

Friendship and group identification: a new look at the role of cohesiveness in groupthink

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Abstract

This article proposes that research has failed to clarify the causal role of group cohesiveness in groupthink because of a failure to distinguish cohesiveness from friendship. To remedy this, a conceptual distinction, based on social identity theory, is drawn between positive regard grounded in interpersonal relations (personal attraction, friendship), and solidarity grounded in group identification (depersonalized social attraction, true group cohesiveness)—Hogg (1992). An experiment compared the roles of friendship and social attraction in groupthink. Four-person discussion groups of friends, or socially attractive or random groups of strangers, made decisions (N = 472). Background conditions for groupthink were established, and a wide range of subjective and behavioural measures of friendship, identification/social attraction, and the decision-making process were taken. Analyses isolated effects associated with friendship/personal attraction, from those associated with identification/social attraction. Friendship was found to be weakly and negatively related to symptoms of groupthink, while group identification and social attraction were strongly and, with some exceptions, positively related to symptoms of groupthink. © 1998 John Wiley & Sons, Ltd.

INTRODUCTION

Since its original publication in 1972, Janis's theory of groupthink has attracted substantial attention—Aldag and Fuller (1993) count more than 700 citations (Social

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The research reported in this article was funded by a research grant from the University of Queensland. We wish to thank Matthew Eakin, Kate Reynolds, and Latina Vlasisavljevic for helping to run sessions and code data, the Students Union of the University of Queensland for providing incentive for participants, and Kip Williams for detailed comments on an earlier version of the article.

Sciences Citation Index) of groupthink in the 3½ years from January 1989. Commentators agree, however, that this popularity has not been matched by research that resolves basic theoretical and empirical problems with the concept. In many respects, the causes of, and processes involved in, groupthink remain poorly understood (e.g. Aldag & Fuller, 1993; Hogg, 1992; Longley & Pruitt, 1980; McCauley, 1989; Whyte, 1989). Our aim is to clarify the role of group cohesiveness in groupthink, by applying social identity theory (e.g. Hogg & Abrams, 1988; Tajfel & Turner, 1979; Turner, 1982) and self-categorization theory (Turner, 1985; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) to distinguish between group membership based cohesiveness on the one hand and interpersonal relationship based friendship on the other (e.g. Hogg, 1992, 1993; Hogg & Hains, 1996; Hogg & Hardie, 1991).

Janis (1972, 1982) employed an archival method relying on retrospective accounts and content analysis to identify a constellation of features to be found in small decision making groups that make suboptimal decisions. Janis was particularly interested in suboptimal policy decisions with actual, or potential for, grave widespread consequences. His analyses focused on U.S. presidential decision-making groups involved in the 1961 Bay of Pigs fiasco, the 1950 escalation of the Korean war, the 1941 defence of Pearl Harbor, and the 1964–67 escalation of the Vietnam war. Janis defined groupthink as ‘a mode of thinking that people engage in when they are deeply involved in a cohesive ingroup, when members’ strivings for unanimity override their motivation to realistically appraise alternative courses of action’ (1982, p. 9).

The principal antecedent of groupthink is cohesiveness, but there are a number of secondary conditions relating to structural faults in the organization (e.g. lack of impartial leadership) and tertiary conditions relating to the decision-making context (e.g. high stress). These antecedents, particularly cohesiveness, generate eight symptoms of groupthink: (1) illusion of invulnerability, (2) collective efforts to rationalize, (3) unquestioned belief in the group’s inherent morality, (4) stereotyped views of enemy leaders as weak or stupid, (5) direct pressure on members who argue against the group’s stereotypes, (6) self-censorship of deviations from group consensus, (7) shared illusion of unanimity, and (8) emergence of self-appointed mind guards to screen adverse information. These symptoms are associated with seven defects in the decision-making process: (1) discussion is limited to few alternatives, (2) the originally preferred solution is not reevaluated, (3) alternatives initially discarded are not reevaluated, (4) advice of experts is not sought, (5) where advice is presented, members exhibit selective bias, (6) members fail to consider how other groups might react, and therefore fail to develop contingency plans, and (7) objectives are incompletely surveyed. In summary, excessive cohesiveness, in conjunction with certain other group conditions, produces concurrence seeking behaviour (Janis & Mann, 1977), which is responsible for defective decision-making processes that produce suboptimal or defective decisions with potential for disastrous consequences.

There has been a large number of descriptive tests of the groupthink hypothesis (e.g. Esser & Lindoerfer, 1989; Hensley & Griffin, 1986; Huseman & Driver, 1979; Janis, 1972; Manz & Sims, 1982; Moorhead & Montanari, 1986; Raven, 1974; Smith, 1984; Tetlock, 1979; Tetlock, Peterson, McGuire, Chang, & Feld, 1992), which provide some support for the general model but do not permit conclusive examination of the role of cohesiveness. In fact Moorhead and Montanari (1986) found on

some measures a negative relationship between cohesiveness and groupthink, and Tetlock *et al.* (1992) found no evidence for cohesiveness as a predictor of symptoms of groupthink.

Experimental studies are fewer, but more useful for examining Janis's causal model—particularly the role of cohesiveness. Experiments generally establish background (i.e. secondary and tertiary) conditions for groupthink, and then orthogonally manipulate cohesiveness and either a leadership variable (directiveness or need-for-power) or procedural directions for effective decision making. Participants generally take part in four-person 30-minute group discussions that are tape-recorded for detection of symptoms of groupthink. Studies manipulating cohesiveness as friendship (i.e. by forming groups of strangers or groups of acquaintances) found either no relationship between cohesiveness and groupthink (Flowers, 1977) or a negative relationship (Leana, 1985). Fodor and Smith (1982) manipulated cohesiveness by creating an intergroup competition for a scarce reward, and found no significant relationship between cohesiveness and groupthink. The manipulation of cohesiveness in terms of 'alleged' compatibility and similarity that engenders liking reveals that high cohesiveness produces groupthink only where no directions for effective group decision making are given (Callaway & Esser, 1984) or where rapid concurrence is an explicit group objective (Courtright, 1978). Most recently, Turner, Pratkanis, Probasco and Leve (1992) manipulated cohesiveness by explicitly labelling three-person groups (cf. minimal group techniques—e.g. Billig & Tajfel, 1973), and giving members 5 minutes discussion time to identify interpersonal similarities and commonalities. They found a positive relationship between cohesiveness and groupthink, but only where the group felt 'threatened' by being videotaped.

One conclusion to be drawn from these experiments is that the effect of group cohesiveness on groupthink may depend on how cohesiveness is operationalized and hence conceptualized. Indeed, critics have noted the need for a more rigorous specification of cohesiveness and its role in groupthink (e.g. Hogg, 1992; Longley & Pruitt, 1980; McCauley, 1989). This is the aim of this article—to examine the role of cohesiveness (Janis' *principal* antecedent of groupthink) in the production of symptoms of groupthink.

A close reading of Janis (Hogg, 1992, p. 137) suggests that although Janis attributes groupthink to cohesiveness as a group property, in the sense of 'attraction-to-group' (e.g. Festinger, 1950; Festinger, Schachter, & Back, 1950), he may actually be conceptualizing cohesiveness as interpersonal attraction (e.g. Lott & Lott, 1965; Lott, 1961) or friendship. For example, Janis speaks of 'bonds of mutual friendship and loyalty ... genuine friendship and mutual support' (1982, p. 99), 'natural friends ... too close, too personally fond of each other' (p. 101), 'relaxed friendly interchanges ... informal social atmosphere ... like old cronies' (p. 214), and 'intimate personal friends ... friendly chatter, joking, and shared sentiments' (pp. 215–216). Indeed, many studies of groupthink operationalize cohesiveness as friendship. Conceptually, it is unclear whether groupthink is supposed to be produced by *group* cohesiveness or by close *interpersonal* relationships (friendship), or by both.

Traditional conceptualizations of group cohesiveness that equate cohesiveness with attraction-to-group, or even interpersonal attraction, have attracted criticism (e.g. Carron, 1982; Cartwright, 1968; Evans & Jarvis, 1980; Hogg, 1987, 1992, 1993; McGrath & Kravitz, 1982; Mudrack, 1989). Although there is little disagreement that positive inter-individual attitude is an important feature of cohesive groups, critics

have wondered whether the concept of interpersonal attraction alone is adequate to explain cohesiveness as a distinctly group phenomenon.

Recent research based on social identity theory (e.g. Hogg & Abrams, 1988; Tajfel & Turner, 1979; Turner, 1982) and self-categorization theory (Turner, 1985; Turner *et al.*, 1987) provides an alternative perspective. Interpersonal relations, behaviours and processes are conceptually distinguished from group relations, behaviours and processes. The latter are associated with social identity: the definition and evaluation of self in terms of a self-inclusive social category. Social identity is constructed and has its effects through a process of self-categorization that accentuates attitudinal, emotional, and behavioural similarity to the group prototype—one's cognitive representation of the features that best define the ingroup in the salient social comparative context. Self-categorization *depersonalizes* perception and conduct such that members, including oneself, are not processed as complex, multidimensional whole persons but, rather, as embodiments of the contextually salient perceived group prototype.

From this perspective, a cohesive group is one in which the process of self-categorization has produced, through depersonalization, a constellation of effects that include intragroup conformity, intergroup differentiation, stereotypic perception, ethnocentrism, and positive inter-member attitude. Positive inter-member attitude produced thus is *social attraction*, where ingroup members are liked not as unique individuals but as embodiments of the group—the more prototypical they are perceived to be, the more they are liked (Hogg, 1987, 1992, 1993; Hogg & Hains, 1996; Hogg & Hardie, 1991). Depersonalized social attraction can be distinguished from *personal attraction* based on idiosyncratic preferences grounded in personal relationships. Personal attraction is independent of group-membership-based processes. Direct tests of the social attraction hypothesis (Hogg, Cooper-Shaw, & Holzworth, 1993; Hogg & Hains, 1996; Hogg & Hardie, 1991, 1992, 1997; Hogg, Hardie, & Reynolds, 1995; see Hogg, 1992, 1993 for overviews) show that social and personal attraction are not isomorphic, but are relatively independent. Social attraction is associated with perceived prototypicality and is influenced by identification with the group, while personal attraction is associated with interpersonal similarity and is influenced by interpersonal relations not group identification.

The experiment reported in this article distinguishes interpersonal relationship based positive regard (friendship) from group membership based positive regard (social attraction) as determinants of symptoms of groupthink. It is closely based on methodologies and procedures employed in other experimental studies, cited above, of groupthink. We had four-person groups of friends, randomly categorized groups of strangers, or socially attractive groups of strangers (social orientation variable) engage in a 25-minute discussion in order to reach a decision. The independent variable (representing different conceptualizations of cohesiveness) was manipulated against background conditions conducive to groupthink—the groups were homogenous in terms of social background, they were insulated, the decision-making task was complex, there was a strict time limit, and the groups lacked a tradition of impartial leadership and norms requiring methodological procedures (cf. Janis, 1982). A questionnaire measured interpersonal relationships and group identification, as well as subjective perceptions of the decision-making process. The discussions were tape-recorded and analysed for objective evidence of symptoms of groupthink. The aim was to compare the effects on group decision-making processes of cohesiveness

defined in interpersonal terms (i.e. friends) with cohesiveness defined in group terms (i.e. random categorization *per se*, or random categorization plus explicit social attraction). Our focus was on symptoms of groupthink and defects in the decision making process, as defined by Janis, not on the quality of the decision made.

If groupthink is produced by friendship (which is an implication of Janis's original theory) then only groups of friends would exhibit symptoms of groupthink. If social attraction and group identification are the culprits then only randomly categorized or socially attractive groups of strangers would exhibit symptoms. We predicted, from our social attraction analysis, that symptoms of groupthink would be associated with social attraction and group identification, not with personal attraction and friendship. In the absence of a group culture encouraging optimal decision-making procedures, identification and concomitant social attraction will relatively automatically generate cognitions, perceptions, and behaviours (e.g. conformity, concurrence, ethnocentrism) that resemble, or underpin, the symptoms of groupthink. In contrast, friendship and personal attraction are more likely to allow people to differentiate themselves from others, act as individuals, disagree with one another, and so forth, since personal identity and mutual positive regard are not threatened by such behaviours. Friends will behave in ways which do not resemble the symptoms of groupthink—friendship may actually guard against groupthink.

The experiment employs face-to-face interactive groups, some of which comprise real friends while others experience an experimental manipulation of social categorization alone or social categorization and social attraction. There is inevitably substantial 'noise' in a 'realistic' experiment such as this, and the transitory manipulations occur against a background of more enduring relationships. This realism is desirable, if not necessary, to properly investigate groupthink, and we agree with Levine and Moreland (1990; Moreland & Hogg, 1993; Moreland, Hogg, & Hains, 1994) that such realism is often sadly lacking in contemporary studies of groups. However, there is a cost in terms of diminished experimental control. For instance, we anticipated that friendship and group identification would, to some extent, be empirically correlated in this experiment because groups of friends may also have developed strong group identities—quite possibly stronger than the group identities developed in *ad hoc* groups of strangers who only interact for an hour in the laboratory. This reasoning is consistent with Campbell's (1958) description of entitativity (also see Mullen, 1991; Mullen & Copper, 1994), and with the depersonalized attraction hypothesis that claims that interpersonal and group based liking are produced by *different mechanisms* not that the two mechanisms cannot co-occur in certain circumstances. One such circumstance is small friendship groups—indeed, small interactive groups in general (Hogg, 1996a,b).

Previous research on social attraction has generally found this effect (cf. Hogg, 1992, 1993) which is also confirmed by Mullen and Copper's (1994) meta-analysis of research on the relationship between group cohesiveness and performance (49 studies, yielding 66 cohesiveness-performance tests, $N = 8702$). They found that interpersonal attraction, group commitment, and group pride were the three main operational components of cohesiveness—they were distinct facets of cohesiveness which were nevertheless empirically intercorrelated (mean $r = 0.489$ for experimental research). Although not identical to our distinction between personal and social attraction, personal attraction is close to interpersonal attraction, and social attraction to commitment and group pride.

Although the present experiment manipulates social and personal attraction, we view this as an attempt to separate the two as best we could. In addition to contrasts between conditions, we also collapsed across experimental conditions to investigate the association between friendship and decision-making processes (with identification partialled out), and the association between identification and decision-making processes (with friendship partialled out).

METHOD

Participants and Design

In exchange for course credit, 472 introductory psychology students (322 females and 150 males, mean age 19.7 years) were assigned to four-person interactive discussion groups ($N = 118$), in conditions formed by the manipulation of the independent variable of social *orientation* (random categorization versus personal attraction versus social attraction)—assignment was random except that personal attraction groups were groups of friends. This produced a relatively even age and sex distribution across conditions. Although groups varied in sex composition, there was no confound of sex composition with condition.

Procedure

Participants were recruited as intact groups of friends who signed up together (personal attraction condition) or as strangers (other conditions) to take part in a study of how groups of friends (personal attraction condition), randomly grouped people (random categorization condition), or cohesive groups of people (social attraction condition) made decisions. Sessions were conducted by a pair of female experimenters in a large room partitioned by screens into five cubicles containing a table and four chairs. The table had on it a tape recorder, and an envelope of materials for each person. On arrival, groups of friends were told to choose a table to sit at. Strangers sat anywhere but were then relocated by the experimenters to split up friends. Participants expected to participate in a 25-minute, tape-recorded, group discussion, followed by a confidential questionnaire.

First, each group chose a leader. In the social attraction condition, groups were also given a few minutes discussion to choose a group name, and were asked to imagine their group had just won office in the Student Union and that their group name should reflect the policies they would be promoting. Each social attraction group displayed its name on a placard outside its cubicle where it was clearly visible to the other groups, and also wrote it on adhesive labels that were affixed to each member's lapel. Group leaders were taken aside by the experimenter and given private instructions to espouse a view recommending closure of the movie theatre, and to be directive in trying to steer the group towards agreeing on this position. They were also asked to maintain a sense of time pressure by periodically reminding the group that the limited time available for discussion was running out, and also to emphasize the importance of reaching consensus. Before returning to their groups, leaders were asked not to divulge what they had been instructed to do.

The topic of discussion was now introduced as a role playing exercise (to be treated seriously and meaningfully) in which a four-person group had to decide whether or not to close down the Schonell Theatre—a respected campus movie theatre that specializes in showing progressive, non-commercial, classic and avant garde movies from around the world. Participants took from their envelopes a sheet, entitled 'relevant information', which displayed four pieces of information concerning the topic. The information was different for each member of the group, but in all cases it was balanced so that there were two pieces of information which supported closure, and two which supported leaving the theatre open. This was to establish a background of unshared information (cf. Janis, 1982), but in such a way as to prevent participants adopting distinct roles based on the information given to them—we felt that the existence of different roles might work against group identification in the two 'stranger' conditions as it would highlight intragroup differences. Groups had 25 minutes to reach a decision and were given 15- and 20-minute warnings to increase the sense of time pressure. This scenario was developed to embody some of the features suggested by Janis (1982) to facilitate groupthink. The topic was difficult (many different arguments and information could be brought to bear such that there was no single obvious best solution), it had some 'moral' implications (employment, student education, artistic freedom and variety), and a decision had to be arrived at under manifest time pressure.

Group leaders started the discussion by turning on the tape recorder and concluded it by turning it off—participants were told that tape-recorded material was confidential and for our analysis only. During the discussion the experimenter displayed signs reading '10 minutes to go' and '5 minutes to go' as a reminder to the leaders to keep their groups aware of the time. After the discussion was over, participants replaced their materials in the envelope and completed the dependent measures questionnaire. It was stressed that because responses were private and confidential it was important that they did not look at each other's responses or communicate with one another. The experiment was then concluded and the participants debriefed.

Dependent Measures Questionnaire, and Construction of Scales

In addition to demographic questions there were 32 manipulation checks and dependent measures. The social *orientation* variable was checked by four questions. The first focused on interpersonal attraction by asking participants to indicate how well they already knew and how much they already liked each of the other three people in the group, prior to coming to the experiment (1 to 9, with '0' indicating someone they did not know at all). Each participant's mean knowledge of and personal liking for the other three members was calculated—the two measures were strongly correlated ($r(472) = 0.96, p < 0.01$), and were averaged to produce a single measure of *friendship*. Depersonalized social attraction was measured by asking participants to consider the 'features of your group which seem to characterize it and make it different from other groups in the study' and then to (1) rate how favourably they felt about this prototype, (2) indicate how representative the other members of the group were of this prototype, and (3) rate how much they liked each of the three other group members 'not as unique individuals, but in terms of your group (prototype)'. Each participant's mean prototypical liking for the other three members

was calculated. Factor analysis revealed a single factor which loaded evenly on all three measures—they were averaged to produce an index of *social attraction* ($\alpha = 0.80$), liking for the group and its members based on prototypicality.

Directive leadership and task difficulty were measured by asking participants to indicate (1) how much the leader encouraged 'the discussion of alternative opinions to his/her own', (2) how much the leader influenced the final group decision, and (3) how difficult the topic was in relation to others they had encountered. There were also two questions, at the end of the questionnaire, to check on participants' previous group decision-making experience in terms of (1) formal decision-making experience, and (2) experience leading decision making groups.

Group identification was measured by 10 questions. Five were adapted from Brown, Condor, Mathews, Wade and Williams (1986) to measure: (1) how subjectively important participants felt the group was, (2) how much they identified with the group, (3) how strong their ties with the group were, (4) how glad they were to be group members, and (5) how strong their feelings of belonging to the group were. The other five questions were adapted from previous studies (e.g. Hogg *et al.*, 1993) to measure: (6) how strong a preference participants had to belong their group rather than a different group, (7) how much they liked other members of the group, (8) how similar they felt their general attitudes and beliefs were to the group as a whole, (9) how well they felt they fitted into the group, and (10) how much they felt the group had acted as a team. Factor analysis revealed a single factor, so the average of the 10 items was taken as an index of *group identification* ($\alpha = 0.90$).

The remaining 13 questions measured perceptions of the group discussion and decision making process, in terms of symptoms of groupthink and defective group decision making (cf. Janis, 1982). *Self-censorship* was measured by asking participants (1) how many times during the discussion they failed to express disagreement with what someone else had said, and (2) how many ideas they had but did not share with the group. *Illusion of unanimity* was measured by asking participants (3) how much agreement there was with the group's decision, and (4) how much they personally agreed with the decision. *Atmosphere discouraging critical evaluation* was measured by asking participants (5) how friendly the group atmosphere was, and (6) how willing they felt people (including themselves) were to have their ideas challenged and criticized. *Survey of and evaluation of ideas* was measured by asking participants (7) how much they thought their group tried to think of all the pros and cons of each idea, (8) how much time was given to individuals generating ideas before sharing them with the group, and (9) how willing the group was to spend time repeating information and explaining meanings to other members. *Pressure against dissent* was measured by asking participants (10) how hard they felt the group tried to come to agreement, (11) how much the group seemed to want to come to a quick decision, (12) how willing the group (including self) was to defer to the ideas and opinions of the leader, and (13) how the group actually came to a decision ('0' majority vote, '1' consensus).

Factor analyses of these 13 measures identified three unique measures (the binary measure of whether the group reached a decision through majority vote or consensus, how hard participants felt the group tried to come to agreement, and how much the group wanted to come to a quick decision), and four factors—scales were constructed by averaging principal items within factors. Factor 1 reflects *poor information handling* ($\alpha = 0.68$)—it loaded on how much participants thought their group tried to think of

pros and cons of each idea, how willing the group was to spend time repeating information and explaining meanings, and how willing they felt people were to have their ideas challenged and criticized. Factor 2 reflects *self-censorship* ($r = 0.42$)—it loaded on how many ideas participants personally had but did not share with the group, and how many times during the discussion participants failed to express their disagreement with what someone else had said. Factor 3 reflects *consensus seeking* ($\alpha = 0.64$)—it loaded on how much agreement there was with the group's decision, how much subjects personally agreed with the decision, and how friendly the group atmosphere was. Factor 4 reflects *deference to the leader* in conjunction with little time to consider ideas ($r = 0.51$)—it loaded on how willing the group was to defer to the ideas and opinions of the leader, and how much time was given to individuals generating ideas before sharing them with the group.

RESULTS

Because participants interacted in groups, the correct unit of analysis is the group (Anderson & Ager, 1978; Kenny & Judd, 1986; Kenny & La Voie, 1985; Koomen, 1982), and at this juncture individual observations were aggregated as group means ($N = 118$ groups) for subsequent analyses.¹ Factor analyses for data reduction were performed on individual data to maximize power—reanalysis at the group level produced identical results.

Checks on the Independent Variable

A one-way (orientation) ANOVA was performed on the measures of friendship and social attraction to reveal a significant main effect on both variables. (In all cases, significant differences between means were located by Newman–Keuls test.) As intended, groups in the personal attraction condition showed significantly greater friendship towards fellow members ($M = 6.78$) than did groups in the random or social attraction conditions ($M_s = 0.07$ and 0.54): $F(2,115) = 771.89$, $p < 0.001$, $\eta^2 = 0.93$. Unintended, it was the personally attractive groups which reported greater social attraction ($M = 6.79$) than the random groups ($M = 6.38$), while the socially attractive groups did not differ from either ($M = 6.47$): $F(2,115) = 3.30$, $p < 0.05$, $\eta^2 = 0.05$. Across the 118 groups, the measures of friendship and social attraction were significantly positively correlated $r(118) = 0.23$, $p < 0.05$, two-tailed test).

¹Intraclass correlations (see Kenny & Judd, 1986; Kenny & LaVoie, 1985) for the 15 focal measures across all 118 groups were significantly positive ($\alpha = 0.05$) in 11 out of 15 cases. We also ran the analyses within each of the three experimental conditions separately—25 out of 45 intraclass correlations were significantly positive. As expected, there was generally greater variance between than within interactive groups, and therefore observations were not independent of group.

Group Identification

One-way ANOVA on the index of identification revealed that people in personally attractive groups identified more strongly ($M = 6.41$) than did people in random or socially attractive groups ($M_s = 5.85$ and 5.90 ; $F(2,115) = 5.74$, $p < 0.01$, $\eta^2 = 0.09$). Across the 118 groups, group identification was strongly correlated with social attraction $r(118) = 0.78$, $p < 0.001$, and also significantly correlated with friendship $r(118) = 0.34$, $p < 0.001$, two-tailed test).

Subjective Decision Making Processes

One-way ANOVAs on the five measures of perceived leader behaviour and participants' decision-making and leadership experience revealed two significant effects. The leader was perceived to encourage significantly more discussion of alternatives in socially attractive groups ($M = 5.93$) than personally attractive groups ($M = 4.98$), with random groups not differing from either ($M = 5.48$; $F(2,115) = 5.73$, $p < 0.01$, $\eta^2 = 0.09$), and personally attractive groups felt the task was more difficult ($M = 5.16$) than did random groups ($M = 4.43$), with socially attractive groups not differing from either ($M = 4.81$; $F(2,115) = 3.70$, $p < 0.05$, $\eta^2 = 0.06$).

One-way MANOVA on the four subjective decision-making indexes and the three variables excluded from the indexes revealed a marginally significant effect $F(14,218) = 1.69$, $p = 0.058$, $\eta^2 = 0.10$). Univariate ANOVAs revealed this effect to be significant on one variable and a non-significant trend on another. Groups in the personal attraction condition believed that they deferred to the leader's ideas less ($M = 3.91$) than did groups in the random and social attraction conditions $M_s = 4.39$ and 4.44 ; $F(2,115) = 3.55$, $p < 0.05$, $\eta^2 = 0.06$). There was a tendency for perceptions of poor handling of information to be more evident in random groups ($M = 3.59$) than personally attractive groups ($M = 3.45$) or socially attractive groups ($M = 3.21$; $F(2,115) = 2.56$, $p = 0.081$, $\eta^2 = 0.04$).

Examination of responses to the question asking participants what decision their group had made, revealed that 44 groups (37.3 per cent) were unanimous (or with one member reporting no decision) in reporting that the group had decided to close the theatre, 51 groups (43.2 per cent) were unanimous (or with one member reporting no decision) in reporting that the group had decided to leave the theatre open, and 23 groups (19.5 per cent) were undecided or seemed to disagree over what decision had been reached. Chi-squared analyses revealed no significant differences between conditions in the decisions reached.

Objective Decision Making Processes: Analysis of the Tapes

Owing to equipment failure on 20 tapes (relatively evenly distributed across conditions), we were left with 98 to analyse (83 per cent of groups). The recorded discussions were segmented into 5-minute blocks which were analysed to count the number of: (1) expressions of *moral* concern about implications of the decision, (2) *rationalizations* of the decision made, (3) instances in which a member was verbally *pressured* to change opinion, (4) different *proposals* considered, (5) *facts* brought into

the discussion, (6) *requests* made for information, (7) *alternative* scenarios discussed, and (8) *risks* associated with the chosen course of action that were discussed. The coding was performed by a male coder who was blind to both the hypotheses and the experimental conditions. To investigate the reliability of these codings, a second, female, coder analysed a random sample of 15 discussions (interrater reliability = 0.83).²

One-way MANOVA on discussion totals for the eight categories was not significant, and a subsequent set of eight ANOVAs revealed only one marginally significant effect—personally attractive groups requested more information ($M = 9.72$) than did socially attractive groups ($M = 6.95$), with random groups not differing from either ($M = 8.00$; $F(2,95) = 3.02$, $p = 0.053$, $\eta^2 = 0.06$). Not statistically significant, but shadowing this effect and therefore of interest, we found that personally attractive groups tended to consider more different proposals ($M = 23.14$) than random or socially attractive groups ($M_s = 18.67$ and 19.92 ; $F(2,95) = 2.48$, $p = 0.089$, $\eta^2 = 0.05$), and brought more facts into the discussion ($M = 20.00$) than random or socially attractive groups ($M_s = 16.77$ and 16.14 ; $F(2,95) = 2.53$, $p = 0.084$, $\eta^2 = 0.05$). In general, across the 98 groups there were almost no rationalizations ($M = 0.05$) or expressions of moral concern ($M = 0.09$), very few instances of verbal pressure ($M = 0.64$) or discussion of risks ($M = 0.90$), but a fair number of requests for information ($M = 7.99$), discussion of alternative scenarios ($M = 12.38$), introduction of new facts ($M = 17.26$), and discussion of different proposals ($M = 20.14$).

Under the explicit time constraint that a decision must be reached within 25 minutes, all groups took between 16 and 21 minutes. One-way ANOVA revealed no difference between conditions in how long groups took to complete the discussion. To control for duration of discussion we computed a new measure of rates, rather than absolute numbers, of occurrences of each category of decision-making process (i.e. absolute number of occurrences, divided by duration of discussion). One-way MANOVA on these measures was not significant, and a subsequent set of eight ANOVAs revealed only one marginally significant effect. Personally attractive groups considered different proposals at a greater rate ($M = 1.25$) than did random or socially attractive groups ($M_s = 1.09$ and 1.04 ; $F(2,95) = 2.88$, $p = 0.060$, $\eta^2 = 0.06$).

Taken together, the subjective and objective measures of symptoms of groupthink suggest that groups in the personal attraction condition are less prone to groupthink than groups in the other two conditions, but the effect is relatively weak.

Relationship Between Identification, Friendship, and Groupthink

The analyses so far show a strong association between friendship, social attraction, and group identification—not surprisingly, groups based on pre-existent friendships rather than random assignment were more salient bases for self-categorization.

²Taking each discussion separately we entered the first coder's frequencies as scores for variable X and the second coder's frequencies as scores for variable Y, and treated the five time-intervals as cases. We then correlated X with Y for each of the eight variables separately, to produce eight correlation coefficients for each of the 15 discussions. The average of the 120 correlation coefficients so obtained was 0.83. This indicates relatively acceptable inter-rater reliability, with 70 per cent of the variance in codings shared—leaving 30 per cent attributable to error.

Interpersonal attraction and group identification thus co-occur. To examine the unconfounded relationship between identification and groupthink symptoms and between friendship and groupthink symptoms, a series of correlations and regressions was performed across all groups.

A series of nine hierarchical multiple regressions was performed. In the first analysis we regressed identification and social attraction onto friendship at step 1 ($R^2 = 0.12$, $R^2_{\text{adj}} = 0.10$, $F(2,95) = 6.45$, $p < 0.01$), and then the seven subjective measures of groupthink at step 2 ($R^2_{\text{change}} = 0.23$, $F_{\text{change}}(7,88) = 4.46$, $p < 0.001$; $R^2 = 0.35$, $R^2_{\text{adj}} = 0.28$, $F(9,88) = 5.26$, $p < 0.001$). This indicates that friendship, disconfounded from identification and social attraction, is significantly associated (as indicated by the R^2_{change} statistic) with subjective symptoms of groupthink. In the second analysis we regressed friendship onto identification at step 1 ($R^2 = 0.11$, $R^2_{\text{adj}} = 0.11$, $F(1,96) = 12.45$, $p < 0.001$), and then the four subjective measures of groupthink at step 2 ($R^2_{\text{change}} = 0.51$, $F_{\text{change}}(7,89) = 17.15$, $p < 0.001$; $R^2 = 0.62$, $R^2_{\text{adj}} = 0.59$, $F(8,89) = 18.39$, $p < 0.001$). This indicates that identification, disconfounded from friendship, is significantly associated with subjective symptoms of groupthink. In the third analysis we regressed friendship onto social attraction at step 1 ($R^2 = 0.05$, $R^2_{\text{adj}} = 0.04$, $F(1,96) = 5.22$, $p < 0.05$), and then the four subjective measures of groupthink at step 2 ($R^2_{\text{change}} = 0.57$, $F_{\text{change}}(7,89) = 18.75$, $p < 0.001$, $R^2 = 0.62$, $R^2_{\text{adj}} = 0.58$, $F(8,89) = 17.90$, $p < 0.001$). This indicates that social attraction, disconfounded from friendship, is significantly associated with subjective symptoms of groupthink.

The next three regressions were identical to the first three except that the eight objective measures (totals) of groupthink were entered at step 2. Groupthink was significantly associated only with social attraction unconfounded with friendship ($R^2_{\text{change}} = 0.16$, $F_{\text{change}}(8,88) = 2.28$, $p < 0.05$; $R^2 = 0.21$, $R^2_{\text{adj}} = 0.13$, $F(9,88) = 2.67$, $p < 0.01$). The final three regressions had the eight objective measures (rates) entered at step 2. Groupthink was marginally significantly associated with social attraction unconfounded with friendship ($R^2_{\text{change}} = 0.14$, $F_{\text{change}}(8,88) = 1.90$, $p = 0.070$; $R^2 = 0.19$, $R^2_{\text{adj}} = 0.11$, $F(9,88) = 2.31$, $p < 0.05$).

To locate the unconfounded relationship between identification and specific symptoms of groupthink and between friendship and specific symptoms of groupthink, a series of partial correlations was conducted. Each of the seven subjective, eight objective (total), and eight objective (rates) measures of decision making were correlated with group identification and with social attraction (friendship covaried out), and with friendship (identification and social attraction covaried out)—see Table 1. Irrespective of degree of group identification, groups of friends reported less deference to the leader and less desire to reach consensus than groups of strangers, and a tendency for less effort to agree, less desire for a quick decision, and more endorsement of consensus decision making. In contrast, irrespective of degree of friendship, higher group identification was associated with reports of better information handling, less self-censorship, a strong desire for consensus, a large effort to reach agreement, and endorsement of majority decision making, and a tendency to defer to the group leader. On objective measures, high identification was associated with less verbal pressure to agree and more rationalization of decisions made. Groups of friends introduced more facts and made more requests for information than strangers, and had a tendency towards less rationalization and more verbal pressure and discussion of alternative proposals.

Table 1. Partial correlations between decision-making processes and identification, social attraction, and friendship

	Identification (F covary)	Social attraction (F covary)	Friendship (I + SA covary)
Subjective decision making			
Poor info handling	-0.45***	-0.46***	0.18 ^a
Self-censorship	-0.25**	-0.17 ^a	0.01
Seek consensus	0.66***	0.64***	-0.33***
Defer to leader	0.17 ^a	0.16 ^a	-0.25**
Effort to agree	0.37***	0.36***	-0.17 ^a
Quick decision	0.10	0.09	-0.17 ^a
Decide consensus	-0.25*	-0.23**	0.18 ^a
Objective decision making (total)			
Moral concern	0.03	-0.05	-0.15
Rationalizations	0.24*	0.17	-0.18 ^a
Verbal pressure	-0.23*	-0.37***	0.20 ^a
Different proposals	-0.14	-0.14	0.19 ^a
Facts introduced	-0.10	-0.09	0.23*
Information requests	-0.09	-0.14	0.20*
Alternative scenarios	-0.09	-0.11	0.07
Risks discussed	-0.15	-0.12	0.16
Objective decision making (rate)			
Moral concern	0.00	-0.02	-0.11
Rationalizations	0.24*	0.16	-0.19 ^a
Verbal pressure	-0.20*	-0.33**	0.18 ^a
Different proposals	-0.04	-0.08	0.19 ^a
Facts introduced	-0.01	-0.01	0.19 ^a
Information requests	-0.09	-0.14	0.14
Alternative scenarios	-0.03	-0.07	0.01
Risks discussed	-0.01	-0.01	0.09

Notes. Correlations with identification and social attraction have friendship (F) covaried out, and correlations with friendship have identification (I) and social attraction (SA) covaried out. Degrees of freedom for identification and social attraction are 115 with subjective measures and 95 with objective measures, and for friendship 114 with subjective measures and 94 with objective measures. Significance is assessed by two-tailed test.

^aNon-significant trend $p < 0.08$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

In order to investigate the unconfounded relationship between identification and friendship on the one hand, and the actual group decision on the other, we dummy coded the nominal decision measure (i.e. whether groups decided to close the theatre, leave it open, or were undecided) into two variables 'close' and 'open'. Hierarchical multiple regressions were performed as above, but with step 2 comprising the dummy variables. Once variance in friendship had been explained at step 1 by identification and social attraction, the decision variables did not explain significantly more variance at step 2. However, the decision variables at step 2 did account for significant variance, after friendship had been entered at step 1, in identification ($R^2_{\text{change}} = 0.05$, $F_{\text{change}}(2,114) = 3.75$, $p < 0.05$; $R^2 = 0.17$, $R^2_{\text{adj}} = 0.15$, $F(3,114) = 7.72$, $p < 0.001$) and in social attraction ($R^2_{\text{change}} = 0.07$, $F_{\text{change}}(2,114) = 5.07$, $p < 0.01$, $R^2_{\text{adj}} = 0.13$, $R^2_{\text{adj}} = 0.11$, $F(3,114) = 5.78$, $p < 0.01$). In both cases, examination of beta values indicated that increased identification and increased social attraction were associated with a reduced tendency for the group to decide to leave the theatre open ($\beta = -2.70$

and -3.17 , respectively, $p < 0.01$). Irrespective of friendship, greater identification and social attraction were associated with a reduced tendency for groups to recommend leaving the theatre open, and thus a greater tendency to be influenced by the group leader's recommendation to close the theatre rather than leave it open. Irrespective of identification and social attraction, friendship did not influence the group decision.

DISCUSSION

Whether one adopts a strict, an additive, or a liberal perspective (cf. Turner *et al.*, 1992, p.784) on groupthink, high cohesiveness has always been considered the most important causal factor. Experiments examining the role of cohesiveness have, however, produced equivocal findings which do not confirm that highly cohesive groups adopt suboptimal group decision procedures that lead to poor decisions which may have deleterious consequences. In this article we argue that this inconclusiveness arises because cohesiveness has been conceptualized, operationalized, and confounded in a variety of ways to refer to interpersonal liking and friendship, but also to cohesion as a distinctively group property (cf. Hogg, 1992; Longley & Pruitt, 1980; Turner *et al.*, 1992).

Based on self-categorization theory (e.g. Turner *et al.*, 1987) a conceptual distinction is drawn between, on the one hand, depersonalized attraction based on group identification and prototypicality and generated by self-categorization, and, on the other, interpersonal attraction based on friendship (Hogg, 1987, 1992, 1993). An experiment with 472 participants in 118 interactive discussion groups, was conducted as an attempt to clarify whether it is depersonalized social attraction or friendship which produces the defective decision-making symptoms of groupthink. Other studies have not, to our knowledge, made this contrast—for example, Turner *et al.* (1992) manipulated cohesiveness as entitativity but contrasted this with threat.

We predicted that group identification and social attraction would be associated with symptoms of groupthink because, in the absence of established group norms for optimal decision-making procedures, social attraction is associated with depersonalization which underpins a general striving for conformity, concurrence, agreement, ethnocentrism, and so forth—all symptoms of groupthink. Personal attraction, as friendship, would not be associated with groupthink because it is associated with individuality, interpersonal differentiation, and so forth—none of which are general symptoms of groupthink.

In conducting this experiment, we were fully aware that although social attraction and friendship may be produced by separate social-cognitive mechanisms, in small groups (particularly groups of friends) the phenomena may co-occur—friends may develop a group identity, and members of the same group may over time become friends (cf. Hogg, 1996a). So, although social attraction/identification and friendship were separated experimentally, hierarchical multiple regression and partial correlational analyses were conducted to investigate the unconfounded roles of social attraction/identification and friendship. Additional features of the experiment were the large number of measures of group identification (derived closely from theory) and subjective measures of decision-making procedures, as well as objective

measures of group decision making based on analysis of tape recordings of the discussions.

Manipulation checks revealed that the social orientation manipulation was partially effective: personally attractive groups reported significantly greater friendship (knowledge of and liking for one another) than did random or socially attractive groups ($\eta^2 = 0.93$), however socially attractive groups did not report significantly greater social attraction than did random or personally attractive groups. Furthermore, it was the personally attractive groups that reported significantly greater group identification than did other groups ($\eta^2 = 0.09$). These personally attractive groups also reported greater task difficulty, less encouragement by the leader of discussion of alternatives, and less deference to the leader's ideas, and they actually requested more information, considered more different proposals, brought more facts into the discussion, and discussed different proposals at a greater rate.

Friendship, identification, and social attraction were correlated, and so hierarchical regressions were conducted to investigate the relationship between subjective and objective groupthink symptoms on the one hand, and the unconfounded measures of identification/social attraction and friendship on the other. These analyses revealed that it was identification and social attraction disconfounded from friendship, not friendship disconfounded from identification and social attraction, that was most significantly and consistently associated with subjective and objective measures of decision making. Partial correlations across groups helped to locate the crucial unconfounded relationship of friendship, identification, and social attraction with subjective and objective decision-making procedures.

Overall the results point to two general conclusions. (1) Friendship, thus cohesiveness defined in interpersonal terms, was associated with *improved* subjective and objective group decision-making procedures: less deference to the leader, less desire to reach consensus, less effort to agree, less desire for a quick decision, and greater endorsement of consensus decision making, as well as, objectively, the introduction of more facts, more requests for information, less rationalization, more verbal pressure, and more discussion of alternative proposals. The effect is generally consistent with findings from Leana (1985). (2) Identification and social attraction, thus cohesiveness defined in group terms, was much more strongly associated with subjective and objective group decision-making procedures. We found that cohesiveness in group terms generally impoverished decision-making procedures—there was a stronger desire for consensus, a larger effort to reach agreement, stronger endorsement of majority decision making, greater deference to the group leader, more rationalization of decisions made, and a tendency for the group to comply with the leader in deciding not to leave the theatre open. However on some measures decision making was improved—there was subjectively better information handling and less self-censorship, and objectively less verbal pressure on deviants to agree. Some of these contraindications may arise because cohesive groups are actually less heterogeneous, and thus there is less actual need to pressure others and to censor oneself. In addition, it is unlikely that people who identify strongly with a group will admit (albeit in a questionnaire) that they themselves handled the information poorly.

In their 1992 article, Turner *et al.* operationalized cohesiveness as social identification. It is interesting to note that, like them, we also found that high cohesiveness (as identification/social attraction) was associated with less reported self-censorship and consideration of risks. The present experiment, however, goes further. We found

a more extensive constellation of effects which included behavioural effects, and which included clearly differentiated effects for cohesiveness as friendship and cohesiveness as social attraction/identification. Turner *et al.* found a positive relationship between cohesiveness and groupthink only in their 'high threat' condition where participants were videotaped. Our own participants were tape-recorded and so may have experienced some sense of shared 'threat'—clearly not as much as Turner's high-threat participants, but certainly more than her low-threat participants who were not recorded at all.

In conclusion, cohesive decision making groups may be prone to many (not all) symptoms of groupthink, but only if cohesiveness is defined in group terms as depersonalized social attraction, not in interpersonal terms as friendship. Friendship may actually discourage groupthink because people feel they can air disagreements, they may actually find the discussion enjoyable, and a leader who is also a friend may simply have less authority to influence decision making (cf. Fielding & Hogg, 1997; Hains, Hogg, & Duck, 1997). In small decision making groups friendship and social attraction may co-occur (as cohesive groups form so may interpersonal friendships), however our research shows that it may be useful to differentiate conceptually between friendship and cohesiveness as they appear to have different effects upon group decision-making.

Group membership based social attraction is associated with symptoms of groupthink because the generic consequences of self-categorization include many behaviours that are often described as symptoms of groupthink. Although self-categorization produces conformity to group norms, it also produces group solidarity, ethnocentrism, stereotypic perceptions, intergroup discrimination, and so forth. In the absence of local ingroup defining group decision-making norms that prescribe optimal group decision-making practices, self-categorization and social attraction will be associated with group decision-making behaviours that are characteristic of groupthink. Any factor that strengthens group identification will, in the absence of appropriate local group decision-making norms, amplify the effect. Indeed, this is what Turner *et al.* (1992) found with their 'threat' variable—shared threat, although it may have consequences for positive social identity (but see Hogg & Abrams, 1993) is, after all, a strong determinant of entitativity (cf. Campbell, 1958) and group identification.

The present research constitutes a suggestive first step, based upon recent theoretical considerations, in clarifying the role of cohesiveness in groupthink. Although further research is needed to try experimentally to separate social and personal attraction more clearly, we might at this juncture hazard a recommendation to group decision makers. Distinguish carefully between friendship/interpersonal attraction and true group cohesiveness. If there is no group norm prescribing optimal group decision making practices, emphasize interpersonal relationships and deter group cohesiveness. If such a norm does exist, then cohesiveness may be a good thing—however, too much cohesiveness is probably risky in almost all group decision making contexts.

REFERENCES

- Aldag, R. J., & Fuller, S. R. (1993). Beyond fiasco: A reappraisal of the groupthink phenomenon and a new model of group decision processes. *Psychological Bulletin*, **113**, 533–552.

- Anderson, L. R., & Ager, J. W. (1978). Analysis of variance in small groups. *Personality and Social Psychology Bulletin*, **4**, 341–345.
- Billig, M., & Tajfel, H. (1973). Social categorization and similarity in intergroup behaviour. *European Journal of Social Psychology*, **3**, 27–52.
- Brown, R., Condor, S., Mathews, A., Wade, G., & Williams, J. (1986). Explaining intergroup differentiation in an industrial organization. *Journal of Occupational Psychology*, **59**, 273–286.
- Callaway, M. R., & Esser, J. K. (1984). Groupthink: Effects of cohesiveness and problem-solving procedures on group decision making. *Social Behavior and Personality*, **12**, 157–164.
- Campbell, D. T. (1958). Common fate, similarity, and other indices of the status of aggregates of persons as social entities. *Behavioral Science*, **3**, 14–25.
- Carron, A. V. (1982). Cohesiveness in sports groups: Interpretations and considerations. *Journal of Sport Psychology*, **4**, 123–138.
- Cartwright, D. (1968). The nature of group cohesiveness. In D. Cartwright, & A. Zander (Eds), *Group dynamics: Research and theory* (3rd ed., pp. 91–109). London: Tavistock.
- Courtright, J. A. (1978). A laboratory investigation of groupthink. *Communication Monographs*, **45**, 229–246.
- Esser, J. K., & Lindoerfer, J. S. (1989). Groupthink and the space shuttle Challenger accident: Toward a quantitative case analysis. *Journal of Behavioral Decision Making*, **2**, 167–177.
- Evans, N. J., & Jarvis, P. A. (1980). Group cohesion: A review and re-evaluation. *Small Group Behavior*, **11**, 359–370.
- Festinger, L. (1950). Informal social communication. *Psychological Review*, **57**, 271–282.
- Festinger, L., Schachter, S., & Back, K. (1950). *Social pressures in informal groups*. New York: Harper and Row.
- Fielding, K. S., & Hogg, M. A. (1997). Social identity, self-categorization, and leadership: A field study of small interactive groups. *Group Dynamics, Theory, Research, and Practice*, **1**, 39–51.
- Flowers, M. L. (1977). A laboratory test of some implications of Janis's groupthink hypothesis. *Journal of Personality and Social Psychology*, **35**, 888–896.
- Fodor, E. M., & Smith, T. (1982). The power motive as an influence on group decision making. *Journal of Personality and Social Psychology*, **42**, 178–185.
- Hains, S. C., Hogg, M. A., & Duck, J. M. (1997). Self-categorization and leadership: Effects of group prototypicality and leader stereotypicality. *Personality and Social Psychology Bulletin*, **23**, 1087–1100.
- Hensley, T. R., & Griffin, G. W. (1986). The Kent State Board of Trustees and the 1977 gymnasium controversy. *Journal of Conflict Resolution*, **30**, 497–531.
- Hogg, M. A. (1987). Social identity and group cohesiveness. In J. C. Turner, M. A. Hogg, P. J. Oakes, S. D. Reicher, & M. S. Wetherell, *Rediscovering the social group: A self-categorization theory* (pp. 89–116). Oxford: Blackwell.
- Hogg, M. A. (1992). *The social psychology of group cohesiveness: From attraction to social identity*. London: Harvester Wheatsheaf; New York: New York University Press.
- Hogg, M. A. (1993). Group cohesiveness: A critical review and some new directions. *European Review of Social Psychology*, **4**, 85–111.
- Hogg, M. A. (1996a). Social identity, self-categorization, and the small group. In E. H. Witte, & J. H. Davis (Eds), *Understanding group behavior (Vol. 2): Small group processes and interpersonal relations* (pp. 227–253). Mahwah, NJ: Erlbaum.
- Hogg, M. A. (1996b). Intragroup processes, group structure and social identity. In W. P. Robinson (Ed.), *Social groups and identities: Developing the legacy of Henri Tajfel* (pp. 65–93). Oxford, UK: Butterworth-Heinemann.
- Hogg, M. A., & Abrams, D. (1988). *Social identifications: A social psychology of intergroup relations and group processes*. London: Routledge.
- Hogg, M. A., & Abrams, D. (1993). Towards a single-process uncertainty-reduction model of social motivation in groups. In M. A. Hogg, & D. Abrams (Eds), *Group motivation: Social psychological perspectives* (pp. 173–190). London: Harvester Wheatsheaf; New York: Prentice Hall.
- Hogg, M. A., & Hains, S. C. (1996). Intergroup relations and group solidarity: Effects of group identification and social beliefs on depersonalized attraction. *Journal of Personality and Social Psychology*, **70**, 295–309.

- Hogg, M. A., & Hardie, E. A. (1991). Social attraction, personal attraction, and self-categorization: A field study. *Personality and Social Psychology Bulletin*, **17**, 175–180.
- Hogg, M. A., & Hardie, E. A. (1992). Prototypicality, conformity and depersonalized attraction: A self-categorization analysis of group cohesiveness. *British Journal of Social Psychology*, **31**, 41–56.
- Hogg, M. A., & Hardie, E. A. (1997). Self-prototypicality, group identification and depersonalized attraction: A polarization study. In K. Leung, U. Kim, S. Yamaguchi, & Y. Kashima (Eds), *Progress in Asian social psychology* (Vol. 1, pp. 119–137). Singapore: Wiley.
- Hogg, M. A., Cooper-Shaw, L., & Holzworth, D. W. (1993). Group prototypicality and depersonalized attraction in small interactive groups. *Personality and Social Psychology Bulletin*, **19**, 452–465.
- Hogg, M. A., Hardie, E. A., & Reynolds, K. (1995). Prototypical similarity, self-categorization, and depersonalized attraction: A perspective on group cohesiveness. *European Journal of Social Psychology*, **25**, 159–177.
- Huseman, R. C., & Driver, R. W. (1979). Groupthink: Implications for small group decision making in business. In R. Huseman, & A. Carroll (Eds), *Readings in organizational behaviour* (pp. 100–110). Boston, MA: Allyn and Bacon.
- Janis, I. L. (1972). *Victims of groupthink*. Boston, MA: Houghton Mifflin.
- Janis, I. L. (1982). *Groupthink: Psychological studies of policy decisions and fiascoes* (2nd ed.). Boston, MA: Houghton Mifflin.
- Janis, I. L., & Mann, L. (1977). *Decision making: A psychological analysis of conflict, choice, and commitment*. New York: Free Press.
- Kenny, D. A., & Judd, C. M. (1986). Consequences of violating the independence assumption in analysis of variance. *Psychological Bulletin*, **99**, 422–431.
- Kenny, D. A., & La Voie, L. (1985). Separating individual and group effects. *Journal of Personality and Social Psychology*, **48**, 339–348.
- Koomen, W. (1982). A note on the analysis of group data. *European Journal of Social Psychology*, **12**, 297–300.
- Leana, C. R. (1985). A partial test of Janis's groupthink model: Effects of group cohesiveness and leader behavior on defective decision making. *Journal of Management*, **11**, 5–17.
- Levine, J. M., & Moreland, R. L. (1990). Progress in small group research. *Annual Review of Psychology*, **41**, 585–634.
- Longley, J., & Pruitt, D. (1980). Groupthink: A critique of Janis's theory. In L. Wheeler (Ed.), *Review of personality and social psychology* (Vol. 1, pp. 74–93). Beverly Hills, CA: Sage.
- Lott, A. J., & Lott, B. E. (1965). Group cohesiveness as interpersonal attraction. *Psychological Bulletin*, **64**, 259–309.
- Lott, B. E. (1961). Group cohesiveness: A learning phenomenon. *Journal of Social Psychology*, **55**, 275–286.
- Manz, C. C., & Sims, H. P. (1982). The potential for 'groupthink' in autonomous work groups. *Human Relations*, **35**, 773–784.
- McCauley, C. (1989). The nature of social influence in groupthink: Compliance and internalization. *Journal of Personality and Social Psychology*, **57**, 250–260.
- McGrath, J. E., & Kravitz, D. A. (1982). Group research. *Annual Review of Psychology*, **33**, 195–230.
- Moorhead, G., & Montanari, J. R. (1986). An empirical investigation of the groupthink phenomenon. *Human Relations*, **39**, 399–410.
- Moreland, R. L., & Hogg, M. A. (1993). Theoretical perspectives on social processes in small groups. *British Journal of Social Psychology*, **32**, 1–4.
- Moreland, R. L., Hogg, M. A., & Hains, S. C. (1994). Back to the future: Social psychological research on groups. *Journal of Experimental Social Psychology*, **30**, 527–555.
- Mudrack, P. E. (1989). Defining group cohesiveness: A legacy of confusion. *Small Group Behavior*, **20**, 37–49.
- Mullen, B. (1991). Group composition, salience, and cognitive representations: The phenomenology of being in a group. *Journal of Experimental Social Psychology*, **27**, 297–323.
- Mullen, B., & Copper, C. (1994). The relation between group cohesiveness and performance: An integration. *Psychological Bulletin*, **115**, 210–227.

- Raven, B. H. (1974). The Nixon group. *Journal of Social Issues*, **30**, 297–320.
- Smith, S. (1984). Groupthink and the hostage rescue mission. *British Journal of Political Science*, **15**, 117–126.
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin, & S. Worchel (Eds), *The social psychology of intergroup relations* (pp. 33–47). Monterey, CA: Brooks-Cole.
- Tetlock, P. E. (1979). Identifying victims of groupthink from public statements of decision makers. *Journal of Personality and Social Psychology*, **37**, 1314–1324.
- Tetlock, P. E., Peterson, R. S., McGuire, C., Chang, S., & Feld, P. (1992). Assessing political group dynamics: A test of the groupthink model. *Journal of Personality and Social Psychology*, **63**, 403–425.
- Turner, J. C. (1982). Towards a cognitive redefinition of the social group. In H. Tajfel (Ed.), *Social identity and intergroup relations* (pp. 15–40). Cambridge: Cambridge University Press.
- Turner, J. C. (1985). Social categorization and the self-concept: A social cognitive theory of group behavior. In E. J. Lawler (Ed.), *Advances in group processes: Theory and research* (Vol. 2, pp. 77–121). Greenwich, CT: JAI.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford: Blackwell.
- Turner, M. E., Pratkanis, A. R., Probasco, P., & Leve, C. (1992). Threat, cohesion, and group effectiveness: Testing a social identity maintenance perspective on groupthink. *Journal of Personality and Social Psychology*, **63**, 781–796.
- Whyte, G. (1989). Groupthink reconsidered. *Academy of Management Review*, **14**, 40–56.