

## Chapter 8

# INFLUENCE AND PERSUASION IN SMALL GROUPS

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During the spring of 2004, Scott Peterson went on trial for allegedly murdering his wife and unborn son. Ever since his wife, Laci Peterson, went "missing" on Christmas Eve in 2002, the media covered the search for the then-8-months-pregnant young woman—that is, until her body and that of the fetus washed ashore in San Francisco Bay 3 months later. The police and the media focused on the behavior of her husband—"strange" by all accounts for a grieving husband. Scott Peterson did not partake in the search for his wife. A television interview showed him using the past tense in describing his wife, who at the time was presumably still just "missing." And then there was a highly publicized exposé of his ongoing affair with another woman. Eventually, he was arrested and charged with the murders. At the time of this writing, he was facing the prospect of the death penalty.

Given the media coverage and the inflamed emotions in the town of Modesto, California, where the Petersons lived, the defense succeeded in getting a change in venue; the trial was moved to Redwood City. A jury of 12 would have to decide the question: Did Scott Peterson kill his wife and unborn son? If so, then why, when, and how? At the time of this writing, lawyers were interviewing each potential juror so intensely that it took a full day or more to "qualify" a single juror. Eventually, the decision—the attempt to ascertain the "truth" and mete out justice—would be in the hands of 12 people.

Each side—the prosecution and the defense—attempted to create a group of 12 people sympathetic to their side given that these individuals would influence each other greatly. Because juries rarely start out in full agreement (i.e., 12 guilty or 12 not-guilty votes), the question is how the final decision will be made. Will the majority prevail, as is statistically most likely? Will the minority prevail, a situation that was dramatized by the film *Twelve Angry Men*, in which actor Henry Fonda is the lone juror favoring a not-guilty verdict and eventually prevails? Will the decision be a compromise? Jurors could tacitly compromise on

a guilty verdict with an agreement for punishment of life in prison rather than death during the penalty phase. Or will each faction polarize such that the two sides cannot agree, resulting in a "hung" jury and requiring the case to be retried. Finally, what about "truth"? What is the best way for a group to consider all of the evidence and be most likely to come up with the correct solution?

In this chapter, we explore different influence scenarios and the mechanisms by which good decision making is achieved. Influence processes are evidenced not only in jury deliberations but also in Cabinet-level meetings and in our ordinary decision-making groups—at home, at work, or in social settings. Groups are important vehicles for decisions, and the ways in which people influence one another is paramount in our understanding of how decisions are reached.

In this chapter, we cover myriad influence processes that occur when we are in the presence of, or interacting with, other people. We take a particular perspective on the research literature (for others, see especially Brown, 2000; Davis, 1973; McGrath, 1984). We start with the simple situation where people are expressing viewpoints in groups. We then move to situations where people are interacting and trying to persuade one another. We repeatedly confront a basic tenet that runs throughout this chapter, namely, that people in groups tend toward agreement. People are not content to have positions that differ; there is always a strain to find which position is correct or appropriate. From this perspective, the different influence processes that we consider differ mainly in where the consensus is found. Sometimes it is the position favored by the majority, termed *conformity*. Sometimes it is the position favored by the minority, termed *minority influence*. Sometimes we find that it is more extreme than the average of the individuals, termed *polarization*. We then explore when these processes are assets or liabilities when we consider the quality of performance and decision making and the likelihood that "truth will prevail."

## MAJORITIES AND CONVERGENT THINKING

### Conformity: The Power of Numbers

#### *The Early Studies*

Although most of us think we are quite independent, it is disconcerting to realize how important sheer numbers are when it comes to influence. The power of peers, and particularly the power of a majority, is one of the most well-established findings in social psychology. It is so powerful that when we are faced with a majority of others who agree on a particular attitude or judgment, we are likely to adopt the majority judgment regardless of whether their judgment is right or wrong.

In a now classic study by Solomon Asch, people came to an experiment in groups of five to seven (Asch, 1956). Unknown to the "real" participant, however, the other four to six people were confederates of the experimenter. They were hired to agree on a judgment that was wrong. In the experiment, the group was shown a series of slides, as illustrated in Figure 8.1. They saw a "standard" line and were asked to name which of the three comparison lines was equal to the standard. This task is easy. When people were alone, they were correct. In Figure 8.1, that answer is "2." However, in the experimental setting, the real participant was the last to decide after hearing the judgments of the other four to six people in order. One by one, they

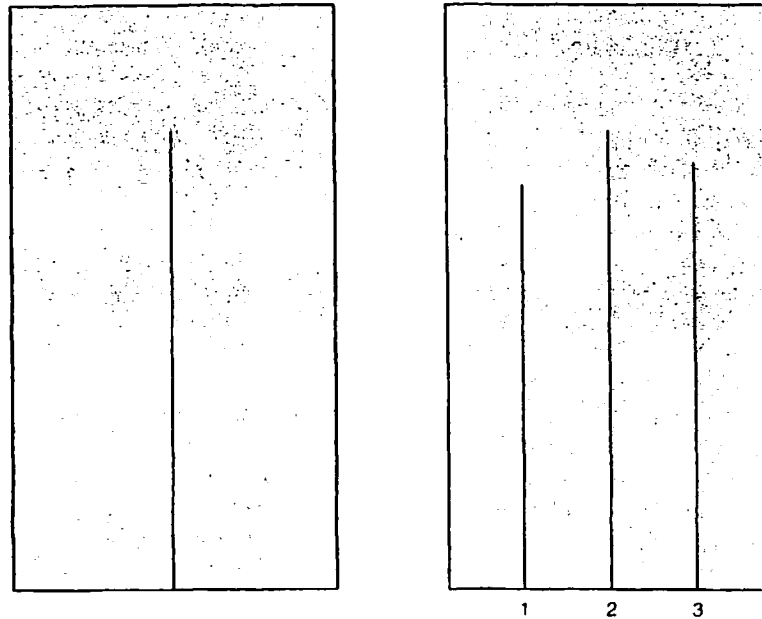


Figure 8.1 Asch Lines Paradigm

all agreed on the same answer. The problem is that their answer was incorrect. For example, all would say "1" was the line equivalent to the standard. What happened? Did the real participants laugh out loud, knowing that those other people were incorrect? Did the real participants feel superior while they maintained what was in fact the correct position? No. Fully one third of the responses from the naive participants were in agreement with the majority; they said "1." Furthermore, 75% of the naive participants agreed with the erroneous majority on at least one of the trials. Even when using perceptual items (e.g., length of lines), people will abdicate the information from their own senses and adopt an erroneous majority view. Furthermore, this effect is not limited to a single study. Literally hundreds of studies have documented this phenomenon (e.g., Allen, 1965; Levine, 1989). There is evidence of this phenomenon in many different countries, and the effect is even stronger in Asian cultures that are assumed to be more concerned with harmony (Bond & Smith, 1996). The question is why.

The question of why people follow the majority, whether right or wrong, appears to be based on an assumption and a concern. The assumption is that "truth lies in numbers" and is known as *informational influence*. The concern is about being accepted, and especially about not being rejected, and is known as *normative influence* (Deutsch & Gerard, 1955). Participants faced with a majority that disagreed with them did not feel superior and were not laughing. They assumed that they were in error because "40 million Frenchmen can't be wrong," as the saying goes. They assumed that truth lies in numbers. Furthermore, they were fearful about "sticking out like a sore thumb," that is, about being ridiculed.

You might ask whether this fear is justified or whether it is just in the participants' heads. Would they be rejected for maintaining a dissenting minority position even when they are

correct? Although we might hope not, research shows quite clearly that people who maintain a dissenting viewpoint, even when they are right, risk rejection from their group. In an early study by Schachter (1951), people discussing a case about a juvenile delinquent were asked to determine how best to deal with the troubled adolescent. The scale ranged from being very "love oriented" to being very "punishment oriented." The story of this delinquent was written very sympathetically, and most people felt that a "2" or "3" on the 7-point scale was appropriate. These were judgments that the boy should be treated mostly with love and should be punished only when needed. However, in this group, there was a confederate. This person consistently maintained the position of "7," a very punishment-oriented position. What happened? He received the most communication aimed at changing his opinion. When such persuasion was unsuccessful, the person was disliked, was made to feel unwelcome, was not nominated to any leadership positions, and was essentially rejected (Schachter, 1951). These findings were even stronger if the group was important to the individuals, that is, if the group was highly "cohesive." However, the effect was also found in temporary groups with little at stake in the issue.

At this point, we begin to realize that majorities have a great deal of power. Believing that truth lies in numbers, we begin to believe that if we hold a differing viewpoint, it must mean that we are in error and not in the majority. Furthermore, we want to belong—to be accepted. This is a source of great power for the majority. The majority can (and often will) reject us if we maintain a differing viewpoint. From this perspective, it becomes easy to understand why many people will publicly agree with a majority. At least, one can understand why one might not voice a dissenting viewpoint, and certainly not maintain it, in the face of such pressure and implied rejection. At best, many of us remain silent.

When Asch (1956) interviewed his participants after his classical experiment, he found that many people, when faced with a majority, had such a strong tendency to agree that they were not even aware that their position actually differed from the majority. A few people seemed quite convinced that they "independently" agreed with the majority. A few people were aware that their judgment differed from that of the others, but they publicly conformed to the majority anyway. However, most people became confused about what the correct judgment was and made a "judgment call." They assumed that the majority must be correct and, moreover, were motivated to make this assumption because it meant that they could be part of the majority.

### *Increasing or Decreasing Conformity*

Since Asch's (1956) original study and the variants that followed, we have become aware of some of the variables that make people more or less likely to conform. For example, consider the size of the majority. Does a majority of 10 have more influence than a majority of 9? Or is a majority of 10 at least more influential than a majority of 4? It turns out that a majority of 3 has maximum influence; larger majorities do not have more influence. Thus, if you are faced with 1 person who disagrees with you, conformity is quite low; if there are 2 people in agreement against you, conformity increases; if 3 people are in agreement against you, conformity is maximal (33% in the original study). With 4, 5, 6, and even up to 15 people in agreement against you, there are essentially no further increases in conformity. If you are going to conform, a majority of 3 people suffices (Asch, 1956; Stang, 1976).

Other variables that increase the likelihood of conformity are difficulty of the task, ambiguity of the stimulus, and uncertainty on the part of the participant. One can create these

Table 8.1 First Ballot and Final Verdict: Guilty Votes on First Ballot

		Guilty Votes on First Ballot (Percentages)				
		0	1-5	6	7-11	12
<i>Final Verdict</i>	Not guilty	100	91	50	5	—
	Hung jury	—	7	—	9	—
	Guilty	—	2	50	86	100
	<i>n</i>	26	41	10	105	43

SOURCE: From Kalven, H., Jr., & Zeisel, H., *The American Jury*. Copyright © 1966. Reprinted with permission of Little Brown.

conditions in many ways, but to illustrate from the original Asch (1956) study, one could make the lines closer together and, thus, make the task more ambiguous and more difficult. One could give you information that you were not very good at this task. All of these variables undermine the confidence of the individual in his or her own judgment and have been found to increase conformity (Allen, 1965; Levine, 1989). Others have pointed to the importance of anonymity for reducing conformity. If normative influence is one reason why people conform, one can reduce such fear of rejection by having the judgments given anonymously. Studies comparing face-to-face groups with those permitting anonymous answers have shown substantial reduction in conformity when anonymity is permitted (Deutsch & Gerard, 1955).

Some have speculated that there will be less conformity when the topic is important to the individual. Experimental studies on this have been mixed, with some showing more conformity and some showing less conformity when the issue is important (Krech, Crutchfield, & Ballachey, 1962; Vaughan & Mangan, 1963). Naturalistic studies, however, show the power of the majority even when the issue is very important. Consider jury trials. Kalven and Zeisel (1966) studied actual juries and looked at the relationship between votes on the first ballot and those on the final verdict. If a majority of 7 to 11 votes favored a "guilty" verdict (with 1 to 5 favoring a "not guilty" verdict), guilty was the final verdict in 86% of the trials. If a majority of 7 to 11 favored a not guilty verdict, not guilty was the final verdict in 91% of the trials. This striking evidence for conformity when the stakes were high stemmed from 225 actual trials (Table 8.1).

### *The Liberating Value of Dissent: Why It Is Often Silenced*

One of the most important variables for reducing conformity is the presence of a dissenter. We already know how difficult it is to dissent, that is, to express a position different from the majority. But what happens when a person does dissent? We find that the others are liberated. Thus, if you are in a group where a majority differs from you but there is *one person* who agrees with you, you are not likely to conform. In fact, an experiment showed that the 33% conformity when a dissenter was alone dropped to 5% when the person had an ally. You might assume that this happens because the ally gives you confidence in your own judgment. However—and this is even more interesting—it appears that this happens not because you have an ally supporting your own position but simply because there is dissent from the majority. If there is a person who disagrees both with you and with the majority, conformity is lowered. Thus, if that person is intermediate between you and the majority, or if he or she is even

more extreme than the majority, conformity is lowered (Asch, 1955). In an amusing variant on this issue, Allen and Levine (1969) used as an ally (a confederate of the experimenters) a person with either normal vision or very poor vision with typecast "thick glasses." In this study of the effect of reduced visual ability, the ally with normal vision caused a significant reduction in conformity. However, even the ally with very poor vision reduced conformity significantly; conformity was intermediate between having no ally and having one with normal vision. In all of these studies, therefore, it was clear that a dissenter is enough to liberate you to say what you believe and/or to say what you see. The dissenter can be of questionable judgment and can disagree completely with you as well as with the majority, yet the dissenter still has value in that his or her dissent liberates you to express your authentic views.

The fact that dissent is such a powerful antidote to conformity is one reason why many groups and organizations—even cults—make sure that dissent is silenced. Many experimental studies show that dissenters are either "persuaded" or "rejected" (e.g., Levine, 1989). Many corporations, especially those that are very profitable, go to great lengths to have cohesion and corporate cultures that reject dissent "like a virus" (Collins & Porras, 1994). They recruit people who will "fit" the company norms (O'Reilly & Chatman, 1996); they socialize these people, make sure that their friends and colleagues all are in agreement, and punish and reject dissent (Nemeth, 1997).

There are researchers who would argue that fit, cohesion, and high morale are very desirable because these factors contribute to the uniformity of the group's beliefs and goals. Furthermore, there is substantial research showing that cohesion is linked to performance (Mullen, Anthony, Salas, & Driskell, 1994). People work harder and faster when they are in agreement. Those who argue for these positive elements generally do not use the term "conformity," which has the negative connotation of being "thoughtless" and possibly agreeing with error. Instead, one hears terms such as "team player." The bottom line, however, is that both terms characterize movement to the majority position. If it is a "good" or "useful" position, that might be beneficial and very efficient; if it is in error, the consequences might be disastrous. The problem, of course, is that people tend to follow and agree with majority judgments regardless of whether they are right or wrong. However, there is a powerful and more insidious aspect to majority influence.

### *Majorities' Inducement of Convergent Thinking*

The problems associated with cohesive and uniform majorities are greater than the simple movement to their position. Research shows that majorities not only shape judgments and behavior but also shape the ways in which individuals think. Several studies (e.g., Nemeth, 1995) have shown that when people are faced with a majority view that differs from their own, they not only adopt the majority position but also convince themselves of the truth of that position by considering the issue only from the majority perspective. People try to understand why the majority takes the position it does and look at the issue nearly exclusively from the majority's point of view. For example, people faced with a majority search for information in a biased manner. They primarily read information that explains, justifies, and corroborates the majority position (Nemeth & Rogers, 1996).

In problem-solving situations as well, people tend to adopt the majority strategy for solving problems to the exclusion of other strategies. To illustrate, one study (Nemeth & Kwan, 1987) showed groups of four individual slides of six-letter strings such as PATren. Participants were asked to name the first three-letter word they noticed. Because each slide

was shown for only a fraction of a second, everyone first noticed "pat," the word formed by the capital letters from left to right. After a series of five such slides, participants were given information as to the judgments of all four individuals. In one condition (majority), each participant was led to believe that the other three people first noticed "tap" (the word formed by the backward sequencing of the capital letters) and that one person first noticed "pat" (the participant himself or herself). The feedback for this slide would be "tap, tap, tap, pat." The same pattern was given for all five slides. Thus, each person believed that the majority of three differed from himself or herself and that the majority position consistently was the backward sequencing of letters. After this experimental feedback, participants were given a series of letter strings and asked to name *all* of the words they could form from the letters.

If we take an example of a letter string such as PITbna, the participants could form words using a forward sequencing (e.g., pit, pin, it), using a backward sequencing of letters (e.g., tip, nip, ant), or using a mixed sequencing of letters (e.g., tin, bat, nap, tan, tap, bin). The findings showed that people in this condition tended to overuse the majority strategy. Compared with a control group, they found more words using the backward sequencing of letters, but this was at the expense of finding words using the forward or mixed sequencing. Exposure to a consistent majority led to an adoption of the majority point of view; however, they were less able to find solutions they would have considered if they had not been exposed to the majority.

The conclusion to be drawn from these types of studies is that a majority not only has the power to get us to adopt its position publicly but also changes the way in which we think about an issue or a problem such that we consider it from the majority's perspective and tend not to see (or perhaps do not want to see) alternatives. In some sense, we "brainwash" ourselves by finding and focusing on information that is consistent with the majority view.

## Minorities and Innovation

As we discussed in the previous section on conformity, dissent has value in part due to its liberating effects. We found that dissenters, whether right or wrong, liberate people to think in different ways to say what they believe. In this section, we explore the possibility that such minority views can actually prevail. More important, even when minority views do not "win," they serve the quality of the group decision making by stimulating a consideration of more information and more options.

### *Minority Influence*

Most of the research literature on influence in groups tends to emphasize the importance and power of majorities and status. Influence is often seen as flowing from the many to the few and from the strong to the weak. It is clear that there are advantages to being among the many and to having power and status. However, these cannot be the only mechanisms for influence. If one wants to understand social change rather than social control, one must consider the possibility that minority views can be influential. How do new ideas ever get adopted, and how do societies change?

### *The Early Studies*

During the late 1960s and early 1970s, Moscovici and Faucheux (1972) asserted that minorities do exercise influence but that the way in which this influence is exerted is quite

different from that of majorities. Minority positions do not have the sheer numbers to cause people to accept the positions as information about reality or to cause fear of rejection by the minority. In fact, because people assume that truth lies in numbers, they are prone to assume that the minority is in error. Furthermore, a good deal of recent research documents the fact that people, rather than fearing rejection by the minority, are motivated to *shun* the minority position. Although people do not want to identify with the majority, they also do not want to be on the receiving end of the majority's "persuasion" or rejection (Mugny, 1982).

In attempting to demonstrate the potential influence of minorities, Moscovici, Lage, and Naffrechoux (1969) conducted an experiment that was essentially the reverse of the conformity studies. They had people in groups of six judge the color of a series of slides and to indicate perceived brightness on a 5-point scale. All of the slides were in fact the same hue—a clear "blue." Different perceptions of brightness were accomplished by the use of neutral density filters. In each group, there were four naive participants and two paid confederates of the experimenters. In one condition (consistent), the two confederates judged each slide to be "green." In a second condition (inconsistent), the confederates called the slides green on two thirds of the trials and blue on one third of the trials. In a third condition (control), there was no dissenter.

You might ask whether anyone would really judge blue slides to be green just because a minority of two in your group of six thought they were green. Furthermore, wouldn't the confederates have more influence if they were correct (and agreed with you and the majority) on at least a third of the trials? The results showed that (a) participants, when alone, did not make mistakes and clearly saw the color as blue; (b) participants in the consistent condition reported the slides to be green on 8.42% of the trials; and (c) participants in the inconsistent condition showed no influence and called the slides blue, as did the control. Thus, there is evidence that people might adopt the minority position.

The influence in the consistent condition, although considerably less than that found with majorities, still is significantly greater than zero. Of interest, however, is the fact that it was the consistent minority—those who repeatedly called the slides green—who had this influence. When they were inconsistent, even though they were correct on those trials, they had no influence. What we learned from this early study is that for a minority to be persuasive, it must be consistent over time in its position. If those in the minority compromise or show inconsistency, they will have no impact.

There was another intriguing finding in this early study. After the public expression of color judgments, Moscovici and colleagues (1969) asked the participants individually to sort a series of "blue-green" stimuli into two piles: "blue" or "green." This is akin to taking a series of blue-green squares from a paint store and asking people whether each is blue or green. There is an actual physical continuum; furthermore, people are in fair agreement about the point at which the colors appear to transition from blue to green. What is interesting is that the individuals who had been exposed to the two confederates who judged blue slides to be green (consistent condition) were influenced even more than their public adoption of the minority position would suggest. More than half of the individuals shifted the point at which stimuli were judged to be green rather than blue. They called slides green when a control group would call them blue.

There are two important points to be made from this study. First, consistency over time by the minority is important to observe minority influence. When those in the minority were inconsistent, even when this meant they were actually correct more often, their influence was



negligible. Compromise to the blue position, which was both true and that held by the majority, did not enhance their credibility or add to their influence. It is when the minority position is held consistently—even if wrong—that it exerts influence. The consistency (and a correspondent belief that the minority has conviction) provides the basis for movement to that position. At least, without such consistency, the minority has essentially no influence.

The second point is that influence is even greater at the private or indirect level than at the public or manifest level when it comes to minority influence. Public adoption of green was small, albeit significant. However, the change in the categorization of what is blue or green was substantially greater. Unlike majority influence, which can effect adoption of the majority position publicly even when people do not believe it, minorities have difficulty in effecting public change. To look only at public adoption of the position would be to underestimate the influence of the minority. People may often privately shift their position toward that of the minority.

We saw this kind of private movement in a simulated jury decision-making study (Nemeth & Wachtler, 1974). In this study, we had one person (a confederate) who maintained a position of low compensation in a personal injury case relative to the majority, who believed that the award should be much higher. In this study, either the confederate chose the head seat or a side seat at the rectangular table or he was assigned to the head seat or a side seat. In no condition did he get the others to agree with him on the verdict. However, there was substantial evidence of private attitude change. Primarily when he chose the head seat—a sign of confidence—people showed considerable movement when asked after the deliberations. They reported being more in agreement with his position. On an entirely new personal injury case, they awarded substantially less money. This study demonstrated the importance of “style” and of actions that enhance the perception of confidence such as taking the head seat. Such confidence may help the minority in its attempt at persuasion.

### Later Refinements

Research on minority influence has been considerable (Wood, Lundgren, Ouellette, Busceme, & Blackstone, 1994). Interestingly, the main results have been replicated and extended. Repeatedly, we find that minorities must be consistent in their position, although the perception of consistency is more subtle than simple repetition of response (Nemeth, Swedlund, & Kanki, 1974). Furthermore, there is substantial work on the private and latent effects of minority influence (Forgas & Williams, 2001; Mugny, 1982). People have been found to adopt minority opinions when asked privately, when asked at a later time, or when asked in a different form (David & Turner, 2001; Mugny, Butera, Sanchez-Mazas, & Perez, 1995).

Moscovici (1985) argued that the reason for these findings is that majorities induce *compliance*, that is, early and direct adoption of the majority position without private change. In contrast, minorities induce *conversion*, that is, private acceptance. The evidence, however, appears to be more complicated. Studies show that majorities do more than simply induce compliance. There is evidence of careful processing of the majority message as well as private attitude change toward the majority position (Baker & Petty, 1994; Mackie, 1987). As mentioned previously, there is also evidence that majorities do more than gain adoption of their position. They induce thinking, but it is biased thinking; it is thinking that takes the perspective of the majority (Nemeth, 1995, 1997).

There is evidence, as hypothesized, that minorities induce "conversion," that is, private change. In some studies, people do adopt the minority position but do so in private. However, much of the research shows that private change often is not to the minority position itself; rather, it is deflected onto different but related attitudes (Crano, 2000; Mugny, 1982). Perez and Mugny (1987), for example, found that participants did not change their opinions to the minority pro-abortion position; however, participants did show attitude change on contraception. These researchers have pointed out that the reason for this is that people are motivated to dissociate themselves from the minority source for fear of inviting ridicule and rejection.

### *Minorities as "Stimulators" of Divergent Thinking*

Another line of research has argued that consistent minority opinions are important, not only because they sometimes "persuade" or even can liberate others to be independent but also because consistent minority viewpoints also stimulate divergent thinking about the issue. They stimulate a consideration of multiple perspectives, only one of which is that espoused by the minority (Nemeth, 1986, 1997). This is a major "hidden benefit" of minority dissent because it has consequences other than attitude change.

The fact that minority viewpoints stimulate consideration of different perspectives has large practical consequences for the quality of individuals' thinking and decisions. The evidence for this proposition is substantial. For example, there is evidence that individuals exposed to minority dissent not only read information on one side of the issue (as they do when faced with a majority) but read information on all sides of the issue (Nemeth & Rogers, 1996). There is also evidence that people faced with dissent use more and better strategies in the service of performance (Legrenzi, Butera, Mugny, & Perez, 1991; Nemeth & Kwan, 1987).

To illustrate, recall the Nemeth and Kwan (1987) study described in the conformity section. In that study, people were shown a series of letter strings (e.g., PATren) and asked to name the three-letter word they first noticed. In the majority condition, they were given feedback that the other three people first noticed the word formed by the backward sequencing ("tap"). The experimenters found that people follow the majority to the exclusion of other strategies. When asked to find all of the words they could from a letter string, participants tended to find words formed by a backward sequencing of letters to the detriment of finding them with forward or mixed sequencing. However, there was another condition, the minority condition, where people were told that one person consistently noticed the word formed by backward sequencing (e.g., "tap, pat, pat, pat"). Now it was a minority of one in their group that was doing this. In this condition, when people tried to form all of the words they could from a new series of letter strings, they formed them using *all* possible strategies. They found words with forward, backward, and mixed sequencing. They displayed divergent thinking. As a result, they found more words overall than did people in the majority condition or the control (Table 8.2).

The stimulation of divergent thinking—multiple perspectives—has been found in other realms as well. It was found that exposure to minority views stimulates people to look more carefully at a stimulus array and, thus, to detect solutions that otherwise would have gone undetected (Nemeth & Wachtler, 1983). Even U.S. Supreme Court justices have been found to write their opinions in more "cognitively complex" ways when there is a dissenting viewpoint. If all of the justices agree, the court opinion is relatively simple and takes one perspective. When there is dissent, the majority justices write the majority opinion from more

Table 8.2 Majorities Versus Minorities

<i>Minorities stimulate:</i>	<i>Majorities stimulate:</i>
<ul style="list-style-type: none"> <li>• Search for more information on all sides</li> <li>• Use of all strategies</li> <li>• Detection of novel correct solutions</li> <li>• More creativity and better group decision making</li> </ul>	<ul style="list-style-type: none"> <li>• Search for information supporting majority</li> <li>• Use of majority strategy</li> <li>• Following of majority and no novel detection</li> <li>• Reduced creativity and premature consensus</li> </ul>

SOURCES: De Dreu & West (2001); Gruenfeld (1995); Nemeth (1995, 2003).

than one perspective; they, like participants in our experiments described previously, consider more alternatives and options (Gruenfeld, 1995). This finding of more divergent thinking when people are exposed to minority dissent has been found in other studies as well (De Dreu & De Vries, 1996; Martin, 1996; Mucchi-Faina, Maass, & Volpato, 1991).

Finally, there is evidence of more creativity when people are exposed to a minority viewpoint. In general, divergent thinking is related to creativity. To illustrate, one creativity task might ask you for all the "uses" for a brick. You could think of "building a house," "building a bridge," and "building a road." These would be three ideas; however, all are in the same category of "building." Alternatively, you could come up with "building a house," "using as a doorstep," and "using as a missile." These would also be three ideas, but they would be in three different categories. The "fluency" for both examples is three. However, the "flexibility"—the divergent thinking—is higher in the second example than in the first example. You have considered more categories. In general, people who exhibit this kind of thinking are more creative.

One of the elements of creativity is originality, and a simple task that illustrates this is the word association task. For example, if a person asks you to say the very first word that comes to mind when he or she says the word "blue," what would you say? A very common response would be "green" or "sky." A much less common response would be "jeans" or "jazz." There is actually research showing the probability of a given response to different words; the differential probabilities yield an objective indicator of originality or "uniqueness" of association.

In an experimental study, originality of thought was studied as a consequence of exposure to majority or minority influence (Nemeth & Kwan, 1985). People were exposed to either a majority opinion or a minority opinion that blue slides were green. They then were asked for seven associations to the words "blue" and "green." The study showed that those exposed to a minority viewpoint had significantly more original associations than did a control group and also had more original associations than did those exposed to a majority viewpoint. In fact, those exposed to the majority viewpoint showed even less originality than the control participants (Table 8.3).

### Group Decision Making: Groupthink and Polarization

In the preceding sections, we considered the importance of being exposed to differing viewpoints and the critical differences between influence exerted by a majority and influence exerted by a minority of individuals in a group. In most of those studies, a person is aware of the opinion difference, but there is no explicit attempt to change his or her opinion. In this

Table 8.3 Mean Uniquenesses of Associations

	<i>Majority</i>	<i>Minority</i>	<i>Control</i>
To "blue"	6.86	3.32	5.17
To "green"	7.21	4.32	6.99

SOURCE: Nemeth &amp; Kwan (1985).

NOTE: The lower the score, the more original.

section, we consider influence processes when groups actually make decisions. We look for some of the same principles as noted previously in an attempt to understand why group decision making can be of high or low quality. For example, the majority of an interacting group does not just state its opinion: it creates pressure on the "deviants," or holders of a minority view, to agree with the majority. A version of this has been recognized in an analysis of some major "fiascos," that is, truly poor decisions made by Cabinet-level groups. Pressure on deviants has been given the term "groupthink."

#### *Groupthink: Cabinet-Level "Fiascos"*

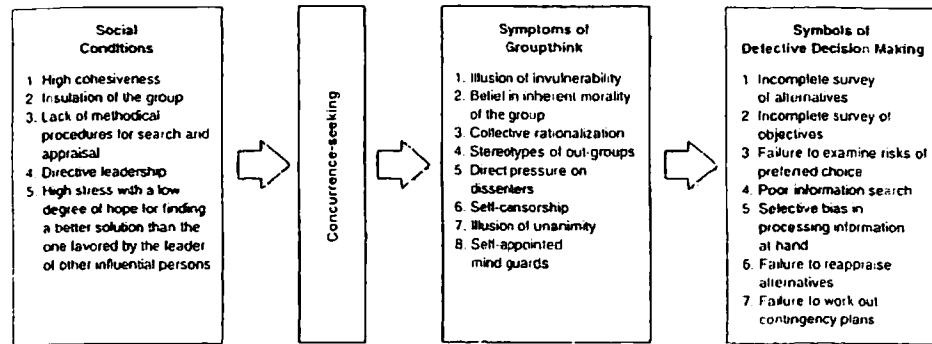
During the early 1970s, Janis (1971) tried to understand why some very bad decisions were made by high-level advisory groups, especially considering that they were made by powerful and intelligent men. The Bay of Pigs fiasco was one such example. In 1961, then President Kennedy and his advisers came up with a plan to overthrow Fidel Castro by invading Cuba with 1,400 Central Intelligence Agency (CIA)-trained Cuban exiles. The plan failed. Nearly all of the invaders were quickly captured or killed, the United States was humiliated, and Cuba became even more closely allied with the Soviet Union. Kennedy himself was reported to ask, "How could we have been so stupid?"

One might first think that stupid people make stupid decisions. However, Kennedy's Cabinet was hardly stupid. Among others, it had Dean Rusk, former head of the Rockefeller Foundation and then Secretary of State; Robert McNamara, former president of Ford Motor Company and then Secretary of Defense; Robert Kennedy, Attorney General; McGeorge Bundy, dean of Harvard University's College of Letters and Science; and Arthur Schlesinger, Harvard University historian.

Janis's (1971) analysis of many such examples demonstrated a problem in the group decision-making process. Janis posited that these groups had several characteristics in common. The groups had a homogeneity of perspective, they had strong and directive leaders, they were isolated from contrary views, and they were highly cohesive. Janis hypothesized that such factors lead to a "strain to uniformity" that he termed "groupthink" (Table 8.4).

The "symptoms" of groupthink included an illusion of invulnerability, a belief in the inherent morality of one's own group, stereotyping of the "enemy," direct pressure on dissenters, and even self-censorship. We are bigger, stronger, and better than our enemy; therefore, the enemy will give up easily and overthrow a hated government. Opinions to the contrary are obstacles and possibly "unpatriotic." As a result of such symptoms, the group engages in poor decision-making processes. The group does not really consider alternatives, it does not examine the preferred alternative for risks and deficits, it does not survey available information, and it shows a selective bias in what it does read and consider. Often, the group does not even work out a contingency plan. In the Bay of Pigs example, the "contingency plan" was to

Table 8.4 Groupthink



SOURCE: Janis & Mann (1977); Myers (2002).

escape by a route involving hundreds of miles across swampland. This was not due to a lack of intellect; all the group had to do was consult an atlas.

#### Research on the Groupthink Model

As the preceding indicates, the groupthink model is an ambitious and interesting attempt to capture why historical fiascos, and faulty decision making in general, can occur. Even the term has caught the public imagination, appearing in *Webster's New Collegiate Dictionary* within 3 years of Janis's (1972) publication (Turner & Pratkanis, 1998), and it is described in nearly every textbook.

Research on the model, however, has been sparse and incomplete. No study has actually investigated all of the antecedents and consequences of the model. There is some support for the model from other case studies (Peterson, Owens, Tetlock, Fan, & Martorana, 1998). Others, however, have pointed out that the important historical examples used by Janis are due to factors other than a small group making a faulty decision. Kramer (1998), for example, thoughtfully pointed out the broader political context. In reanalyzing the Bay of Pigs example (with the help of declassified documents and oral histories published since Janis's formulation), Kramer provided evidence that President Kennedy, rather than relying on this one body of advisers, did seek out opinions from others. Kennedy himself had reservations about the plan. However, the plan had been inherited from former President Eisenhower, who presumably understood military actions. In addition, there were misleading intelligence assessments by the CIA. Perhaps most important, Kennedy himself had campaigned on dealing with the Communist "menace" and could suffer political repercussions if his credibility as a leader were questioned. Thus, it may well be that such political considerations, rather than the poor decision making of one body of advisers, shaped the final decision.

Experimental research on the groupthink model itself has also been infrequent, estimated at less than two dozen studies (Turner & Pratkanis, 1998). The link between cohesion and groupthink, for example, is mixed. Several studies found no relationship between cohesion and aspects of groupthink (Courtwright, 1978; Flowers, 1977; Fodor & Smith, 1982), whereas other studies found mixed support (Moorhead & Montanari, 1986). Looking at the studies as a whole,

a meta-analysis of nine laboratory studies found support for the link between cohesion and groupthink, especially if one defines cohesion as mutual attraction (Mullen et al., 1994).

The evidence for the role of directive leadership has received more support. Directive leadership is linked to less information considered, to fewer solutions found, to discouragement of dissent, and to more self-censorship (Flowers, 1977; Leana, 1985; Moorhead and Montanari, 1986). If the leader is strong, states his or her position at the outset, and appears to have a strong preference for a particular outcome, the group is less likely to consider alternative information or solutions.

### *The Contributions*

Although some criticism of the groupthink model is due to the lack of research and the fact that some studies show only partial support for the hypotheses of the theory, most agree that the concept of groupthink has had a major impact on the ways in which scholars, as well as the public at large, view decision making. It is also the case that probably no theory can be confirmed in every situation or that all of a theory's assumed causal links will be supported. One can always find alternative interpretations to groupthink such as collective optimism and a positive identification with the group (Turner & Pratkanis, 1998; Whyte, 1998). However, the beauty of the groupthink model is that, as a whole, it causes us to reflect on why decisions go awry. It gives us criteria for good versus poor decision-making processes. It suggests potent antecedent conditions (e.g., directive leadership) that give rise to cognitive biases (e.g., stereotyping the outsider) and to influence processes (e.g., pressuring the dissenter, self-censorship) that, by and large, hinder the quality of decision making.

What is probably most important about the groupthink model is that it makes us aware of the negative effects of attraction, esprit de corps, and everyone being "on the same page." Too often, these are assumed to be positive aspects of a group. Conformists are team players, whereas dissenters are deviant—or even unpatriotic. In addition, Janis offered some suggestions as to how to reduce groupthink, that is, how to improve the quality of group decision making.

### *The Antidotes: Dissent and the "Devil's Advocate"*

After analyzing a number of fiascos of groupthink and seeing the patterns that evolve from such "strains to uniformity," Janis outlined a series of antidotes. He suggested that the leader (a) should be impartial and should refrain from stating his or her position at the outset, (b) should divide the group into subgroups, (c) should get outside experts, (d) should set up independent policy planning groups, and (e) should have a "devil's advocate." In our terms, all of these suggestions amount to mechanisms of finding and fostering dissent. We have already reviewed the research showing that dissenters have value in that they liberate others to think and act independently. Furthermore, they stimulate people to think more about the issue and to think from multiple perspectives. We now explore the possibility that dissent in interacting groups improves the quality of decision making.

## **Dissent and Improved Decision Making**

The early work that actually led to the formulation that dissent might stimulate divergent thinking and better decision making was a series of studies on jury deliberations (Neimeth,

1977, 1981). What is interesting about juries is that the concern is not who "wins" (either the majority or the minority); rather, the emphasis is on how to detect truth, that is, to convict when the person is guilty and to acquit when the person is not guilty. In that initial work, it became clear that the presence of a persistent minority changed the nature of the deliberations such that more facts were considered and more "scenarios" of those facts were contemplated. Given the substantial literature arguing that group decisions are better when multiple options are considered (e.g., Janis, 1972; Moorhead, Ference, & Neck, 1991), it followed that minorities might stimulate a consideration of more information and more options and, as a result, might come up with better and more accurate decisions. The literature that we have described previously in this chapter supports this contention at the individual level.

Research on interacting groups, coupled with analysis at the group level, also bears this out. Studies show that groups make better decisions and come up with better solutions when there is a minority viewpoint present and expressed (Van Dyne & Saavedra, 1996). Other studies show that groups' solutions are also more creative when there are dissenters (Nemeth, Brown, & Rogers, 2001). One might ask whether a devil's advocate might then be a very good mechanism for achieving stimulation of thought that is divergent and for promoting consideration of more information and more options. Not only might a devil's advocate mechanism improve the quality of thought and decision making, but it also might do so without the lowered morale or rejection of the dissenter that is consistently found in response to authentic dissent (Levine, 1989; Turner & Pratkanis, 1997). After all, the person who is devil's advocate is now role-playing and cannot be faulted for having an "erroneous" position. Janis himself, as mentioned previously, suggested this antidote to groupthink.

### *Devil's Advocate*

The technique known as devil's advocate originated in a practice initiated by Pope Sixtus V when someone was proposed for beatification or canonization. A "promoter of the faith" was assigned to critically examine the life and miracles of the individual, with an emphasis on the "negative." The assumption was that the Catholic Church was less likely to make an error if such facts were fully explored prior to the decision. Subsequent versions of this technique involve assigning an individual to critique the preferred alternative; the assumption is that this is likely to thwart the overriding desire for consensus and a "rush to judgment." Furthermore, the hypothesis is that more alternatives will be considered and decision making will be improved. The optimistic possibility was that one could have it both ways—stimulation of divergent thinking *and* high morale with less conflict.

In keeping with such an optimistic possibility, the efficacy of devil's advocate has rarely been challenged. There is now a sizable literature on devil's advocate in the organizational psychology literature. A number of studies show its potential value, at least relative to a situation where a preferred alternative is provided with no challenge. Although there are mixed results in the literature, there has not been much questioning of its likely utility (Katzstein, 1996; Schweiger, Sandberg, & Ragan, 1986; Schwenk, 1990). It does provide an interesting alternative possibility to authentic dissent, which has been shown to stimulate thought and improve decision making.

In much of the work on minority dissent, however, conflict is not to be avoided. In fact, it is assumed to play a valuable role. It is because the dissenter is consistent, confident, and willing to pay a price that one must consider the dissenter's position or at least reconsider one's

own position. Can one so easily "clone" dissent by a role-playing technique and achieve the same results? One study now questions whether this technique is as effective and even points to the possibility that there may be unintended negative consequences from techniques such as devil's advocate (Nemeth, Connell, Rogers, & Brown, 2001). In this study, groups deliberated a personal injury case. In one condition, there was an authentic dissenter who took a position of low compensation. In a second condition, a person was assigned the role of devil's advocate. In both conditions, the position argued was identical; arguments were exactly the same and were given in a round-robin sequence. In keeping with the optimistic possibility, our results showed that both conditions led to more thought. However, the direction of that thought differed. Whereas authentic dissent stimulated divergent thought (multiple perspectives), the devil's advocate technique stimulated thought that cognitively bolstered group members' initial positions; group members did not think in terms of the alternatives.

In a follow-up study (Nemeth, Brown, & Rogers, 2001), the position actually held by the devil's advocate was varied. The person's actual position was either unknown, the same as, or the opposite of the position the person was asked to role-play. One might well assume that if the person holds the position he or she is asked to role-play, this would stimulate divergent thought without conflict or rejection. This is logically similar—almost identical—to authentic dissent in that the person believes the dissenting opinion and gives exactly the same arguments in support of that position. The only difference is whether or not the person is asked to play the devil's advocate.

The findings were both interesting and somewhat surprising. First, the true position of the devil's advocate made little difference (if any). It did not matter whether the person's own position was the same as or the opposite of the one the person was asked to role-play or whether it was unknown. *None of these versions of devil's advocacy achieved the stimulation of authentic dissent.* Most surprising was the comparison between the consistent devil's advocate condition and the authentic dissent condition. In both of these conditions, the person believed the position and used exactly the same arguments in defense of that position. The only difference was that one was asked to role-play the position. Although we cannot know with certainty why this difference occurred, some possibilities seem reasonable. When one role-plays a position, there is some ambiguity between what one is saying and what one believes as he or she is playing a role. In addition, a devil's advocate is much less likely to be seen as courageous given that there is less risk of rejection. It is quite possible that it is because the authentic dissenter manifests both conviction and courage that people are stimulated to rethink their positions.

### **Polarization**

In the preceding sections, we have seen the emphasis on uniformity or agreement and found that group members' numbers and status have special advantages, regardless of the correctness of their positions. We have also found that breaking up that agreement is sometimes beneficial to the performance and decision making of the group. However, the group still prefers agreement. In this section, we consider one more process that leads to agreement, but this time it is around a position that is more extreme than the average member's position. The research on this interesting and applicable phenomenon started with studies that illustrated the risk-taking tendencies of groups relative to individual group members.



*The Risky Shift.* Research on the "risky shift" phenomenon actually began with the observation that people seem to make riskier decisions after a group discussion than they would have made alone (Stoner, 1961, cited in Marquis, 1962). Early studies (e.g., Wallach, Kogan, & Bem, 1962) illustrated the phenomenon. Groups of college students were faced with several "choice dilemmas." An example might be that the president of an American corporation that is about to expand could build a new plant in the United States, where returns would be moderate, or could build the plant in a foreign country with an unstable political history, where returns would be very high. Another example—perhaps closer to home—is that the captain of a college football team, during the final seconds of a game with a traditional rival, can choose a play that is almost certain to produce a tie score or choose a riskier play that would lead to sure victory if successful or sure defeat if unsuccessful; in other words, do you go for the touchdown to win (or lose) or the field goal to tie? The participants were asked individually to estimate the lowest probability of success they would require before they would take the riskier course of action. What would you choose? Where is the point at which you would forgo the higher profits and build on U.S. soil? Or go for the field goal? Would you still build in the foreign country or go for the touchdown if you had only a 4-in-10 chance of succeeding? A 3-in-10 chance? As you can see, the lower the number, the more risk you are willing to take.

After completing the questionnaire, participants discussed the issue in groups of five, trying to reach consensus. The results showed that, on most items, the group consensus was riskier than the average of the opinions of the individuals would have predicted, and this risky shift persisted even when the participants were polled after the group discussion. Subsequent studies established the impressive generality of this effect (Pruitt & Teger, 1969). The risky shift was observed among college students across several countries, business school students, and even psychiatric clinical teams (Siegel & Zajonc, 1967; Stoner, 1961, cited in Marquis, 1962). Furthermore, risky shifts seemed to occur across a variety of issues as well (Bem, Wallach, & Kogan, 1965; Wallach & Kogan, 1965; Wallach, Kogan, & Bem, 1962, 1964).

The foregoing notion that groups accept more risk than do individuals made a certain amount of sense. On the one hand, there is the popular notion that there is a diffusion of responsibility in groups—"it's not me but the group." However, the phenomenon proved not to be so simple. There appeared to be evidence that groups are not always more risky than their individual members; sometimes there was evidence of a shift toward caution.

*The Cautious Shift.* Some of the choice dilemmas of Wallach and colleagues (1962) were found to reliably elicit a cautious shift. Consider a young married man with two school-age children who has a secure but low-paying job and no savings. He hears of a stock of a relatively unknown company that may soon triple in value or decline considerably. To invest, he must sell his life insurance policy. Now, what probability of success would he require before investing in the stock? Fraser, Gouge, and Billig (1971) found that some choice dilemmas, such as this one, reliably led to a cautious shift. After discussion, the group decision became more cautious, and this cautious attitude remained after the discussion had ended.

Other evidence came from studies such as that of Knox and Safford (1976) on horse race betting. One set of participants bet as isolated individuals on the second and fifth races and bet as members of a group on the third and sixth races. The other set bet as members of a

group on the second and fifth races and bet as isolated individuals on the third and sixth races. Each bet involved the purchase of a \$2 ticket. Defining risk in terms of closing odds, the results showed that bets made as a group were more cautious than bets made as individuals. The odds of winning were higher.

**The General Phenomenon: Polarization.** As evidence accumulated that there were reliable cautious shifts as well as risky shifts, there appeared to be a dilemma in the literature. Sometimes groups made riskier decisions than individuals, and sometimes groups made more cautious decisions than individuals. Which is correct? Actually, both are correct. In analyzing the research literature, Moscovici and Zavalloni (1969) argued that both were an example of the same process. The broader phenomenon is that groups produced more extreme judgments in the direction that was initially preferred. If a group consists of individuals who favor risk, one will find a risky shift; if a group consists of individuals who prefer caution, one will find a cautious shift. More important, the phenomenon was found to be much broader than simple risk taking. The authors argued that this extremization of the initial preference occurred for many attitudes as well.

To illustrate, Moscovici and Zavalloni (1969) conducted an experiment on attitudes toward Charles de Gaulle and toward Americans—opinions that were positive and negative, respectively, among French students during the late 1960s. As with the choice dilemmas, individuals made judgments alone, then discussed the issue in a group, and then gave individual judgments again. Results showed that the positive perceptions of de Gaulle became more positive and that the negative perceptions of Americans became more negative. Both became more extreme in the direction of the initial orientation. Furthermore, the students maintained these extreme views after the discussion had ended.

These results held up over numerous studies and different kinds of issues. Polarization may be one of the most reliable findings in social psychology. Prejudiced people discussing racial issues become more prejudiced, whereas less prejudiced people become less prejudiced (Myers & Bishop, 1970). People who believe a person is guilty and then discuss the legal case come to believe that the person is even guiltier after discussion, whereas those who believe a person is not guilty also become more extreme and confident in their position after discussion with like-minded people (Myers & Kaplan, 1976). Attempts to account for polarization were numerous but were reduced to two classes of theories by the 1980s (Isenberg, 1986; Pruitt, 1971). One is social comparison theory. According to this theory, people compare themselves with others so as to present themselves in a socially desirable light. An early version of an account aimed at understanding the risky shift was the "risk as value" hypothesis. Brown (1965) reasoned that a moderate willingness to take a risk is a strong cultural value. People believe that they are at least as willing to take risks as are most people. In interaction, they may find that they are more cautious than many of their group members; thus, they shift toward risk to maintain positive self-images.

Most versions of social comparison theory argue that people desire to be perceived as more favorable than average. However, they usually start with a judgment that is a compromise between their ideal and what they believe to be average lest they appear to be deviant. When they interact in the group, however, they find that "on average they are average." Desiring to place themselves in a more favorable light, they make judgments that are more extreme in the desired direction (Levinger & Schneider, 1969; Pruitt, 1971). Variations on this theory have

argued that people want to be distinct but in the right direction (Brown, 1974; Fromkin, 1970; Myers, 1978). Thus, there is a bandwagon effect; again, people move in the direction of the valued pole.

A very different explanation, termed "persuasive arguments" theory (Burnstein & Vinokur, 1975; Kitayama & Burnstein, 1994; Vinokur & Burnstein, 1974), focuses on the exact nature of the discussion. According to this theory, people's initial judgments are based on their memory of arguments—both pro and con—on the issue. When people enter into a group discussion, they are exposed to other arguments, some of which they had not previously considered—and these arguments may be persuasive. Given that people in these groups share an orientation (e.g., they all may favor risk but differ in the exact number), the arguments that are expressed will tend to favor that direction. To the extent that some of these arguments are persuasive and had not been considered previously, people will shift in that direction. In sum, the persuasive arguments theory relies on the information pool present in the group; the greater the number of novel arguments in the group, the greater impact those arguments will have. However, for this prediction to hold, it would have to be assumed that unique or novel information is actually shared, and this is not always the case (e.g., Stasser & Titus, 1985).

Numerous studies have attempted to determine which theory—social comparison or persuasive arguments—is more accurate. There are studies that are poor in arguments but permit social comparisons (Baron & Roper, 1976; Myers, 1978), and there are studies that are poor in terms of comparisons but are substantial in argumentation (Burnstein, Vinokur, & Trope, 1973; Ebbesen & Bowers, 1974). In a meta-analysis of the 21 studies conducted on these issues over a 10-year period, Isenberg (1986) concluded that there is support for both theories, although the magnitude of the effects appears to be somewhat larger for the persuasive arguments theory.

It is interesting to see that researchers often want to find the "right" theory when in fact the focal phenomenon may be determined by many causes. We observed this also with reference to groupthink when there was an attempt to see which variable accounted for which consequences of "concurrency pressure." What we do see in the polarization literature is a very robust phenomenon, one that is highly replicable across many different issues and judgments. Three conditions appear to be necessary: (a) an agreed normative value for the issue, (b) a measurable divergence of views, and (c) discussion. When people basically agree on the valued direction and have some difference of opinion, after discussion they become more extreme in that valued direction both as a group and as individuals. It is one more example of influence processes that lead to agreement. In this case, the agreement is around a position that is more extreme in the desired direction than the pre-discussion average of the individuals would have predicted.

### *Quality of Decision Making*

In the preceding sections, we have found that influence processes in groups are considerable and, in general, tend toward agreement. People are uncomfortable with differing viewpoints, and this provides the impetus for both persuasive attempts and attitude change. In general, we find that numbers, status, and shared values have advantages when it comes to influence. Even when they are wrong, majorities can persuade others to their position. As we saw in the groupthink literature, leaders can exert influence over the discussions and decisions,

However, we have also seen that minorities can exert influence as well. They sometimes persuade others to their position. Shared values can influence people to agree on a more extreme position than that held by individual members. In all of these cases, we are discussing adoption of a given position. This is the persuasion aspect.

Influence, however, can be more broadly construed. Rather than winning or gaining adoption of a given position, members can influence one another to think differently, that is, to consider different information and alternatives. As we saw in the conformity literature, majorities not only win but also shape our thinking to coincide with their perspectives. In the minority influence literature, we saw that dissent liberates people to voice their own authentic views. Furthermore, it stimulates individuals to consider more information and more options. Thus, even when minorities do not win, they can exert considerable influence on the thoughts and decisions of others.

For many decisions, the issue might not be one of "winning"; rather, it might be one of finding the best or most creative solution, that is, of making a "good" decision. Repeatedly, we found that groups underperform. Given that people prefer those who are "similar" in values and attitudes (Berscheid & Walster, 1974), such "comfortable" groups not only have majorities but also have shared values, and it is unlikely that individual members will express unique information or deviant opinions that they may hold. They fear rejection; they assume (often erroneously) that the groups are in total agreement. As a result, groups can rush to judgment without considering information or judgments that each individual holds. More important, they might not profit from the stimulation that comes from debate that often leads to more divergent thinking and the detection of novel and useful solutions. Creative thinking is not easily cloned by techniques that try to preserve harmony; it can come only from authentic differences. From this perspective, it is important to have not only a culture of tolerance but also a culture that actively welcomes differing views.

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