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UNDERSTANDING THE DYNAMICS OF DIVERSITY IN DECISION-MAKING TEAMS

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Changing work-force demographics and new organizational forms are increasing the diversity of work teams in general and decision-making teams in particular. Given these environmental changes, work teams that are diverse in terms of sex, race, ethnicity, national origin, area of expertise, organizational affiliation, and many other personal characteristics are increasingly common.

Diversity may lead to a variety of different consequences for decision-making teams. Consider, as a hypothetical example, an academic selection committee searching for a department chair. The members' diverse perspectives would undoubtedly influence the decision process. If managed well, their discussions might eventually result in the hiring of a Nobel laureate. If badly mismanaged, others at higher levels might usurp the selection committee's choice of a new leader.

The purpose of this chapter is to present a framework for understanding the dynamics of diversity in work teams. We first describe the types of diversity that characterize today's work teams. Next, we present a general framework for analyzing how

diversity influences work teams, their individual members, and their employing organizations. This framework identifies the basic dimensions of diversity, delineates several possible consequences, and describes the processes that shape the consequences of diversity. We use this framework to guide our subsequent discussion of the dynamics of diversity in work teams in general and in decision-making situations in particular. Finally, we conclude with a brief discussion of some of the implications of our analysis, for both research and practice.

The Nature of Diversity in Decision-Making Teams

The Changing Work Force

The changing demographics of the U.S. labor force account for increasing gender diversity, cultural diversity (including cultural differences due to race and ethnicity), and age diversity.

Gender Diversity. Women are entering the labor force in growing numbers. By the year 2000, the work force is expected to be almost completely gender-balanced. When this balance point is reached, the work force as a whole will be maximally diverse with respect to this attribute. Furthermore, gender-based segregation in the workplace is declining. Although they are still seldom seen in corporate board rooms, women currently represent more than 35 percent of the administrative and managerial workforce (Seibert, 1987). Consequently, all but the highest-level decision-making teams in organizations are likely to be characterized by substantial gender diversity.

Domestic Cultural Diversity. As the 1980s drew to a close, the U.S. Department of Labor was projecting rapid increases in the cultural diversity of the labor supply (Johnston & Packer, 1987). Only 58 percent of new entrants into the labor force were expected to come from the "majority" population of white native-born Americans. The remaining 42 percent were expected to be mostly immigrants (22 percent), followed by approximately equal numbers of African Americans and Hispanic Americans. These

national trends are striking, yet they understate the truly dramatic regional changes occurring in Hawaii, California, Texas, New York, and Florida, where the growth in the Asian American, Hispanic American, and immigrant populations is especially rapid. In California, for example, racial diversity is fast approaching the point at which no single group will represent a majority.

National immigration figures understate the extent of cultural diversity in other ways as well. The immigrant population itself has become more diverse as Asians and Latinos from many countries join the once-predominant European immigrants. There are growing numbers of second- and third-generation U.S. citizens who continue to have strong ties to another national culture (see Fugita & O'Brien, 1991; Mydans, 1991). And, although the proportion of African Americans has remained relatively stable, their employment patterns have shifted considerably, resulting in higher degrees of racial integration in clerical, technical, and skilled crafts jobs ("Race in the Workplace," 1991).

Age Diversity. Descriptions of work-force demographics usually emphasize the fact that the average age of the work force is increasing but give little attention to indications that the distribution of ages (variance) represented in the work force is also changing. Yet, given several other trends, employees of greatly different ages are more and more likely to find themselves working side by side. The shrinking rate of growth in the labor pool is pushing employers to hire at both extremes of the age distribution, with the result that both student interns and former "retirees" are being hired to fill vacant positions (Bolick & Nestleroth, 1988). Furthermore, as middle-aged women enter or reenter the work force, they often find themselves working in entry-level jobs traditionally filled by younger employees. Finally, as organizations allow the higher education of younger employees to substitute for the job experience that previous cohorts of employees had to accrue in order to be promoted, relatively young employees are found more often in higher-level jobs. Consequently, within each level of the organizational hierarchy, age diversity is replacing the homogeneity associated with traditional age-based stratification.

New Organizational Forms

Teams are becoming more diverse, not only because of changing work-force demographics but also because of the development of new organizational forms. The globalization of the business economy and the formation of interdepartmental and interorganizational alliances are two forces shaping these new organizational forms.

Global Operations. The globalization of the business economy has received much recent attention in the United States. As trade barriers are removed and competition intensifies, many U.S. companies are beginning to expand their operations in order to take advantage of foreign labor and consumer markets. For smaller companies, foreign activities may be limited to a single joint venture or to offshore production or distribution systems that involve one or two other countries. For larger corporations, foreign offices may be in over one hundred different countries (see Fulkerson & Schuler, 1992). The presence of international affiliations, although not inevitable, is likely to lead eventually to the formation of teams of people with diverse cultural backgrounds, including management teams, design teams, operation teams, and marketing teams (Adler & Ghadar, 1991; Kanter, 1991; Von Glinow & Mohrman, 1990), all of which engage in decision-making activity.

Interdepartmental and Interorganizational Alliances, in order to succeed in an increasingly competitive domestic and global environment, many organizations are utilizing teams to pursue new business strategies that emphasize quality, innovation, and speed. Such work teams often bring together employees from previously segregated areas of the company, creating occupational and knowledge-based diversity. For example, R&D teams bring together experts from a variety of knowledge backgrounds with the expectation that, in combination, they will produce more creative thinking and innovation.

In addition, teams may be used to bring together employees from two or more organizations. For example, in order

to improve the quality of their finished products, manufacturers may include their suppliers as part of a product-design team, and in order to ensure that the finished product appeals to their customers, they may include the end users on the team. Such alliances require subunits from different organizations to coordinate their activities. In doing so, they produce teams that must develop modes of operating that fit with the differing corporate cultures in which the subunits are embedded (Hofstede, 1991; Kanter, 1989).

Corporate (and subunit) cultures shape expectations for behavior and guide interactions among interdependent employees. During a typical day, they are an unnoticed medium for carrying out activities. But when corporate norms, habits, and routines are not shared by all the members of an interdependent team, they become more salient, creating both opportunities for innovation and threats to effective team functioning.

In today's business environment, work teams are becoming both more common and more diverse, intensifying the importance of understanding the dynamics of work-team diversity. Of particular importance to this chapter is diversity within decision-making teams. Organizations are rapidly restructuring to take advantage of the potential benefits of diverse decision-making teams, making the assumption that the liabilities of such teams are worth the risk (or can be successfully avoided). Many of the specific assets and liabilities of work teams arise directly out of diversity. To be effective, diverse decision-making teams must carefully manage their assets and liabilities. Doing so presumes a thorough understanding of how and why diversity affects the behavior of teams and their members.

Framework for Analyzing the Dynamics of Diversity

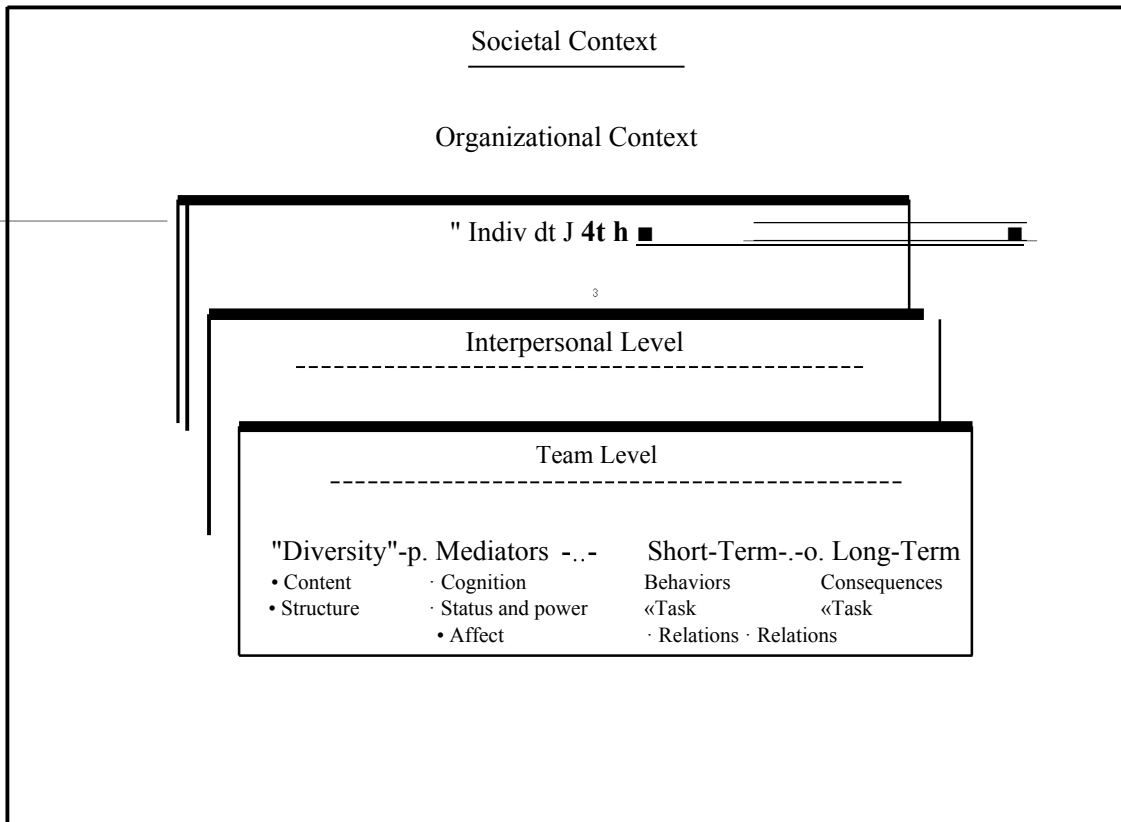
Given the complex nature of diversity and its consequences, it is useful to rely on a heuristic as a guide to discussion. Our discussion in this chapter is guided by the heuristic of a theoretical framework that identifies primary constructs and connects them to form a meaningful territorial map. Within this framework, diversity is placed as a construct that appears early in

the causal chain of phenomena considered. The focus is on the consequence of diversity, rather than on its determinants or its role as a contextual or moderating variable (see Levine & Moreland, 1990).

General Causal Model

In keeping with an open-systems perspective, we assume that the constructs in the taxonomy are nodes in a complex, multilevel, dynamic nomological net. Numerous reciprocal and complex interrelations exist among the primary constructs. The general pattern of these interrelationships and the presumed causal linkages are illustrated graphically in Figure 7.1. The general causal model acknowledges the importance of macro-

Figure 7.1. General Causal Model for Understanding the Dynamics of Diversity in Work Teams.



level phenomena that characterize the embedding societal and organizational contexts. Although a full discussion of these is beyond the scope of this chapter, the importance of societal- and organizational-level phenomena should not be ignored (for more detailed discussions, see Cox, 1993; Ibarra, 1993; Nkomo, 1992).

Taxonomy of General Constructs

The taxonomic component of our framework, shown in Table 7.1, organizes constructs into four general categories that correspond to their presumed roles in the general causal model: aspects of diversity, mediating states and processes, short-term behavioral manifestations, and longer-term consequences. Within each general category, constructs are arrayed vertically, to reflect three levels of analysis: individual, interpersonal, and team. The constructs most directly associated with a team's acknowledged objectives are labeled *task-related*; those that form the context of more general social relationships are labeled *relations-oriented*. The contrast between these two terms is similar to the more familiar contrast between the terms *instrumental* and *socioemotional*. We chose not to use the latter pair of terms because they imply that social relationships have no instrumental value. Contrary to this implication, we assume that social relationships have significant instrumental value for the immediate task at hand, as well as for future activities and objectives. In order to make the taxonomy applicable to many types of tasks and work teams, and to encourage researchers to apply the framework to a broad range of phenomena, the constructs listed in the taxonomy are intentionally general. Throughout this chapter, however, we apply our general framework to the specific task of team decision making.

Societal Context

The societal context is relevant to an understanding of the dynamics that characterize relations between members of different demographic groups. It is in the context of the larger society

that individuals are socialized to exhibit behaviors "appropriate" to their membership in demographic groups, and it is in this context that individuals first learn to respond differentially to members of different demographic groups (see Maccoby & Jacklin, 1974; Jacklin, 1989). In addition, events in society—including new legislation, local politics, and nationally organized demonstrations—can stimulate changes in intergroup relations in the workplace (see Alderfer, 1992; Sessa, 1992).

Organizational Contexts

Organizational contexts also influence relations among members of work teams. For example, some organizations intentionally or unintentionally socialize members in different subunits to compete with employees from other units (other functional areas, business units, or geographical locations). Others emphasize cooperation and weak interunit boundaries (Tichy & Sherman, 1993). Human resource management practices, such as selection systems, training programs, and methods of appraisal, also can shape team composition and team dynamics (see Sundstrom, DeMeuse, & Futrell, 1990). For example, "managing diversity" and cross-cultural training interventions are often designed to sensitize employees to the norms and behavior patterns of various cultures, in the hope of improving interactions among employees. Affirmative action programs are often designed to reduce segregation within organizations.

The Team-Organization Interface

Organizations impinge on work teams, and they also absorb the effects of work teams. Of particular relevance here is the extent to which organizations are affected by the longer-term individual, interpersonal, and team consequences identified in Table 7.1.

The literature on organizational behavior suggests several means by which organizations can be affected by the longer-term consequences of work-team diversity. For example, in his description of the consequences of organizational demography,

Table 7.1. Taxonomy of General Constructs in a Framework for **Understanding Diversity in Work Teams**.

<i>Aspects of Diversity: Content and Structure</i>	<i>Mediating States and Processes</i>	<i>Short-Term Behavioral Manifestations</i>	<i>Long-Term Consequences</i>
<i>Level of Analysis: Individual</i>			
<p>Readily Detectable Attributes</p> <p>Task-related: organizational tenure, team tenure, department/unit membership, memberships in task-relevant external networks, formal credentials, education level</p> <p>Relations-oriented: sex, culture (race, ethnicity, national origin), age, memberships in formal organizations (religious, political), physical features</p> <p>Underlying Attributes</p> <p>Task-related: knowledge, skills, abilities (cognitive, physical), experience</p> <p>Relations-oriented: social status, attitudes, values, personality, behavioral style, extrateam social ties</p>	<p>Task-Related</p> <p>Information processing (e.g., attention, recall)</p> <p>Learning (e.g., discovery, creativity)</p> <p>Task-based information</p> <p>Power to control tangible resources</p> <p>Power to control human resources</p> <p>Relations-Oriented</p> <p>Social cognitive processes: stereotypes and schema-based expectancies</p> <p>Affective responses: attraction, anxiety, fear, guilt, frustration, discomfort</p>	<p>Task-Related</p> <p>Seeking, offering, receiving work-related information, tangible resources, human resources</p> <p>Initiating/responding to influence attempts</p> <p>Relations-Oriented</p> <p>Seeking, offering, receiving social information and/or support</p>	<p>Task-Related</p> <p>Personal performance (speed, creativity, accuracy)</p> <p>Satisfaction with performance of self and team</p> <p>Acquisition of knowledge and skills regarding technical aspects of task, managing human and tangible resources</p> <p>Establishment of position in work-communication networks</p> <p>Relations-Oriented</p> <p>Acquisition of interpersonal knowledge and skills regarding interpersonal aspects of task</p> <p>Establishment of position in social-communication networks (within team and in external environment)</p> <p>Satisfaction with social relationships</p>

Interpersonal (dis)similarity in terms of readily detectable and underlying attributes
 Dyadic
 Individual-to-subgroup
 Individual-to-team

Task-Related
 Differences in task-based cognitions
 Expertise-based status differentials
 Differences in power over tangible and/or human resources
 Relations-Oriented
 Social, familiarity
 Diffuse status differentials
 Differences in social cognitions
 Differences in affective responses

Task-Related
 Exchanges, negotiations, consolidation of task-related information, tangible resources, or human resources
 Relations-Oriented
 Exchanges/consolidation of social information and/or support

Task-Related
 Power balance
 Relations-Oriented
 Status hierarchy
 Balance of interpersonal accounts (political debts, credits)
 Solidification of friendship coalitions

Level of Analysis: Team

Team composition: heterogeneity versus homogeneity of readily detectable and underlying attributes
 Special configurations
 Presence of "tokens"
 Presence of small minority faction
 Bipolar team composition

Task-Related
 Shape of expertise-based status hierarchy
 Patterns of task-based cognitions
 Shape of power distributions for control of tangible and/or human resources
 Relations-Oriented
 Staged team socialization
 Shape of diffuse social-status hierarchy
 Patterns of social cognitions
 Patterns of affective responses across team members

Task-Related
 Task-related communication networks
 Allocation and use of tangible and human resources
 Influence networks
 Relations-Oriented
 Friendship-based communication networks

Task-Related
 Team performance (speed, accuracy, creativity)
 Team satisfaction with performance
 Team learning about technical aspects of task and management of tangible and human resources
 Relations-Oriented
 Membership stability
 Adoption of social structure (norms and roles, influence networks, friendship networks)

Pfeffer (1983) argues that conflict associated with heterogeneity, in terms of organizational tenure, results in fragmented organizations that are difficult to manage. By contrast, the higher turnover rates that seem to occur in heterogeneous teams and organizations may lead to increases in organizational innovation, adaptation, and performance because fresh perspectives are brought (see also Schneider, 1987). The perspective of organizational demography also draws attention to the interorganizational consequences of turnover. For example, it has been argued that interorganizational mobility will tend to make organizations more similar to each other because ideas and information are transmitted through the process (Baty, Evan, & Rothermel, 1971). In addition, interorganizational mobility is associated with interorganizational communication and coordination (Pfeffer & Leblebici, 1973). The implication of this is that, to the extent that interorganizational coordination is important for success, organizations characterized by team heterogeneity should be successful in this domain. This seems to be the driving principle behind many newer types of interorganizational network structures (see Kanter, 1989).

Articles appearing in the popular press point to the potential value that work-force diversity can add to organizations, as the impetus behind recent efforts to manage diversity more effectively. Often implicit in such reports is the assumption that an organization's bottom line is influenced by the extent to which employees from different backgrounds can work together toward organizational goals. This assumption corresponds to a shift away from viewing diversity as primarily a social issue to viewing it as a strategic business imperative (Copeland, 1988; DeLuca & McDowell, 1992; Jackson & Alvarez, 1992; Solomon, 1989; Thomas, 1990). It is supported by anecdotal data related to such interventions as Digital Equipment's Valuing Differences Program. Top management at Digital reports that managing diversity effectively leads to such consequences as a solid reputation as one of the best places to work, an empowered work force, greater innovation, increased productivity, and a competitive advantage in global competition (Walker & Hanson, 1992). This assumption-that diversity influences organizational outcomes

through its impact on the longer-term consequences included in our taxonomy-has not been specifically tested by rigorous scientific research. Nevertheless, it is reasonable to expect that both task-related and relations-oriented consequences within work teams accumulate to affect bottom line indicators of organizational effectiveness.

Team Decision Making in the Context of Our General Framework

The advantage of a framework composed of fairly general constructs is its potential for broad applicability, but the price paid is that specific constructs relevant to particular topics may not appear explicitly. For example, the relevance of the constructs that comprise Table 7.1 to the phenomenon of team decision making is not transparent. To realize the value of this taxonomy of general constructs for an understanding of diversity in decision-making teams, constructs in the taxonomy need to be translated into the language commonly used to describe a specific phenomenon.

Decision making includes numerous activities for which researchers have developed an array of teams. In particular, researchers who adopt an issue-processing perspective for studying decision making tend to cast a very wide net when identifying relevant phenomena. This perspective characterizes much of the field-based research literature on managerial decision making (see Dutton, 1988; Jackson, 1992a; Janis, 1989) and contrasts sharply with the narrower view of decision making often adopted by researchers working in laboratory settings (see McGrath, 1984).

There are two distinguishing characteristics of the issue-processing perspective. First, it recognizes as integral to decision making many activities that precede a decision (environmental scanning, problem sensing, formulation, and framing) and that follow the making of a decision (decision announcements, implementation, evaluation, and readjustments), in addition to core decision-making activities (generating alternatives, evaluating alternatives, and resolution). Second, it recognizes that political (nontask) agendas coexist with decision agendas.

Behavior necessarily reflects both types of agendas. The taxonomy of constructs shown in Table 7.1 captures this duality with its inclusion of constructs that are primarily task-related and constructs that are primarily relations-oriented.

Throughout this chapter, our description of the role of diversity in team decisions adopts the strategic issue-processing perspective. In addition, it assumes the following:

1. Interdependent team members are working on projects that they believe are relevant to organizational functioning.
2. The decision activity represents a substantial portion of the team members' responsibilities, although it need not be their only responsibility.
3. Members interact face to face in a context that allows some degree of intimacy.
4. Team members have a fair amount of autonomy regarding the process of decision making (that is, the decision does not involve the routine application of heuristic rules, and authority is not vested completely in a leader).
5. Team effectiveness is at least minimally valued by team members, although team members are not assumed to agree about the appropriate criteria for judging effectiveness.
6. The team does not yet have a long (and therefore unique) life history.

In cases where these conditions do not hold, the dynamics that occur may be substantially different. Unfortunately, there is almost no research that considers how diversity affects teams under different conditions.

The Concept of Diversity

The term *diversity* has little history within the behavioral sciences and is not (yet) a scientific construct. Instead, it is an everyday term that sprang to life rather recently, nourished by widespread media coverage of the "managing diversity" activities that organizations are adopting in response to changing work-force demographics. Nevertheless, the body of social science research

relevant to understanding the dynamics of diversity in organizations is large, although it is widely dispersed across subdisciplines that neither cross-reference each other nor have a common terminology (see Ferdman, 1992). For integration of the available scientific evidence into a single framework, the conceptual territory of interest must be identified and labeled. In particular, the umbrella term *diversity*, which we use in a general sense to indicate the presence of differences among members of a social unit, must be dissected into a set of more precise terms. In Table 7.1, terms that refer to both the content and the structure of diversity appear in the far-left column.

The Content of Diversity: Individual Attributes

As explained below, diversity is a compositional construct that does not exist at the individual level of analysis. Nevertheless, the individual level of analysis is included as an aspect of diversity because individual differences in various attributes, when present in a team, department, or organization, create diversity. That is, individual attributes reflect the *content* of diversity; by contrast, the configuration of attributes within a social unit reflects the *structure* of diversity.

Within our framework, individual attributes are categorized as either readily detectable or underlying, and as either task-related or relations-oriented. *Readily detectable* attributes can be quickly and consensually determined with only brief exposure to a target person. Generally, they are immutable. Readily detectable attributes that are *task-related* include organizational and team tenure, department or unit membership, membership in task-relevant external networks, formal credentials, and educational level. Those labelled *relations-oriented* include sex, culture (race, ethnicity, national origin), age, membership in formal (religious or political) organizations, and physical features.

Underlying attributes are more subject to construal and more mutable. *Task-related* underlying attributes include knowledge, skills, abilities (cognitive and physical), and experience. *Relations-oriented* underlying attributes include social status, attitudes, values, personality characteristics, behavioral style, and extra-

team social ties. Both readily detectable and underlying attributes contribute to the total diversity present in a team.

Task-Related Attributes. To date, studies of how team diversity (in general) influences team decision making have emphasized the cognitive aspects of decision making, including identifying and ranking decision objectives, searching for information, generating alternative solutions, and analyzing the potential consequences of possible decisions. A relatively rational process is assumed; cognitive biases and errors in information processing may interfere, but it is presumably the human cognitive apparatus that is the major source of such interference. From this perspective, diversity within a decision-making team is recognized as important primarily because it is associated with the resources available during the decision-making process - especially task-related cognitive resources.

Researchers often assume that readily detectable attributes are associated with underlying attributes that are task-related (Hambrick & Mason, 1984; Lawrence, 1991). For example, a cross-functional design team that included a purchasing manager, a marketing manager, design engineers, production engineers, and a customer-service representative (diversity with respect to unit membership) would be expected to make better design decisions than a more homogeneous team because task-related underlying attributes (such as knowledge, skills, and abilities, or KSAs) are assumed to be associated with unit membership. Associated with these KSAs would be a broader distribution of task-related cognitions, which in turn would stimulate information seeking and exchange, as well as task-related negotiations and resource allocation.

Relations-Oriented Attributes. Contrasting with a rational and instrumental explanation for how diversity can affect decision making is a second perspective, which acknowledges the more emotional (political), relations-oriented aspects of team life. This perspective reflects the fact that observed decision-making processes seldom seem to fit the idealized, coolly rational processes just described. Instead, emotions run hot. Personal

affiliations, self-serving behavior, and politics are common, and the resulting decision processes are often muddled at best (see Janis, 1989; Lindblom, 1959). Available resources may not be fully identified and used by the team (Bottger & Yetton, 1988) and the final decision may be shaped as much by unstated individual and interpersonal objectives as by the team's formally stated task objective.

The relations-oriented phenomena present throughout our taxonomy are an essential aspect of the context within which the task-related phenomena unfold. At all levels of analysis, relations-oriented phenomena are affected by the pattern of readily detectable, relations-oriented attributes (gender, ethnicity, age) that characterize the team. Readily detectable attributes play a special role in shaping the dynamics of diversity because they elicit many of the social cognitive processes and affective reactions that guide team interactions (see Berger & Zelditch, 1985; Devine, 1989; Stephan, 1985; Turner, 1987).

The Structure of Diversity

Readily detectable and underlying attributes do describe the dimensions of diversity in terms of content, but it is equally important to consider the structure of diversity. Terms for referring to the structure of diversity differ across levels of analysis, from *interpersonal (dis)similarity* to *team composition*.

Interpersonal (Dissimilarity). Similarity is a relational construct that compares the attributes of two entities. In a social system, the two entities compared can be individuals, subgroups within a team, whole teams, or some combination of these. In this chapter, however, we focus mostly on the degree to which an *individual* and some second entity differ in terms of various attributes (hence the term *interpersonal (dis)similarity*). Most extant research addresses dissimilarity between two individuals. (Some authors, however—such as Tsui & O'Reilly, 1989, and Tsui, Egan, & O'Reilly, 1992—have used the term *relational demography* to refer to interpersonal dissimilarity.) Nevertheless, each unique component of interpersonal similarity has the potential to explain

some of the dynamics within diversity teams (see Jackson, Stone, & Alvarez, 1993, for a discussion of how individual-team dissimilarity may affect the process of socialization).

Team Composition. At the team level of analysis, numerous configurations of attributes are possible, and so several terms are needed to refer to the structure of diversity. In the psychological literature, *composition* is an umbrella term for referring to configurations of attributes within small groups (Levine & Moreland, 1990), and we adopt this terminology here.

One of the most frequently studied aspects of composition is *team heterogeneity*, which refers to the degree to which members of a team as a whole are similar (homogeneous) or dissimilar (heterogeneous) with respect to individual-level attributes. Several different statistical formulae are available for assessing the degree of heterogeneity in a team. All yield indices that take on low values when all members have a common attribute. The indices take on higher values to the extent that (1) individuals' attributes are dissimilar to each other, (2) there is equal (versus disproportionate) representation across different values of an attribute, and (3) there are many (versus fewer) possible values associated with the attribute.

Along the continuum of homogeneity-heterogeneity, a few configurations of attributes have attracted special attention. One such configuration is the presence of a demographic "token" or "solo" member (see Kanter, 1977). This configuration exists when a nearly homogeneous team includes a single dissimilar member (a lone male on a team of females; a lone accountant on a team of sales personnel). Two other psychologically distinct configurations are the presence of a small minority faction (two members who are similar to each other but distinctly different from the other members of a team) and a bipolar team composition, with two equal-size coalitions (a team composed of 50 percent employees from headquarters and 50 percent employees from a subsidiary). Such configurations can be particularly influential in affecting team dynamics (see Kerr, 1992).

Linking Diversity to Longer-Term Consequences

The conceptual framework presented in this chapter is intended to serve as a stimulant and guide to future research aimed at improving our understanding of how diversity influences work-team dynamics in general and team decision making in particular. The framework presumes that empirical linkages exist between the causal input constructs (at the left in Figure 7.1 and Table 7.1) and the outcome constructs (at the right in Figure 7.1 and Table 7.1). In this section, we introduce the longer-term consequences for all three levels of analysis. Then we review the empirical evidence concerning the linkage between diversity and team consequences. (A subsequent section will describe intermediate linkages, which serve as explanations for why and how team diversity is translated into various longer-term consequences.)

Overview of Longer-Term Consequences

Figure 7.1 and Table 7.1 maintain a distinction between short-term behavioral manifestations, which are assumed to be quite dynamic and subject to change during task performance, and the eventual longer-term consequences of such behaviors, which are presumed to be more enduring. Reflecting a sequencing of effects through time, this distinction calls attention to our assumption that work teams are held accountable for completing tasks. Formal documentation is more likely for these longer-term consequences - especially at the level of team consequences - than for the more ephemeral short-term behaviors. At a point of closure, teams may intentionally pause to reorganize for new tasks, or they may move on to new tasks in an almost seamless continuation. In either case, longer-term consequences are the remnants of a team's past that are carried forward, informally or in institutionalized form, as the team and its members engage in new tasks.

Individual Consequences. For individuals, longer-term consequences arise from experiences within the team, as well

as from experiences with external contacts. The primary task-related consequences for individuals concern personal performance (including speed, creativity, and accuracy); feelings of satisfaction (which may reflect evaluations of one's own performance or the performance of other team members) ; acquisition of knowledge and skills (including those of a technical nature and those related to the management of tangible and human resources) ; and established positions within work communication networks (including those within the team and those that reach beyond the team and into the larger organizational and professional communities). Relations-oriented consequences for individuals concern acquisition of interpersonal knowledge and skills (such as knowledge about how to negotiate, exercise influence, or build support); establishment of one's position within social communication networks (including those within the team and those external to the team); and feelings of satisfaction with established social relationships.

Interpersonal Consequences. At the interpersonal level of analysis, the longer-term consequences of diversity are presumed to be primarily relations-oriented, rather than task-related. Nevertheless, the task-related exchanges and negotiations that are engaged in to bring a previous task to closure may have lingering consequences for new tasks. In particular, two parties may have negotiated terms for expending human and financial resources, terms that place contingencies around future resource expenditures; such an agreement has the potential to change the balance of power between the parties involved. Similarly, the process of carrying out a task can have longer-term relations-oriented consequences, including a new or reestablished status hierarchy for the two entities involved, a new or reestablished balance of interpersonal accounts (political debts and credits), and solidified friendship coalitions that are carried forward.

In order to assess whether and how these individual and interpersonal consequences are affected by team-level diversity, cross-level research designs and analysis are necessary (see Rousseau, 1985). Unfortunately, such research is rare. Nevertheless, one recent study is directly relevant to the question of how team

diversity affects the longer-term individual consequences listed in our taxonomy. In a study of top management teams, a set of seven indicators of team heterogeneity has been found to explain a significant amount of variance in individual turnover, even after controlling for how similar an individual was to the group as a whole (Jackson et al., 1991). This finding underscores the value of including constructs at each of the three levels of analysis included in our taxonomy for conducting studies intended to improve our understanding of the behaviors of individuals in organizational contexts.

Task-Related Team Consequences. For the team as a whole, task-related consequences involve team performance, team satisfaction, and team learning. Team performance is particularly important at the team level because it is likely to have a major impact on how the organization responds to the team and its members. Within the context of the team itself, the team's satisfaction with performance may also have an enduring impact: dissatisfaction may prompt restaffing and reorganization, whereas satisfaction may either energize the team or induce complacency. In addition, regardless of whether a team performs well and regardless of its eventual level of satisfaction, the process of carrying out a task provides opportunities for task-based learning. Such learning, whether related to technical matters or to the management of tangible and human resources, may be an especially important determinant of the team's future effectiveness.

Empirical Evidence Linking Diversity to Longer-Term Team Consequences

Task-Related Team Consequences. The majority of the existing research that is directly relevant to task-related team consequences focuses on the link between team composition and team performance. We have found no empirical studies that examine the linkage between team diversity and other longer-term, task-related consequences, such as team satisfaction with performance or team learning.

Several reviews of basic research that relates team diversity

to creative decision making (and that was conducted mostly in laboratory settings) support the conclusion that team heterogeneity improves performance in terms of decision quality (Filey, House & Kerr, 1976; Hoffman, 1979; McGrath, 1984; Shaw, 1981). This effect has been found for diversity of many types, including personality (Hoffman & Maier, 1961), training background (Pelz, 1956), leadership abilities (Ghiselli & Lodahl, 1958), and attitudes (Hoffman, Harburg, & Maier, 1962; Triandis, Hall, & Ewen, 1965; Willems & Clark, 1971). In addition, a meta-analysis of the evidence from twelve studies of problem-solving suggests that mixed-sex teams outperform same-sex teams (Wood, 1987).

Recently, strategic management researchers interested in improving the functioning of top management teams have also directed attention to linkages between team composition and performance of decision-making teams. Most of the relevant research has been guided by Hambrick and Mason's seminal article (1984) describing an "upper echelons" perspective. Prior to this article, the two views of leadership that predominated in the organizational literature were that leaders are largely irrelevant to an explanation of the organization's performance (the population-ecology argument), and that leadership is an individual activity carried out by the person at the apex of the organizational hierarchy (the traditional leadership perspective). By calling attention to the roles and activities of top management teams, Hambrick and Mason offer a third perspective on organizational leadership. Furthermore, they assert that the demographic composition of top management teams will partially determine team performance. In the special case of top management, team performance is reflected in organization-level indicators, such as competitive strategy and financial effectiveness.

A few published studies provide support for the general thesis that the composition of top management teams predicts the firm's strategic choices and performance. For example, a study of 199 top management teams in the banking industry found that levels of organizational innovation were correlated with team heterogeneity with respect to areas of job expertise (Bantel & Jackson, 1989). Several other studies of top manage-

ment also support the general notion of a link between team composition and performance (Eisenhardt & Schoonhoven, 1990; Finkelstein & Hambrick, 1990; Michel & Hambrick, 1992; Murray, 1989; Singh & Harianto, 1989; Wiersema & Bantel, 1991), but the results of these studies are quite complex and not easily explained by available theories. In keeping with the assumption that studies of team diversity need to consider the embedding systems within which teams operate, a variety of organizational and environmental conditions appear to moderate associations between team composition and performance for top management (for a fuller discussion, see Jackson, 1992a).

Relations-Oriented Team Consequences. The process of carrying out a task can have an enduring impact on team relations. Membership stability (or instability) is one of the most important longer-term relations-oriented consequences. However, even for teams with stable membership, diversity may still produce important relations-oriented consequences. For example, a team will often adopt the social structures (norms and roles) established during performance on a prior task as the baseline when beginning a new task. Therefore, once established, norms and roles may persist indefinitely until changes in task requirements or team membership trigger modifications. Influence networks and friendship networks established during tasks are likely to persist as well.

Most of the existing research relevant to relations-oriented team consequences focuses on the link between team composition and membership stability. During the past decade, several studies have examined the relationship between team composition and team turnover rates. Many of these studies were stimulated by Pfeiffer's discussion (1983) of organizational demography. Pfeiffer speculates that the demographic distribution of employees may "do a better job at explaining variation in the dependent variables than measures of the presumed intervening constructs" (p. 351). These studies have not directly compared the relative predictive power of demographic diversity and the presumed intervening processes referred to by Pfeiffer, but they do support the assertion that team turnover rates are predicted by

demographic composition. In several studies, age or tenure heterogeneity have been shown to be correlated with turnover patterns (Jackson et al., 1991; McCain, O'Reilly, & Pfeffer, 1983; O'Reilly, Caldwell, & Barnett, 1989; Wagner, Pfeffer, & O'Reilly, 1984). In addition, heterogeneity in terms of college alma mater, curriculum studied, and industry experiences has been shown to predict turnover in top management teams (Jackson et al., 1991).

When team composition is studied in laboratory settings, usually temporary teams are concocted for short-term projects, so that membership stability is not in fact a relevant issue. However, team cohesiveness and affective reactions to the team have been studied extensively. These are assumed to be indicative of the potential membership stability of these concocted groups. The pattern of results is generally consistent with the behavioral data from field studies: heterogeneity, in terms of readily detectable and underlying attributes, is associated both with lower cohesiveness and with more negative affective reactions to the team (Jackson, 1992b).

Evidence to support the conclusion that diversity has long-term consequences for friendship networks is plentiful as well. Employees with minority status, in terms of ethnicity or gender, often feel that they face special barriers to informal communication networks (Morrison & Von Glinow, 1990). Their reports are consistent with studies of communication patterns in work organizations, which indicate that demographic diversity is related to lower amounts of communication among co-workers. For example, a study of communication networks in five organizations has found that demographic homogeneity (on the dimensions of authority, education, sex, race, and organizational branch) consistently characterized communication chains, suggesting that diversity decreases communication overall (Lincoln & Miller, 1979). Other studies of communication patterns have shown that informal networks are segregated along demographic lines (Brass, 1984), that formal and informal meetings among peers and with immediate subordinates are lower in racially diverse groups (Hoffman, 1985), and that age and tenure similarities between co-workers predict levels of communication

among project teams of engineers (Zenger & Lawrence, 1989). In keeping with these findings for teams and larger work units, similarity among friendship pairs (homophily) has been found for a variety of readily detectable and underlying attributes, including age, sex, race, education, prestige, social class, attitudes, and beliefs (Berscheid, 1985; Brass, 1984; Byrne, 1971; Cohen, 1977; Ibarra, 1992; McPherson & Smith-Lovin, 1987; Verbrugge, 1977; Zander & Havelin, 1960).

We have found no direct evidence linking diversity to influence networks (research on influence networks is generally scarce). However, it seems likely that diversity would affect influence patterns as well as friendship patterns. This notion is supported by research on attitude change and persuasion, which shows that people are more likely to be influenced by the opinions of demographically and ideologically similar others (McGuire, 1985). Conversely, influence attempts may be more likely to be directed toward others who are dissimilar. In the latter case, diverse teams would be characterized by relatively more, and relatively less effective, influence communications.

The empirical evidence clearly indicates that team composition is related to such longer-term team consequences as performance, membership stability, and friendship networks. Studies of team composition, when conducted in laboratory settings, have generally used groups of strangers brought together to work for a few minutes on a concocted (and often very simple) task that involves problem solving, creative idea generation, or judgmental choices of little importance to the team. By contrast, research conducted in the field has most often used natural groups working as teams on a variety of complex, job-related tasks over extended periods of time. Despite these dramatic differences, research in both settings supports the conclusion that team composition affects both task performance and interpersonal relations. Furthermore, these effects appear to be both complex and variable over the course of time (see Watson, Kumar, & Michaelsen, 1993).

At this time, no single theory explains the full set of established empirical relationships between aspects of diversity and

longer-term consequences. Instead, a variety of theoretical explanations has been offered to account for these empirical findings, reflected in work on expectation states (Berger & Zelditch, 1985), composition of top management teams (Hambrick & Mason, 1984), organizational demography (Pfeffer, 1983), the attraction-selection-attrition model (Schneider, 1987), and group processes (Steiner, 1972). The framework presented in this chapter is consistent with these explanations but does not constitute a fully developed new theory that parsimoniously integrates all the available evidence. As a first step toward the eventual development of such a theory, however, our framework highlights the similarities across these many literatures while suggesting new directions for researchers working within established paradigms. Theoretical support for the proposed linkages is available from widely scattered sources. We turn now to a discussion of this evidence.

Explaining the Linkages

In our framework, the empirical linkages between team diversity and longer-term consequences are explained by two classes of intervening constructs, referred to as *mediating states and processes* and *short-term behavioral manifestations*. Behavioral manifestations can be observed directly. Mediating states and processes must be inferred. Mediating states and processes are also assumed to be more proximally determined by the readily detectable and underlying attributes represented by a team. In this section, we describe our classification system for the mediating states and processes (shown in the second column of Table 7.1) and then consider how these shape the short-term behavioral manifestations (shown in the third column of Table 7.1).

Mediating States and Processes

At the individual level of analysis, social, cognitive, and affective processes are considered the key mediators through which diversity influences behavior. From a psychological perspective, these are the most basic *processes* that serve as explanations for

behavioral manifestations. By comparison, individual, interpersonal, and mediating states represent ambient conditions that affect how these processes unfold and, subsequently, are influenced by the resulting behaviors. Interpersonal mediating states are described by relational constructs that capture the structure of relationships between two entities, whereas team-level mediating states are described by compositional constructs that capture patterns that emerge when more than two entities are compared.

A full understanding of the dynamics of diversity requires a consideration both of situational structures associated with attribute distribution among team members and of psychological processes that explain why and how individuals respond to their situations. For example, in a team of professionals, suppose that the expertise-based status hierarchy reflects the formal credentials of team members. This hierarchy is likely to create performance expectations, which become the basis for a hierarchy of power and prestige (Berger, Conner, & Fisek, 1974; Berger, Fisek, Norman, & Zelditch, 1977) and may induce anxiety in a team member with no relevant formal credentials. This individual's anxiety may decrease her willingness to offer information during discussions. In turn, such behavior would be consistent with the performance expectations for low-status team members. Since this member is now viewed as having no valuable information or resources to offer, others seldom seek information from her, nor do they attempt to negotiate with her for the purpose of eventually forming a consolidated unit. At the team level, status differentials are reflected in sparse (versus dense) communication and influence networks, as well as in unequal (versus egalitarian) resource distribution and use (Ridgeway & Berger, 1986).

As this example and the general causal model portrayed in Figure 7.1 show, mediating states and processes and behavioral manifestations are inextricably intertwined, with each other and across the three levels of analysis. Continuous feedback and reciprocal causation keep the psychological and behavioral systems in flux as continuous adjustments occur. The discussion that follows, which is organized around task-related and relations-oriented phenomena, reflects this systemic interconnectedness.

Task-Related Mediating States and Processes

For individuals, task-related mediating *processes* include information processing and learning. Task-related mediating *states* include the task-based information that a person has at hand, the power to control tangible resources (including those within and external to the team), and the power to control human resources (team members, as well as others who are not on the team). Task-related interpersonal mediating states include differences regarding task-based cognitions, expertise-based status differentials, and differences in power over tangible and human resources. Task-based mediating constructs for teams as wholes include the overall shape of the expertise-based status hierarchy, the pattern of the task-based cognitions represented among team members, and the shapes of the distributions of power over tangible and human resources.

Cognition. Task-based cognitions are especially relevant because decision making is an information-intensive activity. During decision making, the acquisition, representation, and processing of task information take center stage; working through cognitive-based differences is a central activity. Agreement or disagreement (and consensus or dissensus) can occur regarding the content of available information, the structure in which information is organized (often referred to as a cognitive map or model; see Cowan, 1986; Porac & Howard, 1990; Simon, 1987), information processing (including attention to and retrieval of information), and learning.

There is clear support for a relationship between diversity and creativity. The conclusion of the majority of studies in this area is that heterogeneous teams produce more innovative and unique solutions to problems (Jackson, 1992b). This effect is attributed to differences among team members in terms of the perspectives from which a problem is faced and in terms of experience in relevant situations (Haythorn, 1968; Hoffman, 1959; Hoffman & Maier, 1961; Pearce & Ravlin, 1987; Triandis, Hall, & Ewen, 1965).

Although supporting evidence is somewhat scarce (Walsh,

1988), it is widely assumed in the management literature that a person's task-based cognitions are associated with readily detectable task-related attributes. For example, the content of information one has available and one's cognitive maps and models are believed to be associated with organizational tenure and with the functional unit in which one is employed (Hambrick & Mason, 1984; Ginsberg, 1990). Task-related attributes also appear to influence information processing. For example, a person's accrued knowledge and expertise appear to guide what he or she attends to, encodes, and later retrieves (Simon, 1987). Consequently, a team of decision makers can be expected to experience disagreement throughout all phases of the decision process.

Accounts of complex decision making often treat both heterogeneity of perspectives and the resulting disagreements as valued resources that ensure the surfacing and discussion of conflicting opinions, a wide range of possible solutions, and full consideration of the possible consequences that might follow from each solution (Cosier, 1981; Janis, 1972; Schweiger, Sandberg, & Rechner, 1989; Schwenk, 1983). Such discussions can even serve as training forums for individual team members (Laughlin & Bitz, 1975; Nemeth, 1986). However, heterogeneity may become a liability when speed is important. Time pressures may encourage a fragmented team to adopt shortcuts, such as compromises and majority rule, to reach a quick resolution instead of persisting to a creative resolution that is acceptable to everyone. Reliance on compromise or majority rule may decrease team members' acceptance of and enthusiasm for the team's resolution, creating obstacles to decision implementation.

Most studies of team composition and creativity have been conducted in laboratory settings, using simple designs that presume a linear relationship between heterogeneity (on a single attribute) and creativity. The research conducted to date leaves open the possibility that composition influences the solutions that teams produce in more complex ways. For example, if team members are so heterogeneous that there is no basis for similarity, then they may be unable to work together; taking advantage of task-related heterogeneity may require team members

to have some degree of similarity (see Lott & Lott, 1965). A similar notion is advanced by Hoffman (1959), who states that "a diversity of viewpoints must be accompanied by a tolerance for differences of opinion if the group is to exploit its potential creativity" (p. 114). As suggested below by the discussion of relations-oriented phenomena within decision-making teams, tolerance for task-based conflicts may be more common when team members are homogeneous in terms of some nontask attributes.

Status and Power. The texture of interactions observed within decision-making teams is surely not a function of task-based cognitions alone, although these receive the most attention in the decision-making literature. Observed behaviors also reflect differential expertise-based degrees of status, which can vary between equal status (zero differential) and extreme inequality (large differential), as well as power differentials, especially differential power over tangible and human resources. Surprisingly, there is little psychological or organizational research that empirically examines the consequences for decision-making teams of differences in expertise-based status or power over resources, yet few would argue that these are irrelevant to such behavioral manifestations as task-related communications, influence attempts, negotiations, exchanges, consolidations, and the resulting patterns of resource allocation and use. The lack of empirical research on this issue may indicate that most scholars assume that the consequences of expertise-based status and power over resources are straightforward and obvious (that is, rational). Such an assumption ignores the potentially important role of relations-oriented mediating **states**.

Relations- Oriented Mediating States and Processes

At the individual level, relations-oriented mediators include social cognitive processes (such as the operation of stereotypes and schema-based expectancies) and affective reactions (such as attraction, anxiety, fear, guilt, frustration, and discomfort). At the interpersonal level, relations-oriented mediating states in-

elude social familiarity (which can range from very low to very high), diffuse status differentials (which refer to status differences based on such attributes as age and sex, with little or no direct task relevance; see Berger, Cohen, & Zelditch, 1972), differences in social cognitions, and differences in affective responses (such as attraction and anxiety). Relations-oriented mediating states for teams include the stage of team socialization, the shape of the diffuse social-status hierarchy, patterns of social cognitions across team members, and patterns of affective responses found among team members.

Whereas some task-related mediating constructs are routinely called upon to explain behavior in decision-making groups, most relations-oriented mediating constructs receive less empirical attention. Nevertheless, many of the diversity training programs that are currently popular in organizations are based on the assumption that interaction difficulties between members of demographically defined groups (men and women, younger and older employees) are due to differences in relations-oriented underlying attributes, especially behavioral and cognitive styles, values, and beliefs.

Certainly, there is evidence that such differences exist. Differences in achievement scores for members of various cultural groups (Ackerman & Humphreys, 1991), which are reflected in the stereotypes held by the American work force (Fernandez, 1988), have been a topic of much concern and debate in this country. Gender and ethnic differences in nonverbal communication and interpersonal styles seem to be numerous (Cox, Lobel, & McLeod, 1991; Ferdman & Cortes, 1991; Hall, 1984; Triandis, 1993). Gender differences in leadership style (Eagly & Johnson, 1990) and influenceability (Eagly & Carli, 1981; Carli, 1989) exist. Cultural differences in values are increasingly well documented (Triandis, 1993), as are age and cohort differences in work attitudes and values (Elder, 1974, 1975; Rhodes, 1983; Thernstrom, 1973; "Work Attitudes," 1986). Moreover, the majors that students choose and their occupational choices are associated with personality characteristics (Costa, McCrae, & Holland, 1984; Holland, 1976). Such group differences probably account for some of the misunderstandings

and conflicts that occur when people from different backgrounds interact.

But perhaps just as powerful as these actual differences are people's *perceptions* of group-based differences. For example, although the data from several million students indicate that differences in cognitive ability are negligible between males and females (Hyde, Fennema, & Lamon, 1990; Hyde & Linn, 1988), males are generally perceived as more intelligent than females (Wallston & O'Leary, 1981). Assessment-center ratings often yield stereotypic snapshots of men and women, although naturalistic studies find few differences (Eagly & Johnson, 1990). Similarly, although the evidence indicates that the deteriorating effects of age have little impact on intellectual capacity until the seventh decade of life (Labouvie-Vief, 1989), managers appear to denigrate employees who are older than the norm for particular jobs or positions (Lawrence, 1988).

In organizations, such stereotypes are important features of the social landscape, linking components of diversity to decision-making activities in an indirect manner. Readily detectable attributes are features of team members that trigger social cognitions (about the self and others) and affective responses. These in turn directly shape interpersonal relations and patterns of team interaction, thereby influencing the task-related information that is made available, attended to, and used in decision making.

Our taxonomy includes phenomena at three levels of analysis. Nevertheless, most of the relevant research has been conducted at the individual and interpersonal levels of analysis, and our discussion reflects their fact.

Cognitions. For team composition to influence the behavior of team members, differences between and among team members must be perceived and encoded. People more quickly notice and encode differences that are easily detectable (race, sex, age, attractiveness, style of dress, handicapped condition), attending less to differences that are subtle or less detectable (attitudes). Once noticed, differences are encoded automatically, and people are categorized on the basis of these differences (Stangor, Lynch, Duan, & Glass, 1992).

After a person has been categorized, subsequent information about the person is processed in relation to the relevant category, and interactions are shaped by it (Sherman, Judd, & Park, 1989). That is, cognitive structures influence social information processing, including what information is attended to, how quickly it is processed, and how it is organized and retained in memory. Cognitive structures also shape evaluations, judgments, and attributions made about others; consequently, they eventually influence interactions (Markus & Zajonc, 1985; Stephan, 1985).

Team composition (for example, heterogeneity) may elicit errors and biases associated with cognitive structures, such as schemas and stereotype-based expectancies. Because it makes social categories more salient (Turner, 1987), team composition activates the in-group and out-group schemas that provide people with naive hypotheses about what members of different social groups are like and how they will act in specific situations; these tend to be biased in favor of in-group members (Ostrom & Sedikides, 1992; Stephan, 1985). Thus heterogeneity in terms of readily detectable attributes is likely to increase the prevalence of biases that occur when people relate to each other as members of in groups and out groups.

Affect. As already described, numerous studies show that members of homogeneous teams experience more positive affect than members of heterogeneous teams (Levine & Moreland, 1990; Lott & Lott, 1965; O'Reilly, Caldwell, & Barnett, 1989; Zander, 1979). One explanation for this finding is that attitude similarity is positively reinforcing and so serves as an unconditional stimulus that evokes a positive affective response (liking). Attitude dissimilarity, by contrast, evokes a negative affective response. In demographically heterogeneous teams there is presumably a higher probability of attitude dissimilarity among team members than in homogeneous teams.

Clearly, the attitude-similarity explanation for attraction to similar others, which was prevalent two decades ago, presumes that affect follows cognition. An alternative view, currently more prevalent, presumes that affect can precede cognition-

or, as argued by Zajonc (1980), preferences need no inferences. Affect may be directly triggered, along with unintended thoughts, when stereotypes that include affective components are spontaneously activated (see Fiske, 1982; Stangor, Sullivan, & Ford, 1991; Uleman & Bargh, * 1989).

Affective responses may also result from conscious attempts to override automatic-but undesirable- impulses, as suggested by recent research on prejudice and compunction (feelings of guilt and self-criticism). Devine's model (1989) of automatic and controlled components of stereotyping and prejudice asserts that prejudicial thoughts or feelings are experienced even by people whose beliefs are not prejudiced. Stereotypes are automatically activated in the minds of all individuals in the presence of a member of a stereotyped group. To behave in non-prejudicial ways requires conscious and intentional inhibition of an activated stereotype. Even individuals who hold non-prejudiced beliefs may not be fully successful in trying to suppress prejudicial thoughts, feelings, and subtle behavioral signals. When one's beliefs do not match these automatic responses, the result is often a feeling of discomfort (Devine, Monteith, Zuwerink, & Elliot, 1991).

Devine's research suggests that members of heterogeneous teams may be more likely to experience negative affect than members of homogeneous teams. Because stereotypes about other team members are more likely to be activated automatically in heterogeneous teams, team members will have to consciously try to suppress them, and discomfort will be the result.

Research on social stigma sheds additional light on the role of affective responses. Such characteristics as race, physical attractiveness, and handicaps or disabilities have been linked to social stigma in organizations (for a review, see Stone, Stone, & Dipboye, 1992). Stigmatized individuals often experience a variety of negative feelings, including embarrassment, depression, fear, anxiety, and lowered self-esteem (Goffman, 1963). People who are not themselves stigmatized may be apprehensive or fearful about interacting with stigmatized others. Thus, to the extent that a team is heterogeneous in terms of any char-

acteristics linked to stigma, its members can be expected to experience more negative affect.

Short-Term Behavioral Manifestations

Work-team diversity shapes the ways in which team members think and feel about interactions with other team members. These processes serve in turn as partial explanations for both task-related and relations-oriented behaviors.

Short-term behavioral manifestations are generic behavioral phenomena that are observable in work teams. Generally speaking, they include task- and relations-oriented communications, the management of tangible and human resources, and social influence. Through these behaviors, team members work to achieve their objectives and establish relationships, both within the team and with others in the external environment (see Ancona, 1987; Ancona & Caldwell, 1992; Ashforth & Humphrey, 1993; Bowen & Schneider, 1988; Gladstein, 1984; Lin, Bobbins, & Fahr, 1992; Maurer, Howe, & Lee, 1992).

In the broadest sense, the term *communications* refers to the management of task- and relations-oriented information. Communications involve producing, transmitting (sending), and interpreting (receiving) symbols (Roloff, 1987), through verbal as well as nonverbal channels, directly and indirectly, passively and proactively (see Miller & Jablin, 1991). Presumably, employees engage in work-related communications, which involve descriptive and evaluative task information, primarily for instrumental purposes. By contrast, friendship-based communications, which involve social information (that is, support), carry their own intrinsic value (Brass, 1984; Ibarra, 1990). Although communications often involve relatively benign exchanges, influence communications engaged in for the purpose of changing the attitudes, values, beliefs, and behaviors of others are particularly potent, which is why they are highlighted in our taxonomy. Through their communications, work teams manage information, tangible resources (equipment, tools, money), and human resources (skills, effort). Behavioral manifestations related

to all of these activities can be conceptualized at the individual, interpersonal, and team levels of analysis.

Individual Behavior. For individuals, short-term behavioral manifestations can be observed from two perspectives: individuals can be observed acting as agents who initiate action, and/or they can be observed as targets who receive and interpret the actions that others initiate. Our taxonomy includes constructs that reflect both perspectives. Thus, for individuals, task-related behaviors include seeking, offering, and/or receiving work-related information, tangible resources, or human resources; initiating influence attempts; and responding to influence attempts. Individuals' relations-oriented behaviors include seeking, offering, and/or receiving social information and support. Clearly, understanding the forces that shape individuals' influence-related behaviors is essential to understanding teams, for it is primarily through influence processes that a group of individuals becomes transformed into a team capable of coordinated action.

In addition to recognizing that individuals both initiate actions toward others and respond to the actions of others, it is important to recognize that the others involved may or may not be members of the work team. The readily detectable and underlying attributes of team members, in combination with the composition of work teams and their embedding organizations, are important determinants of behaviors within a team. They can influence behaviors that link team members to the external environment. For example, the demographic composition of a work team can have important implications for managing one's identities and the interface between work and non-work (Bell, 1990). It can also affect the extent to which other organizational members are sought out as sources of information and advice (Ibarra, 1992; Zenger & Lawrence, 1989).

Interpersonal Behavior. When behavior is conceptualized as an individual-level phenomenon, it is often isolated from the interpersonal context in which it occurs. Moving to the interpersonal level of conceptualization requires viewing behavior as coordinated. Various types of coordinated action are possi-

ble, including exchanges, negotiations, and consolidation. These are treated as conceptually distinct from each other in our framework, although they may be difficult to untangle in natural settings.

A minimal amount of coordination is required in order for two entities to carry out an *exchange*. Indeed, when information and affect are transmitted through nonverbal channels, exchanges often occur even when they are not intended.

The give-and-take process of *negotiation*, which is the interpersonal analogue of influence attempts initiated and responded to by individuals, generally involves greater coordination than a mere exchange. As noted by Neale and Northcraft (1991), negotiation is "a joint interdependent process that entails coordinated action of parties with nonidentical preference structures [that] ... results in the allocation of resources" (p. 148). Negotiations usually precede and often are an integral part of instrumental task-related exchanges.

Consolidation occurs when entities join to form coalitions—presumably, because they have reached a state of agreement. The construct of consolidation is seldom used by researchers who study group processes, however; instead, research and theory typically emphasize the opposite end of this behavioral dimension. That is, rather than focusing on consolidation as a behavioral manifestation of agreement, research often focuses on conflict, which is associated with disagreement. We have intentionally avoided use of the term *conflict* in our framework, given the ambiguity that surrounds this construct (see the entire May 1992 issue of *Journal of Organizational Behavior*). One source of this ambiguity is the general failure to distinguish between mediating states and processes (agreement and disagreement, power differentials) and behavioral manifestations associated with these states and processes (negotiation, consolidation).

Task-related exchanges, negotiations, and consolidations can all involve task-related information, tangible resources, and/or human resources (effort or skill). Relations-oriented exchanges and social consolidations (friendship units) involve social information and/or social support. The fact that relations-oriented negotiations are not included in our framework reflects

the assumption that negotiations seldom precede expressive exchanges of social support and social information.

Team Behavior. Conceptualizing behavior at the level of the teams as a whole requires us to identify the patterns that characterize the total set of individual and interpersonal behaviors occurring within the team. For task-related and relations-oriented communications, behavioral manifestations can be described with the terminology of network analysis. Examples of useful measures for describing group communication patterns include heterogeneity, multiplexity, density, and stability (see Burt, 1982; Granovetter, 1973). Unfortunately, terminology and measurement conventions for describing patterns of behavior related to the allocation and use of human resources and tangible resources are less well developed, at least in the social sciences. It should be feasible to adapt network analysis to this purpose, however. Alternatively, measurement and tracking procedures used by researchers in operations management might be adapted. Thus, just as the measurement of team-level diversity is problematic, progress must be made regarding how to empirically assess team-level resource use and allocation before a full understanding of the dynamics of diversity can be achieved. With the major types of behavior that occur within work teams identified, it is now possible to explore how the mediating states and processes translate aspects of diversity into observable behaviors in work teams.

Behavioral Manifestations of Social Cognitions. Individuals are biased toward collecting expectancy-confirming information, and they evoke behavior that matches their expectancies (Jones et al., 1984; Snyder, Tanke, & Berscheid, 1977). For example, if team members hold the stereotype-based expectation that similar others are more likely to share their perspectives than are dissimilar others, then team members may selectively initiate and reciprocate self-disclosing interactions with those who are similar to them in age, gender, or ethnicity. Such disclosures in turn create understanding among similar team members and facilitate the creation of a shared perspective (that

is, they facilitate consolidation). At the same time, because self-disclosures are made selectively to similar others, understanding is more difficult to establish between dissimilar others.

In heterogeneous teams, these processes are likely to create cliques of demographically similar teammates, with schisms separating these cliques. Because heterogeneous teams contain more out groups than do homogeneous teams, we can also expect in-group biases to have more influence on task-based and social interactions within heterogeneous teams. Thus several predictions can be made about team composition, in-group biases, and behavior, as follows: Members of heterogeneous teams will seek, offer, and receive information and resources (both tangible and human) from fewer team members than will members of homogeneous teams. When they do seek, offer, or receive information or resources, it will more likely be from in-group members than from out-group members. Similarly, interpersonal exchanges of information and resources will occur between fewer dyads in heterogeneous teams than in homogeneous teams, and when they do occur, they will more likely be between in-group members than between in-group members and out-group members. Given these dynamics, task-based and social consolidations probably occur at lower rates within heterogeneous teams, as compared to homogeneous teams.

Studies of communication networks in work organizations tend to support this view of how team composition affects behavior. For example, studies of communication patterns have shown that work-related communications between men and women are less frequent in units that are more diverse with respect to sex (South, Bonjean, Markham, & Corder, 1982), that formal and informal meetings among peers and with immediate subordinates are lower in racially diverse groups (Hoffman, 1985), and that age and tenure similarities between coworkers predict levels of communication among project teams of engineers (Zenger & Lawrence, 1989). The studies just cited all assess the amount of communication, not the nature of the communications, that occurred within work groups. Much of the research relevant to understanding the consequences of diversity for the nature of communications has been conducted to

test hypotheses from expectation-states theory, which emphasizes the formation and consequences of status hierarchies (Berger, Cohen, & Zelditch, 1966, 1972).

Occupational attainment and income are indicators of status in our society. In the United States, sizable sex-, age-, and ethnicity-based differences in both income and occupational level are well documented, and decades of national opinion polls and psychological research on prejudice and discrimination show that subjective attitudes and status hierarchies mirror the economic and educational status indicators (Jaffe, 1987; Johnston & Packer, 1987; Katz & Taylor, 1988; Kraly & Hirschman, 1990; Markides, 1983; Bragger, 1985; *Chronicle of Higher Education*, 1992). Furthermore, there is some evidence that some members of ethnic minority groups internalize the majority group's view of their status (Jones, 1990; Rice, Ruiz, & Padilla, 1974).

Substantial evidence indicates that demographic cues trigger status assignments quickly, and that unfairly low (nontask) status assignments prove difficult to undo (Ridgeway, 1982), in part because the behavioral effects of initial status attributions are so pervasive. These and related findings have been established through empirical tests of the theory of status characteristics and expectation states (Berger, Cohen, & Zelditch, 1966, 1972). Although there is a debate within this literature regarding the processes that lead to status hierarchies, the fact that status is usually correlated with performance-irrelevant demographic characteristics is generally acknowledged (Ridgeway, 1987). Compared to those with lower status, higher-status persons display more assertive nonverbal behavior during communication, speak more often, criticize more, state more commands, and interrupt others more often. They have more opportunity to exert influence, attempt to exert influence more, and actually are more influential. Moreover, they are evaluated more positively and have higher self-esteem (Levine & Moreland, 1990). Some of these results have been found in children as well as in adults, suggesting that status cues are learned early in life (Cohen, 1982). Although studies of the effects of status differentials often involve observing dyadic communication patterns in laboratory settings, results of such studies ap-

pear to generalize to work teams. In a study of 224 R&D teams in twenty-nine large organizations, Cohen and Zhou (1991) found that, even after controlling for performance, higher status was attributed to males than to females.

Findings such as these suggest that participation in and input on task-related decision-making activities is likely to be unequal among members of teams characterized by greater status differentiation, with lower-status members participating less. Because demographics are the cues used in the initial assignment of status, differentiation occurs whenever demographic diversity is present. To the extent that status hierarchies do not match distributions of task-relevant expertise, unequal participation rates are likely to interfere with the team's performance because available resources will not be fully utilized. Teams may assign roles that are consistent with stereotypes, rather than with the actual underlying attributes of team members, and this tendency may lead to inappropriate assignment of roles and responsibilities.

Behavioral Manifestations of Affect. **It** is difficult to separate definitively behavioral consequences due to affect from those due to social cognition, and so it is likely that affect partially explains some of the behaviors we discussed in the section on social cognition. In addition, however, affect seems to have other interesting effects. Before we discuss these, two caveats are needed. First, most of the research on the relationship between affect and behavior focuses on positive affect, whereas the affective consequences of diversity tend to be negative. Moreover, positive and negative affect are considered to be independent dimensions (Watson & Tellegen, 1985), and so it cannot be assumed that the consequences of negative affect are the opposite of those of positive affect. Second, positive affect is typically induced in these studies by offering "small pleasures" (juice and cookies are available; the person "finds" a dime) to the participants in a study. For the sake of discussion, we will assume that the consequences of positive affect induced through these means are generalizable to situations in which positive affect is induced in other ways (for example, being with people one likes).

Among other consequences, positive affect promotes helping behavior and generosity, cooperation, and a problem-solving orientation during negotiations (for a review, see Isen & Baron, 1991). Helping (or prosocial) behaviors inherently involve the sharing and/or redistribution of resources, such as those referred to in our taxonomy, including information, tangible resources, and human resources (effort and time). Thus helping is likely to be beneficial in many types of work situations, as when it takes the form of mentoring (Kram, 1985) or generally offering assistance to colleagues. When positive affect occurs in the form of attraction to team members, it may be translated into greater motivation to contribute fully and perform well as a means of gaining approval and recognition (Festinger, Schächter, & Back, 1950). Conversely, anxiety may inhibit a person's participation in team activities (Allen, 1965; Asch, 1956).

For decision-making teams, studies of how affect influences negotiations are of particular interest. In these problem-solving situations, where flexible and creative thinking can lead to more effective resolutions than compromise can, positive affect is likely to be particularly beneficial for improving performance. For example, in a study of dispute resolution, negotiators who were induced to feel positive affect reached agreement more often, broke off from discussion less often, cooperated more, obtained better outcomes, and evaluated other negotiators more favorably by comparison to negotiators in a control condition (Carnevale & Isen, 1986). There was also some evidence that communication was more effective when positive affect was induced.

Descriptions of why and how the demographic diversity of groups can be expected to influence their internal processes and performance are often predicated on the assumption that demographic attributes are associated with a number of underlying characteristics, including abilities, behavioral styles, personalities, and attitudes and values. Many such associations do indeed exist, but they are often weak, and there are many holes in our knowledge.

The frequent assumption that demographically diverse work teams are also diverse in terms of underlying attributes

(knowledge structures, behavioral styles) is supported only by logical extension of the findings for population-group differences. Generalizations based on population-level differences may not hold for decision-making teams within a particular organization, however, for all team members are likely to have passed through several screens designed to reduce variance in ability levels and perhaps also in behavioral styles, values, and attitudes (Schneider, 1987). Thus there is good reason to believe that the variation in the underlying attributes represented in demographically diverse work teams may actually be less than would be inferred on the basis of data showing correlations between demographics and underlying attributes in the general population. Clearly, the major conclusion to be drawn from the literature reviewed here is this: to understand and predict how diversity is likely to manifest itself in short-term behavior, attention must be paid both to readily detectable and to underlying attributes, including those that are task-related and those that are relations-oriented.

The same conclusion does not follow for perceived diversity, however. Here, the data indicate that perceptions of demographically based differences exaggerate true differences. Furthermore, the experiences of many organizations regarding affirmative action indicate that, regardless of actual practice, employees often do not believe that selection criteria are applied equally to all demographic groups. Consequently, it is likely that members of demographically diverse teams perceive greater diversity along the underlying dimensions than actually exists. These perceptions may be the more powerful determinants of behaviors.

Conclusion: Implications for Research and Practice

This chapter has offered an organizing framework for the study of diversity in work teams and described causal model that specifies relationships among the primary constructs in the framework. The framework's constructs are organized into four general categories, which correspond to their presumed roles in the general causal model. The general causal model, which subsumes

the constructs within the framework, has several features: it acknowledges that work teams operate within broader organizational and societal contexts; it spans multiple levels of analysis (individual, interpersonal, team, and organizational); it reflects the basic assumption that all psychological and behavioral phenomena in work teams are jointly influenced by concerns about both tasks and social relationships; it differentiates between readily detectable and underlying aspects of diversity; it recognizes that the dynamics of diversity produce a set of longer-term consequences, for the team and the organization as a whole, that extend temporally beyond the completion of a task or even beyond the life of the team; and it is generally applicable to a broad range of different types of work teams.

Our model defines a number of paths through which diversity is hypothesized to exert its effects. As our review has shown, however, the amount of available evidence is sparse for some paths within the model. A systematic program of research is needed to fully explicate the relationships among constructs in the model. At the general level, research is needed to determine whether the mediating states and processes provide adequate explanations for the effects of diversity on short-term behavioral consequences. Such research should address primarily causal paths, depicted by the horizontal dimension of the model. In addition, although several studies have investigated the consequences of team composition for the outcomes of performance and membership stability, there is little research on the effects of team composition on other longer-term, task-related consequences, such as satisfaction with performance and learning. Future research should attempt to fill these gaps.

Research is also needed on the vertical aspects of the model and should focus on cross-level effects. For example, the composition of a team can be expected to influence the salience and potency of the cognitive and affective reactions of individual team members. The behaviors of individual team members also can be studied as determinants of both changes in team composition and patterns of information and resource allocation.

To improve our understanding of whether and how different dimensions of diversity affect team processes and outcomes differently, research designs are needed that simultaneously as-

sess several dimensions of diversity. An implicit assumption of much of the early research on team composition was that different dimensions of diversity are associated with similar outcomes. For simplicity, we have adopted this assumption in some of our discussions in this chapter. However, the available evidence indicates that heterogeneity of personal attributes and heterogeneity of skills and abilities may have different consequences for teams (Jackson, 1992b). Future research might focus more specifically on identifying the effects of the full range of diversity dimensions, as well as multidimensional patterns of diversity. For example, it is not known how the readily detectable and underlying attributes, in combination, affect team processes and performance over the course of a team's life.

In developing our framework, we were guided primarily by the research literature, rather than by accounts in the popular media, where recently the dynamics of diversity have been discussed at length. Nevertheless, the framework presented here is intended not only as an aid to research but also as a resource for practitioners as they design, implement, and evaluate "managing diversity" initiatives. At the most general level, our discussion reinforces the importance of adopting a systems perspective when dealing with the issue of diversity. To manage diversity effectively requires understanding a multidimensional, multilevel, dynamic, and complex social system. As one consultant aptly puts it, "If you think managing diversity' is *a program*, you don't get it" (Miller, 1992, p. 27). Specifically, a deeper understanding of three issues will enable organizations to manage diversity more effectively: (1) the different types of diversity that can characterize work teams, (2) the dynamics of diverse teams, and (3) the consequences of diversity for individuals, teams, and the organization as a whole.

Types of Diversity

Many organizations use the term *diversity* to refer only to demographic differences among employees, with sex and ethnicity being the dimensions of greatest concern. As shown in our framework, however, diversity of many types characterizes teams in

organizations, and differences along both readily detectable and underlying dimensions may produce consequences for the team. Increased awareness of the different dimensions of diversity should sensitize organizations to the many dynamics and outcomes associated with a team's total diversity. Consider a team of white males that is having difficulty coming to consensus on solutions to organizational problems. An organization that recognizes only sex and ethnicity as important dimensions of diversity may not consider diversity as a possible cause for the team's problems. However, recognition that diversity includes differences among team members in terms of job knowledge, behavioral styles, values, and beliefs, for example, opens up a new perspective for viewing this problem and makes it more likely that the organization will make an appropriate decision about whether and how to intervene, as well as about how to assess the total consequences of any intervention.

Dynamics of Diversity

Understanding the dynamics of diversity in work teams helps organizations manage the consequences of diversity by providing guidance in the choice and/or development of interventions. By using the framework to identify the processes and / or behaviors underlying the consequences of diversity, the organization can more accurately target interventions to the source of the problem[^]). For example, the mediating states and processes outlined in the framework include affective responses, such as attraction and anxiety. When team members report high levels of anxiety associated with their participation in team activities, the framework enables the organization to consider diversity as a possible cause of the anxiety and to respond accordingly, with an intervention directed at managing anxiety *about diversity*, rather than just at managing anxiety.

Consequences of Diversity

The framework alerts practitioners to the wide range of team consequences that are potentially diversity-related processes and suggests how those consequences may be linked to diversity-related

processes and behaviors. For example, when team membership is unstable, one can consider diversity as a possible cause. Then, using the framework as a guide, one can try to determine which diversity-related processes (stereotyping, anxiety) and/or behaviors (decreased exchange of information and resources) may be contributing to this instability. Identification of these processes and behaviors can then inform one's intervention strategy.

These hypothetical examples illustrate how the framework and model presented in this chapter can be used to systematically analyze whether and how the dynamics of diversity may account for some observed organizational phenomena. Clearly, however, our model is most appropriately used as a guide to generating hypotheses, rather than as a source of answers for effectively managing a diverse work force.

Furthermore, regardless of whether one's purpose in generating hypotheses is to guide research or inform practice, one's analysis will be incomplete unless unique organizational and societal conditions are taken into condition. Relevant organizational conditions may include the entire set of human resource management practices that impinge on a team, the composition of the organization(s) in which a team is embedded, historical context, organization culture(s), structures, and technologies. Relevant societal conditions may include the degree of ethnic and racial segregation that exists in housing and education, the general level of social unrest, ongoing debates about legislation that makes the conditions of a particular subgroup particularly salient or that is construed as targeted toward shaping relationships between particular groups, interventions (political, military, humanitarian) in countries considered "home" to a substantial portion of immigrants residing in the country, and so on. It is impossible to reflect here on the roles of all these organizational and societal conditions, but the imperative to manage diversity effectively makes it essential for these conditions to inform future diversity-based research and practice.

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