

## Alive and Well after 25 Years: A Review of Groupthink Research

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**This article provides a summary of empirical research on groupthink theory. Groupthink research, including analyses of historical cases of poor group decision making and laboratory tests of groupthink, is reviewed. Results from these two research areas are briefly compared. Theoretical and methodological issues for future groupthink research are identified and discussed. I conclude that groupthink research has had and continues to have considerable heuristic value. A small, but growing, body of empirical literature has been generated. In addition, groupthink research has stimulated a number of theoretical ideas, most of which have yet to be tested.** © 1998 Academic Press

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In the 25 years since Irving Janis (1971) first presented the outlines of his theory of groupthink, the theory has received a great deal of attention. A cursory review of the *Social Sciences Citation Index* for any recent year will reveal more than 100 citations of Janis's (1971, 1972, 1982, 1989; Janis & Mann, 1977) presentations of groupthink theory. Groupthink theory is discussed in textbooks in a variety of disciplines, including psychology, business, political science, communication, and others. A management training video on groupthink is a best seller (*Groupthink, revised edition*, 1991), and at least one publisher of management training materials markets a questionnaire (Glaser, 1993) designed to help trainees learn about groupthink and to assess their groupthink tendencies.

The initial popularity of groupthink was probably due, in part, to a widely shared interest in the historical cases Janis analyzed and to the intuitive appeal of his explanation of how these fiascoes occurred. In addition, Janis shrewdly marketed his ideas to a wider audience by first publishing in *Psychology Today* and by coining catchy terms such as "groupthink" and "mindguard."

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However, research on groupthink theory has not kept pace with its popularity. Relative to the hundreds of publications citing groupthink theory, the tens of publications reporting empirical studies of groupthink are less than impressive. Park's (1990) review of the empirical literature on groupthink revealed that most studies reported only partial support for hypotheses derived from the theory. Critics have suggested that the theory is seriously flawed (Longley & Pruitt, 1980) and should be modified (Moorhead & Montanari, 1986; Neck & Moorhead, 1995; Tetlock, Peterson, McGuire, Chang, & Feld, 1992) or even replaced with a more general group decision-making model (Aldag & Fuller, 1993). Similarly, Whyte (1989; Whyte & Levi, 1994) offered prospect theory (Kahneman & Tversky, 1979) as an alternative to groupthink.

In this paper I review the empirical research on groupthink. First, research based on historical cases of poor decision making is reviewed; then laboratory studies of groupthink are considered. Next, a brief comparison of the results from these two types of research is made. Then I discuss several issues affecting the quality of groupthink research. Finally, I conclude with my evaluation of the contribution of groupthink research.

### CASE ANALYSES

Research on groupthink involving the analysis of well-known historical cases has served the primary function of theory development and, secondarily, has begun to demonstrate the range of the theory's applicability. Only a few studies based on historical cases involve tests of the theory. Table 1 provides a summary of groupthink research using case analyses.

#### *Janis's Original Set of Cases*

Analysis of an initial set of four policy decisions which resulted in fiascoes provided the raw material for Janis's (1972) development of groupthink theory. These cases included (1) the decision in 1941 by Admiral Kimmel and his advisors to focus on training rather than on the defense of Pearl Harbor despite warnings of a possible surprise attack by the Japanese, (2) the decision in 1950 by President Truman and his advisors to escalate the Korean War by crossing the 38th parallel into North Korea, (3) the decision in 1960 by President Kennedy and his advisors to authorize the invasion of Cuba at the Bay of Pigs, and (4) a series of decisions by President Johnson and his advisors to escalate the Viet Nam War during 1964–1967. Janis determined the identifying symptoms of groupthink and some of its antecedents and consequences by contrasting these cases with two historical cases which produced good policy decisions — the development of the Marshall Plan to avert economic collapse in post-war Europe and the handling of the Cuban missile crisis in 1962.

Subsequently, Janis (1982) analyzed the series of decisions by President Nixon and his advisors to cover up the involvement of the Nixon White House in the burglary of the Democratic party headquarters in the Watergate building.

**TABLE 1**  
**Case Studies of Groupthink and Groupthink Avoided**

Author, date	Case(s)	Evidence	Comment
Janis, 1972	Bay of Pigs, North Korea, Pearl Harbor, Viet Nam, Marshall Plan, Missile Crisis	Narrative descriptions used to develop and illustrate groupthink theory. Cited four antecedents (cohesion, insulation, lack of impartial leadership, lack of methodical decision-making procedures), eight groupthink symptoms, and seven symptoms of a poor decision-making process.	Argued that five cases (Bay of Pigs, North Korea, Pearl Harbor, Viet Nam) were characterized by groupthink and two cases (Marshall Plan, Missile Crisis) were not.
Raven, 1974	Watergate	Narrative description with sociometric analysis. Two antecedents (cohesiveness and insulation) and six groupthink symptoms (all except rationalizations and stereotypes) were present.	Argued that the Nixon group did not possess <i>esprit de corps</i> , but was cohesive via loyalty to Nixon and desire to be group members.
Huseman & Driver, 1979	Edsel	Narrative description. Two antecedents (cohesiveness and insulation) and five groupthink symptoms (all except morality, direct pressure on dissenters, and mindguarding) were present.	These are very brief analyses.
	Price-fixing in the electrical industry	Narrative description. Two antecedents (cohesiveness and insulation) and three groupthink symptoms (morality, invulnerability, and rationalizations) were present.	
Tetlock, 1979	Bay of Pigs, North Korea, Viet Nam Missile Crisis, Marshall Plan	Content analysis of public statements of key decision makers. Speakers in Groupthink cases were more simplistic regarding policy issues and more positive in evaluating their own groups, but were not more negative in evaluating their opponents.	Results supported two of three hypotheses derived from groupthink theory.

TABLE 1—Continued

Author, date	Case(s)	Evidence	Comment
Janis, 1982	Watergate (and original six cases)	Narrative description. All four antecedents in original set (cohesiveness, insulation, lack of impartial leadership, lack of methodical decision procedures) plus two new antecedents (member homogeneity and high stress) were present. Seven groupthink symptoms (all except morality) and all seven symptoms of poor decision process were present.	Argued in response to Raven (1974) that at the time of the decisions the core group of five was cohesive/ had <i>esprit de corps</i> . Added low self-esteem as final antecedent (not seen in Watergate case).
Manz & Sims, 1982	Three autonomous work groups	Narrative description. Two or three groupthink symptoms identified in each case. No Assessment of antecedents or decision process defects.	Brief presentation to illustrate the potential applicability of groupthink.
Smith, 1984	Hostage rescue attempt in Iran	Narrative description. All eight symptoms of groupthink were present.	No consideration of antecedents or decision process defects.
Hensley & Griffin, 1986	Kent State gymnasium controversy	Narrative description. All seven antecedents, seven groupthink symptoms (all except unanimity), and four symptoms of poor decision-making process (incomplete survey of alternatives, failure to reappraise alternatives, poor information search, selective bias in processing information) were present.	Suggested three new symptoms of poor decision-making process: failure to maintain contact with opposition, lack of cooperation with mediators, and failure to extend deadlines.
Herek, Janis, & Huth, 1987	19 U.S. policy decisions regarding international crises: 1947–1973	Examined the relationship between seven symptoms of poor decision-making and decision outcomes. Results indicate that when more symptoms were present, the decisions were more likely to have adverse effects on U.S. interests and to increase international conflict.	Provides support for one of the links in groupthink theory: that a poor decision process (as indicated by the symptoms) is likely to lead to a poor quality decision.

TABLE 1—Continued

Author, date	Case(s)	Evidence	Comment
Esser and Linderfer, 1989	Challenger	Coded statements from investigative report of the space shuttle Challenger accident as positive or negative instances of antecedents, symptoms, and consequences of groupthink. Positive instances were twice as frequent as negative instances. During the 24 h prior to launch, the ratio of positive to negative instances increased, then stayed high.	Three types of statements: testimony, facts, and opinions. Limiting the data to statements bearing on the groupthink elements produced a conservative test.
McCauley, 1989	Reanalysis of five groupthink cases and two nongroupthink cases from Janis (1982), plus Missile Crisis A (considered a groupthink case). Examined antecedents as predictors of the occurrence of groupthink (G) and type of influence process: internalization or compliance (C).		
	Bay of Pigs	Five of eight antecedents present: G, C	Used idiosyncratic list of eight
	North Korea	Five of eight antecedents present: G	(rather than seven) antecedents.
	Pearl Harbor	Three of eight antecedents present: G	Concluded that the best predictors of groupthink are structural: insulation, promotional leadership, and homogeneity. Lack of homogeneity may predict compliance.
	Viet Nam	Six of eight antecedents present: G, C	
	Watergate	Eight of eight antecedents present: G	
	Missile Crisis A	Six of eight antecedents present: G	
	Missile Crisis B	Five of eight antecedents present:	
	Marshall Plan	Four of eight antecedents present:	
't Hart, 1990	Iran–Contra	Narrative description. Three antecedents (cohesiveness, insulation, promotional leadership) and all eight groupthink symptoms were present. Decision process was also poor, especially in failing to consider risks.	Analysis was designed to illustrate/test his revised groupthink model. Concluded that this case fits his Type II groupthink: over-optimism. Argued that <i>esprit de corps</i> is not necessary. Instead, strong ties to the leader produce “anticipatory compliance.”

TABLE 1—Continued

Author, date	Case(s)	Evidence	Comment
Moorhead, Ference, & Neck, 1991	Challenger	Brief narrative description based on the investigative report. Three antecedents (cohesiveness, promotional leadership, insulation), all eight groupthink symptoms, and five symptoms of a poor decision process (all except incomplete survey of objectives and failure to consider risks) were present.	Proposed that time and leadership style be considered moderators of the group characteristics—groupthink symptoms relationship.
Neck & Moorhead, 1992	DeLorean trial	Narrative description. Five antecedents (all except promotional leadership and methodical procedures) were present, but no groupthink symptoms or symptoms of a poor decision process were present.	Concluded that groupthink was avoided. Argued that the presence of a methodical decision-making procedure was the primary reason that groupthink was avoided.
Sims, 1992	Beech-Nut, E. F. Hutton, Salomon Brothers	Made general argument that groupthink symptoms, decision-making defects, and poor outcome were present in all three cases, but did not provide a point-by-point analysis.	Argued that groupthink can be important in understanding unethical behavior in business organizations.
Tetlock, Peterson, McGuire, Chang, & Feld, 1992	North Korea, Bay of Pigs, Viet Nam, Pearl Harbor, Watergate, Marshall Plan, Missile Crisis, Mayaguez, Iran hostage rescue, Nazi appeasement	Used <i>Q</i> sort methodology to compare the cases to theoretically derived ideal types of group processes, including groupthink. Found positive correlations between Janis's groupthink cases and groupthink ideal type, and between Janis's vigilant cases and vigilant ideal type. Used LISREL to test causal links in groupthink model. Found strong links from structural & procedural faults to concurrence-seeking, from concurrence-seeking to groupthink symptoms, and from groupthink symptoms to	Confirmed Janis's (1982) five groupthink cases and two vigilant cases. Classified Nazi appeasement as groupthink, but not Mayaguez and Iran hostage rescue. Suggested that Watergate is best example of groupthink. Suggested a simpler model of groupthink, omitting cohesiveness and provocative situational context.

TABLE 1—Continued

Author, date	Case(s)	Evidence	Comment
Esser, 1995	Challenger	<p>symptoms of defective decision-making. Found weak links from cohesiveness to concurrence-seeking and from provocative situational context to concurrence-seeking.</p> <p>Narrative description. Six antecedents (all except homogeneity), five groupthink symptoms (all except invulnerability, morality, and stereotyping), and all seven symptoms of defective decision making were present.</p>	

This case study was the first by Janis designed to test the generality of groupthink theory. Therefore, he conducted this case analysis more systematically than the previous cases, assessing the antecedents of groupthink and the symptoms of a defective decision-making process, as well as the symptoms of groupthink. Janis concluded that groupthink played a major role in the Watergate cover-up. Indeed, he considered the Watergate cover-up to be his best example of groupthink. However, Janis's primary interest was in the development of groupthink theory, and he also used the Watergate case study for theory development. From the Watergate case he inferred two antecedents of groupthink which had not been included in his earlier (Janis, 1972) presentation of the theory—homogeneity of members' ideology and high stress from external threats.

Raven (1974) also analyzed the Watergate cover-up and found good support for most of the antecedents and symptoms of groupthink. However, his sociometric analysis of the Nixon group indicated that it was not a highly cohesive group, characterized by *esprit de corps* or mutual attraction. Nevertheless, Raven viewed the Nixon group as cohesive in the sense that the members strongly desired to belong to the group and were bound to it by their loyalty to Nixon, the leader. In his own analysis of the Watergate cover-up Janis (1982) acknowledged Raven's work, but challenged Raven's determination that the group was not cohesive (did not possess *esprit de corps*). Janis argued that the primary decision-making group was composed of 5 persons—Nixon, Haldeman, Ehrlichman, Dean, and Colson—rather than 12 persons as Raven had suggested, and that, during the period of time when crucial cover-up decisions were made, Dean had a positive relationship with Haldeman and Ehrlichman, rather than a negative relationship as Raven had indicated.

The five groupthink cases and two nongroupthink cases analyzed by Janis

(1972, 1982) have been reanalyzed several times by other researchers. Tetlock (1979) tested hypotheses based on three symptoms of groupthink—namely, the belief in the correctness of one's own group, negative stereotypes of the out-group, and rationalizations concerning the issues. He analyzed the content of public statements by key members of the decision-making groups in the five groupthink cases and two nongroupthink (vigilant) cases. He found that, consistent with the theory, speakers in the groupthink cases made more simplistic statements about the issues and made more positive in-group references than those in the nongroupthink cases. However, inconsistent with the theory, speakers in the groupthink cases did not make more negative out-group references.

McCauley (1989) also investigated the social influence processes within decision-making groups by reexamining Janis's (1982) original set of seven cases. McCauley argued that the Cuban missile crisis actually involved two decisions. First, the group quickly decided that a tough, military response was needed. McCauley labeled this Missile Crisis Decision A and suggested that it involved groupthink. Second, the group carefully considered what form of military response to make and eventually reached the decision to impose a naval blockade. This second decision, dubbed Missile Crisis Decision B, is Janis's prototypical nongroupthink case. McCauley's analysis of these eight cases revealed that two of the six groupthink decisions (the Bay of Pigs invasion and the Viet Nam War escalation decisions) involved compliance (public agreement with the majority position without private acceptance), while the remaining four groupthink decisions involved internalization (private acceptance). This conclusion represents a major extension of groupthink theory, because Janis (1982) seemed to consider internalization to be the primary influence process of groupthink.

To date, the most ambitious analysis of historical cases was reported by Tetlock *et al.* (1992). They analyzed 10 cases—Janis's original 7 cases, plus 3 others that Janis (1982) had suggested were good candidates for groupthink. Using a *Q* sort instrument designed to assess its group dynamics, each case was analyzed from the point of view of the authors of source books or articles describing the case. The pattern for each case was compared to an "ideal" groupthink *Q* sort pattern, to several other "ideal" patterns of defective decision making, and to several "ideal" patterns of vigilant decision making. These comparisons confirmed Janis's classification of the original 7 cases into 5 groupthink and 2 vigilant cases; in addition, the case of the appeasement decisions of the Neville Chamberlain cabinet was confirmed as groupthink, while the decisions to rescue the crew of the *Mayaguez* and to attempt to rescue the U.S. hostages in Iran did not fit the groupthink pattern. Following Park's (1990) suggestion, Tetlock *et al.* also conducted a LISREL analysis, assessing the causal relationships in the groupthink model. These results confirmed the importance of structural and procedural faults of the organization as antecedents of groupthink, but revealed no support for two other antecedents in the groupthink model: group cohesiveness and a provocative situational context.



### *Additional Cases*

Janis (1982) noted that to assess generality of the groupthink phenomenon additional research was needed. He listed a variety of other cases of poor group decision making which he speculated may have involved groupthink. For example, Janis discussed three decisions by U.S. presidents and their advisors: (1) the decision by President Ford and his advisors to authorize a military rescue of the ship *Mayaguez* and its crew, which had been captured by the Cambodians, (2) the decision by President Carter and his advisors to attempt a military rescue of the American hostages held by Iran, and (3) the decision by President Reagan and his advisors to propose a drastic cut in Social Security benefits. Janis also discussed several other possible historical examples of groupthink which involved countries other than the United States. Most notable among these was the series of decisions by British Prime Minister Neville Chamberlain and his advisors to appease Nazi Germany during 1938 and 1939. However, Janis subjected none of these cases to a thorough analysis, but rather considered them candidates for groupthink. His speculation was that if these and other cases were carefully analyzed, the analyses would show that "clear-cut symptoms of groupthink are present in at least a substantial percentage" of the cases (Janis, 1982, p. 197).

Janis's call for analyses of additional cases of poor group decision making has been heeded, and the generality of the groupthink phenomenon has been extended as a result of systematic and, sometimes, methodologically innovative case analyses. As noted above, Tetlock *et al.* (1992) included analyses of the *Mayaguez* rescue, the Iranian hostage rescue, and the Nazi German appeasement decisions which Janis listed. Smith (1984) also analyzed the decision to attempt to rescue the American hostages in Iran. Unlike Tetlock *et al.*, Smith concluded that groupthink was involved in the decision. However, as noted by 't Hart (1991), Smith's analysis was more casual than others reported thus far; hence, the Tetlock *et al.* conclusion that groupthink was not involved in the Iranian hostage rescue decision is more persuasive.

Hensley and Griffin (1986) analyzed the controversial decision by the Kent State University Board of Trustees to build a gymnasium annex on the site of an informal memorial for the 1970 "Kent State massacre." In an attempt to prevent the bias of overselecting theory-confirming evidence, Hensley and Griffin imposed several restrictions on the data they reported. First, at least two examples were required to demonstrate the presence of each antecedent or symptom of groupthink. Second, the same example could not be applied as evidence for more than one symptom or antecedent. Third, evidence from one source could not be used if its validity was questioned by another source. Finally, many different information sources, both primary and secondary, were employed. Hensley and Griffin concluded that the trustees' decision involved groupthink, because most of the elements of groupthink theory were present. Moreover, they suggested three additional symptoms of poor decision making which could be produced by groupthink: (1) failure to initiate or maintain

contact with an opposition group, (2) lack of cooperation with third party mediators, and (3) failure to extend the time period for reaching a decision.

A different research approach was taken by Herek, Janis, and Huth (1987). They analyzed 19 international crises which involved decisions by U.S. presidents and their advisors. Each case was independently scored for the presence of the seven symptoms of poor decision making, for the favorability of the outcome to U.S. interests, and for the effect on international conflict. Results indicated that when more symptoms of decision-making defects were present the outcomes were more unfavorable, in terms of both U.S. interests and international conflict. The importance of the Herek *et al.* study is that it provides a test of (and support for) one of the hypothesized links in groupthink theory—that between the symptoms of a poor decision process and a low quality decision.

NASA's decision to launch the Challenger space shuttle has been the subject of several groupthink case analyses. Esser (1995) and Moorhead, Ference, and Neck (1991) reported traditional, but brief, case analyses using the *Report of the Presidential Commission on the Space Shuttle Challenger Accident* (1986) as the primary information source. Both studies reported that most of the antecedents, symptoms of groupthink, and symptoms of poor decision making were present; and in both cases the authors concluded that groupthink was involved in the Challenger decision. Moorhead and his colleagues also suggested that groupthink theory be modified to give more prominent roles to the antecedents of time pressure and leadership style. Esser and Lindoerfer (1989) also used the report of the Presidential commission as the information source for their analysis of the Challenger disaster. However, they employed a more quantitative analysis procedure. First, all statements indicating either the presence or absence of each antecedent, symptom of groupthink, or symptom of poor decision making were located in the commission report. Then each was coded as either a positive instance of groupthink (evidence for the presence of that antecedent or symptom) or a negative instance of groupthink (evidence for the absence of that antecedent or symptom). Although no statements were found for several antecedents and symptoms, a total of 88 statements were scored. Twice as many statements provided evidence for the presence of groupthink elements as for the absence of groupthink elements. Furthermore, during the 24 h prior to launch, the ratio of statements indicating the presence of groupthink elements to those indicating their absence increased over time, then remained high. Esser and Lindoerfer interpreted these results as support for the conclusion that groupthink was involved in the Challenger decision.

't Hart (1990) added the Iran–Contra affair during the Reagan administration to the list of groupthink cases. He proposed that the decision-making group was characterized by a collective overoptimism about the probability of their success—what he called a Type II groupthink pattern. 't Hart's analysis indicated that several antecedents and all groupthink symptoms were present, the outcome was a fiasco, and the risks associated with the decision were ignored. Furthermore, he suggested that the group members engaged in “anticipatory compliance” with what they thought were the desires of the leader (Reagan).

Neck and Moorhead (1992) concluded that groupthink was avoided by the

jury in the trial of John DeLorean for drug trafficking. Their analysis indicated that although most antecedents were present, no groupthink symptoms or symptoms of defective decision making were produced. Neck and Moorhead highlighted the jury's use of methodical decision-making procedures as the key to the avoidance of groupthink.

A number of additional cases have been discussed as evidence of the detrimental effects of groupthink. These include the price-fixing conspiracy involving the electrical manufacturing industry during the 1950s and the decision by Ford Motor Company to produce the Edsel (Huseman & Driver, 1979), the British decisions regarding the conduct of the war in the Falkland Islands (Heller, 1983), and the selling of adulterated apple juice by Beech-Nut in the mid 1980s, the involvement of E. F. Hutton in a form of "check kiting" in the mid 1980s, and the illegal purchases by Salomon Brothers at U.S. Treasury auctions in the early 1990s (Sims, 1992). However, the analyses reported for additional cases such as these tend to be less systematic and comprehensive. As noted by 't Hart (1991), the risk of casually characterizing poor group decisions as groupthink, without careful and thorough analysis, is to make groupthink a convenient label with little explanatory or predictive value.

### *Summary*

Studies of historical cases involving groupthink have been conducted using a variety of methods. Most often the traditional, qualitative case analysis method has been employed (Esser, 1995; McCauley, 1989; Moorhead *et al.*, 1991; Raven, 1974), and the best of these have heeded the calls (Hensley & Griffin, 1986; Janis, 1982) for caution in the selection and interpretation of the data. More quantitative methods have been employed by Tetlock (1979) and Esser and Lindoerfer (1989). Tetlock focused on selected symptoms of groupthink, while Esser and Lindoerfer considered the full range of antecedents and consequences of groupthink. The single most comprehensive and rigorous study of historical cases was conducted by Tetlock and his colleagues (Tetlock *et al.*, 1992). Using a Q sort methodology developed for this task, Tetlock *et al.* compared 10 cases on a wide variety of aspects of group dynamics.

Together, these case analyses have extended our catalog of confirmed groupthink cases to 10 (appeasement of Nazi Germany, Pearl Harbor defense, Korean War escalation, Bay of Pigs invasion of Cuba, Cuban Missile Crisis A, escalation of Viet Nam War, Watergate burglary cover-up, Kent State gymnasium controversy, Space Shuttle Challenger launch, and Iran–Contra affair) and confirmed vigilant cases to 5 (the Marshall Plan, Cuban Missile Crisis B, Mayaguez rescue, Iranian hostage rescue, and DeLorean jury). This catalog of well-documented cases provides an important baseline for future studies involving additional cases.

The more important contributions of studies of historical cases have been to the development of groupthink theory. Two questions have been raised regarding the antecedents of groupthink. First, neither McCauley (1989) nor Tetlock *et al.* (1992) found group cohesion to be predictive of groupthink. Second, although

Moorhead *et al.* (1991) suggested that the antecedent of time pressure be given more prominence, both McCauley (1989) and Tetlock *et al.* (1992) found that situational factors—including time pressure—did not predict the occurrence of groupthink.

Although Herek *et al.* (1987) provided some confirmation that decision process defects do, indeed, lead to poor quality outcomes, questions also have been raised regarding the consequences of groupthink. Hensley and Griffin (1986) suggested that an additional three symptoms of defective decision making be added to help identify groupthink. On the other hand, Esser and Lindoerfer (1989) suggested that not all symptoms of groupthink (nor antecedents and symptoms of poor decision making) need be present to confirm the occurrence of groupthink. They suggested, instead, that the overall pattern of antecedents and symptoms, rather than presence of each individual element, identifies the groupthink syndrome.

The influence process by which groupthink occurs has also been questioned. Although Janis (1972, 1982) implied that groupthink is primarily an internalization process, McCauley's (1989) analysis suggests that, at least some of the time, groupthink occurs as a result of compliance.

### LABORATORY TESTS

Most laboratory research on groupthink has been designed to evaluate the theory by testing the accuracy of hypotheses derived from the theory. These studies have focused primarily on the antecedents of groupthink, asking whether groupthink (evidenced by its symptoms and consequences) occurs if and only if the antecedent conditions are present. Table 2 provides a summary of laboratory research on groupthink.

#### *Group Cohesiveness*

Janis (1972, 1982) considered group cohesion to be the most important antecedent of groupthink. In laboratory studies cohesion has been manipulated by giving false feedback to the group members regarding the compatibility of their attitudes or personalities (Courtright, 1978; Callaway & Esser, 1984), offering a reward for the best-performing group (Fodor & Smith, 1982), forming groups of friends or strangers (Flowers, 1977), using groups with previous experience working on class projects in groups (Leana, 1985; Moorhead & Montanari, 1986), and having members discuss their similarities and wear group labels (Turner, Pratkanis, Probasco, & Leve, 1992).

Leana (1985) obtained only one statistically significant effect involving cohesion—contrary to the groupthink prediction, members of noncohesive groups exhibited more self-censorship than did members of cohesive groups. Flowers (1977), Fodor and Smith (1982), and Esser and Callaway (1984) all found no effects involving cohesion. However, Esser and Callaway also conducted an internal analysis using subjects' self-reports of their groups' cohesion which did produce some support for groupthink. Courtright (1978) reported a significant

**TABLE 2**  
**Laboratory Studies of Groupthink**

Author, Year	Independent variable	Dependent variable	Results
Flowers, 1977	Cohesiveness(low/high) Leadership (nondirective/directive)	No. of proposed solutions No. of facts mentioned	2 L main effects: more solutions and more facts with nondirective leadership
Courtright, 1978	Cohesiveness (low/high) Decision-making procedures (limited/free/no instruction)	No. of proposed solutions No. of statements of agreement No. of statements of disagreement Decision quality	C × D interaction: fewest statements of disagreement by groups with high cohesiveness and limited decision-making procedures
Fodor & Smith, 1982	Cohesiveness (low/high) Leadership (low/high power need)	No. of facts mentioned No. of proposals considered Moral concern	2 L main effects: fewer facts mentioned and fewer proposals considered with high <i>n</i> Power leadership
Callaway & Esser, 1984	Cohesiveness (low/high) Decision-making procedures (present/absent)	No. of statements of agreement No. of statements of disagreement Decision time Confidence in decision Attempted influence by group Actual influence by group Agreement with group decision Decision quality	Initial analysis: no significant effects Reanalysis with three levels of self-reported cohesiveness: 3 C main effects— medium cohesiveness groups made highest quality decisions and members agreed most group decision; high cohesiveness groups were most confident 2 C × D interactions— worst decision and least disagreement in high cohesive, procedures absent groups
Callaway, Marriott, & Esser, 1985	Dominance (low/high) Decision-making procedures (present/absent)	State anxiety and all DVs used by Callaway & Esser (1984)	7 D main effects: groups of highly dominant members made better decisions, reported less anxiety, took more time to decide, made more statements of agreement and disagreement, and reported more attempted and actual group influence 1 D-M main effect: groups with decision-making procedures took more to decide

TABLE 2—Continued

Author, Year	Independent variable	Dependent variable	Results
Leana, 1985	Cohesiveness (cohesive/ noncohesive) Leadership (directive/ nondirective)	No. of facts mentioned No. of facts mentioned before and after the de- cision No. of solutions pro- posed No. of solutions dis- cussed No. of discussions of risks No. of additional solu- tions proposed after the decision	1 C main effect: fewer facts were mentioned in non- cohesive groups 4 L main effects: groups with directive leaders pro- posed and discussed fewer solutions and ac- cepted the leader's solu- tion; however, members expressed less private agreement with the direc- tive leader's solution
Moorhead & Mon- tanari, 1986	Path analysis with three antecedents (cohesive- ness, insulation, leadership), four groupthink symptoms (invulnerability, morality, self-censor- ship, dissent), two decision process symptoms (alternatives, experts), and decision quality rating		High C led to less self-cen- sorship, less dissent, and more alternatives discussed Insulation led to less invul- nerability, more use of ex- perts, fewer alternatives discussed, and poorer quality decisions Promotional leadership led to feelings of morality, less dissent, & more alterna- tives discussed
Kroon, 't Hart, & van Krev- eld, 1991	Accountability (individual/ collective/none)	Questionnaire on two types of groupthink of groupthink symp- toms: overestimation of the group and pres- sures toward unifor- mity; observations of 10 aspects of deci- sion-making process; decision risk; and deci- sion quality	5 A main effects: Account- ability (especially indi- vidual) led to more diffi- culty reaching consensus, more individ- ual influence attempts, more equally shared ac- tual influence, better de- cisions, and less risky de- cisions
Kroon, van Kreveld, & Rabbie, 1992	Accountability (individual/ collective/none) Gender (male/female)	Questionnaire on one type of groupthink: conformity pressures, and three other items; observations of two aspects of decision- making process, and six other ratings; de- cision quality	1 A main effect: Account- ability led to lower esti- mates of group efficacy 2 A × G interactions: Ac- countable male groups were more convinced that they could do better with more information; ac- countable males shared in- fluence more equally, but females with no account- ability shared influence most equally

TABLE 2—Continued

Author, Year	Independent variable	Dependent variable	Results
Turner, Pratkanis, Probasco, & Leve, 1992	Expt 1: Threat (low/high)	Self-reports of five groupthink symptoms and seven symptoms of poor decision-making process; decision time; decision quality	Accountability promoted a vigilant decision process throughout the discussion
	Cohesiveness (low/high)		1 Threat main effect: High threat led to more rationalization
			2 C main effects: High cohesion led to less self-censorship and to viewing the solution as less risky
	Expt 2 checked the cohesiveness manipulation and found it to be effective		1 T × C interaction: worst decisions in high threat–high cohesion and low threat–low cohesion conditions
	Expt 3 Threat (low/high/high with distraction)	Same as in Expt 1	1 T main effect: worst decisions in high threat vs low threat and high threat with distraction groups
Richardson, 1994	Leadership (directive/nondirective) Conformity predisposition (low/high)	Questionnaire tapping eight groupthink symptoms; observations of seven aspects of decision-making process; decision time; decision quality	5 L main effects: Nondirective leadership led to a lower overall groupthink symptom score, less self-censorship, less mind-guarding, more facts being mentioned, and more time taken to reach a decision

interaction supporting their groupthink prediction that cohesive groups would be more likely than noncohesive groups to follow instructions to limit their disagreements. Using a path analysis, Moorhead and Montanari (1986), found one result which was consistent with the groupthink prediction—that cohesive groups were more discouraging of dissent than noncohesive groups. However, contrary to the theory, they also found that cohesive groups reported less self-censorship and generated more alternatives than noncohesive groups. Turner *et al.* (1992) found that, consistent with groupthink theory, cohesive groups were more confident in their decisions and perceived their decisions to be less risky than did noncohesive groups. However, contrary to theoretical prediction, they also found less evidence of self-censorship in cohesive rather than noncohesive groups. In sum, laboratory tests have yielded weak support or no support for the hypothesized relationships between cohesion and groupthink symptoms.

A similar conclusion was reached by Mullen, Anthony, Salas, and Driskell

(1994) in their metaanalysis of nine laboratory studies of the effects of cohesiveness on decision quality. They found no overall relationship between cohesion and decision quality. However, their data do suggest that a negative cohesion–decision quality correlation may exist when cohesiveness is based on interpersonal attraction (rather than on commitment to the task or group pride) and when group size is large.

### *Group Insulation*

Only one laboratory study has examined the influence of group insulation on groupthink. The Moorhead and Montanari (1986) path analysis suggested that, consistent with groupthink theory, insulated groups consider fewer alternatives and make poorer decisions than groups which are not insulated. However, contrary to the theory, insulated groups felt more vulnerable and consulted with experts more often than less insulated groups.

### *Lack of Impartial Leadership*

In some laboratory studies group leaders were selected and assigned on the basis of their personality scores (Fodor & Smith, 1982) or ratings of how influential they had been on previous tasks (Leana, 1985). In other studies a group member (Richardson, 1994) or confederate (Flowers, 1977) was trained to lead the group in a particular style, or members were allowed to emerge as leaders without outside influence by the researchers (Moorhead & Montanari, 1986).

Consistent with groupthink predictions, Flowers (1977) found that groups with directive leaders used less available information, suggested fewer solutions, and rated their leader as more influential in the decision process than groups with nondirective leaders. Richardson (1994) also reported several results supporting groupthink predictions. Groups with directive leaders reported more self-censorship and more mind-guarding, produced higher total scores on an index of groupthink symptoms, and mentioned fewer facts during the decision process than groups with nondirective leaders. Similarly, Fodor and Smith (1982) found that groups whose leaders scored high in need for power shared less information and considered fewer solutions than groups whose leaders were low in need for power. Leana (1985) reported several results which are consistent with groupthink theory. She found that groups with directive leaders proposed and discussed fewer solutions than groups with leaders who encouraged participation. Furthermore, groups with directive leaders who stated their preferred solution early in the discussion tended to acquiesce to the leaders' preferred solution. Moorhead and Montanari (1986) also reported results which support groupthink predictions. They found that groups whose leaders promoted a preferred solution were more likely to discourage dissent and to adopt an illusion of morality than groups with impartial leaders. However, contrary to groupthink theory, Moorhead and Montanari also found that groups with promotional leadership considered more alternatives than did groups with



impartial leaders. In sum, laboratory studies have yielded relatively consistent support for groupthink predictions concerning the relationship between leadership practices and groupthink.

#### *Lack of Methodical Decision-Making Procedures*

Four laboratory studies have investigated the effects of decision-making procedures on groupthink. Callaway, Marriott, and Esser (1985) found no effects of decision-making procedures. However, the remaining three studies provide some support for the groupthink prediction. Although they initially found no significant effects, when Callaway and Esser (1984) conducted an internal analysis (recoding cohesion levels based on subjects' self-reports), they found that highly cohesive groups without adequate decision procedures (the groupthink condition) exhibited less disagreement and made poorer decisions than the other groups. Similarly, Courtright (1978) found that highly cohesive groups given instructions limiting their decision-making process exhibited less disagreement than the other groups. Finally, although their study was not designed as a test of groupthink, Kameda and Sugimori (1993) found that poorer decisions were made by groups whose decision procedure required unanimous rather than majority rule.

#### *Laboratory Studies Involving Additional Issues*

Janis (1972) proposed that groupthink occurs when the group reduces the stress of decision making by suppressing critical inquiry. Later he added stressful situational contexts to his list of antecedents (Janis, 1982). Callaway *et al.* (1985) found that groupthink groups reported more state anxiety than groups in nongroupthink conditions. They also found that groups composed of highly dominant members (who presumably find disagreement less stressful) exhibited less anxiety and made better decisions than groups whose members were low in dominance. Turner *et al.* (1992, Experiment 1) manipulated threat (stress) by instructions which explained that the group would be videotaped and, if the performance was poor, the videotape would be shown in training classes. They reported that members of high threat groups generated more rationalizations for their decisions and, as expected, the high-threat, high-cohesion groups (the groupthink condition) made poor decisions. Turner *et al.* (1992, Experiment 3) also found that groups subjected to groupthink conditions but which were given an excuse for possible poor performance (and therefore presumably were better able to cope with their stress) made better decisions than groups who worked under groupthink conditions without an excuse. Together, these results suggest that groupthink can be prevented if the group members are provided with less debilitating means of coping with their decision-making stress.

Kroon and her colleagues (Kroon, 't Hart, & van Kreveld, 1991; Kroon, van Kreveld, & Rabbie, 1992) tested the hypothesis that holding group members accountable for the decision should reduce groupthink tendencies. Kroon *et al.*

(1991) reported that in both individual and collective accountability conditions group members had more difficulty reaching agreement, attempted to exert more influence over the group decision, shared influence more evenly, and were less willing to make risky decisions than members of groups with no accountability. Kroon *et al.* (1992) reported similar results for groups of males, but not for groups of females. Members of male groups in accountability conditions shared influence more evenly and were more likely to continue to question both procedures and objectives throughout the entire decision process than groups with no accountability.

### *Summary*

Eleven laboratory studies of groupthink were reviewed in this section. However, no single experimental paradigm for groupthink research has been adopted. Nearly all of these studies have employed different decision tasks. In these studies the antecedent, independent variables and the consequent, dependent variables have been operationalized in a wide variety of ways. Furthermore, as noted by Park (1990), each study has investigated the effects of some, but not all, of the antecedents of groupthink on some, but not all, of the consequences of groupthink.

Laboratory research has provided little support for the link between group cohesion and groupthink. However, questions remain regarding the role of group cohesion in the production of groupthink. The hypothesized relationship between cohesion and groupthink may have failed repeated tests because in each test the construct was operationalized inappropriately. Turner *et al.* (1992) suggested that in most laboratory studies group cohesion has not been operationalized in ways which incorporate the key requirement that the members perceive themselves as a group.

On the other hand, laboratory research supports the link between a lack of impartial leadership and groupthink and provides some support for the link between poor decision procedures and groupthink. For these antecedents the lack of methodological standardization in laboratory research on groupthink is a strength, because greater credence is lent to findings which have been demonstrated using a variety of methods.

Too few laboratory studies have been conducted to reach firm conclusions regarding the remaining antecedents of groupthink and their hypothesized consequences. Clearly, the small number of laboratory tests of groupthink theory conducted in the 25 years since Janis first presented the theory has not been sufficient to provide an evaluation of each of the antecedents of groupthink, let alone an overall evaluation of the complete theory.

## **COMPARISON OF CASE ANALYSIS AND LABORATORY RESEARCH RESULTS**

It is difficult to compare the results of case analyses and laboratory research on groupthink, because these two research strategies are used for different

purposes. While laboratory studies are designed to test portions of the theory, case analyses are usually designed to develop theory or to demonstrate the applicability of theory, rather than to test the theory. Nevertheless, two comparisons of results from the two types of research are possible.

First, both lines of research suggest that group cohesiveness—especially when it is viewed as a mutual attraction among group members or *esprit de corps*—is not a strong predictor of groupthink. The LISREL analysis of 10 cases by Tetlock *et al.* (1992) revealed only a weak link from cohesiveness to concurrence-seeking. Similarly, McCauley (1989) reported that although all 8 cases he considered involved cohesive groups, only 6 of these cases were classified as groupthink cases; thus, cohesiveness was not predictive of groupthink. Both Raven (1974) and 't Hart (1990) argued that in the cases that they analyzed (Watergate and Iran–Contra, respectively) the groups did not exhibit *esprit de corps*, but rather were held together by loyalty to the leaders. In laboratory research, as noted earlier, two studies (Flowers, 1977; Fodor & Smith, 1982) reported no effects of cohesiveness manipulations, one study (Leana, 1985) reported only one effect which was contrary to the groupthink prediction, and the remaining four studies (Courtright, 1978; Callaway & Esser, 1984; Moorhead & Montanari, 1986; Turner *et al.*, 1992) reported weak or mixed support for the groupthink predictions involving cohesiveness.

Second, both types of research suggest that structural and procedural faults of the group are predictive of groupthink. Tetlock *et al.* (1992) combined these antecedents in their LISREL analysis of 10 cases and reported a strong link from this combination of antecedents and concurrence-seeking. McCauley (1989) reported that three of these antecedents—insulation, promotional leadership, and homogeneity—were the best predictors of groupthink in the 8 cases he analyzed. A similar conclusion can be drawn from the Neck and Moorhead (1992) analysis of the jury in the DeLorean trial. They found that the jury avoided groupthink despite the presence of all but two antecedents—promotional leadership and lack of methodical decision procedures. Therefore, they concluded that these two antecedents are important predictors of groupthink. As noted earlier, laboratory research has tested three of the structural and procedural antecedents—insulation, leadership, and decision procedures. In the only laboratory study to examine insulation Moorhead and Montanari (1986) reported mixed results; two effects were consistent with groupthink and two were contrary to the theory. However, laboratory studies have provided stronger support for the influence of both leadership and decision procedures on groupthink. Four laboratory studies (Flowers, 1977; Fodor & Smith, 1982; Leana, 1985; Richardson, 1994) reported results supporting groupthink predictions concerning the role of the leader, and Moorhead and Montanari (1986) reported mixed results. Similarly, three laboratory studies investigating the role of decision-making procedures (Callaway & Esser, 1984; Courtright, 1978; Kameda & Sugimori, 1993) reported results consistent with groupthink predictions, and one study (Callaway *et al.*, 1985) found no effects of decision procedures.

In sum, there are notable convergences across the two types of research.

However, more striking is the paucity of research testing the predictive power of the seven hypothesized antecedents of groupthink.

### ISSUES FOR ADDITIONAL GROUPTHINK RESEARCH

The small, but growing, research literature on groupthink has produced as many questions (and methodological issues) as answers. Each of these issues must ultimately be addressed empirically; hence, together, these issues constitute an agenda for further groupthink research.

#### *Groupthink Situations*

In what sorts of situations is groupthink a potential threat to good decision making? A distinction between groupthink driven by a pessimistic view of the likely outcome and groupthink driven by an optimistic view has been discussed by 't Hart and his colleagues (Kroon *et al.*, 1991; 't Hart, 1990, 1991). The first of these groupthink situations is termed collective avoidance and is conducive to the stress-induced defensive reaction to potential failure in a crisis described by Janis (1972). The second type of groupthink situation is a collective overoptimism. It is characterized by an adventuristic response due to a collective overconfidence when the situation is perceived as an opportunity to achieve a great success. In a similar vein, Kameda and Sugimori (1993) suggested that the collective entrapment phenomenon (Brockner & Rubin, 1985) in which a group escalates its commitment to an initially attractive, but failing, policy may be considered a subset of groupthink. Kroon *et al.* (1991) argued that in the collective avoidance type of situation groupthink can be prevented by informing the group members that they will be held accountable, especially individually accountable, for the group decision; however, accountability should have no such preventive effects on groupthink in the collective overoptimism type of situation.

#### *Decision Tasks*

The ideal decision task for groupthink research should possess several characteristics. It should be important, difficult, and involving for the subjects. Subjects should possess the knowledge and technical skills required for the decision. Specific task-related information should be provided to the subjects or available to them. The task should allow for multiple alternative solutions to be generated, and no single solution, if presented, should be readily perceived as "correct." The task should require discussion and information exchange to reach a good decision. Finally, a (preferably objective) method for assessing decision quality should be available.

In several groupthink studies the decision task required the group to provide a rank ordering. The Lost at Sea task (Nemiroff & Pasmore, 1975), used in studies by Callaway and Esser (1984) and Callaway *et al.* (1985), supplies a list of items surviving a ship-board fire and requires subjects to rank order

the items according to their survival value. Leana's (1985) task provides information on six employees and requires subjects to recommend the order by which they will be laid off. The task used by Kroon *et al.* (1992) requires subjects to rank six applicants for an MBA program using information from their vitae. With the exception of Leana's task, these tasks share the advantage that objective measures of decision quality are derived from comparisons with rankings produced by experts. However, in my opinion these tasks are less than ideal because subjects are not required to generate possible solutions, but rather they must only choose from a set of options provided (i.e., rank them).

Several other tasks used in groupthink studies are more unstructured, requiring subjects to generate options and to choose one best solution. Courtright's (1978) task required subjects to recommend the best way to recruit new students to a university. Kroon *et al.* (1991) asked their subjects to play the roles of prison administrators and make a series of three decisions concerning problems arising from a prison riot. The Parasol Subassembly Case (Maier, 1952) used by Turner *et al.* (1992) requires a decision about how to improve the productivity of a work group with an aging member whose work rate has hampered the rest of the group. Flowers (1977) developed a similar task requiring subjects, playing the roles of school administrators, to decide how to deal with an aging teacher who was no longer able to maintain discipline in the classroom. However, the measurement of solution quality for these tasks is more problematic than for the ranking tasks. Flowers did not assess decision quality. In the Kroon *et al.* (1991) study decision quality was assessed by comparing each group's decision with optimal decisions produced by two experts. Because these judgments were made by a single rater, no reliability estimate was possible. In Courtright's study five raters evaluated the group solutions on five dimensions (effectiveness, feasibility, creativity, significance, and competence) and produced average interrater reliabilities of .50 to .76. The best assessment of solution quality among these tasks was by Turner *et al.* Two raters judged the quality of each group solution, using Maier's (1952) coding scheme, and achieved an interrater reliability of .85.

In three groupthink studies (Flowers, 1977; Fodor & Smith, 1982; Leana, 1985) each group member was given some task-relevant information which was not given to the other group members. This type of task seems particularly advantageous for groupthink research because an observer can determine whether the unique information is withheld or shared during group discussion, thus providing an objective measure of self-censorship. Indeed, all three groupthink studies cited above reported significant effects using this dependent variable. Future groupthink research may also benefit from another line of research (e.g., Stasser, Stewart, & Wittenbaum, 1995; Stasser, Taylor, & Hanna, 1989) examining conditions which promote discussion of initially unshared information during group decision making.

### *Measurement of Groupthink Symptoms*

Park (1990) pointed out that most of the symptoms of groupthink cannot be assessed easily by an outside observer. Rather, most groupthink symptoms

represent (private) feelings or beliefs held by the group members or behaviors performed in private. Therefore, the most appropriate way to measure these symptoms is to ask the group members. Only two studies have used questionnaires to assess the full set of eight symptoms of groupthink, as recommended by Park.

The first such study, by Moorhead and Montanari (1986), assessed the full set of eight symptoms of groupthink using a 24-item questionnaire which they had developed earlier (Moorhead & Montanari, 1982; Montanari & Moorhead, 1989). The questionnaire is composed of three items for each symptom, except the illusion of invulnerability (four items) and collective rationalization (two items). All items are scored on a 5-point scale with anchors ranging from "never" to "always." Initial development of the questionnaire was first reported in a convention paper (Moorhead & Montanari, 1982) and later in a journal article (Montanari & Moorhead, 1989). Moorhead and Montanari (1986) factor-analyzed the questionnaire, using the responses of a sample of 197 subjects. They identified only four factors: invulnerability with a negative view of outsiders, morality with feelings of unanimity and rationalizations, self-censorship, discouragement of dissent. Alpha reliabilities for these empirically-derived scales ranged from .55 to .77.

In a second, more recent study Richardson (1994) assessed all eight symptoms of groupthink using the *Groupthink Index* (Glaser, 1993), a commercially available questionnaire designed for use in management training. The *Groupthink Index* is a 40-item questionnaire composed of five items for each of the eight groupthink symptoms. Each item is answered on a 5-point scale ranging from "almost never" to "almost always." The *Groupthink Index* yields a total groupthink score and subscale scores for each of the eight groupthink symptoms. Based on the responses of 284 subjects, Richardson reported an alpha reliability of .70 for the total scale. However, alpha reliabilities for the subscales ranged from .02 to .46. Recently, I factor-analyzed the *Groupthink Index* using Richardson's data. This analysis revealed three factors. The first factor involved the attitude of being objective and avoiding a closed-minded, self-righteous orientation. The second factor focused on a procedure which encourages intellectual conflict and debate. The third factor reflected the belief that the majority is correct and involved pressure on dissenters.

Together, these studies indicate that the eight symptoms of groupthink proposed by Janis (1972, 1982) are difficult to assess using the available questionnaires. It may be that the symptoms are not conceptually distinct. It is also possible that the questionnaires, themselves, are to blame. All questions on the *Groupthink Index* ask the subject to assess the members of the group, while the Moorhead and Montanari questionnaire includes some questions about the subject, some questions about one or more members of the group, and some questions about the group as a whole. However, when the questions ask the subject to assess the other members of the group, the subject is put in a position similar to that of an outside observer. The subject still cannot know what the other group members believe (e.g., invulnerability or morality) and cannot observe another group member's private behavior (e.g., self-censorship). In an

ideal questionnaire all questions would focus on the behaviors or attitudes of the subject; the assessment of the degree to which the group exhibits groupthink symptoms should be based on the sum of these self-assessments by the individual group members. A single apparent exception to this questionnaire strategy involves the illusion of unanimity. In this case we should assess the degree to which each group member personally believed that the group was unanimous in its preference for the chosen solution then sum these responses for all group members.

The measurement of groupthink symptoms also has implications for theoretical controversy. In most laboratory studies support for groupthink has been reported for one or more, but not all, of the groupthink symptoms which were assessed. Aldag and Fuller (1993) have argued for a strong interpretation of groupthink, which requires that in order to be accepted as support for the theory a study must demonstrate the presence of all groupthink symptoms (as well as all antecedents and symptoms of poor decision-making). They rejected a weak interpretation of groupthink, which requires the presence of only a subset of the groupthink elements. Hence, they argued that when empirical studies fail to demonstrate the presence of all eight groupthink symptoms, the theory is disconfirmed. In contrast, Esser and Lindorfer (1989) argued that in its present form groupthink can be considered a syndrome which is more easily identified when a larger majority of the groupthink elements (such as the symptoms) are present. Indeed, it is possible that for some situations in which groupthink can occur not all groupthink symptoms are relevant. For example, not all situations involve an "enemy" outgroup; therefore, stereotyping of the outgroup may not be a valid indicator of groupthink. When no outside sources of information are available, mindguarding is less relevant.

## CONCLUSION

What has been the contribution of groupthink research now, 25 years after the introduction of groupthink theory? The research has not provided unambiguous validation of groupthink theory. Rather, I think that the heuristic contribution has been its greatest value. Groupthink theory and the results of groupthink research have undoubtedly stimulated much thought about group decision making. Groupthink research has led to several theoretical distinctions which should help clarify and develop our thinking about groupthink. Turner *et al.* (1992; Turner & Pratkanis, 1994) have been the most persuasive of those who have distinguished among various conceptions of group cohesion, arguing that groupthink is best understood as a process by which the group members attempt to maintain a shared positive identity as a group. McCauley (1989) distinguished two influence processes by which groupthink could operate: compliance and internalization. 't Hart (1991; Kroon *et al.*, 1991) argued that groupthink based on collective avoidance is sometimes quite different from groupthink based on collective optimism. Tetlock *et al.* (1992) provided models of alternative processes of poor group decision making which can be contrasted with groupthink. And Aldag and Fuller (1993) called attention to additional antecedents

and consequences of group decision making which are not considered in groupthink theory.

However, although groupthink research has stimulated the theoretical developments listed above, both the quantity and quality of groupthink research leave something to be desired. Much of the research on historical cases of poor decision making has involved analyzing and reanalyzing the same set of five cases, and searching for the antecedents and symptoms described by Janis. Some additional cases of groupthink have been documented. Many case analyses have stimulated interesting theoretical suggestions. However, these theoretical ideas have not been subjected to independent tests.

Furthermore, most laboratory research has addressed the question "Can groupthink be produced/confirmed in the laboratory?" Most discussion of laboratory research seems to reflect Park's (1990) desire that this question be answered in each study by testing for all the elements of the complete groupthink model. This approach seems premature, given that no consensus exists on how to appropriately operationalize some antecedents (e.g., cohesion) and that we have not yet developed reliable measures for many of the groupthink symptoms.

I believe that it is too early to attempt to pass judgment on groupthink theory. Much more research is needed before we can determine whether the theory is valid, whether modifications of the theory are needed, or whether the theory should be discarded altogether. In the meantime groupthink theory continues to stimulate interest and its research base, though small, is growing. In sum, groupthink research is alive and well, not because it has validated groupthink theory, but because it has stimulated a growing set of testable ideas about group decision making.

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