

SOCIAL INFLUENCE IN GROUPS

John M. Levine and R. Scott Tindale

Social influence in groups was a major focus of the emerging field of social psychology at the turn of the 20th century. This focus was evident in early interest in such phenomena as sympathy, imitation, suggestion, the crowd, and the group mind. It also was reflected in the first experimental problem in social psychology: “What change in an individual’s normal solitary performance occurs when other people are present?” (Allport, 1954, p. 46). Historical analyses of social psychology are unanimous in according group influence a central role in the development of the field (Jones, 1985; Prislin & Crano, 2012; Ross, Lepper, & Ward, 2010).

Social influence in groups is a multifaceted phenomenon, which can vary on several dimensions. These dimensions include, among others, the relative size and status of the source and target of influence, the extent to which the source and target interact with one another, the degree to which the source and target seek to arrive at a joint decision, and the nature of the influence exerted (e.g., overt behavioral change, covert opinion change). It therefore is not surprising that the literature on social influence in groups is both large and diverse, encompassing such phenomena as leadership (Hogg, 2007a; Chapter 3, this volume), negotiation (Chapter 6, this volume), group creativity (Chapter 2, this volume), group polarization (Brauer & Judd, 1996), groupthink (Baron, 2005), social facilitation and loafing (Williams, Harkins, & Karau, 2003), majority and minority influence (Levine & Prislin, 2013), and group decision making (Tindale, Talbot, & Martinez, 2013).

This chapter discusses majority and minority influence and group decision making, focusing primarily on cases in which the distribution of group members’ initial positions is bimodal and asymmetrical, such that a numerical majority holds one position and a numerical minority holds another. Our definitions of *majority* and *minority* are consistent with those used by most social influence researchers. Three implicit features of the definition should be pointed out, however. First, researchers typically assume that minorities invariably promote change (or innovation) in otherwise-conservative groups, thereby portraying minorities in a heroic light. As Levine and Kaarbo (2001) argued, however, this is not always the case. In addition to promoting change to a position that is new for the group (progressive influence), a minority also can promote change to a position that the group previously held (reactionary influence). Moreover, a minority can *block* change, either to a position that is new for the group (conservative influence) or to one that the group previously held (modernist influence). Second, it generally is assumed that the majority position reflects the dominant viewpoint of people outside the group (i.e., the *Zeitgeist*). This is often, but not always, the case (cf. Maass, Clark, & Haberkorn, 1982; Paicheler, 1976). Finally, although a faction’s power and status often are correlated positively (and strongly) with its relative size, there are important exceptions. Examples include Whites in South Africa during apartheid and the leaders of many groups. As President Abraham Lincoln is reported to have told his advisors, “Gentlemen, the vote is eleven to one, and the one has it” (Hermann & Hermann, 1989, p. 365).

Preparation of this chapter was partially supported by NSF Grants SES-0951516 and BCS-0820344.

<http://dx.doi.org/10.1037/14342-001>

APA Handbook of Personality and Social Psychology: Vol. 2. Group Processes, M. Mikulincer and P. R. Shaver (Editors-in-Chief)
Copyright © 2015 by the American Psychological Association. All rights reserved.

Majority–minority disagreement (of the sort highlighted in this chapter) can have both negative and positive consequences for individual members and the group as a whole. On the negative side, minority members who challenge group consensus can undermine majority members' confidence in the validity of their position, threaten their group's perceived distinctiveness and positivity, cast doubt on their moral worth, and interfere with the group's ability to achieve collective goals (e.g., Festinger, 1950; Hutchison, Abrams, Gutierrez, & Viki, 2008; Kruglanski & Webster, 1991; Marques, Abrams, Paez, & Hogg, 2001; Monin & O'Connor, 2011). On the positive side, minority members can stimulate majority members to question their underlying assumptions, pay attention to alternative viewpoints, and engage in divergent thinking (e.g., Moscovici, 1976, 1980; Nemeth, 1986). These processes, in turn, can enhance the quality of group decision making and performance (e.g., de Dreu & West, 2001; Levine & Choi, 2010, 2011; Rink & Ellemers, 2011; Schulz-Hardt, Brodbeck, Mojzisch, Kerschreiter, & Frey, 2006; Smith, Tindale, & Dugoni, 1996).

How do members of majority and minority factions deal with disagreement? One general strategy involves changing one's position on the issue under consideration. Thus, minority members might move toward the majority (conformity, or majority influence), majority members might move toward the minority (innovation, or minority influence), or members of both factions might move toward one another (compromise). A second general strategy involves redefining one's relationship to one's own or the other faction or to the group as a whole. For example, majority or minority members might express increased liking (disliking) for their own (the other) faction, attempt to recruit new members who will side with their faction, or leave the group (Levine & Thompson, 1996).

The focus in this chapter is on majority and minority influence. The first section, *The Attitude Change Perspective on Majority–Minority Influence*, discusses research in which (a) group members have little or no interaction with one another and are not instructed to reach a collective decision and (b) individual perceptual or opinion change is the major dependent variable. The second section, *The Decision-Making*

Perspective on Majority–Minority Influence, discusses research in which (a) members do interact with one another and are instructed to reach a collective decision and (b) this decision is the major dependent variable. The third section, *Integration and New Directions*, identifies similarities and differences between the attitude change and decision-making perspectives and suggests some promising avenues for future work on majority and minority influence.

THE ATTITUDE CHANGE PERSPECTIVE ON MAJORITY–MINORITY INFLUENCE

Early theoretical and empirical work on how faction size affects social influence focused exclusively on majority influence (conformity), in which the smaller faction moves toward the larger faction. Later work adopted a broader focus, focusing on similarities and differences between majority influence and its mirror opposite—minority influence (innovation), in which the larger faction moves toward the smaller faction.

Majority Influence

The credit for stimulating interest in majority influence belongs to Solomon Asch. In a series of classic studies, Asch (1951, 1952, 1956) confronted a naive participant with a difficult dilemma, namely, how to respond when several peers gave unanimously incorrect answers on visual perception stimuli. Even though the task was very easy (people responding alone hardly ever made mistakes), approximately one third of participants' responses involved yielding to the majority (Asch, 1956). Although these results might seem dramatic, it is important to note that about two thirds of participants' responses were correct and almost one fourth of participants never yielded. Nonetheless, Asch's findings often are interpreted as demonstrating that people generally succumb to group pressure, in other words, that conformity is the default reaction to disagreement (Friend, Rafferty, & Bramel, 1990).

This interpretation of Asch's findings not only is incorrect but also is inconsistent with the goals of his research, which focused on understanding independence as well as conformity. In describing these goals, Asch (1952) stated,

Current thinking . . . has taken slavish submission to group forces as the general fact and has neglected or implicitly denied the capacities of men for independence. . . . Our present task is to observe directly the interaction between individuals and groups when the paramount issue is that of remaining independent or submitting to social pressure. (p. 451)

Thus, Asch did not set out to demonstrate that people typically conform and was not surprised that his participants demonstrated substantial independence (see Levine, 1999; Prislin & Crano, 2012).

Asch's analysis of social influence in groups highlighted the productive interplay of conformity and independence (Levine, 1999). He argued that social interaction depends on people's ability to comprehend others' perspectives, to view themselves and others as members of the same group, and to adhere to the norms and values of the group (cf. Abrams & Hogg, 1990; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). In this context, Asch emphasized the importance of group members' cooperative efforts to achieve a common understanding of the world, or *shared reality* (cf. Echterhoff, Higgins, & Levine, 2009; Hardin & Higgins, 1996; Tindale, Meisenhelder, Dykema-Engblade, & Hogg, 2001). He argued that to develop a useful social reality, group members must balance the opposing tendencies to resist social pressure (independence) and to yield to this pressure (conformity). Asch's belief in the value of independence for group functioning presaged later thinking on minority influence, which is discussed later in this chapter.

Stimulated by Asch's groundbreaking work, substantial research has been done on factors that affect conformity, and many explanations have been offered for why people do and do not succumb to group pressure. These explanations include, among others, attributions about the majority's responses (Ross, Bierbrauer, & Hoffman, 1976), self-presentational goals (Baumeister, 1982), self-categorization (Abrams, Wetherell, Cochrane, Hogg, & Turner, 1990), culture and gender (Bond & Smith, 1996; Eagly & Carli, 1981), ostracism (Williams, Cheung, & Choi, 2000), desire to feel distinctive (Hornsey &

Jetten, 2004; Imhoff & Erb, 2009), desire to achieve multiple goals (Hodges & Geyer, 2006), self-protection and mate attraction (Griskevicius, Goldstein, Mortensen, Cialdini, & Kenrick, 2006), moral conviction (Hornsey, Smith, & Begg, 2007), desire to help the group sustain its values (Packer, 2008), mood (Tong, Tan, Latheef, Selamat, & Tan, 2008), self-uncertainty and implicit self-esteem (Rios, Wheeler, & Miller, 2012), psychological distance (Ledgerwood & Callahan, 2012), threat of infectious disease (Murray & Schaller, 2012), and hormonal mechanisms (Stallen, de Dreu, Shalvi, Smidts, & Sanfey, 2012). (Additional explanations of majority influence that focus on its relationship to minority influence are discussed later in this chapter.)

The dominant explanation of majority influence, however, has focused on the minority's assumed cognitive or social dependence on the majority. The former derives from the minority's desire to respond accurately to the experimental stimuli, whereas the latter derives from the minority's desire to gain acceptance and avoid rejection. In the most influential dependence formulation, Deutsch and Gerard (1955) distinguished between informational influence, which is based on a desire to reduce uncertainty, and normative influence, which is based on a desire for approval (see also Claidière & Whiten, 2012; Jones & Gerard, 1967; Kelley, 1952; Thibaut & Strickland, 1956). Given that majorities are in a stronger position than minorities to satisfy other members' cognitive and social needs, the dependence formulation suggests that conformity is the default form of influence in groups.

Much of what we know about conformity can be explained by Deutsch and Gerard's (1955) informational–normative analysis (Levine & Prislin, 2013). Let us first consider evidence consistent with an informational explanation. It has been found, for example, that people are more likely to conform when they are responding to difficult or ambiguous stimuli (e.g., Crutchfield, 1955) and when they have doubts about their competence on the task (e.g., Hochbaum, 1954). In addition, people conform more on difficult tasks when they have high, rather than low, desire to be accurate (Baron, Vandello, & Brunzman, 1996). And conformity is higher when majority members are believed to have arrived at

their common position independently, rather than through mutual influence (Wilder, 1977, 1978). Finally, knowledge of the majority's position can cause minority members to cognitively restructure the stimulus in ways that increase their susceptibility to majority pressure (Allen & Wilder, 1980).

Other evidence is consistent with a normative explanation. For example, people who deviate from group consensus expect that other members will dislike them (e.g., Gerard & Rotter, 1961), and in fact, dissenters often are liked less than conformers (see Levine & Kerr, 2007). In addition, as would be expected if desire to be liked were important, people tend to conform more when they believe that other group members can monitor their responses (e.g., Insko, Drenan, Solomon, Smith, & Wade, 1983; but see Bond & Smith, 1996), when they expect future interaction with these individuals (e.g., Lewis, Langan, & Hollander, 1972), and when they are working for a common goal rather than individual goals (e.g., Deutsch & Gerard, 1955)—unless they believe conformity will undermine, rather than facilitate, collective goal attainment (Sakurai, 1975). Finally, people often conform more to attractive than to unattractive groups (Allen, 1965; Turner, 1991), and this is particularly likely when they are insecure about their evaluation and view conformity as instrumental to gaining acceptance (e.g., Jetten, Hornsey, & Adarves-Yorno, 2006; Walker & Heyns, 1962).

The informational–normative distinction also is helpful in explaining the impact of both majority and minority size on conformity. Regarding the former, several studies have examined how one-person minorities respond to unanimous majorities of various sizes. In early research, Asch (1951) found that conformity increased as majority size went from one to three and then plateaued. Later studies produced a welter of conflicting findings (e.g., Gerard, Wilhelm, & Conolley, 1968; Goldberg, 1954; Rosenberg, 1961; for a review, see Bond, 2005). To clarify the impact of majority size on conformity, several mathematical models of the relationship were developed (Latané & Wolf, 1981; Mullen, 1983; Tanford & Penrod, 1984). For example, Latané and Wolf (1981) proposed that conformity is related to majority size by a power function, such that the

impact of each additional majority member declines as the size of the majority increases. Thus, going from a majority of 2 to 3 has a much bigger impact on conformity than going from a majority of 11 to 12. In contrast, Tanford and Penrod (1984) argued for an S-shaped relationship between majority size and conformity, whereas Mullen (1983) suggested that conformity varies positively with the *other-total ratio* (the size of the majority faction divided by the total size of the group). Recently, MacCoun (2012) developed a family of burden-of-social-proof models with two key parameters (location and clarity of the influence threshold) and demonstrated that such models can do a better job than prior mathematical models of accounting for the relationship between majority size and conformity.

Although none of these analyses focuses explicitly on informational and normative influence, Mullen's (1983) model posits that as the relative size of the minority decreases, minority members become more self-attentive and thus more likely to match salient standards of behavior. This analysis is broadly consistent with an informational account of majority size and conformity. Wilder (1977, 1978) offered a more explicitly informational explanation, arguing that conformity increases with the number of distinct (i.e., independent) social entities holding the majority position, rather than the absolute number of people in the majority. In support of his viewpoint, he found a positive relationship between majority size and conformity only when majority members were seen as having arrived independently at their position. Not surprisingly, normative influence also can play a role in the relationship between majority size and conformity. For example, Campbell and Fairey (1989) found that when minority members attended closely to stimuli likely to produce normative influence, they conformed more to larger than to smaller majorities. And on the basis of a meta-analysis of studies using Asch's line-judging task, Bond (2005) concluded that the relationship between majority size and conformity differs depending on whether situational factors favor informational influence (e.g., private responding) or normative influence (e.g., public responding).

In addition to examining how one-person minorities respond to unanimous majorities of various

sizes, studies also have investigated how two-person minorities respond to social pressure. This work, like that on majority size, initially was stimulated by Asch's (1951) ground-breaking studies. Asch found that the presence of a "social supporter" (one person who dissents from erroneous group consensus by giving correct answers) dramatically reduces conformity, compared with a unanimous majority. Later work confirmed the power of social support (see Allen, 1975). For example, the presence of a supporter reduces conformity on subjective (e.g., opinion) as well as objective (e.g., visual perception) stimuli, and it continues to be effective even if the supporter leaves the situation, as long as this person does not retract his or her dissent and minority members continue to judge the same kind of stimuli.

The effectiveness of social support can be explained by the supporter's ability to reduce the minority's dependence on the majority for information about reality or for social approval. Consistent with an informational dependence explanation, supporters can reinforce minority members' confidence in the accuracy of their responses. For example, a supporter is more effective in reducing conformity when he or she has high versus low perceived competence in judging the experimental stimuli (Allen & Levine, 1971). Moreover, a supporter can reduce the minority's informational dependence on the majority by reducing the majority's ability to produce cognitive restructuring of the experimental stimulus, which, if unimpeded, facilitates majority influence (Allen & Wilder, 1980). Consistent with a normative dependence explanation of social support, supporters can reduce minority members' fear that they will be punished for deviating from group consensus. For example, Allen (1975) found that compared with minority members who dissented from group consensus alone, dissenters receiving social support were less likely to expect rejection. Minority members who have support also may assume that their deviance will be attributed to the validity of their position rather than a personal idiosyncrasy, which will reduce majority hostility to them (Allen, 1975). The assumption that support will reduce hostility is less likely, however, if minority members think the majority dislikes the

supporter (e.g., due to his or her racial or ethnic identity), because association with a disliked supporter should increase (rather than decrease) majority hostility. In such cases, social support would not be expected to reduce conformity (Boyanowsky & Allen, 1973).

The role of informational and normative influence in conformity has been discussed in regard to the type of change that a majority produces, namely, relatively superficial public compliance (overt behavioral change) versus more profound private acceptance (covert perceptual or attitudinal change). Deutsch and Gerard (1955) did not take a position on the relationship between informational–normative influence and compliance–acceptance, but most subsequent scholars have assumed that normative influence involves only compliance whereas informational influence involves both compliance and acceptance. This assumption, however, can be questioned on both methodological and theoretical grounds (see Levine & Prislin, 2013).

Regarding methodology, various problems are associated with measuring compliance and acceptance. For example, contrary to common assumptions, it is not clear that a minority publicly agreeing with a majority both when it is physically present (Time 1) and later when it is absent (Time 2) was necessarily experiencing acceptance at Time 1 (Allen, 1965). Psychological processes such as dissonance reduction may have transformed initial compliance into later acceptance. In addition, the binary distinction between compliance and acceptance greatly oversimplifies minority members' response options in the face of majority pressure (Allen, 1965; Willis, 1963). For example, eight kinds of influence can be identified if one crosses preexposure private agreement–disagreement, post-exposure public agreement–disagreement, and post-exposure private agreement–disagreement (Nail, 1986; see also Nail, MacDonald, & Levy, 2000). Analyses of this kind provide a much more differentiated picture of the ways in which minority members might accept (and resist) majority influence.

There are also theoretical reasons to question the conventional wisdom that normative influence is associated only with compliance, whereas informational influence is associated with both compliance

and acceptance. For example, self-categorization theorists deny the fundamental distinction between informational and normative influence, at least regarding influence from in-group members, arguing that “the basic influence process is one where the normative position of people categorized as similar to the self tends to be subjectively accepted as valid” (Turner, 1991, p. 171; see also Abrams & Hogg, 1990; Chapter 8, this volume). Prislin and Wood (2005) suggested several reasons to question the assumption that normative influence involves only temporary change manifested in public settings, whereas informational influence involves lasting change manifested in both public and private settings. They argued, for example, that normatively motivated influence can occur in private as well as public settings and is not linked closely to surveillance. In addition, they suggested a more complex typology of the motives underlying social influence, which include the desire to be oneself, the desire to maximize social rewards and minimize social punishments, and the desire to possess an accurate understanding of reality (cf. Cialdini & Goldstein, 2004).

Majority and Minority Influence

Until the late 1960s, social psychologists assumed that when factional conflict in groups is resolved through influence, the minority invariably yields to the majority. In the late 1960s and early 1970s, however, Serge Moscovici challenged this assumption (some might say, dogma) in a way that fundamentally altered the field of group influence (e.g., Moscovici, 1976; Moscovici & Faucheux, 1972; Moscovici, Lage, & Naffrechoux, 1969).

In his 1976 book, Moscovici presented a detailed critique of the dominant functionalist (dependence) model of social influence and offered an alternative *genetic model*. Moscovici’s main criticism of the functionalist model was that it focuses single-mindedly on social stability, which rests on the majority’s ability to influence the minority, and thereby ignores social change, which rests on the minority’s ability to influence the majority. How, Moscovici asked, can one explain revolutions in religion, politics, science, and the arts if one assumes that small minorities with little status or power are always targets and never sources of influence in society?

In his genetic model, Moscovici (1976) provided an analysis of social influence designed to explain both social stability (based on majority influence) and social change (based on minority influence). He proposed that all group members, irrespective of rank, are potential sources *and* targets of influence. He also argued that influence depends on the production and resolution of conflict and that a source’s ability to exert influence derives from its behavioral style (e.g., consistency in presenting and defending its position). Finally, he suggested that three forms of influence can occur in groups: normalization (reciprocal influence and compromise), which avoids conflict; conformity (majority influence), which reduces conflict; and innovation (minority influence), which creates conflict. According to Moscovici’s analysis, normalization occurs when there is no clear criterion for deciding among competing positions and group members generally are anomic (i.e., do not have strongly internalized views); conformity occurs when the majority is nomic (i.e., has strongly internalized views) and the minority is anomic; and innovation occurs when the minority is nomic and the majority is either nomic or anomic.

Moscovici (1976) explained majority influence in terms of the stress associated with holding a minority position in a group. Because the majority is numerically larger, defines what is “real” and “true” in the group, and is motivated to produce consensus by eliminating deviance, it puts pressure on the minority to change its view. As a result, the minority loses confidence that it can win over the majority, doubts the validity of its position, and desires to avoid being isolated or rejected. These responses, in turn, lead the minority to conform to the majority.

In regard to minority influence, Moscovici (1976) argued that because majorities initially are inclined to dismiss minorities as irrelevant at best or dangerous at worst, a minority needs to capture and hold the majority’s attention on its position to have any chance of producing influence. The minority’s behavioral style is critical because it affects the majority’s attributions about the minority (Moscovici & Nemeth, 1974). For example, a minority that consistently maintains its position over time and modality will be seen as highly confident and

unwilling to compromise. These attributions, in turn, will cause the majority to pay attention to the minority's viewpoint and to experience social and cognitive conflict as a result. This conflict, in turn, will lead the majority to consider the minority's position more carefully and to question its own position, resulting in movement toward the minority's position. It is important to note that although certain behavioral styles (e.g., consistency, investment, autonomy, fairness) produce positive attributions about the minority and more influence as a result, other styles (e.g., rigidity) produce the opposite effects (Mugny, 1982).

Two additional aspects of Moscovici's (1976) analysis should be noted. First, he argued that whereas majority influence involves public but not private change, minority influence involves private but not public change. Second, he suggested that minorities elicit ambivalent evaluations from majorities. On the one hand, they are disliked and rejected because they challenge the majority's view of reality. On the other hand, they are admired and grudgingly respected because they demonstrate the courage of their convictions (cf. Baron & Bellman, 2007).

Moscovici's (1976) genetic model stimulated a great deal of interest in minority influence, particularly the impact of minority consistency (e.g., Moscovici & Lage, 1976; Mugny, 1982; Nemeth, Swedlund, & Kanki, 1974). Not surprisingly, the model also elicited criticisms. Many of these focused on the key assumption that attributions about a minority's confidence mediate its ability to exert influence (see Eagly & Chaiken, 1993; Levine, 1989; Maass & Clark, 1984).

In his subsequent *conversion theory* of social influence, Moscovici (1980) elaborated his ideas regarding the role of conflict in majority–minority relations, focusing on the differential cognitive responses elicited by disagreement from members of large versus small factions. In so doing, he substantially altered his explanations of majority and minority influence. For example, regarding minority influence, he placed less emphasis on the minority's behavioral style and the majority's attributions about the minority's confidence and more emphasis on the minority's distinctiveness and the majority's evaluation of the minority's message (see also Moscovici, 1985). Conversion theory postulates that attempts to

influence made by both majorities and minorities create conflict, which increases as a function of the source's and target's confidence in their positions. This conflict, however, elicits different reactions and has different consequences depending on its source. According to Moscovici, majority sources induce a comparison process, whereby minority members focus on the social implications of the conflict. To hold a valid opinion and gain acceptance, the minority exhibits direct–public change toward the majority's position. However, because the minority does not engage in active information processing about the majority's arguments, it does not exhibit indirect–private change. Precisely the opposite occurs with minority sources. These sources induce a validation process in which majority members actively think about the minority's arguments, which in turn leads to indirect–private attitude change. However, because they do not want to be seen as deviant, they do not exhibit direct–public change. The distinction between comparison and validation is similar to Deutsch and Gerard's (1955) distinction between normative and informational influence.

Moscovici's analysis of social influence (particularly conversion theory) stimulated a great deal of empirical work (for reviews, see Martin & Hewstone, 2008; Martin, Hewstone, Martin, & Gardikiotis, 2008; Wood, Lundgren, Ouellette, Busceme, & Blackstone, 1994). The accumulated evidence provides mixed support for Moscovici's key hypotheses that (a) majority influence produces a focus on the relationship between the source and target of influence, whereas minority influence produces a focus on the content of the source's message; (b) majority influence leads to superficial processing of the source's argument, whereas minority influence leads to careful processing; and (c) majority influence is public and direct rather than private and indirect, whereas minority influence is just the opposite. For example, although majorities are more influential than minorities on public measures, they also are more influential on private–direct measures. Moreover, minorities are more influential than majorities on private–indirect measures in some analyses but not in others (Wood et al., 1994; see also Stroebe, 2010).

In contrast to Moscovici's emphasis on how majority and minority sources change recipients'

opinions (publicly or privately), Nemeth's (1986, 1995) *divergent–convergent thought model* focuses on how these two kinds of sources change recipients' thought processes. According to Nemeth, disagreement from a majority is a stressful experience because it undermines recipients' confidence in the validity of their position and raises their concerns about social disapproval. This stress, in turn, narrows their focus of attention and causes them to engage in convergent thinking that focuses on the content of the majority's message. In contrast, because disagreement from a minority is not stressful, recipients engage in divergent thinking that focuses on a wider range of alternatives than are stated in the source's message. Thus, whereas majority influence produces message-specific cognitive activity, minority influence produces issue-specific cognitive activity that enables the recipient to "think outside the box" by considering alternatives that the minority did not put forward (cf. de Dreu, De Vries, Gordijn, & Schuurman, 1999). Nemeth's perspective thus differs from Moscovici's in positing that (a) majority influence involves actively processing the source's message and (b) minority influence involves going beyond the source's message to consider ideas not contained in the message.

Nemeth's research indicates that minority dissent does indeed stimulate more novel and creative ideas than does majority influence (e.g., Nemeth & Kwan, 1985; Nemeth & Wachtler, 1983; see also Chapter 2, this volume). The impact of novelty on performance, however, depends on the requirements of the task, namely, whether divergent or convergent thinking is required. In the former case, minority influence enhances performance (e.g., Nemeth & Kwan, 1987; Nemeth & Wachtler, 1983). In the latter case, such influence undermines performance (e.g., Nemeth, Mosier, & Chiles, 1992; Peterson & Nemeth, 1996). Interestingly, in stimulating solutions of high quantity and quality, a minority expressing a personal position (authentic minority) is more effective than a minority asked to take that same position (devil's advocate; Nemeth, Brown, & Rogers, 2001).

Both Moscovici's and Nemeth's analyses of social influence emphasize the amount and type of cognitive processing that majority and minority sources elicit. This emphasis on information processing is shared by

several other analyses, which were influenced strongly by dual-process theories of attitude change. A fundamental assumption of these theories is that persuasion can arise from either high-effort processing of message-relevant information or low-effort reliance on message or communicator characteristics presumed to signify message credibility (Chaiken, Liberman, & Eagly, 1989; Petty & Cacioppo, 1986; but see Kruglanski & Mackie, 1990; Kruglanski & Thompson, 1999). Moscovici's (1980) distinction between validation-based minority influence and comparison-based majority influence is consistent with this approach.

One dual-process analysis of social influence is the *objective consensus approach* (Mackie, 1987). In contrast to Moscovici's analysis, however, the objective consensus approach asserts that recipients of persuasive communications are more likely to process majority than minority messages. According to this view, because the majority's perspective is assumed to be valid and a counterattitudinal majority is unexpected, people who encounter such a majority are highly motivated to understand its position. As a result, they expend substantial effort processing its message and evidence both direct–public and indirect–private change. In contrast, because a counterattitudinal minority is expected, people who encounter it are not motivated to understand its position, expend little effort processing its message, and are not influenced by it.

A related perspective is the *source-position congruency model* (Baker & Petty, 1994), which assumes that greater message processing occurs when recipients' expectations are violated (by a counterattitudinal majority or a proattitudinal minority) than when they are confirmed (by a proattitudinal majority or a counterattitudinal minority). In the case of expectancy violation by either a majority or minority, processing of the source's message produces more attitude change if the source's message contains strong rather than weak arguments. In the case of expectancy confirmation by either source, however, argument strength does not affect attitude change. Instead, source information operates as a heuristic cue favoring adoption of the majority's (but not the minority's) position.

The *mere consensus approach* (Erb & Bohner, 2001) also assumes that majority positions are

evaluated more favorably than minority positions. This approach, however, does not assume that such positions are influential simply because of their heuristic cue properties. Instead, it suggests that positive inferences about majority sources bias recipients' processing of message-relevant information, such that messages attributed to majority sources are seen as more persuasive, which in turn enhances their influence. This is not to say, however, that minorities can never exert influence. If a minority's low consensus appears positive (rather than negative), it may be influential. This can occur, for example, if recipients are primed to prefer risky judgments or feel de-individuated (Erb & Bohner, 2010).

Yet another analysis that shares some assumptions of the objective consensus approach is the *dual-role model* proposed by de Dreu, De Vries, and their colleagues (de Dreu, 2007; De Vries, de Dreu, Gordijn, & Schuurman, 1996). According to this model, majority sources by default induce desire to identify with the source and systematic processing of the source's message, leading to both direct-public and indirect-private attitude change. Various factors (e.g., a threatening message), however, can reduce the tendency to process the message, thereby undermining the majority's indirect-private, but not direct-public, influence. In contrast, minority sources by default do not induce a desire to identify with the source and do not produce systematic processing of the source's message, leading to little attitude change of any kind. Various factors (e.g., an unexpected message), however, can increase the tendency to process the message, thereby enhancing the minority's indirect-private, but not direct-public, influence.

Each of the theories discussed so far has received some support, but none can account for the range of (often-conflicting) evidence regarding the relationship between information processing and majority-minority influence. To provide a comprehensive analysis that both reconciles prior work and suggests new hypotheses, Martin and Hewstone (2008) developed the *source-context elaboration model* (SCEM). This model predicts that the impact of the source's numerical size on message processing depends on the extent to which the situation demands (or encourages) elaboration of the source's message (see also Tormala, Petty, & DeSensi, 2010).

When this demand is low (e.g., when the topic is low in personal relevance), message recipients do not carefully process either the majority's or the minority's arguments but do attend to the majority's (positive) characteristics. This produces only direct-public change toward the majority's position. When elaboration demand is high (e.g., when the topic is high in personal relevance), recipients carefully process both the majority's and the minority's arguments, which leads to direct-public and indirect-private change toward both sources. Finally, when processing demands are intermediate, recipients carefully process the minority's arguments and attend to the majority's characteristics, which leads to indirect-private change toward the minority and direct-public change toward the majority. The SCEM has received substantial empirical support (see Martin & Hewstone, 2008).

But are all majority and minority sources equally effective in producing influence? According to *self-categorization theory* (Abrams & Hogg, 1990; Turner, 1991), the answer is no. This theory posits that a critical determinant of both majority and minority influence is whether the source belongs to the recipient's in-group versus an out-group. Moreover, in contrast to the analyses discussed previously, self-categorization theory assumes that a single psychological process underlies both kinds of influence (David & Turner, 2001). According to this theory, social influence occurs only if the recipient perceives that the source disagrees with his or her position, the source and target are members of the same group, and the source's position is representative (prototypical) of the group norm. Shared group membership is critical because disagreement with in-group members is unexpected and hence creates uncertainty about the validity of one's position, whereas disagreement with out-group members is expected and does not create this uncertainty. The motives underlying recipients' susceptibility to influence from in-group sources include a desire for a positive social identity (Tajfel & Turner, 1986) and a desire to reduce uncertainty (Hogg, 2007b). Importantly, sources can be characterized in different ways, which in turn affects their ability to exert influence. For example, if only intragroup comparisons are salient, a disagreeing minority may be seen as an out-group and exert

little influence. But if intergroup comparisons are salient, the same minority may be seen as part of the in-group and exert substantial influence. Self-categorization theory posits that in-group majorities exert direct rather than indirect influence, whereas in-group minorities exert indirect rather than direct influence. Although several studies provide support for the self-categorization analysis of majority and minority influence (see David & Turner, 2001), some tenets of the theory (e.g., that only in-group minorities produce indirect attitude change) have not been supported (see Mugny & Pérez, 1991).

Two theoretical approaches seek to integrate group identification and information processing perspectives on majority and minority influence. One is *conflict elaboration theory* (Pérez & Mugny, 1996; Quiamzade, Mugny, Falomir-Pichastor, & Butera, 2010). According to this theory, social influence depends on how recipients assign meaning to disagreement (i.e., elaborate conflict) with a source. This meaning assignment depends on (a) whether the task has objective or subjective standards of correctness (which affect the cost of making errors) and (b) whether recipients' responses do or do not have social identity implications by defining recipients as members of a particular group. This typology yields four quadrants, and the theory predicts different forms of conflict elaboration and social influence in different quadrants. For example, when the task is objective and responses do not have identity implications, the theory predicts that majority sources will elicit public influence, whereas minority sources will elicit private

influence (cf. Moscovici, 1980). When the task is objective and responses do have identity implications, the theory predicts that high-competence (typically majority) sources will elicit convergent thinking, whereas low-competence (typically minority) sources will elicit divergent thinking (cf. Nemeth, 1986).

A second relevant approach is the *context-categorization model* (Crano, 2001, 2010). In analyzing majority and minority influence, this model identifies several moderators that can affect the amount and type of influence that the two kinds of sources produce (e.g., the source's in-group or out-group status, the strength of the source's message). For example, the model predicts that a majority source will produce immediate and long-term direct influence (but not indirect influence) if recipients view the source as relevant to their social identity and as legitimately exerting social pressure and if the source presents a strong message. In contrast, a minority source will produce immediate indirect influence if the source is seen as part of the in-group and not a threat to group viability and if the source presents a strong message. Moreover, if this immediate indirect influence is strong enough, recipients will exhibit delayed direct influence as a function of rebalancing their cognitive systems. These responses to minority sources are explained in terms of an implicit "leniency contract," which stipulates that other group members should respond to the minority with open-mindedness rather than derogation. Several studies provide support for the model (e.g., Alvaro & Crano, 1997; Crano & Chen, 1998). (See Exhibit 1.1 for a summary of the major premises of the theories discussed in this section.)

Exhibit 1.1

Major Premises of Theories of Majority and Minority Influence in the Attitude Change Perspective

Genetic Model (Moscovici, 1976)

Majority influence: Majority committed to its position puts conformity pressure on minority lacking such commitment. For various reasons (e.g., low confidence that it can prevail, desire to avoid isolation and rejection), minority adopts majority's position publicly but not privately.

Minority influence: Minority committed to its position uses a behavioral style indicating confidence and unwillingness to compromise. Majority makes positive attributions about minority, pays attention to minority's perspective, experiences conflict, and adopts minority's position privately but not publicly.

Conversion Theory (Moscovici, 1980)

Majority influence: Majority induces a comparison process, whereby minority focuses on the social implications of the conflict rather than the content of the majority's arguments. To hold a valid opinion and gain acceptance, minority exhibits direct-public, but not indirect-private, change toward the majority position.

Minority influence: Minority induces a validation process, whereby majority actively processes minority's arguments, leading to indirect–private, but not direct–public, change toward the minority position.

Divergent–Convergent Thought Model (Nemeth, 1986)

Majority influence: Disagreement from majority induces stress in recipients, which narrows their focus of attention and causes convergent thinking focusing on content of majority's message (i.e., message-specific cognitive activity).

Minority influence: Disagreement from minority causes recipients to engage in divergent thinking focusing on a wider range of alternatives than contained in minority's message (i.e., issue-specific cognitive processing and creativity).

Objective Consensus Approach (Mackie, 1987)

Majority influence: Because majority is assumed to be correct and disagreement from majority is unexpected, recipients encountering counterattitudinal majority are motivated to understand its position and work hard to process its message. This leads to both direct–public and indirect–private change toward majority.

Minority influence: Recipients who encounter (expected) counterattitudinal minority are not motivated to understand its position and so expend little effort processing its message. As a result, minority produces neither direct–public nor indirect–private influence.

Source-Position Congruency Model (Baker & Petty, 1994)

Majority influence: Due to expectancy disconfirmation, counterattitudinal majority produces more message processing than proattitudinal majority. For the counterattitudinal (but not proattitudinal) majority, processing produces more attitude change if message contains strong rather than weak arguments.

Minority influence: Due to expectancy disconfirmation, proattitudinal minority produces more message processing than counterattitudinal minority. For the proattitudinal (but not counterattitudinal) minority, processing produces more attitude change if message contains strong rather than weak arguments.

Mere Consensus Approach (Erb & Bohner, 2001)

Majority influence: Majority (high-consensus) sources are generally more influential than minority sources. This occurs because majority sources are more likely to bias recipients' processing of message-relevant information in positive ways, such that messages attributed to a majority are seen as more persuasive.

Minority influence: Minority sources can exert influence if their low-consensus position is perceived as attractive rather than unattractive. Low consensus can appear attractive, for example, if recipients are primed to prefer risky judgments or are made to feel de-individualized.

Dual-Role Model (De Vries et al., 1996)

Majority influence: Majority sources generally produce identification and careful message processing, leading to both direct–public and indirect–private attitude change. However, certain factors can reduce this message processing and thereby undermine a majority's indirect–private (but not direct–public) influence.

Minority influence: Minority sources generally do not produce identification or careful message processing, leading to little attitude change of any kind. However, certain factors can increase this message processing and thereby enhance a minority's indirect–private (but not direct–public) influence.

Source-Context Elaboration Model (Martin & Hewstone, 2008)

Majority influence: When situational demand for elaboration of source's message is low or intermediate, recipients attend to source's positive characteristics but do not carefully process source's arguments, leading to direct–public (but not indirect–private) influence. When elaboration demand is high, recipients carefully process source's arguments, leading to both direct–public and indirect–private influence.

Minority influence: When elaboration demand is low, recipients do not carefully process source's arguments, leading to neither direct–public nor indirect–private change. When elaboration demand is intermediate or high, recipients carefully process source's arguments, leading to indirect–private influence in the former case and both indirect–private and direct–public influence in the latter case.

Self-Categorization Theory (David & Turner, 2001)

Majority influence: In-group majorities produce direct but not indirect influence. Out-group majorities do not produce either kind of influence.

Minority influence: In-group minorities produce indirect but not direct influence. Out-group minorities do not produce either kind of influence.

Conflict Elaboration Theory (Pérez & Mugny, 1996)

Majority influence: Influence depends on how recipients assign meaning to disagreement with majority source, which in turn depends on whether task is objective or subjective and whether recipients' responses do or do not have social identity implications.

Minority influence: Influence depends on how recipients assign meaning to disagreement with minority source, which in turn depends on objectivity–subjectivity of task and social identity implications of recipients' responses.

Context–Categorization Model (Crano, 2001)

Majority influence: Majorities produce immediate and long-term direct influence if they motivate recipients to attend to their message (because of their social identity relevance and legitimacy) and provide strong arguments for their position.

Minority influence: Minorities produce immediate indirect influence (and perhaps delayed direct influence) if they motivate recipients to attend to their message (because of their in-group status, their lack of threat, and a “leniency contract” with other members) and provide strong arguments for their position.

THE DECISION-MAKING PERSPECTIVE ON MAJORITY–MINORITY INFLUENCE

Social psychologists have long been interested in how group members influence one another as they work together in face-to-face settings to reach decisions or solve problems (Laughlin, 2011; Smith & Tindale, 2010; Tindale et al., 2013). In these contexts, the focus of interest is the group's collective response developed through discussion, and social influence typically is defined as the extent to which the group's final response is consistent with a member's or a faction's initial position (Davis, 1996). Although this definition of influence differs from that in the attitude change paradigm (individual perceptual or opinion change toward a fixed majority or minority viewpoint), the two paradigms are similar in devoting a good deal of attention to the role of faction size (Stasser, Kerr, & Davis, 1989). Moreover, like early research in the attitude change paradigm, early work in the decision-making paradigm focused on majority influence (Davis, 1973; Smoke & Zajonc, 1962). For example, work on group polarization (Cartwright, 1971) and jury decision making (Davis, Kerr, Atkin, Holt, & Meek, 1975) demonstrated that larger factions tend to pull the group's final judgment in their direction.

Such findings were integrated easily with the early work by Asch (1951, 1952, 1956) and also were consistent with Festinger's (1954) ideas regarding social comparison and with Deutsch and Gerard's (1955) notions of informational and normative social influence. It was not surprising that majorities were influential given that they probably had an information advantage and could bring normative pressure to bear on minority members to conform. In fact, much of the research on group polarization during the 1970s was oriented toward resolving the theoretical controversy concerning whether normative or informational influence was responsible for the effect (Myers, 1978; Vinokur & Burnstein, 1974).

It is also interesting that some of the earliest demonstrations of direct minority influence in problem-solving groups predated Moscovici's (1976) ideas by more than 30 years (Shaw, 1932).

Subsequent theoretical interpretations of these findings made it clear that minority influence was at work (Laughlin, 1980; Lorge & Solomon, 1955). These findings, however, were seen as relevant only to group performance and were not integrated with the attitude change literature on majority and minority influence until much later (Laughlin, 1999; Smith, Tindale, & Anderson, 2001).

It has been argued that many instances of both majority and minority influence in decision-making groups can be explained by the concept of *social sharedness* (Kameda, Tindale, & Davis, 2003; Tindale & Kameda, 2000). According to the social sharedness interpretation of influence, task-relevant cognitions (broadly defined) that the members of a group have in common, or share, exert a greater influence on group process and outcome than do cognitions that are not shared among members. These shared cognitions can involve consciously held preferences for decision alternatives or information about these alternatives as well as heuristic information-processing strategies that members cannot articulate. In any case, the greater the degree of sharedness for a particular task-relevant cognition, the greater the likelihood that it will influence the group decision. In general, social sharedness is often adaptive and probably evolved as a useful aspect of living in groups (Kameda & Tindale, 2006). Both minority and majority influence based on social sharedness, however, can lead to either good or poor group decisions depending on whether the shared cognitions are accurate or appropriate for the decision at hand (Tindale, Smith, Dykema-Engblade, & Kluwe, 2012).

Social sharedness operates on many levels and across a variety of domains. As noted previously, much of the early work on group decision making used member preferences for particular decision alternatives as its basic starting point. Research in this tradition often yielded evidence of majority influence, or the power of larger factions to determine group decisions (Stasser et al., 1989). We discuss research on majority influence and shared preferences in the next section. Then, we shift our focus to minority influence and shared cognitions.

Majority Influence: Shared Preferences

Interacting groups attempting to reach consensus require some type of social influence to reach this goal whenever different members start out preferring different options. To choose a single option, some members must change their initial position, at least publicly, to allow the group to converge on an option they initially did not prefer. There is extensive evidence that such influence is often a function of faction size, with majorities or pluralities defining the final group response (Kerr & Tindale, 2004; Stasser et al., 1989; Tindale et al., 2013). This is especially true for tasks on which the correctness or accuracy of different positions is difficult or impossible to substantiate during group discussion (referred to as *judgmental tasks* by Laughlin, 1980). When the correct answer cannot be ascertained unambiguously while the group is deliberating, members tend to choose the option that has the greatest degree of support before group discussion (Snizek, 1992). This has been referred to as the effect of social sharedness at the preference level (Kameda et al., 2003; Tindale & Kameda, 2000). When the group is choosing between two alternatives, the alternative that has initial support from at least $N/2 + 1$ members (a majority) typically will be chosen. In addition, when there are more than two alternatives, majorities, if they exist, will still win out. If no majority exists, however, the alternative with the greatest amount of support (a plurality) will be the group's choice (Davis, 1982; Kameda et al., 2003).

There are several reasons why majorities or pluralities might be influential in groups. First, larger factions can exert more informational influence than can smaller factions. Assuming that information is distributed evenly across individual members, having more members increases the amount of information at a faction's disposal. Thus, majorities or pluralities possess a greater amount of information that they can use to argue for their position (Vinokur & Burnstein, 1974). In addition, majorities or pluralities benefit from the consensus heuristic, which assumes that greater consensus implies greater informational validity (Chaiken & Stangor, 1987; see also Erb & Bohner, 2001; Mackie, 1987). The consensus heuristic is most likely to be used in

assessing the validity of a faction's position when other forms of information are lacking and when the situation has a high degree of uncertainty.

Second, larger factions can exert more normative influence than can smaller factions. In both short-term and long-term groups, minorities that violate group norms receive pressure to alter their behavior and are punished if they refuse to do so (Levine & Kerr, 2007). Several lines of work suggest that minority conformity in decision-making groups often is motivated by the desire to obtain majority acceptance and avoid majority rejection (Levine & Kerr, 2007). For example, people who hold minority positions in decision-making groups often report that they fear the costs of deviance and hence go along with the majority even though they think it is incorrect (e.g., Schlesinger, 1965). In addition, evidence that majority influence is generally greater on matters of opinion (judgmental issues) than on matters of fact (intellective issues) is consistent with a normative interpretation of conformity, because minorities are less confident that they effectively can defend their position on judgmental issues (cf. Laughlin, 1999). Finally, when judgmental issues are involved, majorities tend to use normative rather than informational influence tactics, whereas the opposite is true when intellective issues are involved (Kaplan & Miller, 1987).

Patterns of information distribution during group discussion also can contribute to the power of majorities or pluralities. When group members have similar sources of information or similar experiences, they come to share a large amount of information (Tindale, Meisenhelder, et al., 2001). This shared information, in turn, often leads to similar decision preferences at the beginning of group discussion. Moreover, during discussion, shared information is much more likely to be brought up and discussed as compared with unshared information held by a single member (Larson, Foster-Fishman, & Keys, 1994; Stasser & Titus, 1985). Thus, initial majorities are formed based on shared information, and then this information reinforces the initial majority's position during discussion (Gigone & Hastie, 1993). Such effects are exacerbated when group members are aware of the preference distribution in the group (Brodbeck, Kerschreiter, Mojzisch,

Frey, & Schulz-Hardt, 2007; Mojzisch & Schulz-Hardt, 2010). In sum, shared information creates an initial majority and then keeps it intact during discussion.

Potentially the most important reason that majorities and pluralities have so much influence is that they are often correct (Kerr & Tindale, 2011; Sorkin, West, & Robinson, 1998). Recent research using signal detection theory and evolutionary game theory has shown that majority decision rules generally produce accurate decisions and often approach optimal strategies. For example, Hastie and Kameda (2005) simulated a variety of decision processes by which hunter-gatherer societies could choose hunting locations and found that a majority or plurality decision rule worked better than any other strategy that required the same degree of cognitive effort. A majority or plurality model even did better than a “best member” model, based on the choice of the most accurate member of the group. Moreover, Sorkin and his colleagues (Sorkin, Hays, & West, 2001; Sorkin et al., 1998) showed that majority models produced close to optimal decision outcomes as compared with various signal detection models. They also found that simple majority models were superior to higher order majority models (e.g., three-fifths or two-thirds majority models). Thus, majority or plurality processes may be dominant in many, if not most, human societies due to their general accuracy and resource efficiency (Hastie & Kameda, 2005). This explanation for the power of majorities or pluralities is quite consistent with an informational influence explanation of minority conformity. It also is worth noting that majority-type processes are used by some nonhuman species that engage in social decision making (Kameda, Wisdom, Toyokawa, & Inukai, 2012).

Majority decision models provide accurate predictions of group outcomes even for groups that are assigned nonmajority decision rules. An example is the unanimity rule given to most juries, which stipulates that all jurors must agree on a verdict before it can be rendered. Much of the work on jury decision making has shown that a two-thirds majority model provides an accurate representation of jury verdict distributions in criminal trials (Davis, 1980; Davis, Kerr, Stasser, Meek, & Holt, 1977; Hastie,

Penrod, & Pennington, 1983; Tindale & Davis, 1983). Thus, in mock juries and actual juries (see Kalven & Zeisel, 1966), consensus on a particular verdict option forms around whatever option had at least two-thirds support at the beginning of deliberation (although not-guilty verdicts can be obtained with less initial support—a phenomenon that is discussed later regarding minority influence). Moreover, research using models that track social influence during jury deliberation (Hastie et al., 1983; Kerr, 1981) have shown that juries reaching a two-thirds majority on a verdict option are likely to select that option at the end of deliberation. Thus, even in situations in which greater than majority support is necessary to make a decision, majority influence seems to allow a group to gain the needed consensus during deliberation.

Majority or plurality influence is relatively easy to assess when groups are making decisions among a discrete set of options (e.g., verdicts, political candidates), but groups often work on tasks in which the response dimension is continuous or nearly so (what Stasser & Dietz-Uhler, 2001, referred to as *estimation tasks*). On such tasks, rarely will a particular response position initially garner majority, or even plurality, support. Kameda et al. (2003), however, have argued that processes similar to majority or plurality influence operate on these tasks as well. Preferences that are similar to one another tend to be seen as functionally the same and are likely to be much closer to the final group response than are preferences that are more deviant. Kameda et al. argued, then, that preference similarity operates much like preference sharing in guiding the social influence process. Evidence in support of their assertion comes from studies comparing models of group estimation that provide differential weights to members based on their preference similarity, or centrality (Davis, 1996; Davis, Au, Hulbert, Chen, & Zarnoth, 1997). Davis's (1996) social judgment scheme model makes this assumption explicit by weighting each member's influence by an exponential function of the distances between that person's preference and the preferences of all other members. Members who are more similar, on average, to other members in preference are predicted by the model to be considerably more influential than are

members who hold more dissimilar positions. Davis et al. (1997) and Hulbert, Parks, Chen, Nam, and Davis (1999) found support for the social judgment scheme model in mock civil trial studies determining plaintiff compensation. Further evidence comes from the relative accuracy of median as opposed to averaging models of group judgment (Black, 1958). Median models tend to ignore very deviant members of the group when making predictions, and research has shown that for situations in which group deliberation is allowed, median models provide a more accurate fit to group judgment data than do averaging models (Crott, Szilvas, & Zuber, 1991; Davis et al., 1997). Thus, even though initial majorities or pluralities are rare on tasks with continuous judgment dimensions, members whose preferences cluster near one another tend to have influence in much the same way as majorities and pluralities do.

Minority Influence: Shared Cognitions

Majority influence is quite prevalent in group decision making, but there are situations in which minorities can exert both direct and indirect influence on group decisions. One of the most important distinctions in the group decision-making literature involves the intellectual–judgmental task dimension proposed by Laughlin (1980). Laughlin argued that most cognitive tasks performed by groups can be arrayed along a dimension anchored at one end by purely intellectual tasks and at the other end by purely judgmental tasks. On intellectual tasks, the correctness of a particular alternative or solution can be “demonstrated” during the course of discussion. In contrast, on judgmental tasks, members cannot demonstrate that one alternative or solution is better than others. For the latter tasks, the amount of initial consensus among members’ opinions typically defines which alternative will be chosen by the group (i.e., majority–plurality processes). For intellectual tasks, however, it is possible for a small faction (sometimes even a single member) to influence the group to adopt its position if it can demonstrate that its preferred alternative is correct. Laughlin (1980, 1999) and Laughlin and Ellis (1986) have shown that for intellectual tasks, “truth wins” and “truth-supported wins” models typically do a better job of describing the group decision-making process

than do majority–plurality models. Truth wins predicts that a group will solve the problem correctly if it contains at least one member with the correct solution, whereas truth-supported wins predicts that a group will solve the problem correctly only if it contains at least two members with the correct solution. Both of these models predict that correct minorities will be influential on intellectual tasks, and both have received substantial empirical support (Laughlin, 2011).

Laughlin and Ellis (1986) attempted to define the key components of a task that allow group members to demonstrate the correctness of their solutions. The first (and potentially most important) aspect of solution demonstrability involves sharing a system of beliefs or axioms that can be used to solve the problem at hand. In other words, a shared cognitive representation of the task is necessary for minority factions to be able to convince majority factions that they should change their position to that of the minority. Tindale, Smith, Thomas, Filkins, and Sheffey (1996) argued that the shared conceptual system underlying demonstrability is one instance of what they have referred to as a *shared task representation*. They defined a shared task representation as “any task/situation relevant concept, norm, perspective, or cognitive process that is shared by most or all of the group members” (Tindale et al., 1996, p. 84). “Task/situation relevant” means that the representation must have implications for the choice alternatives involved, and the degree to which a shared representation affects group decision processes and outcomes will vary as a function of its relevance. The impact of a shared task representation also will vary as a function of its degree of sharedness among group members—the more members who share a representation, the greater its influence. When a shared task representation exists, the group decision process will become asymmetric in favor of alternatives that fit within or are supported by the representation. Under such conditions, majorities or pluralities favoring an alternative consistent with the shared representation are more powerful than are identically sized majorities or pluralities favoring alternatives that are not consistent with the representation. Relevant to our present discussion, minorities favoring an alternative

consistent with the shared representation are not only more powerful than minorities favoring inconsistent alternatives but can be even more influential than majorities favoring inconsistent alternatives.

Although Laughlin's work (1980, Laughlin & Ellis, 1986) is probably the strongest example of the effects of shared representations, other research also reveals the importance of these representations. For example, much of the work on mock-jury decision making (Davis, 1980; MacCoun & Kerr, 1988; Tindale, Nadler, Krebel, & Davis, 2001) has shown that not guilty is an easier verdict to defend than is guilty. Majorities favoring guilty are less successful than are majorities favoring not guilty. In addition, juries evenly divided between guilty and not guilty, and even juries with a sizable minority favoring not guilty, reach a not-guilty verdict much of the time (MacCoun & Kerr, 1988; Tindale, Davis, Vollrath, Nagao, & Hinsz, 1990). MacCoun and Kerr (1988) showed that this asymmetry toward not guilty occurs only when juries are provided with a reasonable-doubt verdict criterion. Tindale et al. (1996) argued that the reasonable doubt criterion serves as a shared task representation that tells jurors that they should look for and pay attention to reasonable doubts, and, if such doubts exist, they should vote not guilty. This process allows minorities favoring not guilty to influence majorities favoring guilty. Recent research has shown that religion also can function as a shared task representation that enhances minority influence. Smith, Dykema-Engblade, Walker, Niven, and McGough (2000) demonstrated that a minority against the death penalty was persuasive in altering a majority's position on the issue when it framed its arguments in terms of religion ("Thou shalt not kill") but not when it used other types of arguments (e.g., errors cannot be corrected). The shared religious orientations of the group members provided a context in which the minority's religious arguments were effective even though they conflicted with the majority's initial preference.

A number of studies have shown that individual decision biases can act as shared task representations, unexpectedly leading groups to perform worse than individuals in certain decision situations and also promoting minority influence. Tindale (1989) demonstrated that biased feedback meant to

induce a conservative (high criterion) promotion strategy in a job situation led minorities favoring the nonpromotion option to win out over majorities favoring the promotion option. Kahneman, Slovic, and Tversky (1982) described how individuals often violate the rules of probability when making intuitive judgments that involve probabilities. For example, individuals sometimes estimate the likelihood of conjunctive events (e.g., Linda is a feminist and a bank teller) as greater than the likelihood of one or both of the elementary events in the conjunction (Linda is a feminist, Linda is a bank teller). Because the conjunction is a subset of the elementary events, such a judgment is inconsistent with the basic laws of probability. Tindale (1993) found that for conjunctive probability judgments on which individuals are likely to make such errors, groups made even more errors. In addition, groups with more error-prone minorities sometimes could overpower correct majorities. For problems on which a correct judgment was intuitive (when both elements of the conjunction were unlikely to begin with), however, correct minorities were able to move incorrect majorities in the correct direction.

How information is distributed in a group can lead to minority influence as well. Brauer, Judd, and Jacquelin (2001) had groups discuss person descriptions that contained both stereotypic and counterstereotypic information. When the counterstereotypic information was spread evenly among the group members, it had little effect on group judgments. When all of the counterstereotypic information was held by a single individual, however, that person (a minority) formed a different judgment than other group members and was influential in reducing stereotyping in the overall group judgments. A similar effect was found by Stewart and Stasser (1998) in a problem-solving domain. Thus, a minority member with key information can be quite persuasive. In a direct test of this idea, Kameda, Ohtsubo, and Takezawa (1997) varied information distribution in three-person groups so that one of the members initially would share considerably more information with each of the other members than they would share with one another, creating a "cognitively central" member. When this member held a minority position, he typically

overpowered the opposing majority in determining the group's final judgment. In addition, postdiscussion responses showed that the cognitively central member was seen as more knowledgeable and more leader-like than the less central members.

Shared cognitions about the group also can lead to minority influence. Social identity theory argues that members of a group who are perceived as prototypic (i.e., as embodying characteristics that differentiate the group from other groups) are especially influential on group-relevant behavior (Hogg, 2001; Hogg & Abrams, 1988). Moreover, such influence occurs only when other members are highly identified with the group. Work on leadership (Hogg & van Knippenberg, 2003) has shown that leaders (who are numerical minorities) have influence to the degree that they are seen as both prototypic leaders and prototypic group members. Each type of prototypicality accounts for unique variance in perceptions of leadership and leadership influence. In another line of work relevant to shared cognitions and minority influence, Morgan and Tindale (2002) compared individuals and three-person groups playing a prisoner's dilemma game, following up findings by Insko and colleagues (see Schopler & Insko, 1992) that groups defect (behave selfishly) much more often than do individuals playing such games. Morgan and Tindale showed that in the group context, a single member favoring defection was sufficient to pull the other two members favoring cooperation to a defection consensus. They explained this by positing that arguments in support of group protection are persuasive once a group thinks of itself as a group, which occurs when intergroup competition is salient. Thus, group protection becomes a shared task representation in such contexts, empowering minorities who take a position consistent with the representation.

Each of the examples of minority influence in interacting groups described thus far involved direct influence. Evidence also indicates, however, that minorities in such groups can exert indirect influence as well. Consistent with evidence in noninteracting groups discussed earlier, majority members facing a minority faction often think in relatively elaborated and complex ways. In these studies, majority members do not adopt the minority's

position but rather develop new ideas. For example, Smith, Tindale, and Dugoni (1996), using a thought-listing methodology, found that group discussions in which a minority was present (versus absent) produced both more thoughts and more diverse thoughts on both the present task and a subsequent unrelated task. Moreover, de Dreu and West (2001) showed that teams in which minority factions were urged (versus not urged) to participate in group discussions showed greater creativity. Recent work by Smith (2008) demonstrated that a source's minority status, in conjunction with the task conflict it engenders, affects its ability to produce indirect influence. Smith had two-person groups work on two consecutive tasks. During the first task, the groups were composed so that members did or did not differ as to their preferred alternative. In half of the conflict cases, both members were told that one of them was arguing for a position that was supported by only a minority of people in the general population. In the other half of the conflict cases, no statement was made about the opinion distribution in the general population. This produced three conditions: conflict with minority status, conflict without minority status, and no conflict. The second task involved creating a poster for an upcoming student event. Groups in which there was conflict but no minority status performed about the same as groups with no conflict. Groups with conflict and minority status, however, produced more creative posters than did the other two kinds of groups. Thus, it appears that minority status moderates the relationship between task conflict and indirect influence in interacting groups.

INTEGRATION AND NEW DIRECTIONS

The previous sections described two different paradigms for studying majority and minority influence: the attitude change and decision-making perspectives. Although there have been some efforts to integrate work across the two paradigms (e.g., Levine & Kerr, 2007; Martin & Hewstone, 2010), they have developed independently, both theoretically and empirically. Reviewing them in a single chapter allowed us to identify both convergent and divergent findings and emphases, which we discuss in the

next section. Following this discussion, we shift gears by looking to the future and arguing for the importance of work on the *social dynamics of factional conflict*.

Convergences and Divergences Across Paradigms

Probably the most consistent finding in both paradigms is that, on the whole, majorities have an easier time producing public influence than do minorities. That is, larger factions tend to get larger, and smaller factions tend to get smaller. For both attitude change and group decision making, (faction) size does matter. Although, as the previous review indicates, various theoretical perspectives have been offered to explain majority and minority influence, we believe that the normative–informational analysis (although not without its critics as an overall explanation of majority influence) provides the most parsimonious explanation of the faction size effect.

Whereas the two forms of influence are highly intertwined in many, if not most, social situations, normative influence may be the more central of the two. There are probably evolutionary reasons for this. We, as humans, may be predisposed to “follow the crowd” because of a fundamental desire to achieve inclusion in the group and avoid exclusion (Levine & Kerr, 2007). Moreover, the motive to hold accurate views, which underlies informational influence, may derive at least in part from the motive to be accepted, which underlies normative influence. To gain group acceptance, which is critical to individual survival, a person must exhibit behaviors that others view as facilitating collective goals. One such behavior is holding “accurate” views on important issues, and such views typically are defined as those that agree with group consensus (Levine & Kerr, 2007).

This is not to say, however, that the perceived validity of the majority’s position has no bearing on its ability to exert influence. In fact, minorities probably are predisposed to assume that majority positions are correct and hence that agreeing with the majority will satisfy their desire for accuracy as well as acceptance. This tendency to use the *consensus heuristic* may well have evolutionary roots, based on our ancestors’ recognition of the general truth value

of majority decisions (Hastie & Kameda, 2005; Kameda & Tindale, 2006; Larrick & Soll, 2006). Thus, even when they provide little or no persuasive argumentation, majorities may be effective in producing influence because they are assumed to be correct. Of course, majorities often do provide arguments, and these can enhance their impact further. For example, in decision-making paradigms, information held by a majority of group members tends to be particularly influential (Gigone & Hastie, 1993; Stasser & Titus, 1985). And in attitude change paradigms, majorities with strong supporting arguments typically are very influential (Bohner, Dykema-Engblade, Tindale, & Meisenhelder, 2008). Thus, as Stroebe (2010) has suggested, a faction’s size can affect its ability to produce (informational) influence both directly—by signaling the validity of its position—and indirectly—by influencing the processing of its arguments.

In contrast to the case of majority influence, for which both normative and informational processes are important, in the case of minority influence (which is often private), informational processes typically are dominant. Although minorities sometimes occupy high-status positions or employ influence tactics that coerce majorities into adopting their position (Levine & Kaarbo, 2001), in most cases, numerical inferiority goes hand in hand with low status and power. Therefore, to the extent that minorities exert influence, they typically do so by reducing the majority’s confidence in the validity of its own position and increasing its attention to and acceptance of the minority’s position.

Our analysis to this point has not distinguished between the motivational underpinnings of majority and minority influence in attitude change and decision-making paradigms. This is because, in both paradigms, normative and informational processes can underlie majority influence, whereas only informational processes typically underlie minority influence. It is likely, however, that the strengths of these processes differ in the two paradigms. This is because participants in the typical attitude change study are merely informed that a majority or minority of physically absent people agrees or disagrees with their position, whereas participants in the typical decision-making study engage in a face-to-face

discussion with other group members. Given that sources in decision-making studies can both elaborate their arguments in response to recipients' views and monitor recipients' responses, whereas sources in attitude change studies cannot, both informational and normative influence are likely to be stronger in the former than in the latter paradigm.

Another reason why both forms of influence may be stronger in decision-making than in attitude change paradigms concerns the relative levels of task and outcome interdependence in the two paradigms. In the decision-making paradigm, groups are instructed to reach consensus by converging on the correct or optimal solution to a problem. Moreover, if the group succeeds, each member shares in its success and benefits from the rewards associated with choosing the best solution. Thus, in these situations, majority and minority members experience high task interdependence as well as high outcome interdependence. In contrast, in the attitude change paradigm, both of these forms of interdependence are typically low. It is likely that normative and informational influences are stronger when task and outcome interdependence are high rather than low.

Other methodological differences between the two paradigms may be important as well. For example, in most attitude change studies, where majorities and minorities are defined by how many members of a large population hold competing positions (e.g., 80% of undergraduates supporting and 20% opposing abortion rights), an influence target's position shift has little chance of transforming a majority into a minority and vice versa. In contrast, in decision-making studies, where majorities and minorities are defined by how many members of a small group hold competing positions, an influence target's position shift can sometimes reverse the majority or minority status of the two factions (e.g., in a three-person jury where one member initially favors guilty and two initially favor not guilty). The likelihood that a majority can become a minority and vice versa may have important consequences for influence in decision-making contexts. Using a mock-jury paradigm, Tindale et al. (1990) found that a single minority member was considerably more influential in three-person juries than in four-, five-, or six-person juries. They speculated that the

stronger minority influence in three-person juries stemmed from the fact that a single convert from the majority faction created a new majority (cf. Prislin, 2010). Thus, defecting from the initial majority did not reduce the status of the defecting member.

Another potentially important difference between the attitude change and decision making paradigms involves the number of factions that exist. Whereas attitude change studies typically contain two factions of unequal size (a majority and a minority), this is not always the case for decision-making studies (Levine & Kaarbo, 2001). For example, decision-making groups may contain three factions, none of which has more than 50% of the members. In such cases, one faction may be larger than either of the other two (a plurality), and the smaller factions may be either the same size or different sizes. Or all three factions may have the same number of members. Social influence in such multifaction groups is potentially much more complex than in two-faction groups.

Research in both the attitude change and decision-making paradigms emphasizes the important role that information processing plays in majority and minority influence. As described earlier, this emphasis characterizes virtually all the work in the attitude change paradigm, beginning with Moscovici's (1976) early theorizing and continuing to the present day (see Martin & Hewstone, 2008). Information processing analyses of influence in the decision making paradigm are also numerous, with early work focusing on preference structure and change (e.g., Davis, 1973; Lorge & Solomon, 1955) and more recent work focusing on when groups use information at their disposal and how this use affects social influence processes (e.g., Brodbeck et al., 2007; Stasser, Abele, & Parsons, 2012). There are important differences between the two paradigms, however, regarding how information processing is conceptualized and measured. In the attitude change paradigm, researchers often vary the strength of arguments contained in messages attributed to majority and minority sources, use thought-listing techniques to assess the amount and type of processing these messages elicit, and measure the relationship between this processing and various kinds of attitude change (e.g., indirect-private vs. direct-public;

see Martin & Hewstone, 2008). In contrast, in the decision-making paradigm, researchers often vary the amount and valence of topic-relevant information available to different group members, observe which information is discussed, and assess the relationship between this information and the final group decision (e.g., Stasser & Titus, 1985).

In this context, it is important to note that little effort has been made to assess or explain group members' private responses to social pressure in decision-making studies (for an exception, see Davis, Stasser, Spitzer, & Holt, 1976). This is not surprising, because the major dependent variable in these studies is the public consensus that emerges during discussion. The neglect of private influence in decision-making studies, however, is unfortunate for both theoretical and practical reasons. Regarding the former, systematic efforts to assess group members' private responses during and after decision making would shed light on the cognitive precursors and consequences of consensus building. Regarding the latter, because groups in natural settings often remain intact for extended periods of time, whether or not members internalize collective decisions might affect the quality of their future interactions and the overall success of the group.

Social Dynamics of Factional Conflict

As our earlier review indicated, much of the research on majority and minority influence has been conducted within attitude change paradigms that focus on the cognitive processes underlying recipients' susceptibility to messages from large versus small factions (see Exhibit 1.1). In retrospect, this emphasis on the individual rather than the group level of analysis and on intrapersonal cognitive processes rather than interpersonal social processes is surprising (Levine & Kaarbo, 2001). Moscovici (1976) initially was interested in minority influence because he viewed it as the engine of revolutionary social change, and he believed that, "in social influence, relations with others take precedence over relations with objects, and inter-individual dynamics take precedence over intra-individual dynamics" (p. 106). Nonetheless, for several reasons—Moscovici's own emphasis on cognitive processes, the wider "cognitive revolution" sweeping social

psychology, and the difficulty of conducting group research—work on majority and minority influence came to be dominated by theories and methods from the field of attitude change.

This is not the whole story, of course, as indicated by the decision-making research discussed in this chapter as well as by other research on work teams in laboratory and organizational settings. For example, in regard to laboratory teams, Levine and his colleagues have identified several factors that affect the ability of newcomers (numerical minorities) to convince oldtimers (numerical majorities) to adopt a new task strategy (see Levine & Choi, 2010, 2011). They found, for example, that oldtimers are more likely to adopt a newcomer's suggestion if the team is not strongly committed to its original strategy (because it was assigned rather than chosen) and if the team previously failed on the task (Choi & Levine, 2004). Moreover, newcomers are more effective if they voice their suggestion in an assertive manner (Hansen & Levine, 2009) and if they both share a social identity with other team members and have task-relevant expertise (Kane, Argote, & Levine, 2005). The latter study also indicated that a newcomer's shared social identity and task expertise affected team performance. These findings, in conjunction with those from other studies (e.g., Choi & Thompson, 2005; Levine & Choi, 2004), demonstrate that minorities can affect team members' overt behaviors, which have not received much research attention (Stroebe, 2010). In regard to organizational teams, evidence indicates that minority dissent can stimulate innovation (defined as the intentional introduction of new ideas or processes designed to benefit the team or the larger organization) under certain conditions. These include team members' participation in decision making (de Dreu & West, 2001) and reflection on the team's objectives, strategies, and processes (de Dreu, 2002; see also Aime & Van Dyne, 2010; Richter, Sacramento, & West, 2010; Rink, Kane, Ellemers, & Van der Vegt, 2013).

As useful as such work is for clarifying majority and minority influence in interacting groups, it does not directly address the social dynamics of factional conflict, by which we mean the interactions that occur between and within factions that disagree about how group members should think, feel, or act.

Before discussing these interactions, it is important to consider a prior question, namely, why minorities arise and challenge majorities in the first place.

An early answer to this question was provided by Moscovici (1976), who defined nomic minorities as small factions with strongly internalized views that create conflict to gain social recognition and change the group. This analysis suggests that having strong views is sufficient to motivate a minority to challenge a majority, but this is not always the case. For example, certain religious minorities (e.g., Amish, Mennonites) hold strong views but do not seek to convert the majority, preferring instead to retreat from contact. Clearly, factors besides strong views are necessary to motivate a minority to produce social change.

Several such factors can be identified. For example, a minority may wish to become a majority because doing so provides a sense of correctness, a feeling of acceptance, or tangible benefits, such as money and power (Prislin & Christensen, 2009). Alternatively, a minority may desire to help the larger group achieve its goals and adhere to its basic values. According to Packer (2008, 2011), when minority members identify strongly with a group and perceive that its current (majority-endorsed) norms are unproductive or immoral, they engage in *collectively oriented dissent* aimed at reinstating the group's core values (see also Near & Miceli, 2011; Sani, 2009). Finally, a minority may be catalyzed into action by the desire to redress wrongs it has suffered at the hands of a majority. Scholars from several disciplines have sought to identify conditions under which oppressed minorities engage in collective action designed to improve their condition. For example, evidence indicates that affective injustice, perceived efficacy, and politicized social identity play a causal role in minority members' attitudes, intentions, and behaviors related to protest (van Zomeren, Postmes, & Spears, 2008).

Given the existence of an active minority seeking to produce social change, how do minority and majority members behave toward those in their own faction and those in the other faction? Surprisingly, few investigators have addressed these questions. An exception is Moscovici (1976), who argued that the critical determinant of minority (and majority)

influence is the source's behavioral style (the organization, timing, and intensity of its responses). Of the several behavioral styles that Moscovici identified, consistency (maintaining a position over time and modality) has received the most attention. Although a minority's perceived consistency does indeed enhance its influence (Wood et al., 1994), the mechanisms underlying this effect are controversial. Moreover, Moscovici's view that the style of a minority's message is more important than its substance can be challenged on several grounds, perhaps most convincingly by work on the role of shared cognitions in minority influence (see also Kerr, 2001).

From our perspective, clarifying the social dynamics of factional conflict is the next major frontier for majority–minority influence research. Below we suggest a few representative questions that we believe deserve systematic attention (for broader discussions, see Gerard, 1985; Levine, 1989; Levine & Kaarbo, 2001; Prislin, 2010).

How does social influence operate in multifaction groups (e.g., when there are three minority factions and no majority faction)? Little is known about when factions try to form coalitions in such situations, what tactics they use (e.g., identifying “common ground” in a joint position that no faction initially favored), or what strategies excluded factions use to prevent the formation or operation of coalitions (e.g., sowing distrust between coalition partners). Previous work on coalition formation using game theoretic and political science models (e.g., Kahn & Rapoport, 1984; Murnighan, 1978) may provide useful frameworks for exploring these more complex multifaction settings.

How do minorities prepare for confrontation with majorities, and what factors determine the nature of this preparation? For example, minorities may engage in cognitive activities that either increase or decrease the likelihood that they will adopt the majority's position (e.g., rehearsing the majority's or their own arguments, respectively). Although there is some work relevant to this issue (e.g., Kenworthy, Hewstone, Levine, Martin, & Willis, 2008; Levine, Bogart, & Zdaniuk, 1996; Zdaniuk & Levine, 1996), much remains to be learned about the anticipatory

cognitive, as well as social, activities that minorities engage in before interacting with majorities.

What factors maintain and strengthen a minority's resolve in the face of majority opposition? In addition to the motivational factors discussed earlier, perceived competition and threat from the majority are likely to be critical because they stimulate in-group identification and cohesion as well as cognitive bolstering and polarization of the minority position. In addition, minorities that engage in long-term conflicts are likely to develop structural features (e.g., formal leadership roles, norms of loyalty and sacrifice, specialized task assignments) that enhance their ability to deal with majorities.

What kinds of "informational" and "normative" strategies do minorities use to exert influence and when do they use them? Informational strategies might include adopting effective behavioral styles, displaying (or claiming) issue-relevant expertise, exaggerating the popularity of the faction's position outside the group, and characterizing the faction's motives in positive (e.g., altruistic) terms. Normative strategies might include threatening to disrupt group decision making (e.g., by filibustering), to withdraw from the group, to mobilize external constituencies, or to discredit the majority (e.g., by whistleblowing). In extreme cases, minority groups might resort to physical violence as an influence strategy (Chen & Kruglanski, 2009).

What are the consequences of minority influence for the group as a whole, and are they always positive? In contrast to the romantic view that minority influence has benefits but not costs, evidence suggests a more nuanced picture. For example, minority influence that causes a reversal in status between the two factions (i.e., with the minority becoming the majority and vice versa) reduces members' overall identification with the group and commitment to it (Prislin, 2010). Although the negative effects of status reversal are not inevitable (e.g., Prislin, Levine, & Christensen, 2006), they suggest that minority influence has costs as well as benefits, which need further explication.

In conclusion, we agree with Hewstone and Martin (2010) that the field of majority-minority

influence has lost a good bit of luster since its glory days following Moscovici's (1976) seminal contributions. Although much has been learned about the cognitive underpinnings of responses to disembodied majority and minority sources, little attention has been given to how members of majority and minority factions behave as they struggle to gain ascendance in group contexts. In our view, what is needed to renew the field—to transform it from what Hewstone and Martin (2010) term a "stagnant pond" to a "sparkling fountain"—is a return to Moscovici's original vision of majority-minority influence as the clash between social groups vying for recognition and dominance.

References

- Abrams, D., & Hogg, M. A. (1990). Social identification, self-categorization and social influence. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 1, pp. 195–228). Chichester, England: Wiley.
- Abrams, D., Wetherell, M., Cochrane, S., Hogg, M. A., & Turner, J. C. (1990). Knowing what to think by knowing who you are: Self-categorization and the nature of norm formation, conformity and group polarization. *British Journal of Social Psychology*, 29, 97–119. doi:10.1111/j.2044-8309.1990.tb00892.x
- Aime, F., & Van Dyne, L. (2010). Bringing social structure to both sides of an issue: How proximal and distal ties interact with minority and majority positions to affect influence in workgroups. In R. Martin & M. Hewstone (Eds.), *Minority influence and innovation: Antecedents, processes and consequences* (pp. 313–340). New York, NY: Psychology Press.
- Allen, V. L. (1965). Situational factors in conformity. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 133–175). New York, NY: Academic Press.
- Allen, V. L. (1975). Social support for nonconformity. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 8, pp. 1–43). New York, NY: Academic Press.
- Allen, V. L., & Levine, J. M. (1971). Social support and conformity: The role of independent assessment of reality. *Journal of Experimental Social Psychology*, 7, 48–58. doi:10.1016/0022-1031(71)90054-0
- Allen, V. L., & Wilder, D. A. (1980). Impact of group consensus and social support on stimulus meaning: Mediation of conformity by cognitive restructuring. *Journal of Personality and Social Psychology*, 39, 1116–1124. doi:10.1037/h0077719

- Allport, G. W. (1954). The historical background of modern social psychology. In G. Lindzey (Ed.), *Handbook of social psychology* (Vol. 1, pp. 3–56). Reading, MA: Addison-Wesley.
- Alvaro, E. M., & Crano, W. D. (1997). Indirect minority influence: Evidence for leniency in source evaluation and counterargumentation. *Journal of Personality and Social Psychology*, *72*, 949–964. doi:10.1037/0022-3514.72.5.949
- Asch, S. E. (1951). Effects of group pressure upon the modification and distortion of judgments. In H. Guetzkow (Ed.), *Groups, leadership, and men* (pp. 177–190). Pittsburgh, PA: Carnegie.
- Asch, S. E. (1952). *Social psychology*. New York, NY: Prentice Hall. doi:10.1037/10025-000
- Asch, S. E. (1956). Studies of independence and conformity: I. A minority of one against a unanimous majority. *Psychological Monographs*, *70* (Whole No. 416).
- Baker, S. M., & Petty, R. E. (1994). Majority and minority influence: Source position imbalance as a determinant of message scrutiny. *Journal of Personality and Social Psychology*, *67*, 5–19. doi:10.1037/0022-3514.67.1.5
- Baron, R. S. (2005). So right it's wrong: Groupthink and the ubiquitous nature of polarized group decision making. In M. P. Zanna (Ed.), *Advances in experimental social psychology*. (Vol. 37, pp. 219–253). San Diego, CA: Academic Press.
- Baron, R. S., & Bellman, S. B. (2007). No guts, no glory: Courage, harassment and minority influence. *European Journal of Social Psychology*, *37*, 101–124. doi:10.1002/ejsp.341
- Baron, R. S., Vandello, J. A., & Brunsman, B. (1996). The forgotten variable in conformity research: Impact of task importance on social influence. *Journal of Personality and Social Psychology*, *71*, 915–927. doi:10.1037/0022-3514.71.5.915
- Baumeister, R. F. (1982). A self-presentational view of social phenomena. *Psychological Bulletin*, *91*, 3–26. doi:10.1037/0033-2909.91.1.3
- Black, D. (1958). *The theory of committees and elections*. Cambridge, England: Cambridge University Press.
- Bohner, G., Dykema-Engblade, A., Tindale, R. S., & Meisenhelder, H. (2008). Framing of majority and minority source information in persuasion: When and how “consensus implies correctness.” *Social Psychology*, *39*, 108–116. doi:10.1027/1864-9335.39.2.108
- Bond, R. (2005). Group size and conformity. *Group Processes and Intergroup Relations*, *8*, 331–354. doi:10.1177/1368430205056464
- Bond, R., & Smith, P. B. (1996). Culture and conformity: A meta-analysis of studies using Asch's (1952b, 1956) line judgment task. *Psychological Bulletin*, *119*, 111–137. doi:10.1037/0033-2909.119.1.111
- Boyanowsky, E. O., & Allen, V. L. (1973). Ingroup norms and self-identity as determinants of discriminatory behavior. *Journal of Personality and Social Psychology*, *25*, 408–418. doi:10.1037/h0034212
- Brauer, M., & Judd, C. M. (1996). Group polarization and repeated attitude expressions: A new take on an old topic. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 7, pp. 173–207). Chichester, England: Wiley. doi:10.1080/14792779643000010
- Brauer, M., Judd, C. M., & Jacquelin, V. (2001). The communication of social stereotypes: The effects of group discussion and information distribution on stereotypic appraisals. *Journal of Personality and Social Psychology*, *81*, 463–475. doi:10.1037/0022-3514.81.3.463
- Brodbeck, F. C., Kerschreiter, R., Mojzisch, A., Frey, D., & Schulz-Hardt, S. (2007). Group decision making under conditions of distributed knowledge: The information asymmetries model. *Academy of Management Journal*, *32*, 459–479.
- Campbell, J. D., & Fairey, P. J. (1989). Informational and normative routes to conformity: The effect of faction size as a function of norm extremity and attention to the stimulus. *Journal of Personality and Social Psychology*, *57*, 457–468. doi:10.1037/0022-3514.57.3.457
- Cartwright, D. (1971). Risk taking by individuals and groups: An assessment of research employing choice dilemmas. *Journal of Personality and Social Psychology*, *20*, 361–378. doi:10.1037/h0031912
- Chaiken, S., Liberman, A., & Eagly, A. H. (1989). Heuristic and systematic processing within and beyond the persuasion context. In J. S. Uleman & J. A. Bargh (Eds.), *Unintended thought* (pp. 212–252). New York, NY: Guilford Press.
- Chaiken, S., & Stangor, C. (1987). Attitudes and attitude change. *Annual Review of Psychology*, *38*, 575–630. doi:10.1146/annurev.ps.38.020187.003043
- Chen, X., & Kruglanski, A. W. (2009). Terrorism as a tactic of minority influence. In F. Butera & J. M. Levine (Eds.), *Coping with minority status: Responses to exclusion and inclusion* (pp. 202–221). New York, NY: Cambridge University Press. doi:10.1017/CBO9780511804465.010
- Choi, H.-S., & Levine, J. M. (2004). Minority influence in work teams: The impact of newcomers. *Journal of Experimental Social Psychology*, *40*, 273–280. doi:10.1016/S0022-1031(03)00101-X

- Choi, H.-S., & Thompson, L. (2005). Old wine in a new bottle: Impact of membership change on group creativity. *Organizational Behavior and Human Decision Processes*, 98, 121–132. doi:10.1016/j.obhdp.2005.06.003
- Cialdini, R. B., & Goldstein, N. J. (2004). Social influence: Compliance and conformity. *Annual Review of Psychology*, 55, 591–621. doi:10.1146/annurev.psych.55.090902.142015
- Claidière, N., & Whiten, A. (2012). Integrating the study of conformity and culture in humans and nonhuman animals. *Psychological Bulletin*, 138, 126–145. doi:10.1037/a0025868
- Crano, W. D. (2001). Social influence, social identity, and ingroup leniency. In C. K. W. de Dreu & N. K. De Vries (Eds.), *Group consensus and minority influence: Implications for innovation* (pp. 122–143). Oxford, England: Blackwell.
- Crano, W. D. (2010). Majority and minority influence in attitude formation and attitude change: Context/categorization-leniency contract theory. In R. Martin & M. Hewstone (Eds.), *Minority influence and innovation: Antecedents, processes and consequences* (pp. 53–77). New York, NY: Psychology Press.
- Crano, W. D., & Chen, X. (1998). The leniency contract and persistence of majority and minority influence. *Journal of Personality and Social Psychology*, 74, 1437–1450. doi:10.1037/0022-3514.74.6.1437
- Crott, H. W., Szilvas, K., & Zuber, J. A. (1991). Group decision, choice shift, and group polarization in consulting, political and local political scenarios: An experimental investigation. *Organizational Behavior and Human Decision Processes*, 49, 22–41. doi:10.1016/0749-5978(91)90040-Z
- Crutchfield, R. S. (1955). Conformity and character. *American Psychologist*, 10, 191–198. doi:10.1037/h0040237
- David, B., & Turner, J. C. (2001). Majority and minority influence: A single process. In C. K. W. de Dreu & N. K. De Vries (Eds.), *Group consensus and minority influence: Implications for innovation* (pp. 91–121). Oxford, England: Blackwell.
- Davis, J. H. (1973). Group decisions and social interactions: A theory of social decision schemes. *Psychological Review*, 80, 97–125. doi:10.1037/h0033951
- Davis, J. H. (1980). Group decisions and procedural justice. In M. Fishbein (Ed.), *Progress in social psychology* (Vol. 1, pp. 157–229). Hillsdale, NJ: Erlbaum.
- Davis, J. H. (1982). Social interaction as a combinatorial process in group decision. In H. Brandstatter, J. H. Davis, & G. Stocker-Kreichgauer (Eds.), *Group decision making* (pp. 27–58). London, England: Academic Press.
- Davis, J. H. (1996). Group decision making and quantitative judgments: A consensus model. In E. Witte & J. H. Davis (Eds.), *Understanding group behavior: Consensual action by small groups* (Vol. 1, pp. 35–59). Mahwah, NJ: Erlbaum.
- Davis, J. H., Au, W., Hulbert, L., Chen, X., & Zarnoth, P. (1997). Effect of group size and procedural influence on consensual judgment of quantity: The example of damage awards on mock civil juries. *Journal of Personality and Social Psychology*, 73, 703–718. doi:10.1037/0022-3514.73.4.703
- Davis, J. H., Kerr, N. L., Atkin, R. S., Holt, R. W., & Meek, D. (1975). The decision processes of 6- and 12-person juries assigned unanimous or two-thirds majority rules. *Journal of Personality and Social Psychology*, 32, 1–14. doi:10.1037/h0076849
- Davis, J. H., Kerr, N. L., Stasser, G., Meek, D., & Holt, R. (1977). Victim consequences, sentence severity, and decision processes in mock juries. *Organizational Behavior and Human Performance*, 18, 346–365. doi:10.1016/0030-5073(77)90035-6
- Davis, J. H., Stasser, G., Spitzer, C. E., & Holt, R. (1976). Changes in group member decision preferences during discussion: An illustration with mock juries. *Journal of Personality and Social Psychology*, 34, 1177–1187. doi:10.1037/0022-3514.34.6.1177
- de Dreu, C. K. W. (2002). Team innovation and team effectiveness: The importance of minority dissent and reflexivity. *European Journal of Work and Organizational Psychology*, 11, 285–298. doi:10.1080/13594320244000175
- de Dreu, C. K. W. (2007). Minority dissent, attitude change, and group performance. In A. R. Pratkanis (Ed.), *The science of social influence: Advances and future progress* (pp. 247–270). New York, NY: Psychology Press.
- de Dreu, C. K. W., De Vries, N. K., Gordijn, E. H., & Schuurman, M. S. (1999). Convergent and divergent processing of majority and minority arguments: Effects on focal and related attitudes. *European Journal of Social Psychology*, 29, 329–348. doi:10.1002/(SICI)1099-0992(199903/05)29:2/3<329::AID-EJSP930>3.0.CO;2-6
- de Dreu, C. K. W., & West, M. A. (2001). Minority dissent and team innovation: The importance of participation in decision making. *Journal of Applied Psychology*, 86, 1191–1201. doi:10.1037/0021-9010.86.6.1191
- Deutsch, M., & Gerard, H. B. (1955). A study of normative and informational social influences upon individual judgment. *Journal of Abnormal and Social Psychology*, 51, 629–636. doi:10.1037/h0046408
- De Vries, N. K., de Dreu, C. K. W., Gordijn, E. H., & Schuurman, M. S. (1996). Majority and minority influence: A dual role interpretation.

- European Review of Social Psychology*, 7, 145–172. doi:10.1080/14792779643000001
- Eagly, A. H., & Carli, L. L. (1981). Sex of researchers and sex-typed communications as determinants of sex differences in influenceability: A meta-analysis of social influence studies. *Psychological Bulletin*, 90, 1–20. doi:10.1037/0033-2909.90.1.1
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Fort Worth, TX: Harcourt Brace Jovanovich.
- Echterhoff, G., Higgins, E. T., & Levine, J. M. (2009). Shared reality: Experiencing commonality with others' inner states about the world. *Perspectives on Psychological Science*, 4, 496–521. doi:10.1111/j.1745-6924.2009.01161.x
- Erb, H.-P., & Bohner, G. (2001). Mere consensus effects in minority and majority influence. In C. K. W. de Dreu & N. K. De Vries (Eds.), *Group consensus and minority influence: Implications for innovation* (pp. 40–59). Malden, MA: Blackwell.
- Erb, H.-P., & Bohner, G. (2010). Consensus as the key: Towards parsimony in explaining majority and minority influence. In R. Martin & M. Hewstone (Eds.), *Minority influence and innovation: Antecedents, processes and consequences* (pp. 79–103). New York, NY: Psychology Press.
- Festinger, L. (1950). Informal social communication. *Psychological Review*, 57, 271–282. doi:10.1037/h0056932
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117–140. doi:10.1177/001872675400700202
- Friend, R., Rafferty, Y., & Bramel, D. (1990). A puzzling misinterpretation of the Asch “conformity” study. *European Journal of Social Psychology*, 20, 29–44. doi:10.1002/ejsp.2420200104
- Gerard, H. B. (1985). When and how the minority prevails. In S. Moscovici, G. Mugny, & E. Van Avermaet (Eds.), *Perspectives on minority influence* (pp. 171–186). Cambridge, England: Cambridge University Press. doi:10.1017/CBO9780511897566.010
- Gerard, H. B., & Rotter, G. S. (1961). Time perspective, consistency of attitude, and social influence. *Journal of Abnormal and Social Psychology*, 62, 565–572. doi:10.1037/h0041814
- Gerard, H. B., Wilhelmy, R. A., & Conolley, E. S. (1968). Conformity and group size. *Journal of Personality and Social Psychology*, 8, 79–82. doi:10.1037/h0025325
- Gigone, D., & Hastie, R. (1993). The common knowledge effect: Information sharing and group judgment. *Journal of Personality and Social Psychology*, 65, 959–974. doi:10.1037/0022-3514.65.5.959
- Goldberg, S. C. (1954). Three situational determinants of conformity to social norms. *Journal of Abnormal and Social Psychology*, 49, 325–329. doi:10.1037/h0056249
- Griskevicius, V., Goldstein, N. J., Mortensen, C. R., Cialdini, R. B., & Kenrick, D. T. (2006). Going along versus going alone: When fundamental motives facilitate strategic (non)conformity. *Journal of Personality and Social Psychology*, 91, 281–294. doi:10.1037/0022-3514.91.2.281
- Hansen, T., & Levine, J. M. (2009). Newcomers as change agents: Effects of newcomers' behavioral style and teams' performance optimism. *Social Influence*, 4, 46–61. doi:10.1080/15534510802280827
- Hardin, C. D., & Higgins, E. T. (1996). Shared reality: How social verification makes the subjective objective. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Vol. 3. The interpersonal context* (pp. 28–84). New York, NY: Guilford Press.
- Hastie, R., & Kameda, T. (2005). The robust beauty of majority rules in group decisions. *Psychological Review*, 112, 494–508. doi:10.1037/0033-295X.112.2.494
- Hastie, R., Penrod, S. D., & Pennington, N. (1983). *Inside the jury*. Cambridge, MA: Harvard University Press.
- Hermann, M. G., & Hermann, C. F. (1989). Who makes foreign policy decisions and how: An empirical inquiry. *International Studies Quarterly*, 33, 361–387. doi:10.2307/2600518
- Hewstone, M., & Martin, R. (2010). Minority influence: From groups to attitudes and back again. In R. Martin & M. Hewstone (Eds.), *Minority influence and innovation: Antecedents, processes and consequences* (pp. 365–394). New York, NY: Psychology Press.
- Hochbaum, G. M. (1954). The relation between group members' self-confidence and their reactions to group pressures to uniformity. *American Sociological Review*, 19, 678–687. doi:10.2307/2087914
- Hodges, B. H., & Geyer, A. L. (2006). A nonconformist account of the Asch experiments: Values, pragmatics, and moral dilemmas. *Personality and Social Psychology Review*, 10, 2–19. doi:10.1207/s15327957pspr1001_1
- 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* (Vol. 4, pp. 56–85). Oxford, England: Blackwell. doi:10.1002/9780470998458
- Hogg, M. A. (2007a). Influence and leadership. In S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology* (5th ed., Vol. 2, pp. 1166–1207). Hoboken, NJ: Wiley.
- Hogg, M. A. (2007b). Uncertainty-identity theory. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 39, pp. 69–126). San Diego, CA: Elsevier.

- Hogg, M. A., & Abrams, D. (1988). *Social identification: A social psychology of intergroup relations and group processes*. London, England: Routledge.
- Hogg, M. A., & van Knippenberg, D. (2003). Social identity and leadership processes in groups. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 33, pp. 1–52). San Diego, CA: Academic Press. doi:10.1016/S0065-2601(03)01001-3
- Hornsey, M. J., & Jetten, J. (2004). The individual within the group: Balancing the need to belong with the need to be different. *Personality and Social Psychology Review*, 8, 248–264. doi:10.1207/s15327957pspr0803_2
- Hornsey, M. J., Smith, J. R., & Begg, D. (2007). Effects of norms among those with moral conviction: Counter-conformity emerges on intentions but not behaviors. *Social Influence*, 2, 244–268. doi:10.1080/15534510701476500
- Hulbert, L. G., Parks, C. D., Chen, X., Nam, K., & Davis, J. H. (1999). The plaintiff bias in mock civil jury decision making: Consensus requirements, information format and amount of consensus. *Group Processes and Intergroup Relations*, 2, 59–77. doi:10.1177/1368430299021005
- Hutchison, P., Abrams, D., Gutierrez, R., & Viki, G. T. (2008). Getting rid of the bad ones: The relationship between group identification, deviant derogation, and stereotype maintenance. *Journal of Experimental Social Psychology*, 44, 874–881. doi:10.1016/j.jesp.2007.09.001
- Imhoff, R., & Erb, H.-P. (2009). What motivates nonconformity? Uniqueness seeking blocks majority influence. *Personality and Social Psychology Bulletin*, 35, 309–320. doi:10.1177/0146167208328166
- Insko, C. A., Drenan, S., Solomon, M. R., Smith, R., & Wade, T. J. (1983). Conformity as a function of the consistency of positive self-evaluation with being liked and being right. *Journal of Experimental Social Psychology*, 19, 341–358. doi:10.1016/0022-1031(83)90027-6
- Jetten, J., Hornsey, M. J., & Adarves-Yorno, I. (2006). When group members admit to being conformist: The role of relative intragroup status in conformity self-reports. *Personality and Social Psychology Bulletin*, 32, 162–173. doi:10.1177/0146167205279904
- Jones, E. E. (1985). Major developments in social psychology during the past five decades. In G. Lindzey & E. Aronson (Eds.), *The handbook of social psychology* (3rd ed., Vol. 1, pp. 47–107). New York, NY: Random House.
- Jones, E. E., & Gerard, H. (1967). *Foundations of social psychology*. New York, NY: Wiley.
- Kahn, J. P., & Rapoport, A. (1984). *Theories of coalition formation*. Hillsdale, NJ: Erlbaum.
- Kahneman, D. K., Slovic, P., & Tversky, A. (Eds.). (1982). *Judgment under uncertainty: Heuristics and biases*. Cambridge, England: Cambridge University Press. doi:10.1017/CBO9780511809477
- Kalven, H., & Zeisel, H. (1966). *The American jury*. Boston, MA: Little-Brown.
- Kameda, T., Ohtsubo, Y., & Takezawa, M. (1997). Centrality in socio-cognitive network and social influence: An illustration in a group decision making context. *Journal of Personality and Social Psychology*, 73, 296–309. doi:10.1037/0022-3514.73.2.296
- Kameda, T., & Tindale, R. S. (2006). Groups as adaptive devices: Human docility and group aggregation mechanisms in evolutionary context. In M. Schaller, J. A. Simpson, & D. T. Kenrick (Eds.), *Evolution and social psychology* (pp. 317–341). New York, NY: Psychology Press.
- Kameda, T., Tindale, R. S., & Davis, J. H. (2003). Cognitions, preferences, and social sharedness: Past, present and future directions in group decision making. In S. L. Schneider & J. Shanteau (Eds.), *Emerging perspectives on judgment and decision research* (pp. 458–485). New York, NY: Cambridge University Press. doi:10.1017/CBO9780511609978.016
- Kameda, T., Wisdom, T., Toyokawa, W., & Inukai, K. (2012). Is consensus-seeking unique to human? A selective review of animal group decision-making and its implications for (human) social psychology. *Group Processes and Intergroup Relations*, 15, 673–689. doi:10.1177/1368430212451863
- Kane, A. A., Argote, L., & Levine, J. M. (2005). Knowledge transfer between groups via personnel rotation: Effects of social identity and knowledge quality. *Organizational Behavior and Human Decision Processes*, 96, 56–71. doi:10.1016/j.obhdp.2004.09.002
- Kaplan, M. F., & Miller, C. E. (1987). Group decision making and normative vs. informational social influence: Effects of type of issue and assigned decision rule. *Journal of Personality and Social Psychology*, 53, 306–313. doi:10.1037/0022-3514.53.2.306
- Kelley, H. H. (1952). Two functions of reference groups. In G. E. Swanson, T. Newcomb, & E. Hartley (Eds.), *Readings in social psychology* (pp. 410–414). New York, NY: Holt.
- Kenworthy, J. B., Hewstone, M., Levine, J. M., Martin, R., & Willis, H. (2008). The phenomenon of minority-majority status: Effects on innovation in argument generation. *European Journal of Social Psychology*, 38, 624–636. doi:10.1002/ejsp.521
- Kerr, N. L. (1981). Social transition schemes: Charting the group's road to agreement. *Journal*

- of *Personality and Social Psychology*, 41, 684–702. doi:10.1037/0022-3514.41.4.684
- Kerr, N. L. (2001). Is it what one says or how one says it? Style vs. substance from an SDS perspective. In C. K. W. de Dreu & N. K. De Vries (Eds.), *Group consensus and minority influence: Implications for innovation* (pp. 201–228). Oxford, England: Blackwell.
- Kerr, N. L., & Tindale, R. S. (2004). Small group decision making and performance. *Annual Review of Psychology*, 55, 623–655. doi:10.1146/annurev.psych.55.090902.142009
- Kerr, N. L., & Tindale, R. S. (2011). Group-based forecasting: A social psychological analysis. *International Journal of Forecasting*, 27, 14–40. doi:10.1016/j.ijforecast.2010.02.001
- Kruglanski, A., & Mackie, D. M. (1990). Majority and minority influence: A judgmental process analysis. In W. Stroebe & M. Hewstone (Eds.), *Advances in European social psychology* (pp. 229–261). London, England: Wiley. doi:10.1080/14792779108401863
- Kruglanski, A. W., & Thompson, E. P. (1999). Persuasion via a single route: A view from the unimodel. *Psychological Inquiry*, 10, 83–109. doi:10.1207/S15327965PL100201
- Kruglanski, A. W., & Webster, D. M. (1991). Group members' reactions to opinion deviates and conformists at varying degrees of proximity to decision deadline and of environmental noise. *Journal of Personality and Social Psychology*, 61, 212–225. doi:10.1037/0022-3514.61.2.212
- Larrick, R. P., & Soll, J. B. (2006). Intuitions about combining opinions: Misappreciation of the averaging principle. *Management Science*, 52, 111–127. doi:10.1287/mnsc.1050.0459
- Larson, J. R., Jr., Foster-Fishman, P. G., & Keys, C. B. (1994). Discussion of shared and unshared information in decision-making groups. *Journal of Personality and Social Psychology*, 67, 446–461. doi:10.1037/0022-3514.67.3.446
- Latané, B., & Wolf, S. (1981). The social impact of majorities and minorities. *Psychological Review*, 88, 438–453. doi:10.1037/0033-295X.88.5.438
- Laughlin, P. R. (1980). Social combination processes of cooperative, problem-solving groups on verbal intellectual tasks. In M. Fishbein (Ed.), *Progress in social psychology* (Vol. 1, pp. 127–155). Hillsdale, NJ: Erlbaum.
- Laughlin, P. R. (1999). Collective induction: Twelve postulates. *Organizational Behavior and Human Decision Processes*, 80, 50–69. doi:10.1006/obhd.1999.2854
- Laughlin, P. R. (2011). *Group problem solving*. Princeton, NJ: Princeton University Press.
- Laughlin, P. R., & Ellis, A. L. (1986). Demonstrability and social combination processes on mathematical intellectual tasks. *Journal of Experimental Social Psychology*, 22, 177–189. doi:10.1016/0022-1031(86)90022-3
- Ledgerwood, A., & Callahan, S. P. (2012). The social side of abstraction: Psychological distance enhances conformity to group norms. *Psychological Science*, 23, 907–913. doi:10.1177/0956797611435920
- Levine, J. M. (1989). Reaction to opinion deviance in small groups. In P. B. Paulus (Ed.), *Psychology of group influence* (2nd ed., pp. 187–231). Hillsdale, NJ: Erlbaum.
- Levine, J. M. (1999). Solomon Asch's legacy for group research. *Personality and Social Psychology Review*, 3, 358–364. doi:10.1207/s15327957pspr0304_5
- Levine, J. M., Bogart, L. M., & Zdaniuk, B. (1996). Impact of anticipated group membership on cognition. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Vol. 3. The interpersonal context* (pp. 531–569). New York, NY: Guilford Press.
- Levine, J. M., & Choi, H.-S. (2004). Impact of personnel turnover on team performance and cognition. In E. Salas & S. M. Fiore (Eds.), *Team cognition: Understanding the factors that drive process and performance* (pp. 153–176). Washington, DC: American Psychological Association. doi:10.1037/10690-008
- Levine, J. M., & Choi, H.-S. (2010). Newcomers as change agents: Minority influence in task groups. In R. Martin & M. Hewstone (Eds.), *Minority influence and innovation: Antecedents, processes and consequences* (pp. 229–262). New York, NY: Psychology Press.
- Levine, J. M., & Choi, H.-S. (2011). Minority influence in interacting groups: The impact of newcomers. In J. Jetten & M. J. Hornsey (Eds.), *Rebels in groups: Dissent, deviance, difference and defiance* (pp. 73–92). Chichester, England: Wiley-Blackwell.
- Levine, J. M., & Kaarbo, J. (2001). Minority influence in political decision-making. In C. K. W. de Dreu & N. K. De Vries (Eds.), *Group consensus and minority influence: Implications for innovation* (pp. 229–257). Oxford, England: Blackwell.
- Levine, J. M., & Kerr, N. L. (2007). Inclusion and exclusion: Implications for group processes. In A. W. Kruglanski & E. T. Higgins (Eds.), *Social psychology: Handbook of basic principles* (2nd ed., pp. 759–784). New York, NY: Guilford Press.
- Levine, J. M., & Prislin, R. (2013). Majority and minority influence. In J. M. Levine (Ed.), *Group processes* (pp. 135–163). New York, NY: Psychology Press.
- Levine, J. M., & Thompson, L. (1996). Conflict in groups. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 745–776). New York, NY: Guilford Press.

- Lewis, S. A., Langan, C. J., & Hollander, E. P. (1972). Expectation of future interaction and the choice of less desirable alternatives in conformity. *Sociometry*, 35, 440–447. doi:10.2307/2786504
- Lorge, I., & Solomon, H. (1955). Two models of group behavior in the solution of eureka-type problems. *Psychometrika*, 20, 139–148. doi:10.1007/BF02288986
- Maass, A., & Clark, R. D., III. (1984). Hidden impact of minorities: 15 years of minority influence research. *Psychological Bulletin*, 95, 428–450. doi:10.1037/0033-2909.95.3.428
- Maass, A., Clark, R. D., III, & Haberkorn, G. (1982). The effects of differential ascribed category membership and norms on minority influence. *European Journal of Social Psychology*, 12, 89–104. doi:10.1002/ejsp.2420120107
- MacCoun, R. J. (2012). The burden of social proof: Shared thresholds and social influence. *Psychological Review*, 119, 345–372. doi:10.1037/a0027121
- MacCoun, R. J., & Kerr, N. L. (1988). Asymmetric influence in mock jury deliberations: Juror's bias for leniency. *Journal of Personality and Social Psychology*, 54, 21–33. doi:10.1037/0022-3514.54.1.21
- Mackie, D. M. (1987). Systematic and nonsystematic processing of majority and minority persuasive communications. *Journal of Personality and Social Psychology*, 53, 41–52. doi:10.1037/0022-3514.53.1.41
- Marques, J. M., Abrams, D., Paez, D., & Hogg, M. A. (2001). Social categorization, social identification, and rejection of deviant group members. In M. A. Hogg & R. S. Tindale (Eds.), *Blackwell handbook of social psychology: Group processes* (pp. 400–424). Malden, MA: Blackwell. doi:10.1002/9780470998458.ch17
- Martin, R., & Hewstone, M. (2008). Majority versus minority influence, message processing, and attitude change: The source-context-elaboration model. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 40, pp. 237–326). San Diego, CA: Elsevier. doi:10.1016/S0065-2601(07)00005-6
- Martin, R., & Hewstone, M. (Eds.). (2010). *Minority influence and innovation: Antecedents, processes and consequences*. New York, NY: Psychology Press.
- Martin, R., Hewstone, M., Martin, P. Y., & Gardikiotis, A. (2008). Persuasion from majority and minority groups. In W. D. Crano & R. Prislin (Eds.), *Attitudes and attitude change* (pp. 361–384). New York, NY: Psychology Press.
- Mojzisch, A., & Schulz-Hardt, S. (2010). Knowing others' preferences degrades the quality of group decisions. *Journal of Personality and Social Psychology*, 98, 794–808. doi:10.1037/a0017627
- Monin, B., & O'Connor, K. (2011). Reactions to defiant deviants: Deliverance or defensiveness? In J. Jetten & M. J. Hornsey (Eds.), *Rebels in groups: Dissent, deviance, difference and defiance* (pp. 261–279). Chichester, England: Wiley-Blackwell.
- Morgan, P. M., & Tindale, R. S. (2002). Group vs. individual performance in mixed motive situations: Exploring an inconsistency. *Organizational Behavior and Human Decision Processes*, 87, 44–65. doi:10.1006/obhd.2001.2952
- Moscovici, S. (1976). *Social influence and social change*. London, England: Academic Press.
- Moscovici, S. (1980). Toward a theory of conversion behavior. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 13, pp. 209–239). San Diego, CA: Academic Press.
- Moscovici, S. (1985). Social influence and conformity. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology* (3rd ed., Vol. 2, pp. 347–412). New York, NY: Random House.
- Moscovici, S., & Faucheux, C. (1972). Social influence, conformity bias, and the study of active minorities. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 6, pp. 149–202). New York, NY: Academic Press. doi:10.1016/S0065-2601(08)60027-1
- Moscovici, S., & Lage, E. (1976). Studies in social influence III: Majority versus minority influence in a group. *European Journal of Social Psychology*, 6, 149–174. doi:10.1002/ejsp.2420060202
- Moscovici, S., Lage, E., & Naffrechoux, M. (1969). Influence of a consistent minority on the responses of a majority in a color perception task. *Sociometry*, 32, 365–380. doi:10.2307/2786541
- Moscovici, S., & Nemeth, C. (1974). Social influence II: Minority influence. In C. Nemeth (Ed.), *Social psychology: Classic and contemporary integrations* (pp. 217–249). Chicago, IL: Rand McNally.
- Mugny, G. (1982). *The power of minorities*. London, England: Academic Press.
- Mugny, G., & Pérez, J. A. (1991). *The social psychology of minority influence*. Cambridge, England: Cambridge University Press.
- Mullen, B. (1983). Operationalizing the effect of the group on the individual: A self-attention perspective. *Journal of Experimental Social Psychology*, 19, 295–322. doi:10.1016/0022-1031(83)90025-2
- Murnighan, J. K. (1978). Models of coalition behavior: Game theoretic, social psychological, and political perspectives. *Psychological Bulletin*, 85, 1130–1153. doi:10.1037/0033-2909.85.5.1130
- Murray, D. R., & Schaller, M. (2012). Threat(s) and conformity deconstructed: Perceived threat of infectious disease and its implications for conformist

- attitudes and behavior. *European Journal of Social Psychology*, 42, 180–188. doi:10.1002/ejsp.863
- Myers, D. G. (1978). Polarizing effects of social interaction. In H. Brandstatter, J. H. Davis, & G. Stocker-Kreichgauer (Eds.), *Group decision making* (pp. 125–162). London, England: Academic Press.
- Nail, P. R. (1986). Toward an integration of some models and theories of social response. *Psychological Bulletin*, 100, 190–206. doi:10.1037/0033-2909.100.2.190
- Nail, P. R., MacDonald, G., & Levy, D. A. (2000). Proposal of a four-dimensional model of social response. *Psychological Bulletin*, 126, 454–470. doi:10.1037/0033-2909.126.3.454
- Near, J. P., & Miceli, M. P. (2011). Integrating models of whistle-blowing and wrongdoing: A proposal for a new research agenda. In J. Jetten & M. J. Hornsey (Eds.), *Rebels in groups: Dissent, deviance, difference and defiance* (pp. 302–323). Chichester, England: Wiley-Blackwell.
- Nemeth, C., Brown, K., & Rogers, J. (2001). Devil's advocate versus authentic dissent: Stimulating quantity and quality. *European Journal of Social Psychology*, 31, 707–720. doi:10.1002/ejsp.58
- Nemeth, C., Swedlund, M., & Kanki, B. (1974). Patterning of the minority's responses and their influence on the majority. *European Journal of Social Psychology*, 4, 53–64. doi:10.1002/ejsp.2420040104
- Nemeth, C. J. (1986). Differential contributions of majority and minority influence. *Psychological Review*, 93, 23–32. doi:10.1037/0033-295X.93.1.23
- Nemeth, C. J. (1995). Dissent as driving cognition, attitudes, and judgments. *Social Cognition*, 13, 273–291. doi:10.1521/soco.1995.13.3.273
- Nemeth, C. J., & Kwan, J. L. (1985). Originality of word associations as a function of majority vs. minority influence. *Social Psychology Quarterly*, 48, 277–282. doi:10.2307/3033688
- Nemeth, C. J., & Kwan, J. L. (1987). Minority influence, divergent thinking and detection of correct solutions. *Journal of Applied Social Psychology*, 17, 788–799. doi:10.1111/j.1559-1816.1987.tb00339.x
- Nemeth, C. J., Mosier, K., & Chiles, C. (1992). When convergent thought improves performance: Majority versus minority influence. *Personality and Social Psychology Bulletin*, 18, 139–144. doi:10.1177/0146167292182004
- Nemeth, C. J., & Wachtler, J. (1983). Creative problem solving as a result of majority vs. minority influence. *European Journal of Social Psychology*, 13, 45–55. doi:10.1002/ejsp.2420130103
- Packer, D. J. (2008). On being both with us and against us: A normative conflict model of dissent in social groups. *Personality and Social Psychology Review*, 12, 50–72. doi:10.1177/1088868307309606
- Packer, D. J. (2011). The dissenter's dilemma, and a social identity solution. In J. Jetten & M. J. Hornsey (Eds.), *Rebels in groups: Dissent, deviance, difference and defiance* (pp. 281–301). Chichester, England: Wiley-Blackwell.
- Paicheler, G. (1976). Norms and attitude change I: Polarization and styles of behaviour. *European Journal of Social Psychology*, 6, 405–427. doi:10.1002/ejsp.2420060402
- Pérez, J. A., & Mugny, G. (1996). The conflict elaboration theory of social influence. In E. H. Witte & J. H. Davis (Eds.), *Understanding group behavior: Small group processes and interpersonal relations* (Vol. 2, pp. 191–210). Mahwah, NJ: Erlbaum.
- Peterson, R. S., & Nemeth, C. J. (1996). Focus versus flexibility: Majority and minority influence can both improve performance. *Personality and Social Psychology Bulletin*, 22, 14–23. doi:10.1177/0146167296221002
- Petty, R. E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. New York, NY: Springer-Verlag.
- Prislin, R. (2010). Dynamics of change: Minority influence makes the world go around. In R. Martin & M. Hewstone (Eds.), *Minority influence and innovation: Antecedents, processes and consequences* (pp. 285–312). New York, NY: Psychology Press.
- Prislin, R., & Christensen, P. N. (2009). Influence and its aftermath: Motives for agreement among minorities and majorities. In F. Butera & J. M. Levine (Eds.), *Coping with minority status: Responses to exclusion and inclusion* (pp. 333–354). New York, NY: Cambridge University Press. doi:10.1017/CBO9780511804465.016
- Prislin, R., & Crano, W. D. (2012). A history of social influence research. In A. W. Kruglanski & W. Stroebe (Eds.), *Handbook of the history of social psychology* (pp. 321–339). New York, NY: Psychology Press.
- Prislin, R., Levine, J. M., & Christensen, P. N. (2006). When reasons matter: Quality of support affects reactions to increasing and consistent agreement. *Journal of Experimental Social Psychology*, 42, 593–601. doi:10.1016/j.jesp.2005.10.002
- Prislin, R., & Wood, W. (2005). Social influence in attitudes and attitude change. In D. Albarracín, B. Johnson, & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 671–705). Mahwah, NJ: Erlbaum.
- Quiamzade, A., Mugny, G., Falomir-Pichastor, J. M., & Butera, F. (2010). The complexity of majority and minority influence process. In R. Martin & M. Hewstone (Eds.), *Minority influence and innovation:*

- Antecedents, processes and consequences* (pp. 19–52). New York, NY: Psychology Press.
- Richter, A. W., Sacramento, C. A., & West, M. A. (2010). Dissent within and among groups in organizations: Lessons for group empowerment and organizational innovation. In R. Martin & M. Hewstone (Eds.), *Minority influence and innovation: Antecedents, processes and consequences* (pp. 341–361). New York, NY: Psychology Press.
- Rink, F., & Ellemers, N. (2011). From current state to desired future: How compositional changes affect dissent and innovation in work groups. In J. Jetten & M. J. Hornsey (Eds.), *Rebels in groups: Dissent, deviance, difference and defiance* (pp. 54–92). Chichester, England: Wiley-Blackwell.
- Rink, F., Kane, A. A., Ellemers, N., & Van der Vegt, G. (2013). Team receptivity to newcomers: Five decades of evidence and future research themes. *Academy of Management Annals*, 7, 247–293. doi:10.1080/19416520.2013.766405
- Rios, K., Wheeler, S. C., & Miller, D. T. (2012). Compensatory nonconformity: Self-uncertainty and low implicit self-esteem increase adoption and expression of minority opinions. *Journal of Experimental Social Psychology*, 48, 1300–1309. doi:10.1016/j.jesp.2012.07.005
- Rosenberg, L. A. (1961). Group size, prior experience, and conformity. *Journal of Abnormal and Social Psychology*, 63, 436–437. doi:10.1037/h0047007
- Ross, L., Bierbrauer, G., & Hoffman, S. (1976). The role of attribution processes in conformity and dissent: Revisiting the Asch situation. *American Psychologist*, 31, 148–157. doi:10.1037/0003-066X.31.2.148
- Ross, L., Lepper, M., & Ward, A. (2010). History of social psychology: Insights, challenges, and contributions to theory and application. In S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology* (5th ed., Vol. 1, pp. 3–50). Hoboken, NJ: Wiley.
- Sakurai, M. M. (1975). Small group cohesiveness and detrimental conformity. *Sociometry*, 38, 340–357. doi:10.2307/2786169
- Sani, F. (2009). Why groups fall apart: A social psychological model of the schismatic process. In F. Butera & J. M. Levine (Eds.), *Coping with minority status: Responses to exclusion and inclusion* (pp. 243–266). New York, NY: Cambridge University Press. doi:10.1017/CBO9780511804465.012
- Schlesinger, A. M., Jr. (1965). *A thousand days*. Boston, MA: Houghton-Mifflin.
- Schopler, J., & Insko, C. A. (1992). The discontinuity effect in interpersonal and intergroup relations: Generality and mediation. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 3, pp. 121–151). Chichester, England: Wiley. doi:10.1080/14792779243000041
- Schulz-Hardt, S., Brodbeck, F., Mojzisch, A., Kerschreiter, R., & Frey, D. (2006). Group decision making in hidden profile situations: Dissent as a facilitator for decision quality. *Journal of Personality and Social Psychology*, 91, 1080–1093. doi:10.1037/0022-3514.91.6.1080
- Shaw, M. E. (1932). A comparison of individuals and small groups in the rational solutions of complex problems. *American Journal of Psychology*, 44, 491–504. doi:10.2307/1415351
- Smith, C. M. (2008). Adding minority status to a source of conflict: An examination of influence processes and product quality in dyads. *European Journal of Social Psychology*, 38, 75–83. doi:10.1002/ejsp.423
- Smith, C. M., Dykema-Engblade, A., Walker, A., Niven, T. S., & McGough, T. (2000). Asymmetrical social influence in freely interacting groups discussing the death penalty: A shared representations interpretation. *Group Processes and Intergroup Relations*, 3, 387–401. doi:10.1177/1368430200003004004
- Smith, C. M., & Tindale, R. S. (2010). Direct and indirect minority influence in groups. In R. Martin & M. Hewstone (Eds.), *Minority influence and innovation: Antecedents, processes and consequences* (pp. 263–284). New York, NY: Psychology Press.
- Smith, C. M., Tindale, R. S., & Anderson, E. M. (2001). The impact of shared representations on minority influence in freely interacting groups. In C. K. W. de Dreu & N. K. De Vries (Eds.), *Group consensus and minority influence: Implications for innovation* (pp. 183–200). Oxford, England: Blackwell.
- Smith, C. M., Tindale, R. S., & Dugoni, B. L. (1996). Minority and majority influence in freely interacting groups: Qualitative vs. quantitative differences. *British Journal of Social Psychology*, 35, 137–149. doi:10.1111/j.2044-8309.1996.tb01088.x
- Smoke, W. H., & Zajonc, R. B. (1962). On the reliability of group judgments and decision. In J. H. Criswell, H. Solomon, & P. Suppes (Eds.), *Mathematical methods in small group processes* (pp. 322–333). Stanford, CA: Stanford University Press.
- Snizek, J. A. (1992). Groups under uncertainty: An examination of confidence in group decision making. *Organizational Behavior and Human Decision Processes*, 52, 124–155. doi:10.1016/0749-5978(92)90048-C
- Sorkin, R. D., Hays, C., & West, R. (2001). Signal detection analysis of group decision making. *Psychological Review*, 108, 183–203. doi:10.1037/0033-295X.108.1.183
- Sorkin, R. D., West, R., & Robinson, D. E. (1998). Group performance depends on the majority rule.

- Psychological Science*, 9, 456–463. doi:10.1111/1467-9280.00085
- Stallen, M., de Dreu, C. K. W., Shalvi, S., Smidts, A., & Sanfey, A. G. (2012). The herding hormone: Oxytocin stimulates in-group conformity. *Psychological Science*, 23, 1288–1292. doi:10.1177/0956797612446026
- Stasser, G., Abele, S., & Parsons, S. V. (2012). Information flow and influence in collective choice. *Group Processes and Intergroup Relations*, 15, 619–635. doi:10.1177/1368430212453631
- Stasser, G., Kerr, N. L., & Davis, J. H. (1989). Influence processes and consensus models in decision-making groups. In P. Paulus (Ed.), *Psychology of group influence* (2nd ed., pp. 279–326). Hillsdale, NJ: Erlbaum.
- Stasser, G., & Titus, W. (1985). Pooling of unshared information in group decision making: Biased information sampling during discussion. *Journal of Personality and Social Psychology*, 48, 1467–1478. doi:10.1037/0022-3514.48.6.1467
- Stasser, G. L., & Dietz-Uhler, B. (2001). Collective choice, judgment, and problem-solving. In M. A. Hogg & R. S. Tindale (Eds.), *Blackwell handbook of social psychology: Group processes* (Vol. 4, pp. 31–55). Oxford, England: Blackwell.
- Stewart, D. D., & Stasser, G. (1998). The sampling of critical unshared information in decision-making groups: The role of an informed minority. *European Journal of Social Psychology*, 28, 95–113. doi:10.1002/(SICI)1099-0992(199801/02)28:1<95::AID-EJSP847>3.0.CO;2-0
- Stroebe, W. (2010). Majority and minority influence and information processing: A theoretical and methodological analysis. In R. Martin & M. Hewstone (Eds.), *Minority influence and innovation: Antecedents, processes and consequences* (pp. 201–225). New York, NY: Psychology Press.
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (2nd ed., pp. 7–24). Chicago, IL: Nelson Hall.
- Tanford, S., & Penrod, S. (1984). Social influence model: A formal integration of research on majority and minority influence processes. *Psychological Bulletin*, 95, 189–225. doi:10.1037/0033-2909.95.2.189
- Thibaut, J. W., & Strickland, L. H. (1956). Psychological set and social conformity. *Journal of Personality*, 25, 115–129. doi:10.1111/j.1467-6494.1956.tb01292.x
- Tindale, R. S. (1989). Group vs. individual information processing: The effects of outcome feedback on decision-making. *Organizational Behavior and Human Decision Processes*, 44, 454–473. doi:10.1016/0749-5978(89)90019-8
- Tindale, R. S. (1993). Decision errors made by individuals and groups. In N. Castellan, Jr., (Ed.), *Individual and group decision making: Current issues* (pp. 109–124). Hillsdale, NJ: Erlbaum.
- Tindale, R. S., & Davis, J. H. (1983). Group decision making and jury verdicts. In H. H. Blumberg, A. P. Hare, V. Kent, & M. F. Davies (Eds.), *Small groups and social interaction* (Vol. 2, pp. 9–38). Chichester, England: Wiley.
- Tindale, R. S., Davis, J. H., Vollrath, D. A., Nagao, D. H., & Hinsz, V. B. (1990). Asymmetrical social influence in freely interacting groups: A test of three models. *Journal of Personality and Social Psychology*, 58, 438–449. doi:10.1037/0022-3514.58.3.438
- Tindale, R. S., & Kameda, T. (2000). Social sharedness as a unifying theme for information processing in groups. *Group Processes and Intergroup Relations*, 3, 123–140. doi:10.1177/1368430200003002002
- Tindale, R. S., Meisenhelder, H. M., Dykema-Engblade, A. A., & Hogg, M. A. (2001). Shared cognitions in small groups. In M. A. Hogg & R. S. Tindale (Eds.), *Blackwell handbook in social psychology: Group processes* (pp. 1–30). Oxford, England: Blackwell.
- Tindale, R. S., Nadler, J., Krebel, A., & Davis, J. H. (2001). Procedural mechanisms and jury behavior. In M. A. Hogg & R. S. Tindale (Eds.), *Blackwell handbook in social psychology: Group processes* (pp. 574–602). Oxford, England: Blackwell.
- Tindale, R. S., Smith, C. M., Dykema-Engblade, A., & Kluwe, K. (2012). Good and bad group performance: Same process—different outcome. *Group Processes and Intergroup Relations*, 15, 603–618. doi:10.1177/1368430212454928
- Tindale, R. S., Smith, C. M., Thomas, L. S., Filkins, J., & Sheffey, S. (1996). Shared representations and asymmetric social influence processes in small groups. In E. Witte & J. Davis (Eds.), *Understanding group behavior: Consensual action by small groups* (Vol. 1, pp. 81–103). Mahwah, NJ: Erlbaum.
- Tindale, R. S., Talbot, M., & Martinez, R. (2013). Decision making. In J. M. Levine (Ed.), *Group processes* (pp. 165–192). New York, NY: Psychology Press.
- Tong, E. M. W., Tan, C. R. M., Latheef, N. A., Selamat, M. F. B., & Tan, D. K. B. (2008). Conformity: Moods matter. *European Journal of Social Psychology*, 38, 601–611. doi:10.1002/ejsp.485
- Tormala, Z. L., Petty, R. E., & DeSensi, V. L. (2010). Multiple roles for minority sources in persuasion and resistance. In R. Martin & M. Hewstone (Eds.), *Minority influence and innovation: Antecedents, processes and consequence* (pp. 105–131). New York, NY: Psychology Press.
- Turner, J. C. (1991). *Social influence*. Pacific Grove, CA: Brooks/Cole.

- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (Eds.). (1987). *Rediscovering the social group: A self-categorization theory*. Oxford, England: Basil Blackwell.
- van Zomeren, M., Postmes, T., & Spears, R. (2008). Toward an integrative social identity model of collective action: A quantitative research synthesis of three socio-psychological perspectives. *Psychological Bulletin*, *134*, 504–535. doi:10.1037/0033-2909.134.4.504
- Vinokur, A., & Burnstein, E. (1974). The effects of partially shared persuasive arguments in group induced shifts: A problem solving approach. *Journal of Personality and Social Psychology*, *29*, 305–315. doi:10.1037/h0036010
- Walker, E. L., & Heyns, R. W. (1962). *An anatomy for conformity*. Englewood Cliffs, NJ: Prentice-Hall.
- Wilder, D. A. (1977). Perception of groups, size of opposition, and social influence. *Journal of Experimental Social Psychology*, *13*, 253–268. doi:10.1016/0022-1031(77)90047-6
- Wilder, D. A. (1978). Homogeneity of jurors: The majority's influence depends upon their perceived independence. *Law and Human Behavior*, *2*, 363–376. doi:10.1007/BF01038988
- Williams, K. D., Cheung, C. K. T., & Choi, W. (2000). Cyberostracism: Effects of being ignored over the Internet. *Journal of Personality and Social Psychology*, *79*, 748–762. doi:10.1037/0022-3514.79.5.748
- Williams, K. D., Harkins, S. G., & Karau, S. J. (2003). Social performance. In M. A. Hogg & J. Cooper (Eds.), *The Sage handbook of social psychology* (pp. 327–346). London, England: Sage.
- Willis, R. H. (1963). Two dimensions of conformity-nonconformity. *Sociometry*, *26*, 499–513. doi:10.2307/2786152
- Wood, W., Lundgren, S., Ouellette, J. A., Busceme, S., & Blackstone, T. (1994). Minority influence: A meta-analytical review of social influence processes. *Psychological Bulletin*, *115*, 323–345. doi:10.1037/0033-2909.115.3.323
- Zdaniuk, B., & Levine, J. M. (1996). Anticipated interaction and thought generation: The role of faction size. *British Journal of Social Psychology*, *35*, 201–218. doi:10.1111/j.2044-8309.1996.tb01092.x