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The Escalation of Commitment To a Course of Action

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There are many instances in which individuals can become locked into a costly course of action. Because it is often possible for persons who have suffered a setback to recoup their losses through an even greater commitment of resources to the same course of action, a cycle of escalating commitment can be produced. In this paper, I review recent research on the escalation of commitment and try to integrate its complex and often conflicting determinants.

Many of the most difficult decisions an individual must make are choices not about what to do in an isolated instance but about the fate of an entire course of action. This is especially true when the decision is whether to cease a questionable line of behavior or to commit more effort and resources into making that course of action pay off. Do individuals in such cases cut their losses or escalate their commitment to the course of action? Consider the following examples:

1. An individual has spent three years working on an advanced degree in a field with minimal job prospects (e.g., in the humanities or social sciences). The individual chooses to invest more time and effort to finish the degree rather than switching to an entirely new field of study. Having obtained the degree, the individual is faced with the options of unemployment, working under dissatisfying conditions such as part-time or temporary status, or starting anew in a completely unrelated field.

2. An individual purchased a stock at $50 a share, but the price has gone down to $20. Still convinced about the merit of the stock, he buys more shares at this lower price. Soon the price declines further and the individual is again faced with the decision to buy more, hold what he already has, or sell out entirely (case taken from personal experience).

3. A city spends a large amount of money to improve its sewer and drainage system. The project is the largest public works project in the nation and involves digging 131 miles of tunnel shafts, reservoirs, and pumping stations. The excavation is only 10 percent completed and is useless until it is totally finished. The project will take the next 20 years to complete and will cost $11 billion. Unfortunately, the deeper the tunnels go, the more money they cost, and the greater are the questions about the wisdom of the entire venture. ["Money down the drain," 1979]

4. A company overestimates its capability to build an airplane brake that will meet certain technical specifications at a given cost. Because it wins the government contract, the company is forced to invest greater and greater effort into meeting the contract terms. As a result of increasing pressure to meet specifications and deadlines, records and tests of the brake are misrepresented to government officials. Corporate careers and company credibility are increasingly staked to the airbrake contract, although many in the firm know the brake will not work effectively. At the conclusion of the construction period, the government test pilot flies the plane; it skids off the runway and narrowly misses injuring the pilot. [Vandiver, 1972]

5. At an early stage of the U.S. involvement in the Vietnam War, George Ball, then Undersecretary of State, wrote the following in a memo to President Johnson: "The decision you face now is crucial. Once large numbers of U.S. troops are committed to direct combat, they will begin to take heavy casualties in a war they are ill equipped to fight in a noncooperative if not

> downright hostile countryside. Once we suffer large casualties, we will have started a wellnigh irreversible process. Our involvement will be so great that we cannot—without national humiliation—stop short of achieving our complete objectives. Of the two possibilities, I think humiliation would be more likely than the achievement of our objectives—even after we have paid terrible costs." [Sheehan & Kenworthy, 1971, memo dated July 1, 1965]

As evidenced in the above examples, many of the most injurious personal decisions and most glaring policy disasters can come in the shape of sequential and escalating commitments. Judging by popular press accounts and the observation of everyday events, it appears that individuals may have a tendency to become locked in to a course of action, throwing good money after bad or committing new resources to a losing course of action. The critical question from an analytical point of view is whether these everyday examples denote a syndrome of decisional errors or are just a post hoc reconstruction of events. That is, do decisions about commitment to a course of action inherently lead individuals to errors of escalation or are we, as observers, simply labeling a subset of decisions whose outcomes turned out to be negative?

The Fallible Decision Maker

In the psychological literature, there have been two primary ways of explaining decisional errors. One is to point to individual limitations in information processing [Ross, 1977; Slovic, Fishhoff, & Lichtenstein, 1977; Tversky & Kahneman, 1974]. Individuals are limited in their ability and desire to search for alternatives and input information, recall information from memory, and to compare alternatives on multiple criteria. Because of the limitations to individual ability at each phase of cognitive information processing, the end-product of individual decisions may optimize neither personal utility nor collective welfare. A second way to explain decisional errors is to attribute a breakdown in rationality to interpersonal elements such as social power or group dynamics. Pfeffer [1977] has, for example, outlined how and when power considerations are likely to outweigh more rational aspects of organizational decision making, and Janis [1972] has noted many problems in the decision making of policy groups. Cohesive groups may, according to Janis, suppress dissent, censor information, create illusions of invulnerability, and stereotype enemies. Any of these by-products of social interaction may, of course, hinder rational decision making and lead individuals or groups to decisional errors.

Although the limitations to rationality posed by the group dynamics and information processing literatures can be relevant to commitment decisions, they do not seem to capture the central element of the commitment dilemma. A salient feature of the preceding case examples is that a *series* of decisions is associated with a course of action rather than an isolated choice. The consequences of any single decision therefore can have implications about the utility of previous choices as well as determine future events or outcomes. This means that sunk costs may not be sunk psychologically but may enter into future decisions.

Under traditional models of economic rationality [e.g., Edwards, 1954; Vroom, 1964], resources should be allocated and decisions entered into when future benefits are greater than future costs. Losses or costs that may have been experienced in the past but that are not expected to recur should not (at least from a normative perspective) enter into decision calculations. However, individuals may be motivated to rectify past losses as well as to seek future gain. One source of this motivation may be a desire on the part of individuals to appear rational in their decision making. The literature on self-justification processes [e.g., Aronson, 1976; Festinger, 1957] supports this proposition and at least some of the tendency to escalate commitment may be explained by self-justification motives.

Research on the Escalation of Commitment

Self-Justification in Commitment Decisions

The largest and most systematic source of data on the justification of behavior is provided by the social psychological literature on forced compliance (see Wicklund & Brehm [1976] for an excellent review). Typically, in forced compliance studies an individual is induced to perform an unpleasant or dissatisfying act when no compensating external

rewards are present. It is generally predicted that individuals will bias their attitudes on the experimental task in a positive direction so as to justify their previous behavior [Festinger & Carlsmith, 1959; Pallak, Sogin, & Van Zante, 1974; Weick, 1964]. Such biasing of attitudes is most likely to occur when individuals feel personally responsible for negative consequences [Cooper, 1971] and when these consequences are difficult to undo [Brehm & Cohen, 1961; Staw, 1974].

In a series of research studies, my associates and I [Staw, 1976; Staw & Fox, 1977; Staw & Ross, 1978] also used a self-justification framework in investigating whether decision makers can become over committed to a course of action. However, the assumption underlying these studies was that individuals may go beyond the passive distortion of adverse consequences in an effort to rationalize a behavioral error. By committing new and additional resources, an individual who has suffered a setback could attempt to "turn the situation around" or to demonstrate the ultimate rationality of his or her original course of action.

In the first empirical test of an escalation effect [Staw, 1976], I used a simulated business case in which an administrator could recoup losses through the commitment of resources. While acting in the role of a corporate financial officer, business school students were asked to allocate research and development funds to one of two operating divisions of a company. Subjects were then given the results of their initial decisions and asked to make a second allocation of R&D funds. In this study, some participants also were assigned to a condition under which they did not make the initial allocation decision themselves, but were told that it was made earlier by another financial officer of the firm. The results of the experiment showed: (1) that subjects allocated more money to the declining rather than improving division, (2) that subjects allocated more money to the initially chosen division when they, rather than another financial officer, were responsible for the initial decision, and (3) there was a significant interaction such that subjects allocated more money under responsibility for negative consequences than would be expected by the two main effects acting alone. These findings supported the prediction that administrators may seek to justify an ineffective course of action by escalating their commitment of resources to it.

In a follow-up study [Staw & Fox, 1977], subjects were again assigned to both high- and low-responsibility conditions in the same type of experimental simulation. In this study, however, all subjects were run under a negative-consequences condition that persisted over three time periods. Time was extended to see if the effects of high personal responsibility would persist or whether commitment could be built up over time even though a decision maker may not have been responsible for the original course of action (e.g., the Nixon administration became committed to the Vietnam War although it did not initiate it).

The results of this second study were more complex and difficult to interpret than those of the previous one. Although the effect of personal responsibility was replicated when we simply considered Time 1 data, there was a significant decline in commitment over time for high-responsibility subjects, while low-responsibility subjects maintained or slightly increased their commitment. In explaining these results, we noted that commitment did not diminish as one might expect when individuals are given negative feedback or "punishment" over repeated trials. For example, when high commitment was followed by continued negative consequences, commitment was generally decreased, but when low commitment was followed by negative consequences, commitment was generally increased. Thus, it appeared from the data that individuals were actively attempting to probe and learn from the system over time.

The results of these two studies, when considered together, did not provide evidence for a totally self-justifying administrator. The replicated effect of personal responsibility demonstrated that self-justification may motivate the commitment of resources to a course of action. However, when choosing to commit resources, subjects did not appear to persist unswervingly in the face of continued negative results or to ignore information about the possibility of future returns. These inconsistencies led to a third study [Staw & Ross, 1978] designed specifically to find out how individuals process information following negative versus positive feedback.

In this third study, previous success/failure and causal information about a setback were both

experimentally varied. Results showed that subjects invested more resources in a course of action when information pointed to an exogenous rather than endogenous cause of a setback, and this tendency was most pronounced when subjects had been given a previous failure rather than a success. The exogenous cause in this experiment was one that was both external to the program in which subjects invested and was unlikely to persist, whereas the endogenous cause was a problem central to the program and likely to persist. These results can be interpreted as showing that individuals will reduce their commitment to a course of action where prospects for future gain are bleak, but that they will continue to invest large amounts of resources when provided an external cause of failure and some hope of recouping their losses. Unfortunately, individuals may selectively filter information so as to maintain their commitment to a policy or course of action [Caldwell & O'Reilly, 1980; Lord, Ross, & Lepper, 1979]. One only has to recall the public statements of policy makers during the Vietnam War to appreciate the tendency to *find* exogenous and nonrecurring sources of setbacks (e.g., monsoon rains, equipment failures, and lead time for training allies).

External vs. Internal Justification

Although research on commitment has emphasized the role of justification, these studies have chiefly tapped what could be labeled an *internal justification* process. When justification is considered primarily as an intra-individual process, individuals are posited to attend to events and to act in ways to protect their own self-images [Aronson, 1968, 1976]. But within most social settings, justification may also be directed externally. When faced with an external threat or evaluation, individuals may be motivated to prove to others that they were not wrong in an earlier decision and the force for such *external justification* could well be stronger than the protection of self-esteem.

Fox and I recently conducted an empirical demonstration of the effect of external justification [1979]. We hypothesized that administrators who are vulnerable to job loss or who implement a policy they know will be unpopular would be especially motivated to protect themselves against failure. In such cases where there is strong need for external justification, an administrator would most likely attempt to save a policy failure by enlarging the commitment of resources. To test this idea, we conducted a simulation in which business students were asked to play the role of administrators under various conditions of job insecurity and policy resistance. The effect of these manipulations on resource allocation decisions confirmed the hypothesis. When a course of action led to negative results, the administrators who were both insecure in their jobs and who faced stiff policy resistance were most likely to escalate their commitment of resources and become locked in to the losing course of action.

Norms for Consistency

In addition to the internal and external forms of justification, norms for consistency in action may be another major source of commitment. A lay theory may exist in our society, or at least within many organizational settings, that administrators who are consistent in their actions are better leaders than those who switch from one line of behavior to another. The possibility that there exists a shared norm for consistency in behavior is suggested by recent commentary in the popular press on the nature of leadership.

> In a sense, Carter seems at last to have experienced "his Bay of Pigs," the kind of crisis that historians tell us bares the true stuff of presidents, forcing them to search out the bedrock of their own convictions, to urge the nation toward the same conclusions, to make decisions that, if waffled later, could produce national trauma and personal political eclipse . . . . Leadership involves total belief and commitment. [Sidey, 1978]

> Carter has exacerbated many of the difficulties he has faced. His most damaging weakness in his first two years has been a frequent indecisiveness . . . . ["The State of Jimmy Carter," 1979]

> A President must, plainly, show himself to be a man made confident by the courage of his own clear convictions . . . . The American people find it easy to forgive a leader's great mistakes, but not long meanderings. [Hughes, 1978]

Evidence for a preference or norm for consistency is also seen in the results of a national political

survey. In a Gallup Poll on President Carter's popularity after his first year in office [Gallup, 1978], respondents who were dissatisfied with the president were asked why they felt this way. "Indecisiveness" was the second-most-frequent response given by the public and the only response that could be coded as a general pattern of behavior (the others were related to specific issues of the economy, foreign policy, campaign promises, etc.).

These survey and anecdotal data point to the possibility of an implicit theory of leadership [Calder, 1977; Pfeffer, 1977b] according to which effective administrators are fully committed to and steadfast in a course of action. In order to test for the existence of such a lay theory, Ross and I conducted an experiment on the reactions of individuals to selected forms of administrative behavior [Staw & Ross, 1980]. Subjects included practicing managers, undergraduates in business, and undergraduates in a psychology course. Each subject was asked to study a case description of an administrator's behavior. Manipulated in these case descriptions was consistency vs. experimentation in the administrator's course of action as well as the ultimate success or failure of the administrator's efforts. In the consistency conditions, the administrator was portrayed as sticking to *a* single course of action through a series of negative results. In the experimenting conditions, the administrator was portrayed as trying one course of action and, when positive results did not appear, moving to a second and finally third alternative (as an administrator might behave within Campbell's [1969] "experimenting society"). Ultimate success or failure of the administrator's actions was manipulated after two sets of negative results had been received by either the consistent or experimenting administrator.

Results showed that administrators were rated highest when they followed a consistent course of action and were ultimately successful. There was also a significant interaction of consistency and success such that the consistent-successful administrator was rated more highly than would be predicted by the two main effects of these variables. This interaction supported a predicted "hero effect" for the administrator who remained committed through two apparent failures of a course of action, *only to succeed in the end*. Finally, the effect of consistency on ratings of the administrator was shown to vary by subject group, being strongest among practicing administrators, next strong among business students, and weakest among psychology undergraduates. These results suggest not only that consistency in action is perceived to be part of effective leadership, but that this perception may be acquired through socialization in business and governmental roles.

Toward a Theoretical Model

From this review of the research conducted to date, it should be apparent that commitment is a complex process, subject to multiple and sometimes conflicting processes. Therefore, it may be helpful to consolidate in a single theoretical model the shape of the forces affecting commitment decisions, specifying their direction as well as possible effect. Such a model is presented in Figure 1.

The figure depicts four major determinants of commitment to a course of action: motivation to justify previous decisions, norms for consistency, probability of future outcomes, and value of future outcomes. Commitment research has concentrated on the first two of these determinants, and the latter are obviously the two accepted determinants of economic and behavioral decision making. It should be apparent from the foregoing review that commitment research has focused on the processes that may lead to departures from rational decision making, and that such "nonrational" forces can often conflict or interact with traditional elements of rationality. After reviewing the major antecedents of commitment, I will address some of the complexities and interactive features of the commitment process.

In Figure 1, motivation to justify decisions can be seen as a function of responsibility for negative consequences as well as both internal and external demands for competence. As depicted in the model, responsibility for negative consequences leads to a motivation to justify previous decisions, if there is a need to demonstrate competence to oneself or others. As already noted, the traditional literature on dissonance and self-justification considers only the desire of individuals to be correct or accurate in decision making for reasons of self-esteem, but the need to demonstrate competence to external

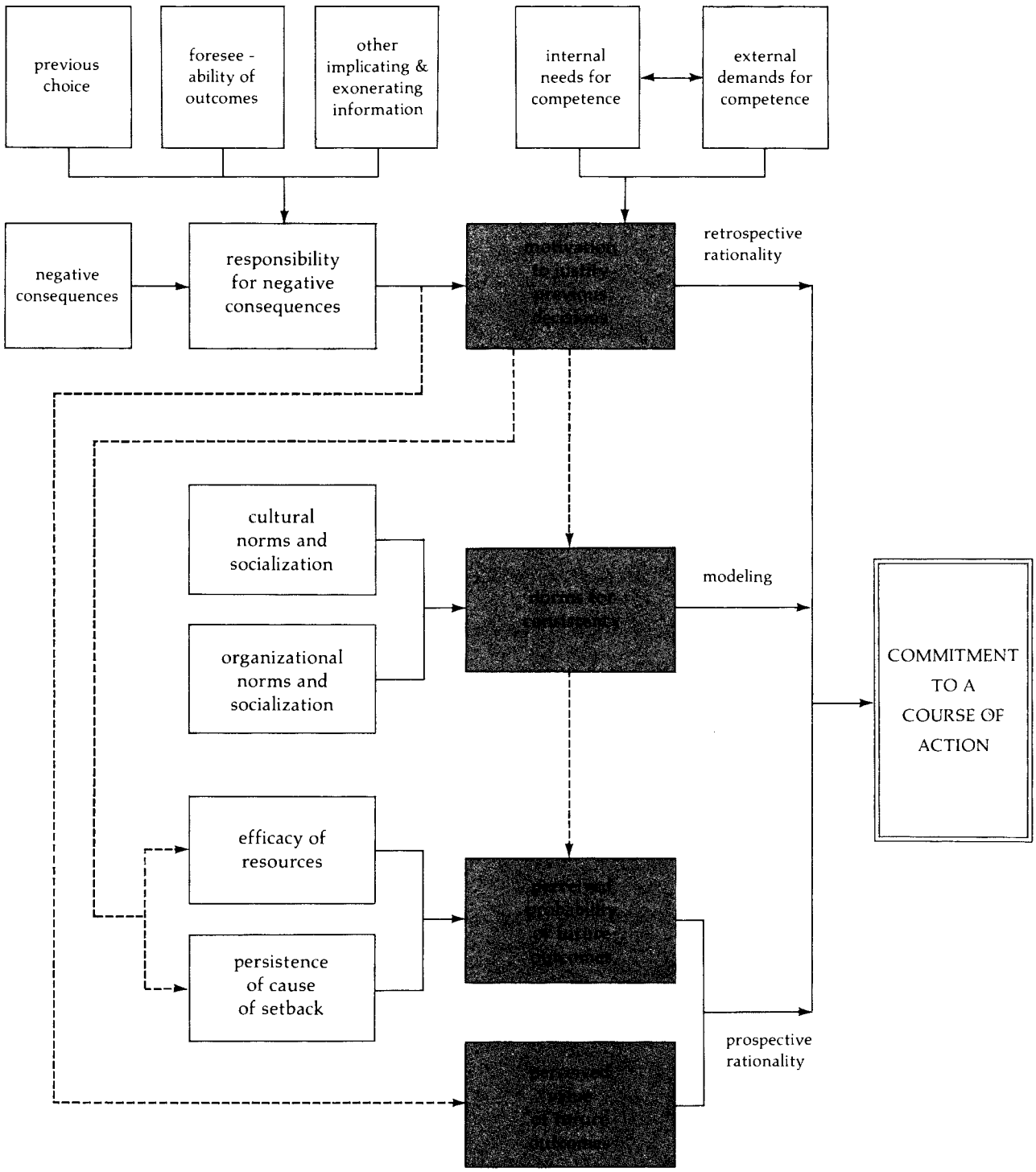

Figure 1
A Model of the Commitment Process

parties may also be a potent force. Our operationalizations of job insecurity and policy resistance [Fox & Staw, 1979] can be interpreted conceptually as manipulations of a need to externally demonstrate competence. However, although much research assumes a need for self-justification, few studies have actually manipulated internal competence needs. Certainly, Aronson [1968, 1976] speaks of self-esteem as influencing justification effects, but it is not yet clear whether a devaluation of self-esteem would lessen or intensify the need to demonstrate competence to oneself and there are no empirical results that clarify this issue. Therefore, at present, it must simply be posited that most individuals possess sufficient internal as well as external competence needs for negative consequences to evoke justification effects. Such predictions may be culture bound, but emphases on individual rationality and competence are so strong in Western societies that they are likely to foster concomitant needs for rationalizing one's actions [Wicklund & Brehm, 1976]. Likewise, because norms for rationality are so dominant in business and governmental organizations [Thompson, 1967], decision makers in these settings may also find it necessary to justify their actions to constituents within and outside the organization. In sum, it is ironic that both internal and external needs to demonstrate competence can lead to justification, because justification is exactly what may detract from the rational or competent decision making that both individuals and organizations seek to achieve [Staw, 1980].

Figure 1 shows that there are three determinants of responsibility for negative consequences. There is evidence from the forced compliance literature that previous choice [Collins & Hoyt, 1972; Linder, Cooper, & Jones, 1967] and foreseeability of outcomes [Brehm & Jones, 1970; Cooper, 1971; Goethals, Cooper, & Naficy, 1979] are antecedents of perceived responsibility. However, as is noted in the figure, there may be other implicating or exonerating information of relevance to the individual, since a person may be accused of error or may accept blame even when he or she did not actively participate in a questionable decision [Caldwell & O'Reilly, in press.]. Although not every one of these antecedents of responsibility has been tested in a commitment context, the overall effect of personal responsibility on commitment has been replicated several times [Fox, 1981; Staw, 1976; Staw & Fox, 1977].

Prospective vs. Retrospective Rationality

As illustrated in Figure 1, forces for justification can lead to a form of "retrospective rationality." The individual, when motivated by a need to justify, seeks to appear competent in *previous* as opposed to *future* actions [Staw, 1980]. In contrast, SEU (subjective expected utility) models of behavior posit that the individual is prospectively rational, seeking to maximize future utility. What adds to the complexity of decision making is the fact that *both* forces may operate in commitment decisions.

As determinants of prospective rationality, some set of perceived probabilities and values should affect resource allocation decisions. Already within commitment situations, we have validated the effects of the efficacy of resources [Staw & Fox, 1977] and the causal persistence of a setback [Staw & Ross, 1978]. However, it is possible that individual perceptions of the likelihood and value of various outcomes are also influenced by nonobjective factors. Conlon and Wolf [1980], for example, found that individuals who use a calculating decision strategy are just as likely to escalate their commitment as noncalculators. Also, as shown in a recent experiment by Fox [1981], individuals make more use of information that exonerates them for an earlier error than information that is implicating. Thus, it can be expected that motivation to justify decisions will affect the search for and storage of information by individuals. Likewise, having been responsible for negative consequences may make the achievement of future outcomes all the more important. The value of future returns may intensify if they are needed to cover past losses. Hence, Figure 1 shows the interplay between some of the antecedents of justification and perceived probability and value of outcomes—the accepted elements of rational behavior. Because of these interactions (denoted by dotted lines), it is not always clear whether behavior can be labeled as strictly prospectively or retrospectively oriented.

In addition to the confluence of retrospective and prospective rationality, there is probably a third force of major importance to commitment deci-

sions. Individuals can become committed to a course of action simply because they believe consistency in action is an appropriate form of behavior [Staw & Ross, 1980]. Individuals sometimes model their own behavior on those they see as successful within organizations and society in general. These effects may be time dependent [Gergen, 1976], inasmuch as high-level administrators model their behavior on leadership stereotypes that exist in the culture at a given time in history. These effects can also be noncognitive, since behavior may be modeled without a direct calculation of costs and benefits [Bandura, 1971]. Thus, the effect of norms for consistency is shown in Figure 1 as being determined by the cultural and organizational norms surrounding individuals and the effect of such norms is posited to lead directly to increases in commitment to a course of action. Obviously, norms could also be integrated into an SEU or expectancy model of decision making [Fishbein & Ajzen, 1975] and viewed as one element of a prospectively rational decision to commit resources. Likewise, norms for consistency can be viewed as an outgrowth of individual needs for cognitive consistency [Festinger, 1957] or socialization for consistency within the general society. The possible effect of justification on norms for consistency is depicted by a dotted line in Figure 1, as is the possible effect of norms on the perceived probability for future outcomes.

In summary, Figure 1 shows commitment to be a complex process dependent on forces for retrospective rationality, prospective rationality, and behavioral modeling. I have emphasized that commitment decisions are different from simple isolated choices, and for that reason, I believe constructs other than SEU can explain much of the commitment process. The crucial feature of commitment decisions is that an entire series of outcomes is determined by a given choice, the consequences of any single decision having implications for past as well as future events. Thus, commitment decisions may be determined as much by a desire to rectify past outcomes as to attain future ones. In addition, because the decisions are associated with each other, norms for consistency in action may override SEU or economic considerations. Most of the antecedents we have explored must of course be viewed as very tentative determinants of commitment. At present, many of the proposed relationships are based as much on theoretical deduction as empirical evidence, and this is especially true for the interactive effects in Figure 1. Existing data have so far identified only simple antecedents of commitment, but the model proposes that commitment is a complex product based on multiple and conflicting processes.

An Assessment of The Commitment Process

This article began with a series of examples and an inquiry into whether commitment situations can inherently lead individuals into errors of escalation. The examples were tilted in the direction of an escalation of commitment and in each case the escalation seemed to lead to further problems or losses. Obviously, it is also possible that escalation of commitment can bring a turnaround of results and positive as well as negative consequences. But this is not the point. The crucial issue is whether there is a tendency to escalate commitment above and beyond what would be warranted by the "objective" facts of the situation. From our research, the answer to this question must be a qualified Yes.

If a decision maker were to escalate commitment only when the facts warranted it, there should be no effects of justification or norms for consistency on commitment. The only variables of relevance to "objective" commitment decisions would be factors influencing the probability and value of future outcomes. However, knowledgeable observers of a commitment situation do not generally reach the same decisions as do actors who have experienced losses. In addition, there may be a simple preference on the part of individuals for consistency in behavior even when it is not warranted by the facts of a commitment situation. Thus, motivation to justify and norms for consistency may each contribute to a general tendency to escalate. If future prospects are especially bleak, and if this information is salient to the individual, escalation tendencies may be outweighed by these more pressing elements of the situation. Nonetheless, I believe research has identified some contributing elements to the commonly observed phenomenon of escalating commitment.

Many researchers may object to the inclusion of "nonrational" elements in a decision framework and prefer to think of commitment strictly as a function of probabilities and valences in an expectancy theory sense [Edwards, 1954; Vroom, 1964]. Of course, it is even possible to collapse all the antecedents of commitment into factors influencing perceived probabilities and valences and finally into an SEU calculation. However, this would neither reduce the number of variables with which we must deal nor improve our understanding. It would simply constitute a semantic transformation of retrospective and normative factors into a purely prospective framework. As examples of this reasoning, factors such as personal responsibility for losses as well as political vulnerability could be reinterpreted as an increase in the value of future returns if a turnaround were to be reached, thus explaining additional commitment to a previously chosen course of action. I do not object to these interpretations, and they may well be validated empirically. However, the usefulness of constructs such as justification and norms for consistency is that they make salient *to the researcher* variables that not only can explain escalation situations, but that would not be emphasized by research posed from other theoretical perspectives.

Implications

If we accept the conclusion that there is a tendency to escalate on the part of individuals, what are its implications? Perhaps the most likely victims of an escalation tendency will be behaviors that are perceptually associated as parts of a single course of action. In such sequences of behavior, both justification and consistency influences have been found to override more objective elements of the situation. Prime candidates for escalation therefore include resource allocation or investment decisions that are identified by an entering and exit value, life choices that are linked together with the label of a career, and policy decisions for which administrators are held accountable by others in an organization or by the general public. In these situations, one must be especially wary of escalation tendencies and perhaps take counteractions to restore balance to decision making.

In counterbalancing an escalation tendency, the variables outlined in Figure 1 may again be of use. For example, individuals should seek and follow the advice of outsiders who can assess the relevant issues of a decision situation without being responsible for previous losses or subject to internal or external needs to justify past actions. Likewise, organizations that have experienced losses from a given investment or course of action should rotate or change those in charge of allocating resources. One applied instance of such a counterbalancing strategy was recently uncovered by Lewicki [1980]. In a comparative case study, procedures were examined in two banks for coping with the problem of delinquent loans. The more financially aggressive bank, which had issued loans with greater risk, utilized separate departments for lending and "workout," the latter department being in charge of efforts to recover the bank's investment from problem accounts. In contrast, the more conservative bank, which had fewer delinquent loans, had developed no formal procedure for separating responsibility for lending and workout, the original loan officer being charged with all phases of the loan relationship.

As a final note, this review should help us recognize how difficult it will be to achieve what Campbell [1969] has described as an "experimenting society." Our research has shown that administrators sometimes become trapped in a course of action by external demands for success [Fox & Staw, 1979], and administrative experimentation is often viewed as an inappropriate form of leadership behavior [Staw & Ross, 1980]. Thus, it may be important to revamp performance evaluation systems facing administrators so that the motivation for action will shift from the defense of past actions to attainment of future gain (e.g., from a retrospective to a prospective basis). It may also be necessary to retrain administrators and resocialize students entering governmental and business organizations about the merits of experimentation versus consistency. In each of these ways, the actions of decision makers can perhaps be directed away from the tendency to escalate.

REFERENCES

Aronson, E. Dissonance theory: Progress and problems. In R. Abelson, E. Aronson, W. McGuire, T. Newcomb, M. Rosenberg, & P. Tannenbaum (Eds.), *Theories of cognitive consistency.* Chicago: Rand McNally, 1968.

Aronson, E. *The social animal.* San Francisco: Freeman, 1976.

Bandura, A. *Psychological modeling: Conflicting theories.* Chicago: Aldine-Atherton, 1971.

Brehm, J.W.; & Cohen, A.E. *Explorations in cognitive dissonance.* New York: Wiley, 1962.

Brehm, J.W.; & Jones, R.A. The effect on dissonance of surprise consequences. *Journal of Experimental Social Psychology,* 1970, *6*, 420–431.

Calder, B.J. An attribution theory of leadership. In B. Staw & G. Salancik (Eds.), *New directions in organizational behavior.* Chicago: St. Clair Press, 1977.

Caldwell, D.F.; & O'Reilly, C.A. Responses to failure: The effects of choice and responsibility on impression management. *Academy of Management Journal,* in press.

Campbell, D.T. Reforms as experiments. *American Psychologist,* 1979, *24*, 409–429.

Collins, B.E.; & Hoyt, M.F. Personal responsibility-for-consequences: An integration and extension of the "forced compliance" literature. *Journal of Experimental Social Psychology,* 1972, *8*, 558–593.

Conlon, E.J.; & Wolf, G. The moderating effects of strategy, visibility, and involvement on allocation behavior: An extension of Staw's escalation paradigm. *Organizational Behavior & Human Performance,* 1980, *26*, 172–192.

Cooper, J. Personal responsibility and dissonance: The role of foreseen consequences: An integration and extension of the "forced compliance" literature. *Journal of Personality & Social Psychology,* 1971, *18*, 354–363.

Edwards, W. The theory of decision making. *Psychological Bulletin,* 1954, *51*, 380–417.

Festinger, L. *A theory of cognitive dissonance.* Stanford: Stanford University Press, 1957.

Festinger, L.; & Carlsmith, J.M. Cognitive consequences of forced compliance. *Journal of Abnormal & Social Psychology,* 1959, *58*, 203–210.

Fishbein, M.; & Ajzen, I. *Belief, attitude, intention, and behavior: An introduction to theory and research.* Reading, Mass.: Addison-Wesley, 1975.

Fox, F.V. *Persistence: Effects of commitment and justification processes on efforts to succeed with a course of action.* Doctoral dissertation in progress, University of Illinois, 1981.

Fox, F.; & Staw, B.M. The trapped administrator: The effects of job insecurity and policy resistance upon commitment to a course of action. *Administrative Science Quarterly,* 1979, *24*, 449–471.

Gallup, G. *The Gallup opinion index.* Princeton, N.J.: American Institute of Public Opinion, March 1978.

Goethals, G.; Cooper, J.; & Naficy, A. Role of foreseen, foreseeable, and unforeseeable behavior consequences in the arousal of cognitive dissonance. *Journal of Personality & Social Psychology,* 1979, *37*, 1179–1185.

Hughes, E.J. The presidency versus Jimmy Carter. *Fortune,* December 4, 1978, p. 58.

Janis, I. *Victims of groupthink.* Boston: Houghton-Mifflin, 1972.

Lewicki, R.J. *Bad loan psychology: Entrapment and commitment in financial lending.* Working paper 80-25, Graduate School of Business Administration, Duke University, 1980.

Linder, E.D.; Cooper, J.; & Jones, E.E. Decision freedom as a determinant of the role of incentive magnitude in attitude change. *Journal of Personality & Social Psychology,* 1967, *6*, 245–254.

Lord, C.; Ross, L.; & Lepper, M. Biased assimilation and attitude polarization: The effects of prior theories on subsequently considered evidence. *Journal of Personality & Social Psychology,* 1979, *37*, 2098–2109.

Money down the drain. *Time,* June 25, 1979, p. 26.

Pallak, M.S.; Sogin, S.R.; & Van Zante, A. Bad decisions: Effects of volition, locus of causality, and negative consequences on attitude change. *Journal of Personality & Social Psychology,* 1972, *30*, 217–227.

Pfeffer, J. The ambiguity of leadership. *Academy of Management Review,* 1977, *2*, 104–112. (a)

Pfeffer, J. Power and resource allocation in organizations. In B. Staw & G. Salancik (Eds.), *New directions in organizational behavior.* Chicago: St. Clair Press, 1977. (b)

Read, W. Upward communication in industrial hierarchies. *Human Relations,* 1962, *15*, 3–16.

Ross, L. The intuitive psychologist and his shortcomings: Distortions in the attribution process. In L. Berkowitz (Ed.),

Advances in experimental social psychology (Vol. 10). New York: Academic Press, 1977.

Sheehan, N.; & Kenworthy, E.W. *Pentagon papers.* New York: Bantam Books, 1971.

Sidey, H. The crux of leadership. *Time,* December 11, 1978, p. 44.

Slovic, P.; Fischhoff, B.; & Lichtenstein, S. Behavioral decision theory. *Annual Review of Psychology,* 1977, *28,* 1-39.

The state of Jimmy Carter. *Time,* February 5, 1979, p. 11.

Staw, B.M. Attitudinal and behavioral consequences of changing a major organizational reward: A natural field experiment. *Journal of Personality & Social Psychology,* 1974, *29,* 742-751.

Staw, B.M. Knee-deep in the big muddy: A study of escalating commitment to a chosen course of action. *Organizational Behavior & Human Performance,* 1976, *16,* 27-44.

Staw, B.M. Rationality and justification in organizational life. In B. Staw & L. Cummings (Eds.), *Research in organizational behavior* (Vol. 2). Greenwich, Conn.: JAI Press, 1980.

Staw, B.M.; & Fox, F. Escalation: Some determinants of commitment to a previously chosen course of action. *Human Relations,* 1977, *30,* 431-450.

Staw, B.M.; & Ross, J. Commitment to a policy decision: A multitheoretical perspective. *Administrative Science Quarterly,* 1978, *23,* 40-64.

Staw, B.M.; & Ross, J. Commitment in an experimenting society: An experiment on the attribution of leadership from administrative scenarios. *Journal of Applied Psychology,* 1980, *65,* 249-260.

Tversky, A.; & Kahneman, D. Judgment under uncertainty: Heuristics and biases. *Science,* 1974, *185,* 1124-1131.

Vandiver, K. Why should my conscience bother me? In A. Heilbroner (Ed.), *In the name of profit.* Garden City, N.Y.: Doubleday, 1972.

Vroom, V. *Work and motivation.* New York: Wiley, 1964.

Weick, K.E. Reduction of cognitive dissonance through task enhancement and effort expenditure. *Journal of Abnormal & Social Psychology,* 1964, *68,* 533-539.

White, R.W. Motivation reconsidered: The concept of competence. *Psychological Review,* 1959, *66,* 297-334.

Wicklund, R.; & Brehm, J. *Perspectives on cognitive dissonance.* Hillsdale, N.J.: Lawrence Erlbaum Association, 1976.

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