The Organizational Application of Groupthink and Its Limitations in Organizations

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This study examined groupthink and team activities in 30 organizational teams faced with impending crises. The results show that the groupthink symptoms consisted of 2 factors. Surprisingly, 1 factor of groupthink was significantly and positively related to team performance, whereas the other showed an insignificant negative correlation to performance. Moreover, the symptoms of defective decision making were not significant predictors of team performance. Overall, team activities had a stronger impact on performance than groupthink. The results imply that groupthink may have an indirect effect on performance mediated by team activities. This study demonstrates the potential positive implications of groupthink in organizational teams and raises a question about the empirical coherence of groupthink as a phenomenon.

Groupthink is a concurrence-seeking tendency that can impede collective decision-making processes and lead to poor decisions that, in turn, induce fiascoes (Janis, 1972, 1982). Janis (1972) defined groupthink as "a mode of thinking that people engage in when they are deeply involved in a cohesive in-group, when the members' strivings for unanimity override their motivation to realistically appraise alternative courses of action" (p. 8). Janis further enumerated a comprehensive list of antecedents of groupthink, symptoms of groupthink, and symptoms of defective decision making that produce unfavorable outcomes. Since its original conceptualization, the groupthink model has been widely investigated in experimental settings (for reviews, see Aldag & Fuller, 1993; Street, 1997). Laboratory studies have mainly focused on antecedent conditions of groupthink, including leadership (e.g., Leana, 1985), group cohesiveness (e.g., Callaway & Esser, 1984), external threat (e.g., Turner, Pratkanis, Probasco, & Leve, 1992), and so on. These studies have revealed that closed leadership style and external threat, particularly time pressure, appear to promote symptoms of groupthink and defective decision making (Neck & Moorhead, 1995); on the other hand, the

effect of group cohesiveness is still inconclusive (Mullen, Anthony, Salas, & Driskell, 1994). Furthermore, a number of experimental researchers and their reviews have attempted to provide the underlying psychological mechanisms producing groupthink, such as social categorization (Turner et al., 1992), compliance and internalization (McCauley, 1989), and group polarization (Whyte, 1989).

In practical terms, researchers have applied the groupthink model to various managerial domains, such as decision making (Miranda, 1994), leadership (Hughes, Ginnett, & Curphy, 1993), and the management of organizational teams (Kayser, 1994). In these domains, groupthink has been regarded as a detrimental group process (e.g., Miranda, 1994). As a result, many training programs addressing leadership and team performance have incorporated various strategies to avoid groupthink in the workplace (e.g., Quinn, Faerman, Thompson, & McGrath, 1990). Nevertheless, there is little empirical evidence for demonstrating groupthink's negative implications in organizational settings. What evidence there is has been extrapolated from the political arena using case analysis (e.g., Janis, 1972, 1982; Moorhead, Ference, & Neck, 1991) or from laboratory settings involving college students (e.g., Driskell & Salas, 1991; Leana, 1985).

The only available empirical data on groupthink derived from work teams in business settings that we know of are those of Manz and Sims (1982). To demonstrate groupthink's potential in organizational settings, they briefly illustrated three anecdotal cases: two from production teams and one from a quality-management team. They concluded that groupthink might hinder the effectiveness of autonomous work groups, and they encouraged further research "based on a more rigorous quantitative base through

the use of the groupthink symptoms as behavioral catego-
ries" (Manz & Sims, 1982, p. 782). Yet, quantitative vali-
dation of the groupthink model in organizations remains to
be done. In the present study we examined the validity of
the groupthink theory using quantitative data collected at
the task-performing teams within business organizations
(hereinafter referred to as *organizational teams*).

In fact, researchers have criticized groupthink for several
reasons. One major critique of Janis's (1972, 1982) discus-
sion on groupthink is his categorically negative evaluation
of groupthink (Longley & Pruitt, 1980). In their critique,
Longley and Pruitt argued that only a premature
concurrence-seeking tendency occurring before consider-
ation of critical options is detrimental to performance.
Moreover, in some cases, concurrence seeking might actu-
ally promote group performance. For example, Sniezek
(1992) reported that group discussions focusing on shared
information enhance members' confidence and commitment
to the group's decisions and actions. Furthermore, even
premature concurrence seeking may be recommended if the
issue at stake is trivial.

Another closely related critique revolves around Janis's
(1972, 1982) overestimation of linkage between the
decision-making process and its outcome (McCauley, 1989;
Tetlock, Peterson, McGuire, Chang, & Feld, 1992). In their
systematic reanalysis of historical cases using Q-sort, Tet-
lock et al. (1992) maintained that "in both the Mayaguez
and Iran rescue decisions, policy-makers displayed many
more symptoms of vigilance than of groupthink. . . . None-
theless, the outcomes in both cases were disappointing and
embarrassing" (p. 419). Undoubtedly, there is a general
tendency to attribute ill-fated decisions to a poor decision-
making process such as groupthink while attributing desir-
able outcomes to a sound decision-making process (Gra-
ham, 1991). However, as Tetlock et al. (1992) illustrated,
the connection between the decision process and its out-
come is only probabilistic because the linkage is mediated
by many factors, such as luck. In a survey study (Moorhead
& Montanari, 1986), none of the symptoms of groupthink
and defective decision making had a significant effect on
group performance. The authors concluded that "the rela-
tionship between groupthink-induced decision defects and
outcomes were not as strong as Janis suggests" (Moorhead
& Montanari, 1986, p. 399).

A more recent criticism of groupthink is concerned with
the fact that it deals with only the first half of a general
problem-solving process (Aldag & Fuller, 1993). A general
problem-solving process is a multiple-stage process that is
composed of problem identification, alternative generation,
alternative evaluation and choice, decision implementation,
and decision control (Bass, 1983; Elbing, 1978). Of these,
groupthink addresses the first three processes of decision
making and is mute about decision implementation and
control (Aldag & Fuller, 1993, pp. 541–542). Although the
groupthink model addresses group dynamics during collec-

tive decision making, organizational teams both make de-
cisions and implement them. Consequently, the groupthink
model may not provide a sufficient explanation of an orga-
nizational team's performance.

In addition to these concerns about the groupthink model,
there is still the issue of whether groupthink is actually
detrimental and, if so, how it might be detrimental to an
organizational team's performance given the fact that there
is no solid empirical evidence validating its negative effect
on performance. Considering this lack of empirical investi-
gations, the widely held negative value attached to
groupthink is questionable. In fact, groupthink may turn out
to be only a weak predictor of team performance because
the link between groupthink and performance is loose and it
addresses only the first half of the problem-solving process.

To better understand team performance, in this study we
compared cognitive functions (i.e., groupthink) and behav-
ioral functions of organizational teams. In terms of the
general problem-solving model (Bass, 1983; Elbing, 1978),
cognitive functions represent decision making and behav-
ioral functions reflect decision implementation. Apparently,
compared with cognitive functions, behavioral functions
may have more direct and tangible effects on outcomes
because of their temporal closeness. In extreme cases, if
implementation fails, the outcome is a fiasco regardless of
the quality of the decision-making process (e.g., the Iran
hostage rescue attempt; see Tetlock et al., 1992), whereas if
it works, the outcome is a notable success (e.g., the decision
by the Israeli government to raid Entebbe; see Maoz, 1981).
In such cases, behavioral functions seem to be more closely
related to the outcome than cognitive functions.

In this study we conceptualized behavioral functions us-
ing two types of team activities: internal and external ac-
tivities. Internal activities are oriented toward the group
itself and reflect intragroup interactions, such as team build-
ing, communication among members, and other group
maintenance activities. Teams' external activities are di-
rected at their environments to manage their interactions
with external groups (cf. Ancona & Caldwell, 1992). The
distinction between internal and external activities seems
beneficial in the context of organizational teams because it
provides a complete and balanced perspective on the pos-
sible set of team activities.

In summary, the goals of this study are twofold. First, we
attempted to quantitatively assess the symptoms of
groupthink and defective decision making in organizational
settings. This set of data allowed an examination of
groupthink's ecological validity beyond the methods of
laboratory experiments and political case studies. Second,
we focused not only on what groups think but also on what
they do. We compared the relative impacts of cognitive
(groupthink) and behavioral functions (team activities) of
organizational teams on their performance. In so doing, we
used a crisis as the research context because virtually every
study of groupthink, beginning with Janis, has emphasized

an external threat or crisis as the situational factor inducing groupthink (Janis, 1972, 1982, 1989; Moorhead et al., 1991; Smith, 1984).

Method

Participants and Procedures

The participants were 108 employees who made up 30 teams in five large corporations. These teams conducted various functions such as sales, marketing, planning, human resources, and finance. Before the survey, the participants were asked to hold brief discussions in their teams to identify crisis events that they had collectively experienced within the past year. A questionnaire was then individually completed and mailed.

Survey Questionnaire

The questionnaire was designed to examine the relationships among groupthink, team activities, and team performance. The questionnaire had four sections: (a) case description; (b) measurement of the symptoms of groupthink and defective decision making; (c) measurement of internal and external activities; and (d) measurement of team performance. All questionnaire items used are listed in Appendix A. Each of the items was followed by a 6-point Likert scale ranging from *strongly disagree* to *strongly agree*.

Case description. Each team was asked to identify a crisis event characterized by the following features: (a) having the crisis characteristics of threat, surprise, and time pressure (Hermann, 1972); (b) having occurred within a year before the study; and (c) involving all or most members of the team. The members of a team were instructed to describe the same crisis they experienced together and to use the crisis as the referent for answering the subsequent questions about groupthink and team activities. To ensure the description of the same crisis within a team, we asked participants to hold a brief conversation to identify a crisis before they actually responded to the questionnaire. The case description consisted of separate parts describing causes, developing processes, team activities, and the results of the crisis using a modified version of the critical incident technique (Flanagan, 1951). Twenty-eight crises were described by the 30 participating teams because two pairs of teams from the same organization selected the same crises. The content of these cases is listed in Appendix B.

Measurement of the symptoms of groupthink and defective decision making. Because the purpose of this study was to provide empirical evidence on groupthink in organizational settings rather than a full verification of the groupthink model, those aspects of groupthink that appear to be more applicable to organizational teams were selected, particularly the behavioral aspects of groupthink (see Manz & Sims, 1982). Included were six of the eight symptoms of groupthink and six of the seven symptoms of defective decision making. The six symptoms of groupthink were the illusion of invulnerability, belief in inherent group morality, illusion of unanimity, collective rationalization, self-censorship, and pressure on dissenters. The six symptoms of defective decision making were an incomplete survey of alternatives, incomplete survey of objectives, failure to reexamine preferred choice, poor information search, selective bias in processing information, and

failure to develop contingency plans. Two symptoms of groupthink (i.e., stereotypes of outsiders and self-appointed mind guards) and one symptom of defective decision making (i.e., failure to reexamine rejected alternatives) were not included. To measure the symptoms of groupthink and defective decision making, we adapted items pertinent to the context of organizational teams from Park's (1989) instrument of groupthink. In summary, 12 items were used to measure the symptoms of groupthink and defective decision making.

Measurement of internal and external activities. Internal activities addressed two areas of internal team functions: internal communication and internal resource utilization. Communication among the members has been emphasized as a fundamental activity for performance groups in the literature (e.g., Monge & Eisenberg, 1987). The use of internal resources is another critical internal function because adequate mobilization and allocation of internal resources (e.g., skills, materials) is necessary to cope with a crisis (Reilly, 1987). On the other hand, external activities comprised two types of team functions to manage external relations: external communication and external resource utilization. First, external communication is creating and maintaining cooperative relationships with external entities (D'Aveni & McMillan, 1990; Reilly, 1987). External resource utilization (Pfeffer & Salancik, 1978) involves the exchange of resources, such as materials or support. For these activities, seven items were developed based on Reilly's (1987) crisis-management activities and Van de Ven and Ferry's (1980) organization assessment tool. Participants were asked to rate the intensity of these activities as they had tried to resolve a crisis.

Measurement of team performance. The outcome of team crisis management was measured by four items, each designed to measure different aspects of the effectiveness of crisis resolution. The four items measured (a) cost-effectiveness of the crisis-management process; (b) congruence of the outcome with the performance goals of the team; (c) team members' satisfaction with the outcome; and (d) overall effectiveness of the crisis resolution.

Results

A total of 108 participants' responses were aggregated and analyzed at the team level ($n = 30$, average team size = 3.6). This group-level aggregation is a standard procedure that allows for inferences generalizable at the group level rather than at the individual level (Klein, Dansereau, & Hall, 1994). Because we were examining group-level phenomena such as groupthink and team activities, the group appeared to be the proper unit of analysis and inference.

Factor Structure of the Symptoms of Groupthink Scale

The reliability of each scale was examined before its application to analysis. Most of the scales showed acceptable levels of reliability ranging from .70 to .95 (Cronbach's alpha coefficients of internal consistency). However, the scale for the symptoms of groupthink produced a problem-

atic low reliability of .25. To explore the reason for this low reliability, we conducted a factor analysis for those items comprising the scale using principal-components analysis with varimax rotation. Because of the small team-level sample, we conducted the factor analysis at the individual level ($N = 108$). Table 1 shows the results illustrating that the symptoms-of-groupthink scale was composed of two clearly distinguishable factors. The first factor included three items measuring pressure on dissenters, collective rationalization, and self-censorship. The second factor comprised the remaining three symptoms: belief in inherent group morality, illusion of unanimity, and illusion of invulnerability. Subsequent analyses showed that these two factors had completely opposite relationships with other variables. Specifically, the first factor generated a correlation pattern consistent with the prediction of the groupthink model. In contrast, the second factor consistently produced a pattern that contradicted expectations based on the groupthink model. To clarify this difference, we renamed the first factor Concurrence Seeking and the second Group Identity. Dividing the symptoms of groupthink scale into two separate scales improved the reliability of these scales: Concurrence Seeking showed a substantially enhanced reliability of .67, whereas Group Identity showed a still problematic alpha of .45 (see Table 2).

Although the reliability of the Group Identity scale was low, it was worth exploring the different effects of two clearly distinguished factors of groupthink. The existence of the two factors could indicate the unique dynamics of groupthink in the context of organizational teams, a phenomenon that, to our knowledge, has not been examined before. To explore this possibility, we included both the Concurrence Seeking and Group Identity scales in the subsequent analyses. However, the results involving the two scales should be regarded as tentative because the analyses using the two new scales were post hoc and exploratory.

Correlations Among Variables

Table 2 shows the zero-order correlation coefficients, along with means and standard deviations, of the variables aggregated at the team level. Unfortunately, these

Table 1
Factor Loadings of Items Measuring the
Symptoms of Groupthink

Item	Factor 1	Factor 2
Pressure on dissenters	.76	.05
Collective rationalization	.75	−.33
Self-censorship	.71	−.01
Belief in inherent group morality	.10	.77
Illusion of unanimity	−.12	.70
Illusion of invulnerability	−.12	.61

Note. Individuals are the units of analysis ($N = 108$).

correlations were affected by same-method bias because each participant rated all the variables at a point of time. To reduce the method variance, we assigned members from the same team to two subgroups and computed for each variable the mean scores of the two subgroups. The two sets of mean scores were then correlated (see Table 3). This procedure could have partially removed the same-method bias because the raters of the two correlated scores were independent but were from the same team. Nevertheless, note that these correlation coefficients partially depended on each other because the same scores were used more than once and that different sets of coefficients could have emerged from the same procedure depending on how to divide each group into two subgroups. Table 3 also shows the correlations corrected for rater unreliability (for a computation formula, see Pedhazur & Schmelkin, 1991, p. 114). Interrater agreements were computed using the upped Spearman–Brown reliability (Rosenthal & Rosnow, 1991, p. 51) and are presented in the diagonal of Table 3. The correlations corrected for rater unreliability provide relatively unbiased estimates of population parameters. Although the size of correlation fluctuated according to the methods of computation, the overall correlational pattern in terms of relative size and direction appeared to be consistent across the methods. The following discussion of the results is based on the correlations presented in the lower diagonal of Table 3.

Confirming the groupthink model, concurrence seeking showed a significant positive correlation with defective decision making ($r = .44$, $p < .05$). Group identity, however, was negatively related ($r = −.41$, $p < .5$). Furthermore, group identity was significantly and positively related to reported team performance ($r = .47$, $p < .01$), whereas both concurrence seeking and defective decision making showed insignificant negative correlations ($rs = −.19$ and −.21, respectively). Among team activities, external activities were more strongly associated with reported team performance ($r = .56$, $p < .01$) than internal activities ($r = .16$, ns).

This correlational pattern seems to undermine the previous assumption that symptoms of groupthink are pathological and result in negative outcomes. Although the group think model does not make any unambiguous claim for each symptom of groupthink, it is obvious that these symptoms have been collectively treated as a "box" in the model (Janis & Mann, 1977, p. 132) and that poor decision making and undesirable outcomes are more likely when more symptoms are present in a group (Neck & Moorhead, 1995). The correlational pattern presented in Table 3, however, suggests that some symptoms of groupthink (i.e., group identity) may have positive implications for both decision making and team performance.

Table 2

Means, Standard Deviations, Reliabilities, and Intercorrelations Among Variables

Variable	M	SD	1	2	3	4	5	6
1. Concurrence seeking	3.16	0.57	.67					
2. Group identity	4.32	0.52	−.20	.45				
3. Defective decision making	2.83	0.55	.52**	−.68***	.85			
4. Internal activities	4.11	0.55	−.32	.46**	−.51**	.70		
5. External activities	4.00	0.76	−.26	.52**	−.37*	.55**	.86	
6. Team performance	3.90	1.02	−.22	.65***	−.28	.46*	.71***	.95

Note. Groups are the unit of analysis ($n = 30$). Reliabilities are indicated on the diagonal.
$* p < .05.$ $** p < .01.$ $*** p < .001.$ All tests are two-tailed.

Hierarchical Regression Analysis

To examine unique contributions of each variable in predicting reported team performance, we conducted a stepwise hierarchical regression analysis using reported team performance as a criterion. The two sets of mean scores generated for Table 3 were again used to reduce the same-method bias by separating the raters of predictors and the criterion. The predictors were entered into the equation in the order of the causal process by which they were hypothesized to affect the criterion (Pedhazur & Schmelkin, 1991, p. 427). To decide the order of variable entry, we applied two rules: (a) According to Janis's (1972, 1982) original model, the symptoms of groupthink induce the symptoms of defective decision making and (b) as mentioned earlier, cognitive or decision processes may affect performance via their influence on behavioral functions (i.e., team activities). Table 4 shows the resulting order of variable entry.

The first block included concurrence seeking, which was not a significant predictor of reported team performance. Group identity was entered into the equation in the second block. At this stage, the R^2 jumped from .04 to .22 ($\Delta R^2 = .18$, $p < .05$), a result that indicates that group identity contributed significantly to predicting reported team performance above and beyond the contribution of concurrence seeking. In the third block, defective decision making did

not significantly increased R^2. In the last block, internal and external activities significantly increased the explained variance ($\Delta R^2 = .19$, $p < .01$). This significant increment seemed largely attributable to the contribution of external activities ($\beta = .51, p < .01$). The distinctive role of external activities appears reasonable because, in a crisis situation, organizational teams often face unusual demands from external actors and have to mobilize extra resources for crisis resolution. Overall, group identity and external activities were the two main predictors that accounted for the large variance in reported team performance.

Path Model of Team Performance

To construct an overall relational structure among the variables, we adopted a two-stage approach (Vinokur-Kaplan, 1995). The purpose of the first stage was to identify the best fitting path structure including all the variables based on individual-level data. Even at the individual level, the sample size was not large enough to establish a measurement model incorporating all the items as indicators of each variable. Thus, instead of creating a full measurement model, scale means were used as single indicators of corresponding latent factors (cf. Liang, Lawrence, Bennett, & Whitelaw, 1990). Measurement errors of each scale were incorporated into the model by setting random variance of a scale to its variance multiplied by one minus its reliability

Table 3

Intercorrelations Among Variables: Random Assignment of Raters From the Same Team Into Two Subgroups

Variable	1	2	3	4	5	6
1. Concurrence seeking	**.62**	−.19	.65	−.31	−.22	−.26
2. Group identity	−.13	**.72**	.57	.35	.39	.58
3. Defective decision making	.44*	−.41*	**.73**	−.01	−.17	−.26
4. Internal activities	−.16	.19	−.01	**.41**	.08	.27
5. External activities	−.16	.31	−.13	.05	**.86**	.64
6. Team performance	−.19	.47**	−.21	.16	.56**	**.91**

Note. Groups are the unit of analysis ($n = 30$). Zero-order correlations are shown to the left of the diagonal. Correlation coefficients corrected for rater unreliability are shown to the right of the diagonal. Numbers in boldface are interrater agreements of each scale.
$* p < .05$, two-tailed. $** p < .01$, two-tailed.

Table 4

*Hierarchical Regression Analysis for Variables
Predicting Team Performance*

Variable	Block 1	Block 2	Block 3	Block 4
Concurrence seeking	-.19	-.06	-.14	-.06
Group identity		.45*ᵃ	.69**	.58*
Defective decision making			.36	.41
Internal activities				-.09
External activities				.51**
R^2	.04	.22*ᵇ	.28*	.47**
ΔR^2		.18*	.06	.19**

Note. Groups are the unit of analysis ($N = 30$). [a] Significance level from t test of standardized regression coefficients (β). [b] Significance level from F test of R^2.
$*p < .05$, two-tailed. $**p < .01$, two-tailed.

estimate (i.e., variance $\times$ [1 − α]; see Bollen, 1989). Then, various fully saturated models with all possible causal patterns linking the latent factors were tested for their significance. The structural model was continually adjusted based on modification indexes to find the model best fitting the data observed. The optimized solution showed a good model fit, $\chi^2(5, N = 108) = 9.84, p > .08$, normed fit index $= .96$, comparative fit index $= .98$, and goodness-of-fit index $= .97$.

At the second stage, on the basis of the significant paths identified at the first stage, we conducted a path analysis at the group level with 30 teams. Because of the small sample size at the group level, it was not possible to replicate the structural model at this level of analysis. Nevertheless, the best structural equation model identified at the individual level was identical to the most parsimonious path-analytic model at the group level as identified by the procedure described by Pedhazur (1982, pp. 617–628).

Figure 1 shows the resulting path model at the group level. The standardized path coefficients appearing in Figure 1 were obtained through a series of multiple regression analyses. The path model demonstrates that both concurrence seeking and group identity significantly influenced

defective decision making but in opposite directions. Defective decision making seemed to be negatively associated with internal activities that were positively related to external activities. Finally, reported team performance was significantly predicted by both group identity and external activities. The present path model partially confirms the groupthink model that claims a causal flow from groupthink (i.e., concurrence seeking and group identity) via defective decision making to performance. In addition, this path model suggests that team activities perhaps mediate the relationship between groupthink and reported team performance.

Discussion

In this study we examined the groupthink model in the context of organizational teams facing crises. The results show that both concurrence seeking and defective decision making were not significantly associated with reported team performance. Surprisingly, some symptoms of groupthink (i.e., group identity) were positively and significantly related to reported team performance, a pattern that directly negates most of the previous research on groupthink. The results also demonstrate that behavioral functions, such as internal and external activities, had greater potential for influencing team performance than cognitive decision processes, such as concurrence seeking and defective decision making. Furthermore, the path model implied that those behavioral functions can mediate the relationship between the decision processes and team performance.

These results indicate that groupthink may have novel implications for organizational teams. Interestingly, several groupthink symptoms (i.e., group identity), such as the illusion of invulnerability, belief in inherent group morality, and illusion of unanimity, produced unexpected results: (a) negative correlations with concurrence seeking and defective decision making and (b) positive correlations with both internal and external team activities and with reported team performance. These correlation patterns of group identity
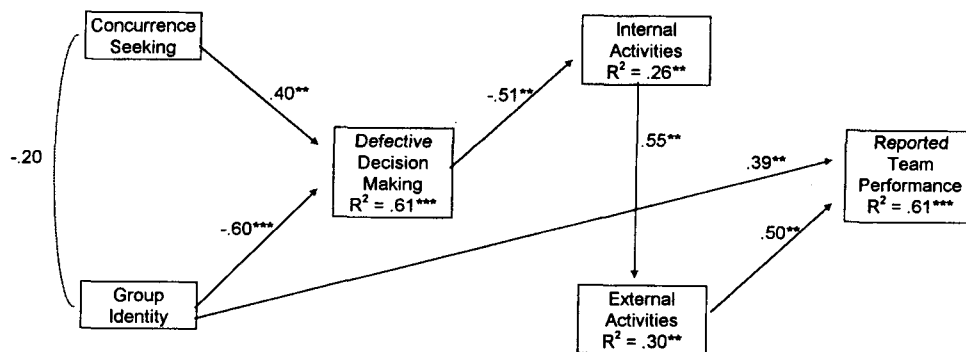

Figure 1. Path-analytic model conducted at the team level ($N = 30$). Coefficients appeared are standardized regression coefficients. $**p < .01$. $***p < .001$.

were too systematic and too strong to be simply explained away as measurement errors.

On the one hand, these unexpected results might be attributed to the research design that includes retrospective data collection, thus allowing participants to reconstruct their experiences. For example, a successful resolution of a crisis can induce post hoc beliefs that team members were competent, ethical, and solid with strong unity among members, whereas what they really experienced was the opposite. Therefore, our data are subject to fundamental attribution errors or halolike errors on the part of participants. In summary, our findings should be interpreted with full consideration of the retrospective, cross-sectional nature of the data.

On the other hand, the unexpected results may have a meaningful message to communicate. The positive effect of groupthink (i.e., group identity) may have substantive causes that have not been addressed in groupthink literature. In fact, the engendered feelings of invulnerability, morality, and unanimity can facilitate organizational teams' performance by promoting morale and confidence, which, in turn, can invigorate motivational forces among team members. Moreover, those feelings may boost the energy level of a team, which may be crucial for the laborious task of decision implementation. In other words, team members' cognitive inclinations that are based on group identity can provide a source of emotional solidarity and high morale that strengthen the members' motivation to persist.

Two related concepts seem to reinforce this substantive account of the positive effects of groupthink in organizational teams: collective efficacy and group identity. The term *collective efficacy* refers to "perceptions regarding a team's capability to perform in a particular situation" (Bandura, 1986, p. 188). The sense of invulnerability, morality, and unanimity perceived by team members may reflect their judgment of the overall team ability to act and engender a sense of collective competence (Zaccaro, Blair, Peterson, & Zazanis, 1995). Thus, collective efficacy, which is an extension of self-efficacy to the group level (Bandura, 1982, 1986), might be the underlying mechanism explaining the unexpected beneficial effects of groupthink.

On the other hand, from a social identity maintenance perspective of groupthink,

> Groupthink can be viewed as a process by which group members attempt to maintain a shared positive view of the functioning of the group in the face of threat. . . . [There are] interesting parallels between the symptoms of groupthink and the tactics of social identity maintenance or enhancement. (Turner et al., 1992, p. 789)

Group categorization and the maintenance of a positive group image supplies team members with a motivational basis for working together and collectively coping with external threats. Furthermore, positive group identity might induce group confidence and lack of defensiveness that allow the group to seek and consider criticisms from outside the group, a tendency that may enhance external activities. One interesting possibility here is that group identity and team performance can have an inverse U relationship. That is, as group identity increases from low to moderate, team performance may be improved for the reasons presented earlier. However, when group identity increases from moderate to high, team performance may deteriorate for the reasons generated by Janis (1982).

One important feature of this study was the comparison of the quality of decision processes (i.e., concurrence seeking and defective decision making) and that of implementation (i.e., internal and external activities). As expected, the quality of implementation appeared to have more of an impact on reported team performance than the quality of decision processes. Moreover, the path modeling (see Figure 1) suggested a possibility that implementation quality (team activities) may mediate the loose connection between the quality of decision processes and team performance. The mediation by implementation quality might seem plausible because implementation is temporally closer to outcomes and thus might have a more direct effect on outcomes than decision processes. However, this kind of interpretation may not be warranted given the cross-sectional and retrospective nature of the data. Even so, at least theoretically, the possible mediation of the causal link between groupthink and outcome by implementation provides a promising route for revising the groupthink model (Aldag & Fuller, 1993) and for integrating groupthink into a general framework of problem solving (Bass, 1983; Elbing, 1978).

The results of this study provide several implications both for theory and practice and indicate a direction for revising the groupthink model, particularly concerning the disparate effects of the groupthink symptoms. The clear division of groupthink symptoms into two factors—Concurrence Seeking and Group Identity—raises the question about whether group think is a coherent phenomenon. Rather, groupthink could reflect a mixture of two or three distinctive group dynamics that are differentially experienced by members and have different implications for subsequent group activities and outcomes. One possibility is that there might be two dimensions of members' experience of groupthink: behavioral and subjective. In the present data, the items measuring concurrence seeking mainly involved behavioral aspects of groupthink, whereas the items measuring group identity included more subjective judgments. Furthermore, the effects of groupthink symptoms on team performance may depend on contexts such as tasks, goals, norms, stages of group development, and the group's hierarchical position within the organization. Obviously, these contextual variables offer a potential agenda for future research. Overall, future investigations should focus on antecedents and symptoms of groupthink, which constitute the core of the

groupthink model but have generated conflicting empirical results (Mohamed & Wiebe, 1996; Street, 1997).

In practical terms, the results of this study imply potential directions for effective team-level crisis management. First, the "prescription" concerning groupthink needs to be changed from the categorical objection that has typically been suggested in managerial textbooks. Because several symptoms of groupthink (i.e., the illusion of invulnerability, belief in inherent group morality, illusion of unanimity) were positively associated with team performance, it is possible that organizational teams can benefit from these symptoms in terms of enhanced group identity and collective efficacy, especially at the later stage of problem solving. In addition, our results suggest that external activities should be the focus of crisis intervention because they seem to be more critical for team performance than internal activities and because typical responses to a crisis are characterized by enhanced internal relations with diminished relations with external agents (Staw, Sandelands, & Dutton, 1981).

A more fundamental question raised by this study is the dynamics between cognitive and behavioral functions or between decision making and implementation. The two functions seem to continually and reciprocally influence each other. Obviously, a factor affecting the decision-making process is the implementability of alternatives. Likewise, actions taken during implementation are guided and constrained by ideas, beliefs, and feelings generated in the phase of decision making. Currently, researchers do not yet have a model explaining how groups integrate these various aspects of their functioning. A complete conceptual framework that integrates thoughts, feelings, and actions would be particularly beneficial for a better understanding of team performance in organizations.

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Appendix A

List of Constructs and Corresponding Items

Concurrence Seeking (Groupthink Factor 1)

During the crisis event:
1. Members criticized others who raised questions concerning the selected solution.
2. When new information was contradictory to our decision, we tried to rationalize our decision.
3. Most members did not raise objections in order to maintain unity of my team.

Group Identity (Groupthink Factor 2)

During the crisis event:
1. We believed that our solution was right in the face of ethical consideration.
2. All members completely agreed to the selected solution.
3. We were confident that we could produce high-quality solutions.

Symptoms of Defective Decision Making

During the crisis event:
1. My team surveyed as many alternatives as possible to solve the problem (R).
2. My team surveyed as many objectives as possible to solve the problem (R).
3. My team did not reevaluate our solution for unforeseen risks after we originally adopted it.
4. My team put effort to obtain expert advice or qualified information from outside the team (R).
5. My team considered the advice of outsiders even when it was contrary to our preferred solution (R).
6. My team developed contingency plans to be used if our first solution did not work (R).

Internal Activities

During the crisis event:
1. The leader of our team facilitated open communication among members.

(Appendix continues)

2. We used monetary and material resources available to us.
3. We freely communicated among members to share relevant information.

External Activities

During the crisis event:
1. We communicated with other teams within our organization effectively.
2. We communicated with executive managers effectively.
3. We obtained information and other resources from other teams within our organization.

4. We obtained endorsement and support from executive managers.

Team Performance

1. We could resolve the crisis with efficiency in terms of cost.
2. The crisis was resolved in a way that moved us toward our goal.
3. We are satisfied with the results of the crisis resolution.
4. Overall, we coped with the crisis effectively.

Note. (R) = reverse-scored items.

Appendix B

Summary of Crisis Cases Included

1. Fire at a franchise gas station
2. Strengthened governmental regulation of real estate business
3. Delay in gas shipment due to typhoon
4. Car accident before a major event
5. Oil leakage due to engineering problems
6. Increase in the international price of oil
7. Transferring wrong information about new branches
8. Financial strain due to overinvestment[a]
9. Employees' resistance to a new mainframe computer
10. Conflict between headquarters and the branches[a]
11. Business environment shifts due to the gulf war
12. Sudden closure of a main bank
13. Quality problem due to frequent turnover
14. Illegal marketing by a subcontractor
15. Media coverage of price cheating
16. Sudden cancellation of a business plan by the CEO
17. Change in the governmental regulation of retailing
18. Governmental intervention on land utilization

19. Claims raised by a dissatisfied consumer association
20. Miscommunication among planning teams
21. New branch opening by a competitor
22. Conflict among team members due to the lack of group identity
23. Governmental regulation of abnormal consumption patterns
24. Pressure for cost reduction
25. Conflict between line and staff teams
26. Low sales of a new product leading to a huge inventory back-up
27. Unfavorable decline in the cost of gas and electricity
28. Movement of a store to a new location

[a] Described by two teams from the same organization