positive and negative effects. For example, early work by Marvin E. Shaw (in L. Berkowitz [Ed.], *Advances in Experimental Social Psychology*, Vol. 1, New York, 1964) showed that centralized communication networks (in which communication flows mainly to one central member) are more efficient for simple tasks, but they also decrease the satisfaction of noncentral members. In addition, work on brainstorming groups (groups attempting to generate creative ideas) has found that interpersonal interaction, which was originally thought to increase both the number and creativity of ideas, actually inhibits performance relative to noninteracting groups. The main reason behind the decreased performance seems to be production blocking: as one member shares his or her ideas, other members must listen and cannot think of new ideas or share the ones they already have. However, new advances in technology are changing the basic notions behind what is meant by group interaction and communication. Because of advances such as electronic mail and video conferencing, group members no longer need to be in the same place in order to work as a group. Recent research has shown that production blocking can be attenuated by using computer-mediated brainstorming groups. Group members can continue typing in new ideas while the ideas generated by other members appear in a separate part of the computer screen. It is quite likely that many aspects of our conceptualizations of groups may change as a function of moving from face-to-face or physical groups to “virtual groups.”

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**R. Scott Tindale**

**Group Processes**

Many definitions of groups have been offered over the years. For our purposes, the prototypical “group” contains a small number of members who interact freely on a wide range of activities, are highly interdependent, and have a remembered past and an anticipated future together (cf. McGrath, 1984). Groups of this sort are a ubiquitous feature of human life because they satisfy several basic needs. For example, groups facilitate child-rearing, acquisition of food and shelter, and defense; they allow members to avoid loneliness and maintain a positive image of themselves; and they help members understand the world they live in and their own capabilities. Although group membership does not always satisfy all of these needs, the rewards of membership cause most people to belong to groups of one sort or another throughout their lives.

The goal of this article is to discuss contemporary trends in group research. Rather than providing a com-
prehensive review of the literature (see Levine & Moreland, 1998). I will pursue a more modest goal, namely, to clarify how cognitive, behavioral, and emotional processes have been treated by group researchers. Coverage will be selective rather than exhaustive and will focus on recent work by social and organizational psychologists.

**Cognitive Processes**

Given the recent emphasis on cognitive processes in social psychology, it is not surprising that current research on groups has a distinctly cognitive flavor. In many cases, researchers with a social cognition background have used their theoretical and methodological tools to help explain group phenomena. Perhaps the clearest example is recent work on stereotyping and intergroup relations. Much contemporary research on these topics focuses on how individuals process information about members of their own group and other groups (Fiske, 1998). This approach has shed light on several related phenomena, including how group-relevant information is represented and remembered, how stereotypes affect attributions about group members, how perceptions of group variability differ for ingroups versus out-groups, and how information about groups is distorted through the process of illusory correlation. For example, work on illusory correlation shows that when observers learn that a minority group member has exhibited an undesirable behavior, they perceive a stronger relationship between the group and the behavior than the facts warrant (Hamilton & Gifford, 1976). This cognitive tendency can thus produce negative stereotypes about minority groups.

Not all cognitive approaches to intergroup relations utilize the fine-grained information-processing analyses that are the hallmark of social cognition research. An exception is self-categorization theory, which assumes that people differentiate themselves from others on dimensions that maximize within-group similarity and between-group difference. In addition to shedding light on intergroup processes, self-categorization theory has proven useful in clarifying a variety of intragroup processes, including majority and minority influence and group polarization (Turner, 1991). For example, self-categorization researchers have demonstrated that people in group pressure situations are most likely to be influenced when they view themselves as in-group (rather than out-group) members and when they are asked to adopt a position that represents the group norm.

Most efforts to understand intergroup relations in terms of cognitive processes use the individual as the unit of analysis, focusing on information-processing activities that occur in the minds of individual respondents. A similar emphasis on individual cognitive activity is apparent in several lines of work that focus on intragroup processes. One example is research on majority and minority influence, which shows that people exposed to the responses of numerical minorities generate more creative ideas than do those exposed to the responses of numerical majorities (Nemeth, 1995). A second example is research on brainstorming, which indicates that people generate fewer creative ideas when working in groups than when working alone, even though they often believe they do better in groups (Stroebe & Diehl, 1994). A final example is research on the cognitive consequences of participation in group decision making, which demonstrates that people who participate in joint decision making later employ the problem-solving strategies that the group used. In all these cases, participating in a face-to-face group (or, in some cases, simply knowing what other group members think) either enhances or inhibits cognitive activity on the part of individual members.

In contrast to these and other efforts to study individual cognition in a group context, additional work is being done on “group cognition,” or cognitive activity that occurs at the level of the aggregate. Early social psychologists were quite comfortable with the notion that groups have mental lives, but theories of “group mind” have been out of favor for many years. Several lines of contemporary research, though not couched in group mind terms, seek to clarify how groups create, conserve, transmit, and use information to make decisions and carry out other tasks (Hinsz, Tindale, & Vollrath, 1997). Examples include work on groupthink, an extreme form of concurrence-seeking that interferes with effective information processing and thereby produces poor group decisions (Janis, 1982); studies of information dissemination in groups, showing that group members often do not exchange and use all the information they possess while making decisions (Stasser, 1992); research on how groups develop and use transactive memory systems, which are composed of members’ individual memory systems and the communication processes that link them (Moreland, Argote, & Krishnan, 1996); and work on how groups transmit task and social information to newcomers (Levine & Moreland, in press). Also relevant is recent work on “shared mental models,” which presumably arise as group members work together on collective tasks. Although these models have become popular in analyzing team performance, questions can be raised about their content and form, their measurement, and their impact on group dynamics and performance (Klimoski & Mohammed, 1994). Finally, several strands of research, although not dealing with groups per se, nevertheless assume that cognition is a collaborative social activity that cannot be reduced to individual mental processes. Examples include work on speakers’ efforts...
to establish common ground during communication and investigations of the determinants and consequences of "shared reality" (Hardin & Higgins, 1996).

In evaluating current work on cognitive activity at the level of the aggregate, it is important to recognize a form of reductionism that pervades much of this research. In many cases, group phenomena are explained completely by reference to the thoughts and feelings of individual members. And even when group-level explanations are offered, the individual often serves as a model for the group, so that processes at the individual level are simply generalized to the group level. If comparisons between group and individual processes take the latter as the standard, then uniquely group phenomena, such as emergent hypotheses that no group member held prior to discussion, may be overlooked.

### Behavioral Processes

Behavior in group settings can involve interactions between groups and interactions within groups. Regarding the former, recent research has focused on the determinants of reward allocation in the minimal group paradigm and the impact of contact on prejudice in natural groups. The first line of work, identified with Henri Tajfel, involves placing experimental participants into two groups on the basis of some flimsy criterion, such as artistic preference, and then asking them to allocate money to in-group and out-group members (excluding themselves). Many studies indicate that participants favor the in-group over the out-group in this situation (Brewer & Brown, 1998). Recent work shows that in-group favoritism is lower in some circumstances than others, for example when participants allocate negative (rather than positive) outcomes and when three groups (rather than two) are present. The second line of work, identified with Gordon Allport, involves producing contact between members of different groups as a means of reducing intergroup hostility. Allport suggested that contact is effective only under certain conditions, for example when participants have equal status and the interaction is cooperative and has institutional support. Social categorization theory, which emphasizes cognitive representations of the contact situation, is helpful in clarifying the mechanisms by which intergroup interaction can reduce intergroup bias (Brewer & Brown, 1998). For example, hostility toward an out-group decreases when participants focus their attention on a superordinate (inclusive) group identity that encompasses both the in-group and the out-group (Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993).

Much of the recent research on behavior in intragroup contexts has focused on how members of work teams coordinate their actions to perform complex tasks (Guzzo, Salas, & Associates, 1995). Teams differ in several ways from the laboratory groups that social psychologists typically study. For example, teams work on meaningful tasks and their members have specialized skills; teams experience developmental changes and must adapt to member turnover; teams have well-defined norms, roles, and status systems; teams influence members’ access to valuable rewards; and teams are embedded in organizations that influence their composition and working procedures.

Interest in teams has stimulated research on topics that have received little attention in recent years from laboratory researchers. One is team composition, which involves the number and type of people who belong to the team. Relevant work focuses on how teams select and train members and manage continuity and change among them. A second neglected topic is team ecology, which involves the temporal, physical, and social settings in which the team operates. Relevant work focuses on how teams develop over time, use computer technology, and relate to the organizations in which they are embedded. Finally, a third neglected topic is team interaction, which involves the ways team members coordinate their actions to achieve shared goals. Relevant work focuses on how team members of different status levels communicate and share information in high-stress environments.

In the preteam era, Steiner (1972) argued that a group’s interaction process often inhibits its performance. He suggested that this "process loss" has two primary causes: coordination loss, which occurs when group members’ responses are not combined in the optimal way for attaining the group goal, and motivation loss, which occurs when members do not exert optimal effort on the group task. Recent research on team performance by social psychologists focuses primarily on avoiding coordination loss, perhaps because members of real-life teams, such as airline crews, are assumed to be highly motivated to perform well. In contrast, most of the recent research on group productivity by social psychologists focuses on motivation loss, primarily "social loafing" (Karau & Williams, 1993).

Early work on social loafing found that group members expend less individual effort when working together than when working alone. In most studies of social loafing, this motivation loss occurs when members do not interact with one another but still believe that their individual task contributions are pooled. Although social loafing is a robust phenomenon, occurring on both physical and cognitive tasks, it is not inevitable. Research indicates that social loafing can be reduced by increasing the identifiability and uniqueness of individual contributions, the ease of evaluating these contributions, members’ task involvement and accountability, and task attractiveness (Karau & Williams, 1993). And under certain conditions, working with others can increase, rather than decrease, individual effort. This occurs when group members view the task as im-
important and do not expect their co-workers to contribute adequately to the group's performance.

In many cases, group members must coordinate their actions in order to maximize their share of scarce resources. In these mixed-motive situations, where people have conflicting interests and can influence each other's outcomes, they are motivated to both compete and cooperate. Much of the early work on mixed-motive situations involved the two-person Prisoner's Dilemma game. However, recent attention has been devoted mainly to the n-person social dilemma in which there is a fundamental conflict between actions that benefit the individual and those that benefit the group (Komorita & Parks, 1995). An example is the problem of public goods, which occurs when more people profit from a good (e.g., public television) than are needed to provide it. Everyone is thus tempted to free-ride on others' contributions. Many variables have been found to affect behavior in social dilemmas. For example, cooperation increases when group members understand the nature of the dilemma, view their contributions as critical, and can communicate with one another. Under certain circumstances, group members solve social dilemmas through collective action, such as electing a powerful leader or developing a sanctioning system for selfish behavior (Samuelson & Messick, 1995).

Although some studies of n-person social dilemmas have allowed participants to communicate with one another, most have not. But communication figures prominently in other techniques for resolving conflicts of interest (Pruitt, 1998). One such technique is two-party negotiation, in which the disputants are influenced by the expected or actual behavior of outsiders. In "representative bargaining," the disputants feel responsible for safeguarding the interests of constituents who are not directly involved in the negotiation. Representatives tend to be more unyielding than negotiators who do not have constituents. In "mediation," people who do not have a direct interest in the outcome of the negotiation try to help the disputants reach a mutually acceptable agreement. Mediators are more effective under some conditions than others (e.g., when they are able to establish a working alliance with the negotiators, improve the climate of negotiation, and apply pressure for settlement).

Another technique for resolving conflicts of interest is "intragroup negotiation," in which several group members who represent their own interests try to resolve conflicting preferences. Compared to dyads, larger groups have a harder time reaching agreement because they impose higher information-processing requirements on their members, use social decision rules to combine individual preferences, and have more complex interpersonal dynamics.

Finally, a third conflict resolution technique is "intergroup negotiation," in which the disputants are groups rather than individuals. Behavior between groups is often more competitive than behavior between individuals, a phenomenon labeled the "discontinuity effect" (Insko & Schopler, 1998). Two major explanations for the discontinuity effect are the schema-based distrust (or fear) hypothesis, based on the notion that people distrust other groups more than other individuals, and the social-support-for-shared-self-interest (or greed) hypothesis, based on the notion that group members provide each other with support for immediate self-interest, whereas this support is not available to individuals. Although the discontinuity effect would suggest that groups are poorer negotiators than individuals, evidence indicates that negotiating teams sometimes attain higher joint payoffs than do negotiating individuals. This occurs because teams are better at developing mutually beneficial trade-offs between issues and discovering compatible interests (Thompson, Peterson, & Brodt, 1996).

**Emotional Processes**

Investigators have devoted less attention to how group members feel than to how they think or act, but emotional processes in groups are becoming a more popular research topic. Regarding emotion in intragroup contexts, much attention is being devoted to the affective underpinnings of stereotyping and intergroup relations (Mackie & Hamilton, 1993; Stephan & Stephan, 1985). Several studies show that affective states, including mood, influence people's perceptions of groups. For example, anxious people do not attend to an out-group member's behavior if it disconfirms their negative stereotype of the out-group. And people who imagine or actually engage in interaction with out-group members, particularly when that interaction is perceived as an intergroup encounter, experience negative emotions such as anxiety.

The most active research on emotion in intragroup contexts involves group cohesion, or group members' affective reactions to one another and to the group as a whole. A recent analysis derived from self-categorization theory distinguishes between cohesion based on personal attraction, which depends on group members' feelings toward one another as individuals, and cohesion based on social attraction, which depends on members' perceptions of how much others match a shared image of the prototypical group member (Hogg, 1993). Current research on cohesion focuses primarily on its consequences for performance. More cohesive groups tend to perform better, especially when cohesion involves task commitment, rather than just feelings of personal attraction or group pride. In addition, there is stronger evidence that performance causes cohesion than that cohesion causes performance (Mullen & Copper, 1994).

Like much of the work on cognitive and behavioral
processes in groups, these two lines of research on emotional processes have a distinctly individualistic flavor. That is, research on intergroup relations generally views emotion as an individual, rather than a group, phenomenon. In addition, much of the current research on cohesion, including that done by investigators working in the self-categorization tradition, focuses on individual emotion rather than group emotion.

More work is needed on emotion at the group level of analysis. Several lines of research appear promising in this regard. For example, evidence indicates that status hierarchies in task groups influence the expression of negative emotions arising from disagreement but not the expression of positive emotions arising from agreement (Ridgeway & Johnson, 1990). And studies show that the affective tone of a work group influences members’ prosocial behavior and absenteeism (George, 1990). Other relevant work deals with how families communicate emotions, how emotional reactions during group discussion affect social influence, and how stress affects the performance of work groups. Some groups seem to be dominated by a single strong emotion, such as love (in the case of Christian missionary groups) or hate (in the case of White supremacist groups). Research is needed on how emotion comes to play such an important role in these groups and how their internal dynamics and external relations differ from those of other groups.

Conclusions

My goal in this article was to review current group research conducted by social and organizational psychologists. To accomplish this, I discussed cognition, behavior, and emotion in groups and, in each case, I distinguished intergroup processes from intragroup processes. Like all organizational schemes, this one obscures as well as illuminates. One shortcoming of the scheme is its failure to highlight the complex interrelationships between cognition, behavior, and emotion and between intergroup and intragroup processes. It is interesting that group researchers have been much more sensitive to the former complexity than to the latter. There are several examples of work exploring the causal connections between cognition, behavior, and emotion in group contexts. These include research on how intergroup contact influences participants’ thoughts and feelings, how shared mental models affect team performance, and how expectations and cognitive biases influence negotiation behavior. In contrast, there is much less recognition that intergroup processes can affect intragroup processes and vice versa. With some important exceptions, such as self-categorization theory, researchers exhibit little interest in the causal connections between intergroup and intragroup processes. Although separate consideration of what happens between and within groups may have been useful in the past, it is now time to abandon this dual-track approach in the interest of developing a more integrated theoretical perspective on group processes.

Bibliography


GROUP THERAPY is the treatment of emotional or psychological disorders or problems of adjustment through the medium of a group setting, the focal point being the interpersonal (social), intrapersonal (psychological), or behavioral change of the participating clients, or group members. Designed as a therapeutic process capable of creating change in the lives of individual clients, the group format features, as distinctive, the interpersonal and group properties of the therapeutic process.

During the past two decades, the definition, objectives, and structure of group therapy have substantially expanded, specifically in the tempering of exclusion and inclusion criteria. Traditionally, therapy groups were comprised of 4 to 10 outpatient clients suffering with various emotional and behavioral problems, were led by a therapist who focused on the individual and the group, and had members who participated for one or two years. Today there is wide variability in the structure and application of group therapy. Groups vary in size (4 to 20 or more), treatment duration (short/long term), scope (preventative/developmental/remedial), composition (heterogeneous/homogeneous), amount and type of structure (process oriented/therapist directed/manual driven), population (child/adolescent/adult/elderly), setting (outpatient/therapist directed/manual driven), and theoretical orientation. Recent years document an increased use of the group format in psychological treatment delivery, a proliferation of theoretical applications, a reemergent use with medical problems, an increased variety of problem-focused groups, and a renewed investment in the training and education of group therapists.

Group therapy is not solely the domain of psychology: practitioners, researchers, and training programs can be found in the professional disciplines of education, nursing, occupational therapy, psychiatry, and social work. National associations distinctive to group therapy, such as the American Group Psychotherapy Association (AGPA), American Psychological Association (APA) Division 49 (Group Psychology and Group Psychotherapy), and the Association for Specialists in Group Work (ASGW), reflect this professional diversity. Additional associations concentrate on specific orientations and applications. The empirical and theoretical writings also display this interdisciplinary flair and are found in well over 160 journals, most notably Group, Group Dynamics: Theory, Research, and Practice, Grouppsychotherapie und Gruppendifynamik, International Journal of Group Psychotherapy, and Small Group Research.

The dynamic forces that operate in group therapy emerge from the interpersonal nature of the group setting, placing interpersonal influence and interaction at the foundation of the therapeutic process. It follows, then, that the chief medium of treatment is the verbal interaction between therapist and clients and among client members. The therapeutic alliance also contributes to the interactive forces affecting client change.

Properties characteristiclly associated with a group