

2010

## Group Processes

Donelson R. Forsyth  
*University of Richmond*, [dforsyth@richmond.edu](mailto:dforsyth@richmond.edu)

Jeni Burnette

Follow this and additional works at: <http://scholarship.richmond.edu/jepson-faculty-publications>



Part of the [Social Psychology Commons](#)

---

### Recommended Citation

Forsyth, Donelson R., and Jeni Burnette. *Advanced Social Psychology: The State of the Science*. Edited by Roy F. Baumeister and Eli J. Finkel. Oxford: Oxford University Press, 2010. 495-534.

This Book Chapter is brought to you for free and open access by the Jepson School of Leadership Studies at UR Scholarship Repository. It has been accepted for inclusion in Jepson School of Leadership Studies articles, book chapters and other publications by an authorized administrator of UR Scholarship Repository. For more information, please contact [scholarshiprepository@richmond.edu](mailto:scholarshiprepository@richmond.edu).

## Chapter 14

### *Group Processes*

Donelson R. Forsyth and Jeni Burnette

Social behavior is often group behavior. People are in many respects individuals seeking their personal, private objectives, yet they are also members of social collectives that bind members to one another. The tendency to join with others is perhaps the most important single characteristic of humans. The processes that take place within these groups influence, in fundamental ways, their members and society-at-large. Just as the dynamic processes that occur in groups—such as the exchange of information among members, leading and following, pressures put on members to adhere to the group's standards, shifts in friendship alliances, and conflict and collaboration—change the group, so do they also change the group's members. In consequence, a complete analysis of individuals and their social relations requires a thorough understanding of groups and their dynamics.

### **Studying Groups**

Audiences, bands, cliques, clubs, committees, crews, crowds, congregations, dance troupes, families, fraternities, gangs, juries, military squads, mobs, orchestras, professional associations, queues, support groups, and teams are just a few of the groups that enfold and surround us. But do all of these collections of people qualify as groups in the social psychological sense of the word?

Groups differ from one another in many ways. Some, such as the crew of an airliner or students in a graduate seminar, are small, but others are so large they include thousands of members. Some groups form spontaneously and exist only briefly, whereas others are deliberately created, elaborately structured, and enduring (Arrow, McGrath, & Berdahl, 2000). Some, such as teams, are devoted to accomplishing tasks, whereas others seem to have no clear purpose. Despite these wide variations, groups sustain and are sustained by relationships among their members. A family is a group because the members are connected, not just genetically, but by social and emotional bonds. People who work together are linked not only by the tasks that they must complete collectively, but also by friendships, alliances, and shared antagonisms. Thus, a group is two or more individuals who are connected by and within social relationships (Forsyth, 2010).

### *Perceiving Groups*

Not all collections of individuals are groups. People waiting on a subway platform may, for example, just be a set of individuals gathered together by chance as they wait for a train. But they may be a group, particularly if the same individuals tend to gather at the same platform at the same time each workday to catch the same train (Milgram, 1992). Groups, then, are as much subjective, social reality as they are objective, physical reality. As the concept of *entitativity* suggests, perceptual factors such as similarity, proximity, and common fate influence both members' and nonmembers' perceptions of a group's unity (Campbell, 1958). When members are similar to one another, frequently together rather than apart, and experience shared outcomes then most would conclude the aggregation is an entity—a group.

People's intuitive distinctions among various kinds of groups hinge, to an extent, on variations in entitativity. People are more likely to consider aggregations marked by strong bonds between members, frequent interactions among members, and clear boundaries to be groups, but they are less certain that aggregations such as crowds, waiting lines, or categories qualify as groups (Lickel, Hamilton, Wierzchowska, Lewis, Sherman, & Uhles, 2000, Study 3). The four basic categories of groups in Table 14.1—small intimate groups, more socially oriented groups, collectives, and categories—capture most people's thinking with regard to groups and associations, but the line between group and nongroup is often a fuzzy one.

These intuitive construals, even though subjective, influence how people respond to social collectives. A collection of individuals literally becomes a

TABLE 14.1 Four Types of Groups

<i>Type of Group</i>	<i>Characteristics</i>	<i>Examples</i>
Primary groups	Small in size, moderate in duration and permeability, but characterized by substantial levels of interaction among the members, who considered them to be very important to them personally	Families, romantic couples, and close friends, street gangs
Social groups	Groups in public settings, such as employment settings and goal-focused groups in a variety of nonemployment situations	Employees at a restaurant, people who work in a factory, committees, support groups, juries, study groups
Associations	Aggregations of individuals that formed spontaneously; some last only a brief period of time and have permeable boundaries, whereas others are marked by very weak relationships among members or very limited interaction among them	People gathered at a bus stop waiting for the next bus; an audience in a movie theater, residents in a large neighborhood, students in a large college class
Categories	Aggregates of individuals who were similar to one another in terms of gender, ethnicity, religion, and nationality	"Women," "Catholics," "lawyers," "Canadians," "feminists"

Source: Forsyth (2010).

group when the members, or others outside the group, label the collective a group. Group members are much more likely to identify with such groups (Castano, Yzerbyt, & Bourguignon, 2003), and this tendency is particularly strong when people feel uncertain about themselves and the correctness of their beliefs (Hogg, Sherman, Dierselhuis, Maitner, & Moffitt, 2007). When, for example, researchers regularly reminded individuals working in isolation that they were members of a group they eventually accepted the label of group and felt badly when told their group had performed poorly (Zander, Stotland, & Wolfe, 1960). Groups that are high in entitativity tend to be more cohesive groups (Zyphur & Islam, 2006) and their members report enhanced feelings of social well-being (Sani, Bowe, & Herrera, 2008). Entitativity is also related to both stereotyping and prejudice, since it influences perceivers' perceptions of people who are members of groups and categories (Rydell, Hugenberg, Ray, & Mackie, 2007). When perceivers think an aggregate of individuals is a group they are more likely to treat it like a group, and this treatment increases the group's actual unity (Alter & Darley, 2009).

### *The Reality of Groups*

Scholars have debated the connection between the individual and the group for centuries. When the social sciences such as psychology and sociology emerged as their own unique disciplines in the late 1800s, each one recognized the importance of understanding group processes, but with that shared focus on groups came differences in *level of analysis*. Some researchers adopted an *individual-level perspective*, for they considered people to be autonomous, self-reliant creatures who struggle against the group's influence. Others favored a *group-level perspective* that assumed each person is a constituent in an encompassing group, organization, or society, and that each person's reactions shape and are shaped by the group and its processes (Steiner, 1974). Reconciling these two potentially compatible views is, in many respects, social psychology's "master problem" (Allport, 1962).

The group-level explanation of people's thoughts, emotions, and actions is not as intuitively appealing as an individual-level analysis to those who are acculturated to a Western world view. Even though people speak of concepts such as teamwork, synergy, leadership, and cliques in their discussions of contemporary issues, they tend to translate these group-level processes into individualistic ones. Displaying a kind of group-level *fundamental attribution error* (FAE)—the tendency to assume other people's actions are caused by their personal, individual qualities rather than external, situational forces (Ross, 1977)—perceivers are slow to admit that an explanation that stresses group-level causes is as accurate as one that stresses individualistic causes. In consequence, they are often surprised when the same individual acts differently when he or she changes groups; after all, if personal, individualistic qualities are the primary causes of behavior then group-level process should play only a minor role in determining outcomes (Darley, 1992).

A multilevel perspective amends these tendencies by recognizing the profound impact of groups on members' thoughts, feelings, and actions (Forsyth & Burnette, 2005). Repeatedly researchers have discovered that cognitive processes are not private and personal but shared and interpersonal. People base their estimates and opinions on the statements made by other group members rather than on evidence of their own senses (Asch, 1957; Sherif, 1936). Groups prompt their members to endorse certain ideas and attitudes, and even non-conformists tend to eventually take on the standards of the groups to which they belong (Newcomb, 1943). Disagreeing with other members can trigger cognitive dissonance, and as a result people's thoughts change to reduce this unpleasant mental state (Matz & Wood, 2005). People also process information collectively, through discussion and other group communication processes, and so basic cognitive processes such as planning, evaluating, judging, decision

making, and problem solving are undertaken, not by individuals, but by groups (Hinsz, Tindale, & Vollrath, 1997).

Turning to emotions, groups directly and indirectly influence members' affect and emotional adjustment. Members' feelings about themselves and their identities depend on inclusion in social groups that sustain their sense of satisfaction and well-being. Groups create affectively rich relationships between people and they are often the source of the motivational drive needed to accomplish difficult, taxing goals. Emotions are also sometimes contagious in groups, with the feelings of one individual passing rapidly from one member of the group to the next. These group-level emotions become more intense when individuals identify with their group, and can be shared among members who did not even experience the emotion-provoking event (Smith, Seger, & Mackie, 2007; Vider, 2004). Even members of more task-focused groups, such as teams and task forces, become increasingly similar in their overall mood the longer they remain together (Kelly, 2001).

Group influence is perhaps most conspicuous at the behavioral level. People, both knowingly and unwittingly, will amend their actions and preferences to match the actions of others (Semin, 2007). Groups can literally transform their members, to the point that the behavior of a person in a group may have no connection to that person's behavior when alone. Milgram's work (1963), for example, can be considered a study of group influence, for once the participants took their place in a hierarchical group structure, they obediently followed the orders of the group's leader. Similarly, individuals who join religious or political groups that stress secrecy, obedience to leaders, and dogmatic acceptance of unusual or atypical beliefs (cults) often display fundamental and unusual changes in behavior (Kelman, 2006).

### *A Multilevel Perspective on Groups*

Rather than favor either an individual-level perspective or a group-level perspective, a multilevel approach assumes group dynamics are shaped by processes that range along the micro-meso-macro continuum. *Microlevel* factors include the qualities, characteristics, and actions of the individual members. *Mesolevel* factors are group-level qualities of the groups themselves, such as their cohesiveness, their size, their composition, and their structure. *Macrolevel* factors are the qualities and processes of the larger collectives that enfold the groups, such as communities, organizations, or societies. Groups, then, are nested at the mesolevel where the bottom-up microlevel variables meet the top-down macrolevel variables (Hackman, 2003).

A multilevel approach requires that social psychologists share the study of groups with researchers in a variety of scientific disciplines and professions.

Groups were originally studied primarily by social psychologists within psychology and sociology, but in time investigators in other fields—communication studies, organizational behavior, political science, economics, and anthropology—began to explore issues related to group formation, processes, and performance. For example, those who study organizations discovered that these larger social entities actually depend on the dynamics of small subgroups within the organization. Social scientists examining global issues such as the development and maintenance of culture found themselves turning their attention toward small groups as the unit of cultural transmission. Researchers in business and industry interested in workgroups and teams drew heavily on studies of groups performing tasks in the laboratory. Social psychology can claim the group as one of its key subjects of study, but it must share groups with all the other social sciences, including sociology, anthropology, economics, and business.

The multilevel approach also requires that researchers implement specialized methodological and statistical procedures in their work. Because the individuals they study are nested in groups that are also nested in organizations, researchers must be careful not to attribute effects caused by group-level processes to individual-level processes and vice versa. If data are collected from individual group members, researchers must check for group-level interdependencies by computing intraclass correlations (ICC), average deviation scores (e.g., rWG scores), or within-and-between analysis (WABA) statistics. These analyses will indicate if the individual can serve as the unit of analysis or if interdependency among the members' data make aggregated group-level analyses more appropriate. Advanced statistical procedures, such as hierarchical linear modeling (HLM), are capable of disentangling cause-effect relationships and processes that operate simultaneously at two or more levels (Zyphur, Kaplan, & Christian, 2008). These advances, taken together, highlight the growing methodological sophistication of group researchers as they identify ways to deal with the challenge of studying individuals nested in groups (Sadler & Judd, 2001).

## Group Formation

Groups form through a combination of personal, situational, and interpersonal processes. Some people are more likely than others to seek the company of others, and when they do a group is born. Groups also come into existence through deliberate planning or when the press of environmental circumstances brings people together, repeatedly, and these associations kindle attractions (Correll & Park, 2005).

### *Attachment to Groups*

Baumeister and Leary (1995) suggest human's tendency to seek social connections and avoid isolation is generated by a basic *need to belong* to social groups: All "human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and impactful interpersonal relationships" (p. 497). People's need to belong is thoroughly satisfied by a group that actively seeks them out, but any group that accepts the person is preferred to one that refuses to permit entry (Leary, 2007). Individuals who are made to feel as though they will be excluded from groups display a number of dysfunctional side-effects, including increased aggression, risk-taking, procrastination, and tentativeness when interacting with others (Blackhart, Nelson, Knowles, & Baumeister, 2009; Burnette & Forsyth, 2008; Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007).

Although few individuals live out their lives isolated from others, people differ in their proclivity to seek out and maintain group memberships. This difference is due, in part, to past experiences, for those who report prior positive outcomes are more likely to seek out membership in the future (Brinthaup, Moreland, & Levine, 1991; Pavelshak, Moreland, & Levine, 1986). Personality differences also influence the willingness to join groups. Extraversion, a key aspect identified in most theories of personality, is a particularly influential determinant of group behavior (Asendorpf & Wilpers, 1998). Extraverts may seek out groups because such interactions are stimulating and they appreciate stimulating experiences more than introverts (Eysenck, 1990). Groups may also seek out extraverts rather than introverts. Some qualities, such as intelligence, morality, and friendliness, are difficult to judge during initial encounters, but observers are particularly good at detecting extraversion in others (Albright, Kenny, & Malloy, 1988).

Attachment orientation is another important predictor of who joins groups (Smith, Murphy, & Coats, 1999). For example, individuals who are anxious about their group experiences—particularly those who feel they are unworthy of membership—will eschew group membership. People with anxious group attachment styles also spend less time in their groups, engage in fewer collective activities, and are less satisfied with the level of support they receive from the group. Those with avoidant group attachment styles report feeling that the group is less important to them and spend more of their time alone rather than with others (Brown, Silvia, Myin-Germeys, & Kwapil, 2007).

### *Affiliation in Groups*

Festinger (1950, 1954), in his theory of social comparison, suggested that people affiliate with others because other people are excellent sources of



information about social reality. When people find themselves in ambiguous situations, conventional sources of information do not provide enough information to erase their doubts and apprehensions. In such cases, they join with other people to compare their personal viewpoint to those expressed by others, and so determine if they are "correct," "valid," or "proper" (Forsyth, 2000).

Schachter (1959) confirmed the informational value of groups for members in a series of studies of women's reactions when they were led to believe they would be given electric shocks. In one study the women in the low-anxiety condition were told the shocks would be so mild that they would "resemble more a tickle or a tingle than anything unpleasant" (p. 14). However, those in the high-anxiety condition were told that the shocks would be painful. When given the choice to wait alone or with others, 63% of the women in the high-anxiety condition chose to wait with others, compared to only 33% of the women in the low-anxiety condition. Schachter (1959) concluded: "Misery loves company". In a second study some women who expected to receive painful electric shock were given the opportunity to wait with other women who were about to receive shocks. Those in the control condition were told they could wait with women queuing to meet an advisor. Schachter felt that if the women believed that the others could not provide them with social-comparison information, there would be no reason to join them. The findings confirmed his analysis, leading him to conclude, "Misery doesn't love just any kind of company, it loves only miserable company" (p. 24).

### *Social Identity and Groups*

Other group members are not only fonts of information during times of uncertainty but sources of identity and self-definition. Groups are often very willing to provide members with descriptive feedback about their personal qualities and capabilities, and so can correct misperceptions and enhance self-authenticity. Additionally, a substantial portion of the sense of self entails group-level qualities and characteristics. This collective self or social identity includes all those qualities that spring from one's membership in social groups: families, cliques, neighborhoods, tribes, cities, countries, regions. Even demographic qualities, such as sex or age, can influence the collective self provided group members categorize themselves on the basis of these qualities. Social identity theory assumes that people ascribe the characteristics of the typical group member to themselves when the group becomes central to their identity (Hogg, 2001).

Groups also provide a variety of means for maintaining and enhancing a sense of self-worth. Because the self-concept is defined, at least partially, by the groups to which people belong, joining prestigious or successful groups can

boost self-esteem (Branscombe, 1998). Adolescents, for example, often seek out membership in high-status cliques, and those who manage to gain acceptance report feeling very satisfied with themselves and their group (Brown & Lohr, 1987). Individuals are more interested in joining and maintaining membership in groups that succeed at the tasks they attempt rather than fail (Leary & Forsyth, 1986). In consequence, personal self-esteem is linked to *collective self-esteem*: a person's assessment of the quality of the groups to which he or she belongs (Crocker & Luhtanen, 1990).

### *Groups and Survival*

By joining with others in groups, members satisfy not only their need for self-worth but also their need for belonging, information, control, and identity. Moreland (1987), in his theory of social integration, concluded that groups tend to form whenever “people become dependent on one another for the satisfaction of their needs” (p. 104). The advantages of group life may be so great that humans may be genetically ready to prefer membership in a group to isolation. From an evolutionary psychology perspective, because groups increased humans' overall fitness for countless generations, individuals who carried genes that promoted solitude seeking were weeded out, whereas those with genes that prompted them to join groups survived. This process of natural selection culminated in the creation of a modern human who seeks out membership in groups instinctively (Buss, 1996; Simpson & LaPaglia, 2010; Van Vugt & Schaller, 2008).

### **Networks of Association**

Group behavior is usually orderly and predictable rather than disorganized and capricious. In any group some people make the assignments and others carry them out. Some members are liked by nearly everyone but others are barely tolerated. Some people talk to many others in the group but others hardly speak. These regularities reflect the group's *structure*: the underlying pattern of relationships among members (Cartwright & Zander, 1968; Troyer & Younts, 2010).

### *Status Networks*

Few groups treat all members equally. Just as some group members are permitted to lead and others must follow, so some group members are afforded more

authority than the rank-and-file. These stable status networks—these pecking orders—are often hierarchical and centralized (Tiedens, Unzueta, & Young, 2007).

*Expectation-states theory* provides an explanation for the gradual emergence of status networks even in groups with no formally appointed leaders (e.g., Berger & Zelditch, 1998). The theory assumes group members intuitively take note of one another's personal qualities that they assume are indicative of ability, skill, or prestige. Specific-status characteristics are qualities that group members think signal each individual's level of ability at the task to be performed in the given situation. On a mountain climbing expedition, for example, athletic ability may be a specific-status characteristic, whereas a degree from Harvard Business School may be an indicator of skill among the members of a bank's board of directors. Diffuse-status characteristics are more general qualities often related to social category membership that the members think are relevant to ability and evaluation. The members' beliefs about the link between these qualities and skill may be completely inaccurate, but group members may nonetheless assume that these characteristics are good indicators of leadership potential. Those who possess specific and diffuse status rise upward in the group's status hierarchy (Driskell & Mullen, 1990; Ridgeway, 2006).

### *Sociometric Relations*

Members of groups are linked to one another not only in status hierarchies, but also in networks of likes, dislikes, affection, and even hatred (Maassen, Akkermans, & van der Linden, 1996). This network of likes and dislikes among the members is often called the group's sociometric structure. This term derives from *sociometry*, which is a method for measuring social relationships in groups developed by researcher and theorist Jacob Moreno (1953). Researchers who use this method typically ask group members to identify which members of the group they like or dislike most. Their choices are then summarized statistically or in a graph such as the one shown in Figure 14.1. Popular individuals are singled out by most of the others to be the target of much affection, isolates are neglected by most of the group, outcasts are rejected by the majority of the group, whereas the average members are liked by several others in the group (Coie, Dodge, & Coppotelli, 1982; Newcomb, Bukowski, & Pattee, 1993).

Sociometric relations tend to be organized rather than random configurations of liking and disliking. Most attraction relations are reciprocal; if person A likes B then B likes A. As Heider's (1958) balance theory suggests, the relations in groups usually fit together to form a coherent, unified whole. A dyad, for example, is balanced only if liking (or disliking) is mutual. Similarly, triads

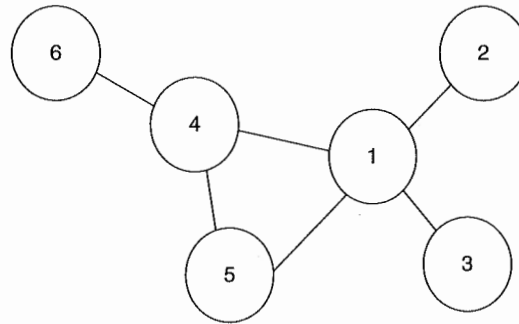


FIGURE 14.1. Sociometric structure of a group.

and larger groups are balanced only if (1) all the relationships are positive or (2) an even number of negative relationships occurs in the group. Conversely, groups are unbalanced if they contain an odd number of negative relations (Gawronski, Walther, & Blank, 2005).

### *Communication Flow in Groups*

The flow of information from one person to another in groups is often structured by the group's communication network. Patterns of communication among group members, similar to other structural features of groups, are sometimes deliberately set in place when the group is organized. Many companies, for example, adopt a centralized, hierarchical communication network that prescribes how information is passed up to superiors, down to subordinates, and horizontally to equals. Even if no formal attempt is made to organize communication, an informal communication network will usually take shape over time.

Communication networks often parallel status and attraction patterns (Shelly, Troyer, Munroe, & Burger, 1999), although they tend to become more centralized as groups increase in size. With centralized networks, one of the positions in the group has a very high degree of centrality—it is located at the crossroads (the *hub*) of communications—relative to the other positions in the group. Groups with this type of structure tend to use the hub position as the data-processing center, and its occupant typically collects information, synthesizes it, and then sends it back to others. In decentralized structures the number of channels at each position is roughly equal, so no one position is more “central” than another (Shaw, 1964).

Early studies of communication networks suggested that groups with centralized networks outperformed groups with decentralized networks (Bavelas, 1950; Leavitt, 1951). However as Shaw (1964) noted, the benefit of centralization depends on network saturation. When a group is working on a problem, exchanging information, and making a decision, the central position in the network can best manage the inputs and interactions of the group. As work progresses and the number of communications being routed through the central member increases, however, a saturation point can be reached, at which point the individual can no longer efficiently monitor, collate, or route incoming and outgoing messages. Because the “greater the saturation the less efficient the group’s performance” (Shaw, 1964, p. 126), when the task is simple, centralized networks are more efficient than decentralized networks; when the task is complex, decentralized networks are superior. As a consequence, groups tend to gravitate naturally to more decentralized network structures when the tasks they must accomplish become more complex and multifaceted (Brown & Miller, 2000).

### *Social Network Analysis*

The study of relations among individuals in groups, organizations, and even larger collectives is termed *social network analysis* (SNA). Figure 14.1 illustrates an application of SNA to groups. Each network member, or node, is represented as a point or circle, and the lines connecting nodes indicate who is linked to whom—by a line of communication or by friendship. Directed relations, such as liking, are capped with arrows to indicate the direction of nonsymmetrical relationships, whereas nondirected relations such as those in Figure 14.1 have no directional indicators (Freeman, 2004).

SNA yields information about group structure as well as each individual’s location in the structure. Group-level, or sociocentric, views capture characteristics of the entire network whereas member-level, egocentric studies look at the individuals within the network (Knoke & Yang, 2008). The *density* of a group, for example, is determined by how many people are linked to one another out of the total possible number of links. The group in Figure 14.1, for example, includes six members, and so a total of 15 relationships would be required to link every member to every other member. (The formula,  $n(n - 1)/2$ , where  $n$  is the number of members, defines the number of relationships needed to create a completely interlinked group.) Because this group contains only six relationships, its density is  $6/15$ , or 0.40. *Centrality*, in contrast, is an individual-level, or egocentric index, and is defined by how many connections a person

has relative to others. Person 1 in Figure 14.1, for example, has the highest *degree centrality*, for Person 1 is connected to four other members, whereas Person 6 has the lowest. SNA provides researchers with the means to quantify the extent to which members are embedded in their group as well as a tool for studying the impact of structural variations on various interpersonal outcomes (e.g., Paxton & Moody, 2003).

### **Group Cohesion**

In physics, the strength of the molecular attraction that holds particles of matter together is known as cohesiveness. In psychology, a group's cohesiveness is the strength of the relationships linking the members to one another and to the group itself (Dion, 2000). Even though theorists and researchers continue to debate the nature of this construct, most agree that what unifies the members of one group may be different from the factors that cause another group to form a cohesive unit. Social cohesion, for example, traces a group's cohesion back to attraction—both between specific group members and to the group itself (Festinger, Schachter, & Back, 1950; Hogg, 1992). Other cohesive groups, in contrast, may promote a strong sense of group loyalty and unity (e.g., Henry, Arrow, & Carini, 1999), and still others may be marked by heightened emotionality and *esprit de corps* (Smith et al., 2007). Regardless of the source of cohesion, researchers note that the strength of relationships is the overarching component of a group's cohesion (Dion, 2000)

In most instances, cohesion is associated with increases in member satisfaction and decreases in turnover and stress. For example, the staff of an office will likely enjoy their work more if their group is a cohesive one, and they may even outperform an equally talented, but less cohesive, group. This cohesion–performance relationship, however, is a complex one. Meta-analytic studies suggest that cohesion improves teamwork among members, but that performance quality influences cohesion more than cohesion influences performance (Mullen & Copper, 1994). The work group may not be successful because it is cohesive, but instead it may be cohesive because it has succeeded in the past. Also, cohesiveness that is based on attraction to specific members of the group has less of an effect on performance than does shared commitment to the group's task, so team building will not be effective unless it includes suggestions on improving workgroup efficiency. Cohesive groups can also be dramatically unproductive if the group's norms stress low productivity rather than high productivity (Seashore, 1954).

## Leadership and Power

The leader is the individual in the group who guides others in their pursuits, often by organizing, directing, coordinating, supporting, and motivating their efforts. In some cases the group's leader is formally recognized, However, in many groups the leader gains authority implicitly, as other group members come to rely on him or her to guide the group.

Studies of leaders in all kinds of group situations—flight crews, politics, schools, military units, and religious groups—suggest that groups prosper when guided by good leaders (Hogan & Kaiser, 2005). The ingredients for “effective leadership,” however, are often debated, for leadership involves finding the right balance between (1) keeping the members working at their tasks and improving relationships and (2) providing guidance without robbing members of their autonomy.

### *Leadership Styles*

The leadership role usually includes two interrelated components: task orientation and relationship orientation. The task-oriented leader focuses on the problem at hand by defining problems for the group, establishing communication networks, providing feedback as needed, planning, motivating action, coordinating members' actions, and so on. Relationship leaders focus on the quality of the relationships among the members of the group by boosting morale, increasing cohesion, managing conflict, showing concern and consideration for group members, and additional factors (Yukl, 2010).

Which leader will be more effective: the one who can get the job done or the one with relationship skills? Researchers and theorists agree on one conclusion: It depends on the nature of the group situation. Fiedler's (1978, 1981) *contingency theory* of leadership, for example, assumes that most people are, by nature, either task-oriented leaders or relationship-oriented leaders; few can shift from one style of leadership to the other. Importantly, however, different styles work better in different situations. If the group situation is very favorable for the leader or very unfavorable for the leader (say, because the group members do not get along with the leader and the leader has little power), the task-oriented leader will perform most effectively. In contrast, the relationship leader should be more effective in moderately favorable or moderately unfavorable situations.

Other theories, in contrast, assume that effective leaders should exhibit varying amounts of task-oriented and relationship-oriented leadership depending on the situation they face. Situational leadership theory, for example,

assumes that groups require more or less task and relational guidance depending on their degree of development (Hersey & Blanchard, 1982). Newly formed groups, groups beginning a new project, and groups with many new members are immature, and they require a high task/low relationship leader. As the group matures and begins working adequately on the task, the leader can increase the relationship behavior and adopt a high/high style. Still later in the group's development, the leader can decrease on both types of leadership, starting first with task emphasis. Unlike Fiedler's contingency theory model, the situational model recommends that leaders adjust their style until it fits the circumstances (Hersey & Blanchard, 1982). Situational leadership theory's emphasis on adaptability as a cardinal trait in a leader is consistent with studies that have identified people who seem to rise to positions of leadership in all settings. These individuals are often intelligent, energetic, and socially skilled, but above all they are flexible: They can read the demands of the situation and adjust their actions so that they meet those demands (Kirkpatrick & Locke, 1991; Zaccaro, Foti, & Kenny, 1991).

### *Participatory Leadership*

Leaders differ in how much control they exert over the group (Hollander & Offermann, 1990; Sankowsky, 1995). Which leader is most effective: the one who takes charge and directs the group with a strong hand or the one who consults with group members and lets them share the reins of leadership? Lewin, Lippitt, and White (1939) examined this question in one of the first studies to create groups in a laboratory setting for experimental purposes. They examined the reactions of small groups of boys working on craft projects after school to one of three types of adult leaders. In some groups, the leader made all the decisions for the group without consulting the boys. This directive, *autocratic leader* told the boys what to do, he often criticized them, and he remained aloof from the group. Other groups were guided by a participatory, *democratic leader* who let them make decisions as he provided guiding advice. He explained long-term goals and steps to be taken to reach the goals, but he rarely criticized the boys or gave orders. Other groups were given a *laissez-faire leader* who allowed the boys to work in whatever way they wished. He provided information on demand, but he did not offer information, criticism, or guidance spontaneously.

The boys responded very differently to these three types of leaders. Groups with autocratic leaders spent more time working than groups with democratic leaders, which in turn spent more time working than groups with the laissez-faire leaders—provided the leader remained in the room. Groups with a democratic leader kept working when their leader left but the boys working under



the direction of an autocratic leader did not. Laissez faire and democratic groups were also less aggressive than autocratic groups. In autocratic groups, observers noted high rates of hostility among members, more demands for attention, more destructiveness, and a greater tendency to single out one group member to serve as the target of verbal abuse.

Lewin, Lippitt, and White's (1939) findings suggest that autocratic (directive) and democratic (participatory) leaders have both strengths and weaknesses. The strongly directive leader often succeeds in pushing the group to high levels of productivity, although at an interpersonal cost as conflict increases. The groups with a participatory leader were not as productive or efficient in their work, but members were more satisfied with their group and more involved (Stogdill, 1974). Laissez-faire leaders increased members' sense of autonomy, but their productivity was especially low. In conclusion, each type of leadership method may be appropriate in certain situations. If the group members are unmotivated and working on well-defined tasks, then a strong, directive style may work best. A directive approach is also warranted when the issues to be settled are minor ones, the group's acceptance will not impact them in any way, and the group members are, themselves, autocratic. In general, however, group members will be much happier if they are involved in group decisions. The decisions, too, will probably be better if the leader is puzzled by the issues and group members have information that might be relevant (Pearce & Conger, 2003; Vroom, 2003).

### *Women and Leadership*

Leaders differ physically and psychologically from their subordinates. Leaders tend to be older, taller, and heavier than the average group member. They are generally more accomplished at the tasks facing the group and they tend to talk more than the average member. Leaders are outgoing rather than shy and dominant rather than submissive. Leaders, too, are more often men than women (Eagly & Carli, 2007; Hoyt & Chemers, 2008).

Even though the gender gap in leadership has narrowed in recent years, it has not closed. More men than women work outside the home, and their overrepresentation in organizations and business settings provides them with far more leadership opportunities than are available to women. The number of women working in managerial roles has risen steadily over the years, but women make up only about 5% of management and only 1% of upper management. The reasons women are not equally represented in the highest ranks of leadership in corporations are many. For example, some researchers argue that there is a leadership labyrinth of obstacles for women to overcome (Eagly & Carli, 2007).

Additional factors may include the fact that women are aware of existing stereotypes that suggest they lack leadership aptitude (Crocker, Major, & Steele, 1998), which makes them vulnerable to *stereotype threat*. Stereotypes can undermine performance when a person is in a situation that could confirm an attitude that disparages the abilities of his or her own social group. This stereotype threat contributes to the underperformance of individuals belonging to a range of negatively stereotyped groups (e.g., Davies, Spencer, & Steele, 2005). Different work experiences and family roles also shape women and men's perspective on leadership and often influence leadership approaches and emergence. For example, gender differences influence men and women's actions in small group settings, with men five times more likely to enact leadership behaviors than women in small, mixed sex leaderless groups (Walker, Ilardi, McMahon, & Fennell, 1996) and to emerge as leaders (Bartol & Martin, 1986).

As in many social psychological processes, individual perceptions—even though mistaken—generate a series of reactions that fundamentally shape social outcomes. As *social role theory* explains, people in most cultures, when asked to describe women, speak of their expressive qualities, including nurturance, emotionality, and warmth. They expect a “she” to be sentimental, affectionate, sympathetic, soft-hearted, talkative, gentle, and feminine. When describing men, they stress their instrumental qualities, including productivity, energy, and strength (Eagly & Karau, 2002). But when group members are asked to describe the qualities needed in a leader, their implicit leadership theories prompt them to emphasize the instrumental side of leadership rather the more relational side (Forsyth & Nye, 2008).

### *The Effects of Power*

Power and leadership typically go together. Leaders, no matter how they gain their position and maintain it, use forms of influence that range from persuasion to coercion to guide others in their pursuits. French and Raven (1959), when describing the typical sources of a leader's influence, identified five key foundations: the leader's capacity to reward others (reward power) and punish others (coercive power), the authority vested in their position (legitimate power), their followers' feelings of respect and admiration (referent power), and their superior experience and skill (expert power).

Power is, fundamentally, a group-level process, for it involves some members of a group conforming to the requirements of others in situations that vary from the cooperative and collaborative to those rife with conflict, tension, and animosity. As an evolutionary account of human gregariousness would suggest, group members accept influence from others because such behavioral responses

are adaptive. As long as the group's leaders are perceived to be motivated by group-level goals, then those lower in the status hierarchy tend to do as they are told by those with higher status (Tiedens et al., 2007). Power in social species, then, is a dynamic, negotiated process rather than a top-down chain of influence (Keltner, Van Kleef, Chen, & Kraus, 2008). As Milgram (1974, p. 124) explained, "Each member's acknowledgement of his place in the hierarchy stabilizes the pack."

Probably for as long as humans have aggregated in groups, they have puzzled over the nature of power and its influence on those who have it, those who lack it, and those who seek it. Keltner and his colleagues (2003, 2008), synthesizing previous analyses, theorize that power—having power, using power, even thinking about power—transforms individuals' psychological states (Keltner, Gruenfeld, & Anderson, 2003; Keltner et al., 2008). Their approach/inhibition model assumes that power activates: it triggers increases in action, self-promotion, energy, and environmental scanning. The lack of power, in contrast, triggers inhibition and is associated with reaction, self-protection, vigilance, loss of motivation, and an overall reduction in activity. In consequence, powerful people tend to be active group members whose increased drive, energy, motivation, and emotion help the group overcome difficulties and reach its goals. Powerful group members are more proactive than those with little power, and they tend to pursue goals appropriate to the given situation (Guinote, 2008). Researchers have demonstrated the proactive tendencies of the powerful by first priming a sense of power or powerlessness. Some participants were asked to think back to a time when they had power over other individuals, whereas others thought of a time when they had little power. The participants were then seated at a table positioned too close to an annoying fan blowing directly on them. A majority of the participants primed with power took steps to solve the problem: they moved the fan or turned it off. Most of the participants primed with powerlessness, in contrast, just put up with this irritation (Galinsky, Gruenfeld, & Magee, 2003).

Power also leads to enhanced executive functioning. For example, those primed with power plan, make decisions, set goals, and monitor information flow more rapidly and effectively (Smith, Jostmann, Galinsky, & van Dijk, 2008). Even when distracted by irrelevant information, powerful individuals make better decisions than less powerful group members, apparently because they can think in more abstract terms (Smith, Dijksterhuis, & Wigboldus, 2008). Powerful people also tend to be happier group members. Their moods are elevated, they report higher levels of positive emotions such as happiness and satisfaction, and they are more optimistic and enthusiastic (Berdahl & Martorana, 2006).

But these positive consequences of power are counterbalanced by the liabilities of power. Powerful people are proactive, but in some cases their actions are risky, inappropriate, or unethical. Simply being identified as the leader of a group prompts individuals to claim more than the average share of the resources, as members believe the leadership role entitles them to take more than others (De Cremer & Van Dijk, 2005). When individuals gain power, their self-evaluations grow more favorable, whereas their evaluations of others grow more negative. If they believe that they have a mandate from their group or organization, they may do things they are not empowered to do. When individuals feel powerful, they sometimes treat others unfairly, particularly if they are more self-centered than focused on the overall good of the group. Some individuals associate power with sexuality, and so when they are empowered, they engage in inappropriate sexual behaviors, including sexual harassment (Galinsky, Jordan, & Sivanathan, 2008; Keltner et al., 2008). Power's darker side lends credence to Lord Acton's famous warning: "Power tends to corrupt, and absolute power corrupts absolutely."

## Performing: Working in Groups

Researchers have studied a variety of aspects of groups, but McGrath's (1997) historical analysis of the field identifies three basic "schools of thought" that organize researchers' efforts and interests. The *systems perspective* considers groups to be complex sets of interdependent components that influence members' thoughts, feelings, and actions. The *structural perspective* examines the way that groups create enduring patterns and consistencies in social settings, including norms, roles, and regularized patterning in communication and influence. The third school of thought, the *functional perspective*, considers groups to be tools, for people use groups to achieve goals that require collaboration among many. Groups assemble to lift, build, or move things that individuals cannot. When critical decisions and selections must be made—judgments of criminal guilt or innocence, choices between diverse alternatives, or identification of previous errors—people turn to groups rather than make such determinations individually. Yet, at the same time people ridicule the benefits of work groups and teams with sarcasms such as, "an elephant is a mouse designed by a committee," "a committee is a group that keeps minutes and wastes hours," and "too many cooks spoil the broth." Groups can push members to reach the peak of their capabilities but they can also promote mediocrity as well (Larson, 2010; Nijstad, 2009).

**Social Facilitation**

Do people perform more effectively when alone or when part of a group? Social psychologists have been studying this question for over a century, beginning with Norman Triplett (1898). He noted that bicyclists in races were fastest when they competed against other racers rather than when they raced alone against the clock, and hypothesized that the presence of others leads to psychological stimulation that enhances performance. To test this idea he conducted the first laboratory study in the field of social psychology. He arranged for 40 children to play a game that involved turning a small reel as quickly as possible. He carefully measured how quickly they turned the reel, and confirmed that children performed best when they played the game in pairs compared to when they played alone (see Strube, 2005, for a reanalysis of Triplett's data).

Triplett (1898) succeeded in sparking interest in a phenomenon known now as *social facilitation*: the enhancement of an individual's performance when that person works in the presence of other people. It remained for Zajonc (1965), however, to specify when social facilitation does and does not occur. Zajonc (1965), after reviewing prior research, noted that the facilitating effects of an audience usually occur only when the task requires the person to perform dominant responses, ones that are well-learned or based on instinctive behaviors. If the task requires nondominant responses—novel, complicated, or untried behaviors that the organism has never performed before or has performed only infrequently—then the presence of others inhibits performance (see Figure 14.2). Hence, students write poorer quality essays on complex philosophical questions when they labor in a group rather than alone (Allport, 1924), but they make fewer mistakes in solving simple, low-level multiplication problems with an audience or a coactor than when they work in isolation (Dashiell, 1930).

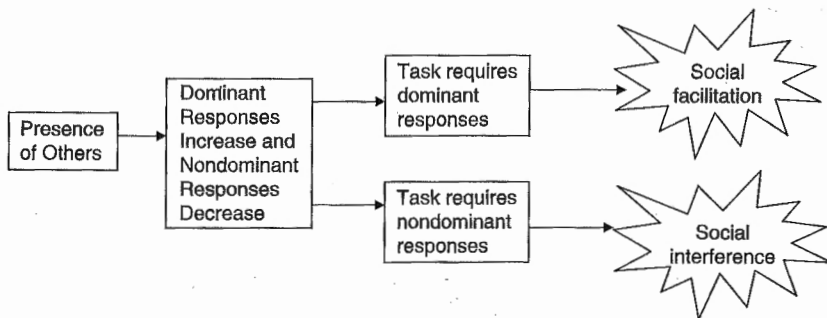


FIGURE 14.2. Zajonc's (1965) model of social facilitation. If the dominant response is appropriate in the situation, the presence of others is facilitating. If, however, the situation calls for a nondominant response, the presence of others will interfere with performance.

Bond and Titus (1983), in their review of 241 studies of social facilitation, confirmed Zajonc's (1965) insight by finding that facilitation occurs primarily when people perform simple tasks that require dominant responses. And Zajonc and his colleagues themselves confirmed this clarification in a study of some unusual subjects: cockroaches (Zajonc, Heingartner, & Herman, 1969). Zajonc, noting that roaches, by instinct, run from bright lights, designed two mazes with a start box near a light and a goal box hidden from the light. The simple maze was just a straight runway from the start to the goal. In the more complex maze, the roaches had to turn to the right to reach their goal. Zajonc reasoned that when other roaches are present the roaches should perform more efficiently in the simple maze than in the complex one. As predicted, cockroaches escaped the light more quickly in pairs than when alone provided the maze was simple. If the maze was complex, they escaped more quickly when alone than when with another cockroach. Zajonc and his colleagues also found that having an observer roach that watched from a small plastic cubicle located by the maze facilitated performance of the simple task but interfered with performance of the complex task.

Three processes—arousal, evaluation apprehension, and distraction-conflict—combine to create social facilitation effects (Aiello & Douthitt, 2001). First, as Zajonc (1965, 1980) noted, the mere presence of others introduces an element of uncertainty into any situation, and so elevates arousal. Once aroused, individuals tend to perform more dominant responses and fewer nondominant responses. The nature of this arousal is also different, depending on the nature of the task (Blascovich, Mendes, Hunter, & Salomon, 1999). When the task is easy, people display a *challenge response*. At the physiological level, they appear to be ready to respond to the challenge that they face (elevated heart rate and activation of the sympathetic nervous system). But when the task is difficult, people display a *threat response*; they appear to be stressed rather than ready for effective action.

Second, arousal is particularly likely when people are concerned about being evaluated by others (Cottrell, 1972). People know, from experience, that most observers are judging the quality of their work, and so the presence of an audience increases feelings of evaluation apprehension. As a consequence, individuals who display a negative orientation toward social situations tend to show a decline in performance in social settings, whereas those with a more positive orientation show a gain in performance (Uziel, 2007).

Third, a number of researchers suggest that cognitive processes account for social facilitation effects. These distraction-conflict theories note that others can be distracting, as attention is divided between the task and others' reactions. This distraction taxes the performer's cognitive resources and prevents him or her from processing task-related information thoroughly. If the task is a simple

one, this distraction is overcome by working harder, and performance improves. But if the task is so complex that the increase in motivation is unable to offset the negative consequences of attentional conflict, then the presence of others will lead to decrements in performance (Baron, 1986; Guerin, 1983).

### *Social Loafing*

Groups usually outperform individuals. One person playing soccer against a team of 11 will lose. Groups estimating the temperature of a room will be more accurate than an individual making the same estimate (Surowiecki, 2004). Students taking a multiple choice test as a team will get a higher score than a single individual taking the same test (Littlepage, 1991; Steiner, 1972).

Groups, though, display a curious tendency toward underachievement. The soccer team with superb athletes sometimes seems to play without any energy or excitement. Each student in a learning team may not do all that he or she can to help the group reach its goals. This inefficiency was documented by French agricultural engineer Max Ringelmann nearly a century ago. Say, hypothetically, an average individual working alone was able to lift 100 pounds. Therefore, two people working together should be able to lift nearly 200 pounds, three 300 pounds, and so on. But Ringelmann found that dyads managed to pull only about 1.9 times as much as one person, triads only 2.5 times as much, and eight-person groups a woeful 3.9 times the individual level. This tendency for groups to become less productive as their size increases is known as the *Ringelmann effect* (Kravitz & Martin, 1986).

Ringelmann traced this loss of productivity to two causes—one interpersonal and one motivational. First, when people work together they sometimes have trouble coordinating their individual activities and contributions, so they never reach the maximum level of efficiency (Diehl & Stroebe, 1987). Three people, lifting a heavy weight, for example, invariably pull and pause at slightly different times, so their efforts are uncoordinated. In consequence, they are stronger than a single person, but not three times as strong. Second, people just do not expend as much physical effort when working on a collective endeavor, nor do they expend as much cognitive effort trying to solve problems. They display *social loafing* (Latané, Williams, & Harkins, 1979; Petty, Harkins, & Williams, 1980).

Latané and colleagues (1979) examined both coordination losses and social loafing by arranging for students to cheer or clap alone or in groups of varying sizes. The students cheered alone or in two- or six-person groups, or they were led to believe they were in two- or six-person groups (those in the “pseudo-groups” wore blindfolds and headsets that played masking sound). As Figure 14.3 indicates, groups generated more noise than solitary participants, but the

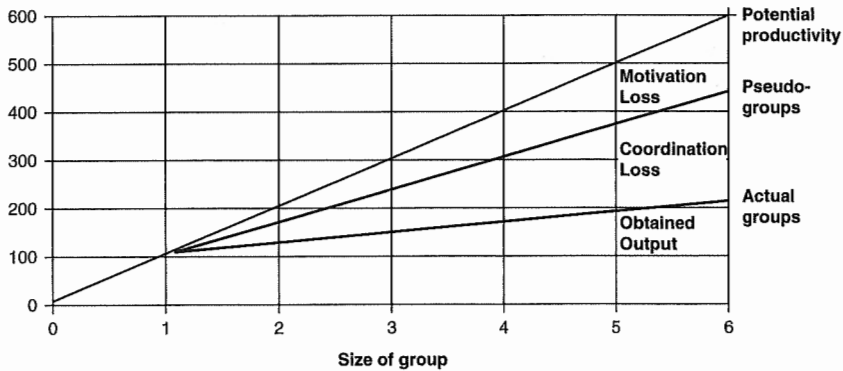


FIGURE 14.3. Social loafing in groups. Latané and his colleagues examined the two major causes of the Ringelmann effect by leading people to think they were working in groups when they actually were not. The people in these pseudogroups suffered from motivation loss, but not from coordination loss since they were actually working alone.

productivity dropped as the groups became larger in size. In dyads, each participant worked at only 66% of capacity, and in six-person groups at 36%. Productivity also dropped when participants believed they were in groups. If participants thought that one other person was shouting with them, they shouted only 82% as intensely, and if they thought five other people were shouting, they reached only 74% of their capacity. These losses in productivity were not due to problems with coordination but to a reduction in effort—to social loafing (Latané et al., 1979; Experiment 2).

Social loafing is not a rare phenomenon. People working on all types of physical and mental tasks—including brainstorming, evaluating employees, monitoring equipment, interpreting instructions, and formulating causal judgments—are less productive when working in a group situation than when working alone. Group members, however, rarely notice their loss of productivity. When people in groups are asked whether they are working as hard as they can, they generally claim that they are doing their best even when they are loafing. Either people are not aware or are simply unwilling to admit that they are loafing (Karau & Williams, 1993).

### *Reducing Social Loafing*

Studies of social loafing suggest ways to increase the productivity of individuals working on collective tasks. Williams, Harkins, and Latané (1981) succeeded in eliminating social loafing in their noise-making paradigm by making each person's contribution seem identifiable. Just as the belief that you are being evaluated



can facilitate performance on simple tasks, the belief that your contribution can be identified and evaluated will likely make you work much harder (Harkins & Jackson, 1985; Jackson & Latané, 1981). Social loafing is also minimized when subjects think that objective standards exist that can be used to evaluate their personal performance (Harkins & Szymanski, 1989; Szymanski & Harkins, 1987).

Social loafing can also be reduced if group members believe that their contribution to the project is important and if they personally value the group's goals. People should be made to believe that their contributions are unique and essential for the group's success. By breaking down large groups into smaller ones, for example, leaders can reduce feelings of anonymity and increase involvement (Kameda, Stasson, Davis, Parks, & Zimmerman, 1992). Loafing also becomes less likely when group members expend more effort to avoid the stigma associated with being the group's weakest performer. This tendency is known as the Köhler effect, after the investigator who noticed the performance gains of weaker individuals striving to keep up with the accomplishments of others in the group (Kerr, Messé, Seok, Sambolec, Lount, & Park, 2007; Weber & Hertel, 2007).

## Group Decision Making

People often turn to groups when they must make key decisions, for groups can draw on more resources than one individual. Groups can generate more ideas and possible solutions by discussing the problem. Groups, too, can evaluate the options that they generate during discussion more objectively. Before accepting a solution, a group may stipulate that a certain number of people must favor it, or that it meets some other standard of acceptability. People generally believe that a group's decision will be superior to an individual's decision.

Groups, however, do not always make good decisions. Juries sometimes render verdicts that run counter to the evidence presented. Community groups take radical stances on issues before thinking through all the ramifications. Military strategists concoct plans that seem, in retrospect, ill-conceived and short-sighted. Three processes that can warp a group's decisions—group polarization, the shared information bias, and groupthink—are considered next.

### *Polarization in Groups*

Common sense notions suggest that groups exert a moderating, subduing effect on their members. However, in the early 1960s social psychologists began to

question this assumption. By asking individuals to make judgments alone and then in groups, they found a surprising shift in the direction of greater risk after group interaction (Stoner, 1961; Wallach, Kogan, & Bem, 1962). Moreover, this group shift carried over when members gave their private choices following the group discussion. This change was dubbed the *risky shift*.

Subsequent study indicated that risky shifts after group discussion are part of a larger, more general process. When people discuss issues in groups, they tend to decide on a more extreme course of action than would be suggested by the average of their individual judgments. Group discussion leads to *group polarization*: judgments are more extreme in the same direction as the average of individual judgments made prior to the discussion (Myers, 1982). For example, in France, where people generally like their government but dislike Americans, group discussion improved their attitude toward their government but exacerbated their negative opinions of Americans (Moscovici & Zavalloni, 1969). Similarly, prejudiced people who discussed racial issues with other prejudiced individuals became even more negative. Conversely, when mildly prejudiced persons discussed racial issues with other mildly prejudiced individuals, they became less prejudiced (Myers & Bishop, 1970).

As with social facilitation, several cognitive and interpersonal processes probably combine to generate group polarization (Isenberg, 1986; Kaplan & Miller, 1983). As group members discuss possible choices, the one favored by the majority of members will likely be supported with more and better arguments. Members who were initially ambivalent will be persuaded by the arguments, and as a result the entire group will become polarized (persuasive-argument theory; Burnstein & Vinokur, 1973, 1977). As group members compare their judgments to those of others, they shift their position when they realize that the attitudes of others are stronger (or more extreme) than their attitudes (social comparison theory; Blascovich, Ginsburg, & Howe, 1975, 1976). Groups may also become polarized when they implicitly adopt a majority-rules scheme and adopt the solution when more than 50% of the group expresses approval of that solution. If a majority, no matter how slim, favors a more extreme choice, then the group will polarize (social decision scheme theory; Davis, Kameda, & Stasson, 1992).

### *Shared Information Bias*

When group members share their knowledge with each other in extensive discussions, these conversations often focus on information that the majority of the members already have. Instead of revealing unique pieces of information gleaned from personal experience or unique expertise, the group members discuss ideas that they share in common (Stasser, 1992; Stasser, Talor, & Hanna, 1989).

This *shared information bias* is inconsequential if the group is discussing a problem that is well known to all group members or that has an obvious solution. If, however, the group must access the unshared information to make a good decision, then the bias can lead the group astray. If a group is working on a problem and the shared information suggests that Alternative A is correct, but the unshared information favors Alternative B, then the group will discover this so-called hidden profile only if it discusses the unshared information (Larson, 2010; Wittenbaum, 2010).

### *Groupthink*

Groups sometimes make spectacularly bad decisions. In 1961 a special advisory committee to President John F. Kennedy planned and implemented a covert invasion of Cuba at the Bay of Pigs that ended in total disaster. In 1986 NASA carefully, and incorrectly, decided to launch the Challenger space shuttle in temperatures that were too cold, and it crashed. Experts in the Bush administration weighed the risks of a war in Iraq carefully, and then proceeded with it only to find that the human and financial costs far exceeded their expectations.

Intrigued by these types of blunders, Janis (1982) carried out a number of case studies of such groups: the military experts that planned the defense of Pearl Harbor, Kennedy's Bay-of-Pigs planning group, and the presidential team that escalated the war in Vietnam. Each group, he concluded, fell prey to a distorted style of thinking that rendered its members incapable of making a rational decision. Janis labeled this syndrome *groupthink*: "a mode of thinking that people engage in when they are deeply involved in a cohesive in-group, when the members' strivings for unanimity override their motivation to realistically appraise alternative courses of action" (1982, p. 9).

*Symptoms of Groupthink* To Janis, groupthink is a disease that infects healthy groups, rendering them inefficient and unproductive. And like the physician who searches for symptoms that distinguish one disease from another, Janis has identified a number of symptoms that occur in groupthink situations. These danger signals, which should serve to warn members that they may be falling prey to groupthink, include overestimating the group's capabilities, biased perceptions, pressures to conform, and defective decision strategies. Groups that have fallen into the trap of groupthink are stumbling, yet the members usually assume that everything is working well. They think that nothing can stop them from reaching their goals (illusions of invulnerability) and they are morally vindicated to take action (illusions of morality).

During groupthink, members misperceive the motivations and intentions of other people, often assuming people who oppose their plan are untrustworthy

or manipulative. Groupthink groups also display a high level of conformity. Even members who begin to question the group's decision privately engage in self-censorship; they hide their misgivings when they discuss the issue openly. As a result, many members may privately disagree with what is occurring in the group, yet publicly everyone expresses total agreement with the group's policies.

*Causes of Groupthink* In addition to identifying the warning signs of groupthink, Janis (1982) pointed out aspects of the situation and the group that serve as antecedents to this negative decisional syndrome. One cause, cohesion, serves as a necessary condition for groupthink, for only highly unified groups will display the pressures to conform that promote groupthink. Cohesive groups have many advantages over groups that lack unity, but when cohesiveness intensifies, members become more likely to accept the goals, decisions, and norms of the group without reservation. Pressures to conform also increase as members become reluctant to say or do anything that goes against the grain of the group, and the number of internal disagreements—necessary for good decision making—decreases. Noncohesive groups can also make terrible decisions, “especially if the members are engaging in internal warfare” (Janis, 1982, p. 176), but they do not fall prey to groupthink.

Other causal conditions include the degree of isolation, leadership methods, and the degree of stress. Kruglanski's group-centrism theory, for example, suggests that groups are more likely to make decisional mistakes when they encounter situations that interfere with their capacity to process information—time pressures, severe ambiguity, noise, or fatigue (Kruglanski, Pierro, Mannetti, & De Grada, 2006). In such situations, a group strives for cognitive closure, and its members are willing to accept the authority of strong, focused leaders. Baron's (2005) ubiquity model of group decision making shares a number of points of agreement with Janis's (1982) approach, but Baron suggests it is not group cohesion that increases groupthink symptoms but rather a threat to a shared social identity that may result should the group fail (Haslam, Ryan, Postmes, Spears, Jetten, & Webley, 2006).

Groups need not sacrifice cohesiveness to avoid the pitfall of groupthink. Rather, limiting premature seeking of concurrence, correcting misperceptions and errors, and improving the group's decisional methods can collectively help reduce poor decisions (Janis, 1982).

## Groups over Time

Groups, like all living things, change over time. A group may begin as unrelated individuals, but in time roles develop and friendships form. New members join

the group and old members leave. The group may become more cohesive or begin to lose its unity (see Table 14.2 for a summary).

These changes, however, follow a predictable pattern (Wheelan, 2005). In most groups the same types of issues arise over time, and once resolved the group can continue to develop. Tuckman (1965, Tuckman & Jenson, 1977) maintained that this group development often involves five stages. In the *forming phase* the group members become oriented toward one another. In the *storming phase* the group members find themselves in conflict, and some solution is sought to improve the group environment. In the *norming phase* standards for behavior and roles develop that regulate behavior. In the *performing phase* the group has reached a point at which it can work as a unit to achieve desired goals. The *adjourning phase* ends the sequence of development; the group disbands. Throughout these stages groups tend to oscillate back and forth between the task-oriented issues and the relationship issues, with members sometimes working hard but at other times strengthening their interpersonal bonds (Bales, 1965).

Individuals also experience change as they pass through the group: They are gradually assimilated into a group, remain in a group for a time, and then separate from the group. Moreland and Levine's (1982) model of group socialization, shown in Figure 14.4, describes this process. During the investigation

TABLE 14.2 Stages of Group Development

Stage	Major Processes	Characteristics
Orientation: <i>Forming</i>	Members become familiar with each other and the group; dependency and inclusion issues; acceptance of leader and group consensus	Communications are tentative, polite; concern for ambiguity, group's goals; leader is active; members are compliant
Conflict: <i>Storming</i>	Disagreement over procedures; expressions of dissatisfaction; tension among members; antagonism toward the leader	Criticism of ideas; poor attendance; hostility; polarization and coalition formation
Structure: <i>Norming</i>	Growth of cohesiveness and unity; establishment of roles, standards, and relationships; increased trust, communication	Agreement on procedures; reduction in role ambiguity; increased "we-feeling"
Work: <i>Performing</i>	Goal achievement; high task orientation; emphasis on performance and production	Decision making; problem solving; mutual cooperation
Dissolution: <i>Adjourning</i>	Termination of roles; completion of tasks; reduction of dependency	Disintegration and withdrawal; increased independence and emotionality; regret

Sources: Tuckman (1965) and Forsyth (2010).

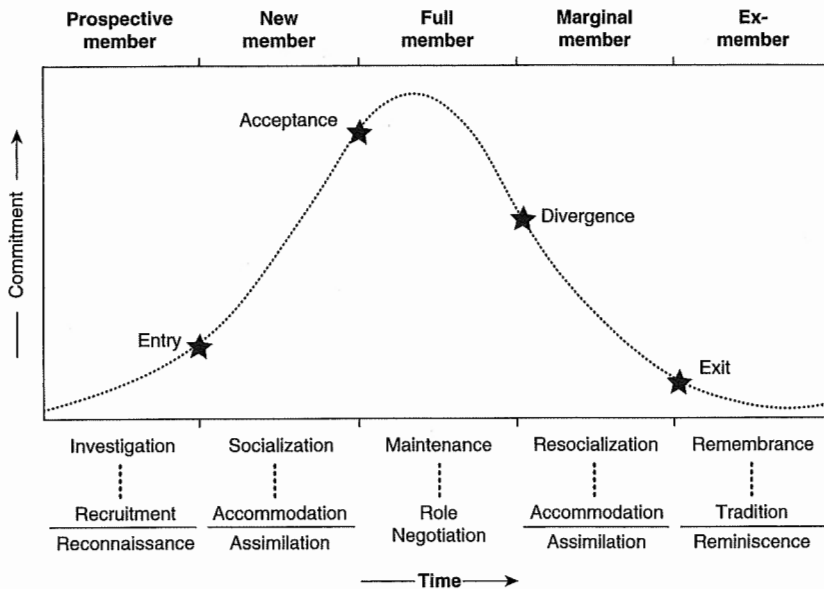


FIGURE 14.4. Moreland and Levine's (1982) theory of group socialization.

stage prospective members are still outsiders: They are interested in joining the group, but are not yet committed to it. Once the group accepts them as members, socialization begins as they take on different responsibilities depending on their role within the group. Even though they are full-fledged members at this point, changes continue as their roles and responsibilities change. During this maintenance phase, members may have to learn new ways of doing things or accept responsibilities that they would rather avoid. If this maintenance is successful they remain in this stage until the group or their membership ends as scheduled. If, however, they fail to adapt to changes appropriately, then group members may attempt resocialization, in which group members are reminded that they must abide by the group's norms. If they fail, they will probably leave the group. In any case, once membership in the group is concluded the former members pass through yet another stage, remembrance. They are no longer members, but still remember, sometimes with fondness and sometimes with regret, the time when they belonged to the group.

### *Future of Group Research*

Social psychologists are intrigued by a variety of topics and phenomena, including attitudes and prejudices, liking and loving, altruism and aggression, and the

way perceivers process information about their social worlds, but the study of groups and their processes remains the cornerstone of a social psychological approach to understanding human interaction. Although researchers have explored many intriguing aspects of groups, this chapter has explored only a small fraction of the insights yielded by those investigations: the compelling need of individuals to be part of a group, and the far-reaching effects that result when that need is denied; a group's astonishing capacity to transform its members, prompting them to act in ways that they never would were they acting as individuals; the tendency for groups to create consistencies among the relationships of members, with the result that communication, influence, and even attraction become patterned and predictable; the group's willingness to allow some members to assume responsibility for, and control over, the group's activities; a group's capacity to bring individuals together in the pursuit of shared goals, with results that are sometimes admirable but also, in some cases, appalling; and the way groups, like all living organisms, change and develop as they form, mature, and dissolve.

Despite researchers' success in studying groups, much more work needs to be done in exploring the nature and functioning of groups. It is ironic that although scientists have studied aspects of the physical world for centuries, only in the past 100 years have they turned their attention to human experiences, and human groups in particular. Yet theories and studies of groups repeatedly confirm the important role they play in all aspects of social life. Groups are the key to understanding people—why they think, feel, and act the way they do. On a practical level, much of the world's work is done by groups, so by understanding groups we move toward making them more efficient. If we want to improve productivity in a factory, problem solving in a boardroom, or learning in the classroom, we must understand groups. An understanding of groups is also essential if we are to solve societal problems such as racism, sexism, and international conflict. Any attempt to change society will succeed only if the groups within that society change. As society adjusts to a more technological and globally united world, and as economic success is increasingly determined by group decisions and work team efforts, a clear understanding of group processes will become increasingly relevant, practical, and essential (Forsyth & Burnette, 2005).

## References

- Aiello, J. R., & Douthitt, E. A. (2001). Social facilitation: From Triplett to electronic performance monitoring. *Group Dynamics: Theory, Research, and Practice*, 5, 163–180.

- Albright, L., Kenny, D. A., & Malloy, T. E. (1988). Consensus in personality judgments at zero acquaintance. *Journal of Personality and Social Psychology*, 55, 387–395.
- Allport, F. H. (1924). *Social psychology*. Boston: Houghton Mifflin.
- Allport, F. H. (1962). A structural-conceptual conception of behavior: Individual and collective. I. Structural theory and the master problem of social psychology. *Journal of Abnormal and Social Psychology*, 64, 3–30.
- Alter, A. L., & Darley, J. M. (2009). When the association between appearance and outcome contaminates social judgment: A bidirectional model linking group homogeneity and collective treatment. *Journal of Personality and Social Psychology*, 97, 776–795.
- Arrow, H., McGrath, J. E., & Berdahl, J. L. (2000). *Small groups as complex systems: Formation, coordination, development, and adaptation*. Thousand Oaks, CA: Sage.
- Asch, S. E. (1957). An experimental investigation of group influence. In *Symposium on preventive and social psychiatry*. Washington, DC: U.S. Government Printing Office.
- Asendorpf, J. B., & Wilpers, S. (1998). Personality effects on social relationships. *Journal of Personality and Social Psychology*, 74, 1531–1544.
- Bales, R. F. (1965). The equilibrium problem in small groups. In A. P. Hare, E. F. Borgatta, & R. F. Bales (Eds.), *Small groups: Studies in social interaction*. New York: Knopf.
- Baron, R. S. (1986). Distraction-conflict theory: Progress and problems. *Advances in Experimental Social Psychology*, 19, 1–40.
- Baron, R. S. (2005). So right it's wrong: Groupthink and the ubiquitous nature of polarized group decision making. *Advances in Experimental Social Psychology*, 37, 219–253.
- Bartol, K. M., & Martin, D. C. (1986). Women and men in task groups. In R. D. Ashmore & F. K. DelBoca (Eds.), *The social psychology of female-male relations* (pp. 259–310). New York: Academic Press.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497–529.
- Bavelas, A. (1950). Communication patterns in task-oriented groups. *Journal of the Acoustical Society of America*, 22, 725–730.
- Berdahl, J. L., & Martorana, P. (2006). Effects of power on emotion and expression during a controversial group discussion. *European Journal of Social Psychology*, 36, 497–509.
- Berger, J., & Zelditch, M., Jr. (1998). *Status, power, and legitimacy: Strategies and theories*. New Brunswick, NJ: Transaction.
- Blackhart, G. C., Nelson, B. C., Knowles, M. L., & Baumeister, R. F. (2009). Rejection elicits emotional reactions but neither causes immediate distress nor lowers self-esteem: A meta-analytic review of 192 studies on social exclusion. *Personality and Social Psychology Review*, 13, 269–309.
- Blascovich, J., Ginsburg, G. P., & Howe, R. C. (1975). Blackjack and the risky shift, II: Monetary stakes. *Journal of Experimental Social Psychology*, 11, 224–232.
- Blascovich, J., Ginsburg, G. P., & Howe, R. C. (1976). Blackjack, choice shifts in the field. *Sociometry*, 39, 274–276.



- Blascovich, J., Mendes, W. B., Hunter, S. B., & Salomon, K. (1999). Social "facilitation" as challenge and threat. *Journal of Personality and Social Psychology*, 77, 68-77.
- Bond, C. F., & Titus, L. J. (1983). Social facilitation: A meta-analysis of 241 studies. *Psychological Bulletin*, 94, 265-292.
- Branscombe, N. R. (1998). Thinking about one's gender group's privileges or disadvantages: Consequences for well-being in women and men. *British Journal of Social Psychology*, 37, 167-184.
- Brinthaup, T. M., Moreland, R. L., & Leviné, J. M. (1991). Sources of optimism among prospective group members. *Personality and Social Psychology Bulletin*, 17, 36-43.
- Brown, B. B., & Lohr, N. (1987). Peer group affiliation and adolescent self-esteem: An integration of ego-identity and symbolic-interaction theories. *Journal of Personality and Social Psychology*, 52, 47-55.
- Brown, L. H., Silvia, P. J., Myin-Germeys, I., & Kwapil, T. R. (2007). When the need to belong goes wrong: The expression of social anhedonia and social anxiety in daily life. *Psychological Science*, 18, 778-782.
- Brown, T. M., & Miller, C. E. (2000). Communication networks in task-performing groups: Effects of task complexity, time pressure, and interpersonal dominance. *Small Group Research*, 31, 131-157.
- Burnette, J. L., & Forsyth, D. R. (2008). "I didn't do it:" Responsibility biases in open and closed groups. *Group Dynamics: Theory, Research, and Practice*, 12, 210-222.
- Burnstein, E., & Vinokur, A. (1973). Testing two classes of theories about group-induced shifts in individual choice. *Journal of Experimental Social Psychology*, 9, 123-137.
- Burnstein, E., & Vinokur, A. (1977). Persuasive arguments and social comparison as determinants of attitude polarization. *Journal of Experimental Social Psychology*, 13, 315-332.
- Buss, D. M. (1996). The evolutionary psychology of human social strategies. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 3-38). New York: Guilford Press.
- Campbell, D. T. (1958). Common fate, similarity, and other indices of the status of aggregates of persons as social entities. *Behavioral Science*, 3, 14-25.
- Cartwright, D., & Zander, A. (Eds.). (1968). *Group dynamics: Research and theory* (3rd ed.). New York: Harper & Row.
- Castano, E., Yzerbyt, V., & Bourguignon, D. (2003). We are one and I like it: The impact of ingroup entitativity on ingroup identification. *European Journal of Social Psychology*, 33, 735-754.
- Coie, J. D., Dodge, K. A., & Coppotelli, H. (1982). Dimensions and types of social status: A cross-age perspective. *Developmental Psychology*, 18, 557-570.
- Correll, J., & Park, B. (2005). A model of the ingroup as a social resource. *Personality and Social Psychology Review*, 9, 341-359.
- Cottrell, N. B. (1972). Social facilitation. In C. G. McClintock (Ed.), *Experimental social psychology* (pp. 185-236). New York: Holt, Rinehart & Winston.

- Crocker, J., & Luhtanen, R. (1990). Collective self-esteem and ingroup bias. *Journal of Personality and Social Psychology*, 58, 60–67.
- Crocker, J., Major, B., & Steele, C. (1998). Social stigma. In D. T. Gilbert & S. T. Fiske (Eds.), *The handbook of social psychology* (Vol. 2, 4th ed., pp. 504–553). New York: McGraw-Hill.
- Darley, J. (1992). Social organization for the production of evil. *Psychological Inquires*, 3, 199–218.
- Dashiell, J. F. (1930). An experimental analysis of some group effects. *Journal of Abnormal and Social Psychology*, 25, 190–199.
- Davies, P., Spencer, P. J., & Steele, C. M. (2005). Clearing the air: Identity safety moderates the effects of stereotype threat on women's leadership aspirations. *Journal of Personality and Social Psychology*, 88, 276–287.
- Davis, J. H., Kameda, T., & Stasson, M. (1992). Group risk taking: Selected topics. In J. F. Yates (Ed.), *Risk-taking behavior* (pp. 163–199). Chichester, UK: Wiley.
- De Cremer, D., & Van Dijk, E. (2005). When and why leaders put themselves first: Leader behavior in resource allocations as a function of feeling entitled. *European Journal of Social Psychology*, 35, 553–563.
- Diehl, M., & Stroebe, W. (1987). Productivity loss in brainstorming groups: Toward the solution of a riddle. *Journal of Personality and Social Psychology*, 53, 497–509.
- Dion, K. L. (2000). Group cohesion: From “field of forces” to multidimensional construct. *Group Dynamics: Theory, Research, and Practice*, 4, 7–26.
- Driskell, J. E., & Mullen, B. (1990). Status, expectations, and behavior: A meta-analytic review and test of theory. *Personality and Social Psychology Bulletin*, 16, 541–553.
- Eagly, A. H., & Carli, L. L. (2007). *Through the labyrinth: The truth about how women become leaders*. Boston: Harvard Business School Press.
- Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, 109, 573–598.
- Eysenck, H. (1990). Biological dimensions of personality. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 244–276). New York: Guilford Press.
- Festinger, L. (1950). Informal social communication. *Psychological Review*, 57, 271–282.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117–140.
- Festinger, L., Schachter, S., & Back, K. (1950). *Social pressures in informal groups*. New York: Harper.
- Fiedler, F. E. (1978). The contingency model and the dynamics of the leadership process. *Advances in Experimental Social Psychology*, 12, 59–112.
- Fiedler, F. E. (1981). Leadership effectiveness. *American Behavioral Scientist*, 24, 619–632.
- Forsyth, D. R. (2000). Social comparison and influence in groups. In J. Suls & L. Wheeler (Eds.), *Handbook of social comparison: Theory and research* (pp. 81–103). Dordrecht, Netherlands: Kluwer Academic Publishers.

- Forsyth, D. R. (2010). *Group dynamics* (5th ed.). Belmont, CA: Wadsworth/Thompson.
- Forsyth, D. R., & Burnette, J. L. (2005). The history of group research. In S. Wheelan (Ed.), *The handbook of group research and practice* (pp. 3–18). Thousand Oaks, CA: Sage.
- Forsyth, D. R., & Nye, J. L. (2008). Seeing and being a leader: The perceptual, cognitive, and interpersonal roots of conferred influence. In C. L. Hoyt, G. R. Goethals, & D. R. Forsyth (Eds.), *Leadership at the crossroads: Leadership and psychology* (Vol. 1, pp. 116–131). Westport, CT: Praeger.
- Freeman, L. C. (2004). *The development of social network analysis: A study in the sociology of science*. Vancouver, British Columbia: Empirical Press.
- French, J. R. P., Jr., & Raven, B. (1959). The bases of social power. In D. Cartwright (Ed.), *Studies in social power*. Ann Arbor, MI: Institute for Social Research.
- Galinsky, A. D., Gruenfeld, D. H., & Magee, J. C. (2003). From power to action. *Journal of Personality and Social Psychology*, *85*, 453–466.
- Galinsky, A. D., Jordan, J., & Sivanathan, N. (2008). Harnessing power to capture leadership. In C. L. Hoyt, G. R. Goethals, & D. R. Forsyth (Eds.), *Leadership at the crossroads: Leadership and psychology* (Vol. 1, pp. 283–299). Westport, CT: Praeger.
- Gawronski, B., Walther, E., & Blank, H. (2005). Cognitive consistency and the formation of interpersonal attitudes: Cognitive balance affects the encoding of social information. *Journal of Experimental Social Psychology*, *41*, 618–626.
- Guerin, B. (1983). Social facilitation and social monitoring: A test of three models. *British Journal of Social Psychology*, *22*, 203–214.
- Guinote, A. (2008). Power and affordances: When the situation has more power over powerful than powerless individuals. *Journal of Personality and Social Psychology*, *95*, 237–252.
- Hackman, J. R. (2003). Learning more by crossing levels: Evidence from airplanes, hospitals, and orchestras. *Journal of Organizational Behavior*, *24*, 905–922.
- Harkins, S. G., & Jackson, J. M. (1985). The role of evaluation in eliminating social loafing. *Personality and Social Psychology Bulletin*, *11*, 457–465.
- Harkins, S. G., & Szymanski, K. (1989). Social loafing and group evaluation. *Journal of Personality and Social Psychology*, *56*, 934–941.
- Haslam, S. A., Ryan, M. K., Postmes, T., Spears, R., Jetten, J., & Webley, P. (2006). Sticking to our guns: Social identity as a basis for the maintenance of commitment to faltering organizational projects. *Journal of Organizational Behavior*, *27*, 607–628.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.
- Henry, K. B., Arrow, H., & Carini, B. (1999). A tripartite model of group identification: Theory and measurement. *Small Group Research*, *30*, 558–581.
- Hersey, P., & Blanchard, K. H. (1982). *Management of organizational behavior* (4th ed.). Upper Saddle River, NJ: Prentice Hall.
- Hinsz, V. B., Tindale, R. S., & Vollrath, D. A. (1997). The emerging conceptualization of groups as information processors. *Psychological Bulletin*, *121*, 43–64.

- Hogan, R., & Kaiser, R. B. (2005). What we know about leadership. *Review of General Psychology, 9*, 169–180.
- Hogg, M. A. (1992). *The social psychology of group cohesiveness: From attraction to social identity*. New York: New York University Press.
- Hogg, M. A. (2001). Social categorization, depersonalization, and group behavior. In M. A. Hogg & R. S. Tindale (Eds.), *Blackwell handbook of social psychology: Group processes* (pp. 56–85). Malden, MA: Blackwell.
- Hogg, M. A., Sherman, D. K., Dierselhuis, J., Maitner, A. T., & Moffitt, G. (2007). Uncertainty, entitativity, and group identification. *Journal of Experimental Social Psychology, 43*, 135–142.
- Hollander, E. P., & Offermann, L. R. (1990). Power and leadership in organizations: Relationships in transition. *American Psychologist, 45*, 179–189.
- Hoyt, C. L., & Chemers, M. M. (2008). Social stigma and leadership: A long climb up a slippery ladder. In C. L. Hoyt, G. R. Goethals, & D. R. Forsyth (Eds.), *Leadership at the crossroads: Leadership and psychology* (Vol. 1, pp. 165–180). Westport, CT: Praeger.
- Isenberg, D. J. (1986). Group polarization: A critical review and meta-analysis. *Journal of Personality and Social Psychology, 50*, 1141–1151.
- Jackson, J. M., & Latané, B. (1981). All alone in front of all those people: Stage fright as a function of number and type of co-performances and audience. *Journal of Personality and Social Psychology, 40*, 73–85.
- Janis, I. L. (1982). *Groupthink: Psychological studies of policy decisions and fiascos* (2nd ed.). Boston: Houghton Mifflin.
- Kameda, T., Stasson, M. F., Davis, J. H., Parks, C. D., & Zimmerman, S. K. (1992). Social dilemmas, subgroups, and motivation loss in task-oriented groups: In search of an “optimal” team size in division of work. *Social Psychology Quarterly, 55*, 47–56.
- Kaplan, M. F., & Miller, C. E. (1983). Group discussion and judgment. In P. B. Paulus (Ed.), *Basic group processes* (pp. 65–94). New York: Springer-Verlag.
- Karau, S. J., & Williams, K. D. (1993). Social loafing: A meta-analytic review and theoretical integration. *Journal of Personality and Social Psychology, 65*, 681–706.
- Kelly, J. R. (2001). Mood and emotion in groups. In M. A. Hogg & R. S. Tindale (Eds.), *Blackwell handbook of social psychology: Group processes* (pp. 164–181). Malden, MA: Blackwell.
- Kelman, H. C. (2006). Interests, relationships, identities: Three central issues for individuals and groups in negotiating their social environment. *Annual Review of Psychology, 57*, 1–26.
- Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review, 110*, 265–284.
- Keltner, D., Van Kleef, G. A., Chen, S., & Kraus, M. W. (2008). A reciprocal influence model of social power: Emerging principles and lines of inquiry. *Advances in Experimental Social Psychology, 40*, 151–192.

- Kerr, N. L., Messé, L. A., Seok, D., Sambolec, E. J., Lount, R. B. Jr., & Park, E. S. (2007). Psychological mechanisms underlying the Köhler motivation gain. *Personality and Social Psychology Bulletin*, *33*, 828-841.
- Kirkpatrick, S. A., & Locke, E. A. (1991). Leadership: Do traits matter? *Academy of Management Executive*, *5*, 48-60.
- Knoke, D., & Yang, S. (2008). *Social network analysis* (2nd ed.). Los Angeles: Sage.
- Kravitz, D. A., & Martin, B. (1986). Ringelmann rediscovered: The original article. *Journal of Personality and Social Psychology*, *50*, 936-941.
- Kruglanski, A. W., Pierro, A., Mannetti, L., & De Grada, E. (2006). Groups as epistemic providers: Need for closure and the unfolding of group-centrism. *Psychological Review*, *113*, 84-100.
- Larson, J. R., Jr. (2010). *In search of synergy in small group performance*. New York: Psychology Press.
- Latané, B., Williams, K., & Harkins, S. (1979). Many hands make light the work: The causes and consequences of social loafing. *Journal of Personality and Social Psychology*, *37*, 822-832.
- Leary, M. R. (2007). Motivational and emotional aspects of the self. *Annual Review of Psychology*, *58*, 317-344.
- Leary, M. R., & Forsyth, D. R. (1986). Attributions of responsibility for collective endeavors. *Review of Personality and Social Psychology*, *8*, 167-188.
- Leavitt, H. J. (1951). Some effects of certain communication patterns on group performance. *Journal of Abnormal and Social Psychology*, *46*, 38-50.
- Lewin, K., Lippitt, R., & White, R. (1939). Patterns of aggressive behavior in experimentally created "social climates." *Journal of Social Psychology*, *10*, 271-299.
- Lickel, B., Hamilton, D. L., Wierzchowska, G., Lewis, A., Sherman, S. J., & Uhles, A. N. (2000). Varieties of groups and the perception of group entitativity. *Journal of Personality and Social Psychology*, *78*, 223-246.
- Littlepage, G. E. (1991). Effects of group size and task characteristics on group performance: A test of Steiner's model. *Personality and Social Psychology Bulletin*, *17*, 449-456.
- Maassen, G. H., Akkermans, W., & van der Linden, J. L. (1996). Two-dimensional socio-metric status determination with rating scales. *Small Group Research*, *27*, 56-78.
- Matz, D. C., & Wood, W. (2005). Cognitive dissonance in groups: The consequences of disagreement. *Journal of Personality and Social Psychology*, *88*, 22-37.
- McGrath, J. E. (1997). Small group research: That once and future field. *Group Dynamics: Theory, Research & Practice*, *1*, 7-27.
- Milgram, S. (1963). Behavioral study of obedience. *Journal of Abnormal and Social Psychology*, *67*, 371-378.
- Milgram, S. (1974). *Obedience to authority*. New York: Harper & Row.
- Milgram, S. (1992). *The individual in a social world: Essays and experiments* (2nd ed.). New York: McGraw-Hill.

- Moreland, R. L. (1987). The formation of small groups. *Review of Personality and Social Psychology*, 8, 80–110.
- Moreland, R. L., & Levine, J. M. (1982). Socialization in small groups: Temporal changes in individual-group relations. *Advances in Experimental Social Psychology*, 15, 137–192.
- Moreno, J. L. (1953). *Who shall survive? A new approach to the problem of human interrelations* (revised ed.). Washington, DC: Nervous and Mental Disease Publishing Co.
- Moscovici, S., & Zavalloni, M. (1969). The group as a polarizer of attitudes. *Journal of Personality and Social Psychology*, 12, 125–135.
- Mullen, B., & Copper, C. (1994). The relation between group cohesiveness and performance: An integration. *Psychological Bulletin*, 115, 210–227.
- Myers, D. G. (1982). Polarizing effects of social interaction. In H. Brandstätter, J. H. Davis, & G. Stocker-Kreichgauer (Eds.), *Group decision making*. New York: Academic Press.
- Myers, D. G., & Bishop, G. D. (1970). Discussion effects on racial attitudes. *Science*, 169, 778–789.
- Newcomb, A. F., Bukowski, W. M., & Pattee, L. (1993). Children's peer relations: A meta-analytic review of popular, rejected, neglected, controversial, and average sociometric status. *Psychological Bulletin*, 113, 99–128.
- Newcomb, T. M. (1943). *Personality and social change*. New York: Dryden.
- Nijstad, B. A. (2009). *Group performance*. New York: Psychology Press.
- Pavelshak, M. A., Moreland, R. L., & Levine, J. M. (1986). Effects of prior group memberships on subsequent reconnaissance activities. *Journal of Personality and Social Psychology*, 50, 56–66.
- Paxton, P., & Moody, J. (2003). Structure and sentiment: Explaining emotional attachment to group. *Social Psychology Quarterly*, 66, 34–47.
- Pearce, C. L., & Conger, J. A. (Eds.). (2003). *Shared leadership: Reframing the hows and whys of leadership*. Thousand Oaks, CA: Sage.
- Petty, R. E., Harkins, S. G., & Williams, K. D. (1980). The effects of group diffusion of cognitive effort on attitudes: An information-processing view. *Journal of Personality and Social Psychology*, 38, 81–92.
- Ridgeway, C. L. (2006). Status construction theory. In P. J. Burke (Ed.), *Contemporary social psychological theories* (pp. 301–323). Stanford, CA: Stanford University Press.
- Ross, L. (1977). The intuitive psychologist and his shortcomings: Distortions in the attribution process. *Advances in Experimental Social Psychology*, 10, 173–220.
- Rydell, R. J., Hugenberg, K., Ray, D., & Mackie, D. M. (2007). Implicit theories about groups and stereotyping: The role of group entitativity. *Personality and Social Psychology Bulletin*, 33, 549–558.
- Sadler, M. S., & Judd, C. M. (2001). Overcoming dependent data: A guide to the analysis of group data. In M. A. Hogg & R. S. Tindale (Eds.), *Blackwell handbook of social psychology: Group processes* (pp. 497–524). Malden, MA: Blackwell.

- Sani, F., Bowe, M., & Herrera, M. (2008). Perceived collective continuity and social well-being: Exploring the connections. *European Journal of Social Psychology*, 38, 365-374.
- Sankowsky, D. (1995). Charismatic leader as narcissist: Understanding the abuse of power. *Organizational Dynamics*, 23, 57-71.
- Schachter, S. (1959). *The psychology of affiliation*. Stanford, CA: Stanford University Press.
- Seashore, S. E. (1954). *Group cohesiveness in the industrial work group*. Ann Arbor, MI: Institute for Social Research.
- Semin, G. R. (2007). Grounding communication: Synchrony. In A. W. Kruglanski & E. T. Higgins (Eds.), *Social psychology: Handbook of basic principles* (2nd ed., pp. 630-649). New York: Guilford Press.
- Shaw, M. E. (1964). Communication networks. *Advances in Experimental Social Psychology*, 1, 111-147.
- Shelly, R. K., Troyer, L., Munroe, P. T., & Burger, T. (1999). Social structure and the duration of social acts. *Social Psychology Quarterly*, 62, 83-95.
- Sherif, M. (1936). *The psychology of social norms*. New York: Harper & Row.
- Simpson, J. A., & LaPaglia, J. (2010). Evolutionary psychology. In J. M. Levine & M. A. Hogg (Eds.), *Encyclopedia of group processes & intergroup relations* (Vol. 1, pp. 258-262). Los Angeles: Sage.
- Smith, E. R., Murphy, J., & Coats, S. (1999). Attachment to groups: Theory and management. *Journal of Personality and Social Psychology*, 77, 94-110.
- Smith, E. R., Seger, C. R., & Mackie, D. M. (2007). Can emotions be truly group level? Evidence regarding four conceptual criteria. *Journal of Personality and Social Psychology*, 93, 431-446.
- Smith, P. K., Dijksterhuis, A., & Wigboldus, D. H. J. (2008). Powerful people make good decisions even when they consciously think. *Psychological Science*, 19, 1258-1259.
- Smith, P. K., Jostmann, N. B., Galinsky, A. D., & van Dijk, W. W. (2008). Lacking power impairs executive functions. *Psychological Science*, 19, 441-447.
- Stasser, G. (1992). Pooling of unshared information during group discussions. In S. Worchel, W. Wood, & J. A. Simpson (Eds.), *Group process and productivity* (pp. 48-67). Thousand Oaks, CA: Sage.
- Stasser, G., Taylor, L. A., & Hanna, C. (1989). Information sampling in structured and unstructured discussions of three- and six-person groups. *Journal of Personality and Social Psychology*, 57, 67-78.
- Steiner, I. D. (1972). *Group process and productivity*. New York: Academic Press.
- Steiner, I. D. (1974). Whatever happened to the group in social psychology? *Journal of Experimental Social Psychology*, 10, 94-108.
- Stogdill, R. M. (1974). *Handbook of leadership*. New York: Free Press.

- Stoner, J. A. F. (1961). *A comparison of individual and group decisions involving risk*. Unpublished master's thesis. Cambridge, MA: Massachusetts Institute of Technology.
- Strube, M. J. (2005). What did Triplett really find? A contemporary analysis of the first experiment in social psychology. *American Journal of Psychology*, *118*, 271–286.
- Surowiecki, J. (2004). *The wisdom of crowds*. New York: Anchor.
- Szymanski, K., & Harkins, S. G. (1987). Social loafing and self-evaluation with a social standard. *Journal of Personality and Social Psychology*, *53*, 891–897.
- Tiedens, L. Z., Unzueta, M. M., & Young, M. J. (2007). An unconscious desire for hierarchy? The motivated perception of dominance complementarity in task partners. *Journal of Personality and Social Psychology*, *93*, 402–414.
- Triplett, N. (1898). The dynamogenic factors in pacemaking and competition. *American Journal of Psychology*, *9*, 507–533.
- Troyer, L., & Younts, C. W. (2010). Group structure. In J. M. Levine & M. A. Hogg (Eds.), *Encyclopedia of group processes & intergroup relations* (Vol. 1, pp. 381–385). Los Angeles: Sage.
- Tuckman, B. W. (1965). Developmental sequences in small groups. *Psychological Bulletin*, *63*, 384–399.
- Tuckman, B. W., & Jensen, M. A. C. (1977). Stages of small group development revisited. *Group and Organizational Studies*, *2*, 419–427.
- Twenge, J. M., Baumeister, R. F., DeWall, C. N., Ciarocco, N. J., & Bartels, J. M. (2007). Social exclusion decreases prosocial behavior. *Journal of Personality and Social Psychology*, *92*, 56–66.
- Uziel, L. (2007). Individual differences in the social facilitation effect: A review and meta-analysis. *Journal of Research in Personality*, *41*, 579–601.
- Van Vugt, M., & Schaller, M. (2008). Evolutionary approaches to group dynamics: An introduction. *Group Dynamics: Theory, Research, and Practice*, *12*, 1–6.
- Vider, S. (2004). Rethinking crowd violence: Self-categorization theory and the Woodstock 1999 riot. *Journal for the Theory of Social Behavior*, *34*, 141–166.
- Vroom, V. H. (2003). Educating managers in decision making and leadership. *Management Decision*, *10*, 968–978.
- Walker, H. A., Ilardi, B. C., McMahon, A. M., & Fennell, M. L. (1996). Gender, interaction, and leadership. *Social Psychology Quarterly*, *59*, 255–272.
- Wallach, M. A., Kogan, N., & Bem, D. J. (1962). Group influence on individual risk taking. *Journal of Abnormal and Social Psychology*, *65*, 75–86.
- Weber, B., & Hertel, G. (2007). Motivation gains of inferior group members: A meta-analytical review. *Journal of Personality and Social Psychology*, *93*, 973–993.
- Wheelan, S. (2005). The developmental perspective. In S. Wheelan (Ed.), *The handbook of group research and practice* (pp. 119–132). Thousand Oaks, CA: Sage.



- Williams, K. D., Harkins, S., & Latané, B. (1981). Identifiability as a deterrent to social loafing: Two cheering experiments. *Journal of Personality and Social Psychology*, *40*, 303–311.
- Wittenbaum, G. M. Hidden profile task. In J. M. Levine & M. A. Hogg (Eds.), *Encyclopedia of group processes & intergroup relations* (Vol. 1, pp. 398–400). Los Angeles: Sage.
- Yukl, G. (2010). *Leadership in organizations* (7th ed.). Upper Saddle River, NJ: Prentice Hall.
- Zaccaro, S. J., Foti, R. J., & Kenny, D. A. (1991). Self-monitoring and trait-based variance in leadership: An investigation of leader flexibility across multiple group situations. *Journal of Applied Psychology*, *76*, 308–315.
- Zajonc, R. B. (1965). Social facilitation. *Science*, *149*, 269–274.
- Zajonc, R. B. (1980). Compresence. In P. B. Paulus (Ed.), *Psychology of group influence* (pp. 35–60). Mahwah, NJ: Erlbaum.
- Zajonc, R. B., Heingartner, A., & Herman, E. M. (1969). Social enhancement and impairment of performance in the cockroach. *Journal of Personality and Social Psychology*, *13*, 83–92.
- Zander, A., Stotland, E., & Wolfe, D. (1960). Unity of group, identification with group, and self-esteem of members. *Journal of Personality*, *28*, 463–478.
- Zyphur, M. J., & Islam, G. (2006). *Toward understanding the existence of groups: The relationship between climate strength and entitativity*. IBMEC Working Paper (WPE-12-2006). Retrieved from <http://www.ibmecsp.edu.br/> December 15, 2008.
- Zyphur, M. J., Kaplan, S. A., & Christian, M. S. (2008). Assumptions of cross-level measurement and structural invariance in the analysis of multilevel data: Problems and solutions. *Group Dynamics: Theory, Research, and Practice*, *12*, 127–140.