

## Escalation of Commitment in Individual and Group Decision Making

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Previous research (cf. B. M. Staw, *Academy of Management Review*, 1981, 6, 577-587) has found that when managers are given negative feedback on an initial individual investment decision, they allocate more additional funds to that investment if they, rather than another member of their organization, made the initial allocation decision. Justification is thought to underlie this phenomenon. This study explored commitment in group and individual decisions and examined the plausibility of dissonance processes as the mediator of escalation of commitment. One hundred eighty-three individuals participated in a role-playing exercise in which personal responsibility for an initial decision was manipulated for groups and individuals. As expected, escalation of commitment occurred for both groups and individuals. In support of a dissonance explanation, dissonance processes did vary as a function of the personal responsibility manipulation, and individual variation in dissonance responses accounted for a substantial portion of variance in allocation behavior beyond that accounted for by the experimental manipulations. The results concerning dissonance processes suggest a number of ways in which escalation can be reduced in individuals and groups.

The escalation of commitment to a course of action that is failing or incurring great costs has recently become a topic of interest among decision researchers (Bazerman, Beekun, & Schoorman, 1982; Brockner, Shaw, & Rubin, 1979; Conlon & Wolf, 1980; Fox & Staw, 1979; Staw, 1976, 1981; Staw & Ross, 1978; Teger, 1979). Individuals who are personally responsible for negative consequences consistently commit the

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greatest amount of resources to a previously chosen course of action. While research on this topic has focused exclusively on the individual tendency to escalate, examples of escalation of a commitment commonly involve decision making groups. America's involvement in Vietnam, for instance, is often cited as a classic example of escalation (Teger, 1979). Policymakers of that time gradually increased the nation's commitment in such a manner that no major political force would retrospectively argue that the actions taken were rational. Because important industrial, political, and military decisions are rarely made by a single individual, and the consequences of escalation for decision making behavior can be far-reaching, this study was designed to explore the possibility that escalation might exist in group decision making.

The tendency for individuals to escalate commitment of resources following negative feedback concerning a previous related allocation was initially demonstrated in a study by Staw (1976). One group of subjects (high responsibility) was asked to allocate research and development funds to one of two operating divisions of an organization. The subjects were then told that after 3 years the investment had either proven successful or unsuccessful and that they were faced with a second allocation decision concerning the division to which they had previously given funds. A second group (low responsibility) was told that another financial officer of the firm made a decision that had been either successful or unsuccessful (the same content information as provided to the previous group of subjects) and that they were to make a second allocation of funds concerning that division.

When the outcome of the previous decision was negative (an unsuccessful investment), high responsibility subjects allocated significantly more funds to the original division in the second allocation than did low responsibility subjects. For successful initial decisions, the amount of money allocated in the second decision was not related to responsibility. Given that the escalation of commitment occurred only for high responsibility subjects who made a previously unsuccessful decision, Staw (1976) concluded that the mechanism underlying escalation in individuals is a cognitive dissonance (Festinger, 1957) or self-justification (Aronson, 1968) process. That is, the increase in allocation following negative outcomes is an attempt to make previous behavior appear rational. Following this line of reasoning, the cognitive processes underlying the tendency to escalate should be those that justify or contribute to the rationality of the previous decision.

In extending the examination of escalating commitment to groups, it must be realized that groups differ from individuals not only in sheer number, but due to dynamic interactions among individuals. While the potential for productivity in groups is increased, the potential for in-

creased process losses is also accelerated (Steiner, 1972). For example, in the escalation paradigm, additional members in the decision making unit may increase the potential to identify and eliminate the nonoptimal committing effects of the first decision. Operating against this added potential is a predicted increase in commitment to the initial decision due to the previous group support for that decision. While the former effect predicts a decrease in escalation, the latter effect predicts an increase in the tendency to escalate. The net result of this analysis implies that some groups will escalate more than individuals, while other groups will reduce the commonly observed individual tendency to escalate.

Despite these differences, there are many ways in which the group closely resembles the individual. Thus, it becomes necessary to specify the conditions when the justification process underlying escalation in individuals is duplicated in groups. In the individual case, Staw (1976) has argued that dissonance is the underlying driving force behind the non-rational escalation of commitment. This analysis suggests that *groups should exhibit escalation patterns similar to individuals to the extent that the group as a unit experiences dissonance*. If groups do not exhibit similar dissonance, the logic predicting the escalation of commitment as a group phenomenon would be broken, and groups might be immune from the nonrational escalation of commitment.

Two lines of research support the contention that escalation of commitment will occur in groups. In the "risky shift" literature, considerable evidence (cf. Cartwright, 1973; Vinokur, 1971) has been added to Stoner's (1961) initial demonstration that groups make riskier decisions than the mean of decisions made by individuals. In the escalation paradigm, the decision not to escalate can be viewed as risk averse—accepting the *sure* loss. In contrast, the decision to escalate can be viewed as risk seeking—risking an even bigger loss in order to avoid the initial loss. Since groups are hypothesized to be riskier than individuals, groups would be predicted to escalate more than individuals.

The "groupthink" literature (Janis, 1972; Longley & Pruitt, 1980) also indirectly addresses the tendency to escalate commitment in group decision making. Janis (1972) defines groupthink as a mode of thinking in which groups engage "when members' striving for unanimity override their motivation to realistically appraise alternative courses of action" (p. 9). Once unanimity is reached by investing in a particular division (in Staw's experiment), the easiest way to protect this unanimity is to stay committed to the group's decision. Faced with some negative feedback, members will not suggest abandonment of the earlier course of action, for this breaks the existing unanimity that exists. Further, Janis (1972) suggests that groups will feed on an "illusion of invulnerability" and will exhibit "collective rationalization" of their decision. When the negative

feedback occurs, the group may still feel invulnerable ("we can turn this thing around") and collectively rationalize the new data. Thus, the group-think hypothesis leads to the belief that cohesive groups will escalate to a greater extent than individuals. To the extent responsibility increases the cohesiveness of a group, this effect should be greater for high- than low-responsibility groups. Given this support, the first purpose of this investigation was to show that escalation of commitment occurs for high-responsibility groups as well as high-responsibility individuals.

The second purpose of this investigation concerns the role of dissonance in this process. In the individual case, Staw (1976) has argued that dissonance is the underlying driving force behind the nonrational escalation of commitment. Although certainly not the only potential explanation, it has been readily accepted as the most likely one (Conlon & Wolf, 1980; Fox & Staw, 1979; Staw & Ross, 1978). In the present study we want to determine to what extent dissonance processes provide a plausible explanation for what occurs in the escalation of commitment. Without purporting to test the causal role of dissonance in this process, we are testing the viability of one particular causal path that leads to the escalation of commitment. Given the escalation paradigm initiated by Staw (1976), this means that the manipulation of responsibility should result in varying amounts of dissonance, and that the amount of dissonance should correspond with money allocation (the measure of escalation of commitment). Escalation of commitment patterns of groups should be similar to those of individuals if the group, too, experiences dissonance. For both individuals and groups, then, we will examine dissonance processes as a potential mechanism underlying the tendency to escalate commitment.

Following Wicklund and Brehm's (1976) version of dissonance theory, we examined the dissonance processes underlying escalation by looking at two sets of variables: those considered important in the arousal of dissonance and those considered important in the reduction of dissonance. Two factors logically contributing to the arousal of dissonance are how committed subjects were to the initial decision (Commitment), and the degree to which subjects saw the two decisions as being related (Relatedness). In line with dissonance theory, we expected that greater commitment to a negative decision would result in greater need for justification which would, in turn, be reflected in greater subsequent allocations. Concerning relatedness, dissonance should be aroused to the extent that the two decisions are seen as related, because it is only then that the decision not to allocate money at the second decision time would be seen as dissonant with the initial allocation decision.

Two factors logically contributing to the reduction of dissonance are subjects' confidence in their ability to have made the optimal decision at

the second decision point (Confidence) and how much they thought additional funds could "turn the situation around" (Reversal). Confidence that one made the right decision and the belief that the new decision would vindicate past wrongs are both cognitions that make the allocation of additional resources consonant with the initial decision. These cognitions contribute to the expectation that the ultimate rationality of the original decision will be demonstrated.

In the present study, groups and individuals made decisions under conditions of high and low responsibility. We expected escalation to occur for both high-responsibility individuals and groups. This should be evident in greater allocations to the unsuccessful previously chosen division at the second decision point. Further, to demonstrate the viability of dissonance as the underlying mechanism in escalation, we expected dissonance arousal and reduction processes to be stronger for decision makers who made the initial decision (High Responsibility) than for those who did not (Low Responsibility). Dissonance levels, then, should be greater for high-responsibility subjects than for low-responsibility subjects. That is, high-responsibility subjects should report more commitment, see greater relatedness, report more confidence, and have greater expectations for reversal than low-responsibility subjects. Finally, dissonance arousal and reduction are expected to vary within experimental conditions. Consequently, if dissonance is a viable explanation of escalation, the variability in dissonance measures should account for variance in the tendency to escalate, beyond that accounted for by the experimental manipulations.

## METHOD

### *Subjects and Design*

Subjects were 183 male undergraduates at the University of Texas at Austin who participated in partial fulfillment of the requirements of their introductory psychology course. Subjects were separated randomly into groups of four and assigned to one of four conditions in a 2 (Individual vs Group)  $\times$  2 (High-Responsibility vs Low-Responsibility) design.

### *Procedure*

Upon arrival, subjects were given some introductory information, separated into groups, and taken to smaller rooms. They were then given a brief written overview of the task, modified from Staw (1976). The first variable of interest, Social Unit, was whether the decision was to be made individually or in a group. Subjects in the Group condition were told that the study investigated the use of information in managerial group decision making. In addition, they were told they would be playing the role of one of the members of a management group whose task was to make financial

decisions in a large company. Using a similar cover story, subjects in the Individual condition were told they would be playing the role of a financial vice-president.

All subjects were given the history of a hypothetical company, Adams and Smith, Inc., which was divided into two divisions: Consumer and Industrial Products. A variety of descriptive data about each division was provided. Each division previously received research and development (R&D) funding at a rate of \$10 million every 3 years. The directors recently decided to make an additional \$10 million available for R&D. They specified, however, that the additional funds should be allocated to only one of the two product divisions.

Responsibility was manipulated at this phase of the experiment. Low-Responsibility subjects were told that the previous management team (Groups) or financial vice-president (Individuals) had been made responsible for the allocation decision. These subjects were told that one of the divisions (consumer or industrial was randomly chosen) was allotted the additional funding. It was then explained that 3 years had passed and the funding decision was up for reevaluation. Furthermore, they were told that they were replacing either the management team due to a plane crash (Groups) or the financial vice-president due to a fatal heart attack (Individuals). The High-Responsibility subjects, on the other hand, were told that they were the management team (Groups) or financial vice-president (Individuals) responsible for the initial allocation decision (described above). These subjects were asked to consider the information about each division provided, and select one of the two divisions. Groups were given no structure concerning how they reached the decision, except that they were told that the decision must be unanimous. Individuals and groups were allotted an unlimited amount of time to make the initial decision. All individuals and most groups made the decision in 20 min or less.

All subjects were then presented with descriptive data (sales and earnings) for the 3-year period since the initial decision. This data showed a steady net loss in earnings for whichever division was chosen previously. Furthermore, it was explained that in response to a request from both divisions for additional R&D funds, the directors had created a \$20 million general fund for R&D to be distributed according to the decision of the management team (Groups) or the financial vice-president (Individuals). Subjects were asked to distribute the \$20 million according to the number of dollars to be given to the previously chosen division and the amount of funds to be reserved for other uses. The dependent variable was the amount of funds allocated in the second decision to the initially chosen division. Again, groups were given no structure concerning how they reached a decision, with the exception that they were told that the decision must be unanimous. Individuals and groups were again allotted

an unlimited amount of time for this decision, and most needed no more than 20 min.

Upon making the final allocation decision, all subjects completed a questionnaire containing 9-point rating scales tapping each of the four process variables. "Commitment" was assessed by the question: "To what extent did your group (you) feel committed to the 1971 decision?" (1 = not at all committed; 9 = very committed); "Relatedness" was measured by the question "Did the \$10 million allocation to the chosen division in 1971 make your group (you) more or less likely to allocate money to the same division in 1974?" (1 = less likely, 5 = did not affect our (my) decision, 9 = more likely). "Confidence" was assessed by the question: "How confident are you in your group's (your) ability to have made the optimal decision in 1974?" (1 = not at all confident, 9 = extremely confident). Finally, "Reversal" was measured by the question: "After viewing the results of the 1971 decision, to what extent did your group (you) feel additional funds could 'turn the situation around'?" (1 = additional funds would not affect outcome, 9 = additional funds would greatly affect outcomes).

The "Commitment" and "Relatedness" variables operationalize dissonance arousal, while the "Confidence" and "Reversal" variables operationalize dissonance reduction. To the extent that the individual (group) felt committed to the 1971 decision and felt that the two decisions were related, dissonance should have been aroused. To the extent that the individual (group) felt confident in his/her decision and believed that the situation could be turned around, subjects could reduce dissonance by allocating additional funds.

The measures of each of these variables for groups consisted of taking the average of the four responses obtained from group members. Following completion of the questionnaire, subjects were thoroughly debriefed and dismissed.

## RESULTS

A  $2 \times 2$  ANOVA on amount of funds allocated to the previously chosen division yielded a statistically significant main effect for Responsibility,  $F(1,71) = 15.45$ ,  $p < .001$ , and no other effects. As expected, high-responsibility groups and individuals allocated more funds at the second decision point than low-responsibility groups and individuals. Cell means for this analysis are presented in Table 1.

For the four variables designed to measure processes underlying escalation, nonhomogeneity of variance as assessed by the  $F_{\max}$  test between Individual and Group conditions was expected and found to exist, since averaging group member responses artificially reduced the variance of these measures in the Group conditions. Consequently, comparisons

TABLE 1  
FUNDS ALLOCATED AND DISSONANCE MEASURES AS A FUNCTION OF SOCIAL UNIT  
AND RESPONSIBILITY

Social unit responsibility	Condition			
	Individual		Group	
	Low	High	Low	High
Number of units	20	19	18 <sup>a</sup>	18 <sup>a</sup>
Allocation of funds	10.77(5.21) <sup>b</sup>	13.42(3.37)	7.81(4.23)	13.19(4.40)
Commitment	5.30(2.45) <sup>c</sup>	7.74(1.37)	4.13(1.04)	7.19(0.74)
Relatedness	5.10(2.34)	6.42(1.50)	3.75(2.04)	6.40(1.50)
Reversal	6.15(1.66)	7.21(1.96)	4.85(1.94)	6.53(1.09)
Confidence	6.35(2.39)	7.74(1.10)	6.82(0.57)	7.46(0.53)

<sup>a</sup> Each group observation is based on the data from 4 subjects.

<sup>b</sup> Allocation entries are cell means in millions of dollars; possible range, 0–20. Numbers in parentheses represent standard deviations.

<sup>c</sup> Entries for process variables are mean ratings on a 9-point scale; possible range, 1–9.

between high- and low-responsibility subjects were made separately within Individual and Group conditions. Before examining the impact of commitment, relatedness, reversal, and confidence on allocation behavior, it is instructive to look at the intercorrelations among these measures. Due to the nonhomogeneity of variance, these correlations are provided separately for groups and individuals in Table 2. Given that with few exceptions these dissonance measures vary together, rather than independently, this data strongly argues for the existence of convergent validity of our measures of a state of dissonance.

As expected, evidence of underlying dissonance processes was present more often for both individual and group decision making units in which escalation occurred. Comparisons within individuals and within groups showed high-responsibility subjects made consistently higher ratings than low-responsibility subjects on each of commitment (Individual  $t(37) = 3.8, p < .01$ ; Group  $t(34) = 8.67, p < .01$ ), relatedness (Individual  $t(37) = 2.09, p < .05$ ; Group  $t(34) = 4.45, p < .01$ ), reversal (Individual  $t(37) = 1.83, p = .08$ ; Group  $t(34) = 3.21, p < .01$ ), and confidence (Individual  $t(37) = 2.31, p < .05$ ; Group  $t(34) = 3.49, p < .01$ ). In summary, high-responsibility Groups and Individuals experienced higher arousal and reduction of dissonance than low-responsibility subjects. The means for all of these variables are shown in Table 1.

To test the predictive ability of the dissonance measures in accounting for variance beyond that accounted for by experimental condition, social unit and responsibility were regressed on funds allocated ( $R^2 = .20, F(2,72) = 8.82, p < .01$ ), and residuals were obtained. The four disso-



TABLE 2  
INTERCORRELATIONS OF THE FOUR DISSONANCE VARIABLES

	Relatedness	Confidence	Reversal
		Group data	
Commitment	.683*** (36)	.512*** (36)	.603*** (35)
Relatedness		.387** (36)	.747*** (35)
Confidence			.488*** (35)
		Individual data	
Commitment	.296* (39)	.614*** (39)	.250 (39)
Relatedness		.050 (39)	.346* (39)
Confidence			.273* (39)

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

Note. *N*'s are in parentheses.

nance variables were then regressed against these residuals, the unexplained variance in allocated funds. This resulted in the following regression:

$$\epsilon = 2.434 + .286 \text{ (Commitment)} + .268 \text{ (Relatedness)} \\ \text{(ns)} \qquad \qquad \qquad (p < .05) \\ + .366 \text{ (Confidence)} + .290 \text{ (Reversal)} + \epsilon', \\ (p < .05) \qquad \qquad \qquad (p < .05)$$

$$R^2 = .55, F(4,70) = 7.557, p < .01.$$

Commitment did not contribute significantly to the previously unexplained variance, but statistically significant contributions were made by the measures of Relatedness, Confidence, and Reversal. While Commitment was earlier stated to be significantly higher for high-responsibility subjects than for low-responsibility subjects, Commitment did not significantly account for additional within cell variation. Relatedness, Confidence and Reversal, however, varied within experimental conditions, and this additional variation contributed to the amount of funds allocated. Thus, individual differences in dissonance contributed significantly to the amount of funds allocated, beyond the variance accounted for by the responsibility manipulation.

## DISCUSSION

The results of this study suggest that decision making groups, as well as individual decision makers, will attempt to justify a decision that has negative outcomes when they, rather than other groups or individuals, are responsible for that decision. This was revealed in greater allocations to the unsuccessful division by high-responsibility subjects. In addition, high-responsibility groups and individuals differed from low-responsibility subjects in (1) their commitment to the initial decision; (2) their perceptions of the two decisions as being related; (3) their confidence in their second decision; and (4) their belief that additional funds would "turn the situation around." These results suggest that high-responsibility subjects felt a greater dissonance arousal, as well as an increased motivation to reduce dissonance; therefore, it is plausible that dissonance processes underlie escalation of commitment.

In further support of this position, the residual analysis indicated that individual variation in dissonance arousal and dissonance reduction account for a substantial proportion of variance in allocation behavior, beyond that accounted for by the experimental manipulations. That is, the high- vs low-responsibility manipulation is only part of the reason dissonance processes operate in group decision making. We found that not only is more dissonance evident, these additional dissonance processes also contribute to allocation behavior. This provides convergent validation to the arguments which define dissonance as an underlying process in the escalation paradigm (Staw, 1981).

We are suggesting here that groups and individuals appear to be similarly affected by dissonance. While this suggests some parallelism between individual and group escalation of commitment, we should not conclude that individuals and groups do not differ. We have attempted to show here that groups as well as individuals show evidence of escalation of commitment, and that dissonance processes may underlie this operation in each. This is not to say that there are not other factors that contribute differentially to this escalation in individuals and groups, or that even the dissonance processes present operate in the same manner. Although such an analysis would be interesting, the current data are not designed to respond to these issues.

The results of the experiment provide several alternatives for the reduction of escalation. Assuming that group and individual escalation of commitment is a function of underlying dissonance processes, the most obvious approaches are those that counterattack this dissonance. In practice this is not so straightforward, as it suggests escalation will occur whenever anyone receives negative feedback about any decision they had a choice about, are responsible for, or are committed to. One approach to the elimination of escalation would require different individuals or groups to make consecutive decisions, thereby ensuring low responsi-

bility. In contrast, it is important to realize that continuity in organizations may be critical. While a bank loan officer may have a tendency to escalate his/her commitment to a "bad" loan that he/she previously made (Lewicki, 1980), having bank loan officers maintaining contact with their personal customers may be critical to developing the relationships a bank needs for survival. We argue not for the elimination of all consecutive decisions by the same individual, but for the realization of the trade-offs that exist.

An alternative suggestion—one that may not eliminate escalation, but might help to reduce it—involves inducing decision makers to examine decisions in a more independent manner. The results of the relatedness variable in our analyses indicate that escalation occurs most among subjects who are more likely to consider the previous decision in making the second one. It is likely that escalation might be at least partially due to the failure to ignore irrelevant historical information—past outcomes that cannot be changed and should not enter into future decisions. If this is true, training in discounting sunk costs might reduce escalation.

A less obvious alternative to the reduction of escalation, based on the comparison of groups and individuals, offers insight into how to alleviate escalation in decision making groups. It is possible that the escalation of commitment in groups occurs because the categorization of people into a group leads the members to see themselves as a unit (Heider, 1958). High-responsibility group members, then, should feel committed to the group and the group decision, and so should feel dissonance as a result of the unsuccessful group decision. This feeling of groupness that accompanies dissonance at the group level may also be the mechanism responsible for the occurrence of groupthink. In line with Janis (1972), then, we suggest that breaking up the cohesiveness of a group might to some extent serve to hinder escalation. This is because if members do not feel responsible for the group decision, they will not need to reduce any group dissonance. For example, if a group is responsible for a decision but the members do not feel "involved" in the group, the group feeling will not be present and group dynamics may change. Rather than a justification process taking place in the group unit, added conflict and individual contributions may actually lead to a decrease in escalation. Using Steiner's (1972) framework, if we can eliminate this group cohesiveness that increases the need for justification, while at the same time maintain the added mind power of group processes, groups may offer greater potential for the reduction of escalation than individuals.

Following this line of reasoning, if only a portion of the people required to make the second decision were responsible for the initial allocation, the group as a whole may not experience as much dissonance, and the conflict between high- and low-responsibility members of that group might be enough to prevent escalation. Although these alternatives may

sound reasonable in light of this type of analysis, we must caution against the breakdown of cohesion as a solution to the nonrational escalation of commitment. Cohesiveness, and involvement in a group, after all, are crucial factors in maintaining group morale and dedication. As Longley and Pruitt (1980) point out, we must be careful in losing the benefits of group cohesion in order to obtain specific improvements in group decision process.

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