A. Huff, & P. Shrivastava (Eds.), *Advances in strategic management*, vol. 8: 345–382. Greenwich, CT: JAI Press.
- Jackson, S. E., Brett, J. F., Sessa, V. I., Cooper, D. M., Julin, J. A., & Peyronnin, K. 1991. Some differences make a difference: Individual dissimilarity and group heterogeneity as correlates of recruitment, promotions, and turnover. *Journal of Applied Psychology*, 76: 675–689.
- Jackson, S. E., May, K. E., & Whitney, K. 1995. Understanding the dynamics of diversity in decision making teams. In R. A. Guzzo & E. Salas (Eds.), *Team effectiveness and decision making in organizations*: 204–261. San Francisco: Jossey-Bass.
- Johnson, R. A., Hoskisson, R. E., & Hitt, M. A. 1993. Board of director involvement in restructuring: The effects of board versus managerial controls and characteristics. *Strategic Management Journal*, 14: 33–50.
- Johnston, W. B., & Packer, A. H. 1987. *Workforce 2000*. Indianapolis, IN: Hudson Institute.
- Judge, T. A., & Ferris, G. R. 1993. Social context of performance evaluation decisions. *Academy of Management Journal*, 36: 80–105.
- Kanter, R. A. 1977. *Men and women of the corporation*. New York: Harper.
- Korn, H. J., Milliken, F. J., & Lant, T. K. 1992. *Top management team change and organizational performance: The influence of succession, composition, and context*. Paper presented at the annual meeting of the Academy of Management, Las Vegas, NV.
- Kosnik, R. D. 1990. Effects of board demography and directors' incentives on corporate greenmail decisions. *Academy of Management Journal*, 33: 129–150.
- Lawrence, P. R., & Lorsch, J. W. 1969. *Organization and environment*. Homewood, IL: Irwin.
- Lefkowitz, J. 1994. Race as a factor in job placement: Serendipitous findings of “ethnic drift.” *Personnel Psychology*, 47: 497–513.
- Li, J. 1994. Demographic diversity, tokenism, and their effects on individuals' behavior in group processes. *Academy of Management Best Paper Proceedings*: 229–243.

- Maznevski, M. L. 1994. Understanding our differences: Performance in decision-making groups with diverse members. *Human Relations*, 47: 531–552.
- McLeod, P. L., & Lobel, S. A. 1992. The effects of ethnic diversity on idea generation in small groups. *Academy of Management Best Paper Proceedings*: 227–231.
- McPherson, J. M., & Smith-Lovin, L. 1987. Homophily in voluntary organizations: Status distance and composition of face-to-face groups. *American Sociological Review*, 52: 370–379.
- Meglino, B. M., Ravlin, E. C., & Adkins, C. L. 1989. A work values approach to corporate culture: A field test of the value congruence process and its relationship to individual outcomes. *Journal of Applied Psychology*, 74: 424–432.
- Mobley, M., & Payne, T. 1993. Backlash! The challenge of diversity training. *Security Management*, September: 35–42.
- Morrison, A. 1992. *The new leaders: Guidelines on leadership diversity in America*. San Francisco: Jossey-Bass.
- Mount, M. K., Hazucha, J. F., Holt, K. E., & Sytsma, M. 1995. Rater-ratee race effects in performance ratings of managers. *Academy of Management Best Papers Proceedings*: 141–145.
- Murray, A. I. 1989. Top management group heterogeneity and firm performance. *Strategic Management Journal*, 10: 125–141.
- Nemeth, C. J. 1986. Differential contributions of majority and minority influence. *Psychological Review*, 93: 23–32.
- O'Reilly, C. A., Caldwell, D. F., & Barnett, W. P. 1989. Work group demography, social integration, and turnover. *Administrative Science Quarterly*, 34: 21–37.
- Pfeffer, J. 1981. Management as symbolic action: The creation and maintenance of organizational paradigms. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior*, vol. 3: 1–52. Greenwich, CT: JAI Press.
- Pfeffer, J. 1983. Organizational demography. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior*, vol. 5: 299–357. Greenwich, CT: JAI Press.
- Pulakos, E. D., Oppler, S. H., White, L. A., & Borman, W. C. 1989. Examination of race and sex effects on performance ratings. *Journal of Applied Psychology*, 74: 770–780.
- Rindova, V. P. 1994. *What corporate boards have to do with strategy*. Paper presented at the annual meeting of the Academy of Management, Dallas, TX.
- Sackett, P. R., & DuBois, C. L. Z. 1991. Rater-ratee race effects on performance evaluation: Challenging meta-analytic conclusions. *Journal of Applied Psychology*, 76: 873–877.
- Sackett, P. R., DuBois, C. L. Z., & Noe, A. W. 1991. Tokenism in performance evaluation: The effects of work group representation on male-female and white-black differences in performance ratings. *Journal of Applied Psychology*, 76: 63–267.
- Schneider, B. 1987. The people make the place. *Personnel Psychology*, 40: 437–453.
- Simons, T. 1995. Top management team consensus, heterogeneity, and debate as contingent predictors of company performance: The complementarity of group structure and process. *Academy of Management Best Papers Proceedings*: 62–66.
- Smith, K. G., Smith, K. A., Olian, J. D., Sims, H. P., O'Bannon, D. P., & Scully, J. A. 1994. Top management team demography and process: The role of social integration and communication. *Administrative Science Quarterly*, 39: 412–438.
- Tsui, A. S., Egan, T. D., & O'Reilly, C. A. 1992. Being different: Relational demography and organizational attachment. *Administrative Science Quarterly*, 37: 549–579.
- Tsui, A. S., & O'Reilly, C. A. 1989. Beyond simple demographic effects: The importance of relational demography in superior-subordinate dyads. *Academy of Management Journal*, 32: 402–423.

- U.S. Bureau of the Census. 1994. *Statistical abstract of the United States: 1994* (114th ed.). Washington, DC: Author.
- Verkuyten, M., de Jong, W., & Masson, C. N. 1993. Job satisfaction among ethnic minorities in the Netherlands. *Applied Psychology: An International Review*, 42: 171-189.
- Wagner, G. W., Pfeffer, J., & O'Reilly, C. A. 1984. Organizational demography and turnover in top-management groups. *Administrative Science Quarterly*, 29: 74-92.
- Waldman, D. A., & Avolio, B. J. 1991. Race effects in performance evaluations: Controlling for ability, education, and experience. *Journal of Applied Psychology*, 76: 897-901.
- Watson, W. E., Kumar, K., & Michaelsen, L. K. 1993. Cultural diversity's impact on interaction process and performance: Comparing homogeneous and diverse task groups. *Academy of Management Journal*, 36: 590-602.
- Webster's dictionary of the English language*. 1992. Danbury, CT: Lexicon.
- Weick, K. 1979. *The social psychology of organizing*. Reading, MA: Addison-Wesley.
- Wiersema, M. F., & Bantel, K. A. 1992. Top management team demography and corporate strategic change. *Academy of Management Journal*, 35: 91-121.
- Wiersema, M. F., & Bantel, K. A. 1993. Top management team turnover as an adaptation mechanism: The role of the environment. *Strategic Management Journal*, 14: 485-504.
- Wiersema, M. F., & Bird, A. 1993. Organizational demography in Japanese firms: Group heterogeneity, individual dissimilarity, and top management team turnover. *Academy of Management Journal*, 3: 996-1025.
- Zenger, T. R., & Lawrence, B. S. 1989. Organizational demography: The differential effects of age and tenure distributions on technical communication. *Academy of Management Journal*, 32: 353-376.
- Ziller, R. C. 1972. Homogeneity and heterogeneity of group membership. In C. G. McClintock, (Ed.), *Experimental social psychology*: 385-411. New York: Holt, Rinehart and Winston.

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**APPENDIX**

Authors	Nature of Sample	Dependent Variables Studied
<b>1. Race/Ethnic background</b>		
Cox, Lobel, & McLeod, 1991	136 undergraduate and graduate students from a large public university in the midwestern U.S. <i>Task:</i> Two-party Prisoner's Dilemma	<i>Affective Consequences:</i> Cooperative responses
Greenhaus, Parasuraman, & Wormley, 1990	828 managers from 3 companies	<i>Affective Consequences:</i> Sponsorship; Discretion; Acceptance; Supervisory support; Career strategies; Career satisfaction <i>Individual Performance:</i> Job-performance evaluations-relationship dimension & task dimension; Promotability assessments; Career plateau
Lefkowitz, 1994	369 clerical employees of a large commercial bank	Job assignment <i>Affective Consequences:</i> Supervisor liking <i>Individual Performance:</i> Performance rating
McLeod & Lobel, 1992	137 undergraduate and graduate students <i>Task:</i> Brainstorming task ("Tourist Problem")	<i>Cognitive Consequences:</i> Number of ideas; Number of unique ideas; Quality of ideas
Mount, Hazucha, Holt, & Sytsma, 1995	22,431 managers at various levels of management	<i>Individual Performance:</i> Subjective performance rating
Pulakos, Oppler, White, & Borman, 1989	6,377 supervisors and 8,174 peers rating first-term soldiers in 19 U.S. military occupational specialties. A total of 39,537 rater-ratee pairs.	<i>Individual Performance:</i> Subjective performance rating (technical skill and job effort; personal discipline; and military bearing)
Sackett & DuBois, 1991	Civilian study: Between-ratee—12,022 white ratee & rater; 661 white ratee, black rater; 5,972 black ratee, white rater; 1,110 black ratee & rater. Within-ratee—286 white & 331 black ratees. <i>Military study:</i> Between-ratee—18,294 white ratee & rater; 7,391 white ratee, black rater; 5,745 black ratee, white rater; 4,700 black ratee & rater. Within-ratee—1,259 white & 561 black ratees.	<i>Individual Performance:</i> Subjective performance rating

Authors	Nature of Sample	Dependent Variables Studied
Sackett, DuBois, & Noe, 1991	First set of analyses: 486 job-firm combinations. Second set of analyses: 814 job-firm combinations.	<i>Individual Performance:</i> Performance ratings
Tsui & O'Reilly, 1989	272 superior-subordinate dyads in a Fortune 500 multidivisional company	<i>Affective Consequences:</i> Supervisor's liking for subordinate; Subordinate's role ambiguity; Subordinate's role conflict <i>Individual Performance:</i> Performance effectiveness of subordinate
Tsui, Egan, & O'Reilly, 1992	151 work units in 3 large firms	<i>Affective Consequences:</i> Psychological commitment; Absences; Intention to stay
Waldman & Avolio, 1991	21,547 employees in 10 occupational categories	<i>Individual Performance:</i> Performance ratings
Watson, Kumar, & Michaelson, 1993	173 upper-level undergraduates, divided into 36 workgroups <i>Task:</i> Four group tasks (case analyses) performed at approximately one-month intervals	<i>Cognitive Consequences:</i> Range of perspectives; Problem identification; Alternatives generated; Quality of solutions; Overall performance (average of above four) <i>Affective Consequences:</i> Group process (assessed using Watson & Michaelson's 1988 scale)
<b>2. Nationality</b>		
Bochner & Hesketh, 1994	263 employees (from 28 countries) of a large Australian Bank	<i>Affective Consequences:</i> Work-related friction; Perceived discrimination; Attitudes toward multiculturalism; Counternormative attitudes and behavior
Verkuyten, de Jong, & Masson, 1993	1693 civil servants (including 681 belonging to ethnic minorities) in Rotterdam	<i>Affective Consequences:</i> Job satisfaction
Watson, Kumar, & Michaelson, 1993	173 upper-level undergraduates, divided into 36 workgroups <i>TASK:</i> Four group tasks (case analyses) performed at approximately one-month intervals	<i>Cognitive Consequences:</i> Range of perspectives; Problem identification; Alternatives generated; Quality of solutions; Overall performance (average of above four)

Authors	Nature of Sample	Dependent Variables Studied
		<i>Affective Consequences:</i> Group process (assessed using Watson & Michaelson's 1988 scale)
<b>3. Gender</b>		
Cummings, Zhou, & Oldham, 1993	176 employees from 43 offices of 2 divisions of a state government	<i>Affective Consequences:</i> Absenteeism <i>Long-term Consequences:</i> Turnover <i>Individual Performance:</i> Performance
Ely, 1994	30 women associates in law firms (15 in male-dominated firms and 15 in sex-integrated firms)	<i>Consequences for Observers:</i> Hierarchical relationships between women; Peer relationships among women
Pulakos, Oppler, White, & Borman, 1989	6,377 supervisors and 8,174 peers rating first-term soldiers in 19 U.S. military occupational specialties. A total of 39,537 rater-ratee pairs.	<i>Individual Performance:</i> Subjective performance rating (technical skill and job effort; personal discipline; and military bearing)
Sackett, DuBois, & Noe, 1991	First set of analyses: 486 job-firm combinations. Second set of analyses: 814 job-firm combinations.	<i>Individual Performance:</i> Performance ratings
Tsui & O'Reilly, 1989	272 superior-subordinate dyads in a <i>Fortune</i> 500 multidivisional company	<i>Affective Consequences:</i> Supervisor's liking for subordinate; Subordinate's role ambiguity; Subordinate's role conflict <i>Individual Performance:</i> Performance effectiveness of subordinate
Tsui, Egan, & O'Reilly, 1992	151 work units in 3 large firms	<i>Affective Consequences:</i> Psychological commitment; Absences; Intention to stay
<b>4. Age</b>		
Bantel & Jackson, 1989	TMTs of 199 banks in 6 states	<i>Cognitive Consequences:</i> Technical innovation; Administrative innovation; Total innovation
Cummings, Zhou, & Oldham, 1993	176 employees from 43 offices of 2 divisions of a state government	<i>Affective Consequences:</i> Absenteeism <i>Long-term Consequences:</i> Turnover

Authors	Nature of Sample	Dependent Variables Studied
		<i>Individual Performance:</i> Performance
Jackson, Brett, Sessa, Cooper, Julin, & Peyronnin, 1991	93 top management teams in bank holding companies	<i>Long-term Consequences:</i> Turnover
Judge & Ferris, 1993	81 registered nurses and their supervisors, from a hospital in central Illinois	<i>Affective Consequences:</i> Supervisor's affect toward subordinate <i>Individual Performance:</i> Performance ratings
O'Reilly, Caldwell, & Barnett, 1989	20 work units with 79 employees	<i>Affective Consequences:</i> Group-level social integration; Individual-level social integration <i>Long-term consequences:</i> Turnover
Tsui & O'Reilly, 1989	272 superior-subordinate dyads in a <i>Fortune</i> 500 multidivisional company	<i>Affective Consequences:</i> Supervisor's liking for subordinate; Subordinate's role ambiguity; Subordinate's role conflict <i>Individual Performance:</i> Performance effectiveness of subordinate
Tsui, Egan, & O'Reilly, 1992	151 work units in 3 large firms	<i>Affective Consequences:</i> Psychological commitment; Absences; Intention to stay
Wiersema & Bantel, 1992	TMTs of 87 firms drawn from the 1980 <i>Fortune</i> 500	<i>Long-term Consequences:</i> Change in strategy
Wiersema & Bird, 1993	220 executives forming the executive committees of 40 firms listed on the Tokyo Stock Exchange	<i>Long-term Consequences:</i> Top team turnover; Top team turnover controlled for retirement
Zenger & Lawrence, 1989	88 engineers and engineering managers from a research division of a medium-sized electronics firm in the U.S.	<i>Cognitive Consequences:</i> Frequency of technical communication inside project groups; Frequency of technical communication outside project groups
<b>5. Personality Characteristics and Values</b>		
Bochner & Hesketh, 1994	263 employees (from 28 countries) of a large Australian Bank	<i>Affective Consequences:</i> Work-related friction; Perceived discrimination; Attitudes toward multiculturalism; Counternormative attitudes and behavior

Authors	Nature of Sample	Dependent Variables Studied
Meglino, Ravlin, & Adkins, 1989	191 production workers, 17 supervisors, and 13 managers from a large industrial products manufacturing plant in the southeastern U.S.	<i>Affective Consequences:</i> Satisfaction; Organizational commitment; Attendance <i>Individual Performance:</i> Performance evaluation; Efficiency
<b>6. Educational background</b>		
Bantel & Jackson, 1989	TMTs of 199 banks in 6 states	<i>Cognitive Consequences:</i> Technical innovation; Administrative innovation; Total innovation
Cummings, Zhou, & Oldham, 1993	176 employees from 43 offices of 2 divisions of a state government	<i>Affective Consequences:</i> Absenteeism <i>Long-term Consequences:</i> Turnover <i>Individual Performance:</i> Performance
Jackson, Brett, Sessa, Cooper, Julin, & Peyronnin, 1991	93 top management teams in bank holding companies	<i>Long-term Consequences:</i> Turnover
Simons, 1995	TMT members of 57 electronic component manufacturing firms	<i>Organizational Performance:</i> Change in sales; Change in profitability
Smith, Smith, Olian, Sims, O'Bannon, & Scully, 1994	230 TMT members from 53 single-business, technology-based firms	<i>Processes:</i> Social integration; Informality of communication; Communication frequency <i>Organizational Performance:</i> Return on investment; Sales growth
Tsui & O'Reilly, 1989	272 superior-subordinate dyads in a Fortune 500 multidivisional company	<i>Affective Consequences:</i> Supervisor's liking for subordinate; Subordinate's role ambiguity; Subordinate's role conflict <i>Individual Performance:</i> Performance effectiveness of subordinate
Tsui, Egan, & O'Reilly, 1992	151 work units in 3 large firms	<i>Affective Consequences:</i> Psychological commitment; Absences; Intention to stay
Wiersema & Bantel, 1992	TMTs of 87 firms drawn from the 1980 Fortune 500	<i>Long-term Consequences:</i> Change in strategy

Authors	Nature of Sample	Dependent Variables Studied
Wiersema & Bantel, 1993	TMTs of 85 Fortune 500 (1980) firms	<i>Long-term Consequences:</i> Team turnover
Wiersema & Bird, 1993	220 executives forming the executive committees of 40 firms listed on the Tokyo Stock Exchange	<i>Long-term Consequences:</i> Top team turnover; Top team turnover controlled for retirement
<b>7. Functional background</b>		
Ancona & Caldwell, 1992	45 new product teams (409 respondents) in 5 high-technology companies	<i>Affective Consequences:</i> Group process (task-related) <i>Cognitive Consequences:</i> External communication; Technical innovation <i>Group Performance:</i> Adherence to budget and schedule; Team-rated performance
Bantel & Jackson, 1989	TMTs of 199 banks in 6 states	<i>Cognitive Consequences:</i> Technical innovation; Administrative innovation; Total innovation
Glick, Miller, & Huber, 1993	79 top management teams of strategic business units	<i>Processes:</i> Communication frequency; Group cohesiveness, comprehensiveness of planning
Korn, Milliken, & Lant, 1992	78 firms in the furniture and computer software industries	<i>Organizational Performance:</i> Future performance
Simons, 1995	TMT members of 57 electronic component manufacturing firms	<i>Organizational Performance:</i> Change in sales; Change in profitability
Smith, Smith, Olian, Sims, O'Bannon, & Scully, 1994	230 TMT members from 53 single-business, technology-based firms	<i>Processes:</i> Social integration; Informality of Communication; Communication Frequency <i>Organizational Performance:</i> Return on investment; Sales growth
<b>8. Occupational background</b>		
Goodstein, Gautam, & Boeker, 1994	334 hospitals in California	<i>Organizational Performance:</i> Strategic change (service additions, service divestitures, service reorganizations)

Authors	Nature of Sample	Dependent Variables Studied
Kosnik, 1990	53 U.S. companies that had paid greenmail and 57 U.S. companies that had resisted playing greenmail between 1979 and 1983	<i>Organizational Performance</i> : Resistance to greenmail
Murray, 1989	TMGs of 26 integrated oil companies and 58 food companies TMGs divided into inclusive group (all executives included in D&B reference book and exclusive group (only top executives)	<i>Organizational Performance</i> : Short-term performance; Long-term performance
<b>9. Industry experience</b>		
Jackson, Brett, Sessa, Cooper, Julin, & Peyronnin, 1991	93 top management teams in bank holding companies	<i>Long-term Consequences</i> : Turnover
Smith, Smith, Olian, Sims, O'Bannon, & Scully, 1994	230 TMT members from 53 single-business, technology-based firms	<i>Processes</i> : Social integration, Informality of communication; Communication frequency <i>Organizational Performance</i> : Return on investment; Sales growth
<b>10. Organizational membership</b>		
Goodstein, Gautam, & Boeker, 1994	334 hospitals in California	<i>Organizational Performance</i> : Strategic change (service additions, service divestitures, service reorganizations)
Johnson, Hoskisson, & Hitt, 1993	92 manufacturing firms that had voluntarily restructured between 1985 and 1990	<i>Organizational Performance</i> : Board involvement in corporate restructuring
Kosnik, 1990	53 U.S. companies that had paid greenmail and 57 U.S. companies that had resisted paying greenmail between 1979 and 1983	<i>Organizational Performance</i> : Resistance to greenmail
<b>11. Organizational tenure</b>		
Ancona & Caldwell, 1992	47 new product teams (409 respondents) in 5 high-technology companies	<i>Affective Consequences</i> : Group process (task-related) <i>Cognitive Consequences</i> : External communication; Technical innovation

Authors	Nature of Sample	Dependent Variables Studied
		<i>Group Performance:</i> Adherence to budget and schedule; Team-rated performance
Bantel & Jackson, 1989	TMTs of 199 banks in 6 states	<i>Cognitive Consequences:</i> Technical innovation; Administrative innovation; Total innovation
Jackson, Brett, Sessa, Cooper, Julin, & Peyronnin, 1991	93 top management teams in bank holding companies	<i>Long-term Consequences:</i> Turnover
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Tsui, Egan, & O'Reilly, 1992	151 work units in 3 large firms	<i>Affective Consequences:</i> Psychological commitment; Absences; Intention to stay
Wagner, Pfeffer, & O'Reilly, 1984	599 managers from 31 1976 <i>Fortune</i> 500 firms	<i>Affective Consequences:</i> Top management likelihood of staying <i>Long-term Consequences:</i> Top management turnover



Authors	Nature of Sample	Dependent Variables Studied
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Zenger & Lawrence, 1989	88 engineers and engineering managers from a research division of a medium-sized electronics firm in the United States	<i>Cognitive Consequences:</i> Frequency of technical communication inside project groups; Frequency of technical communication outside project groups
<b>12. Group tenure</b>		
Johnson, Hoskisson, & Hitt, 1993	92 manufacturing firms that had voluntarily restructured between 1985 and 1990	<i>Organizational Performance:</i> Board involvement in corporate restructuring
Kosnik, 1990	53 U.S. companies that had paid greenmail and 57 U.S. companies that had resisted paying greenmail between 1979 and 1983	<i>Organizational Performance:</i> Resistance to greenmail
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