



The Escalation of Commitment to a Failing Course of Action: Toward Theoretical Progress

Author(s): Joel Brockner

Reviewed work(s):

Source: *The Academy of Management Review*, Vol. 17, No. 1 (Jan., 1992), pp. 39-61

Published by: [Academy of Management](#)

Stable URL: <http://www.jstor.org/stable/258647>

Accessed: 02/02/2012 19:36

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at

<http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



Academy of Management is collaborating with JSTOR to digitize, preserve and extend access to *The Academy of Management Review*.

<http://www.jstor.org>

THE ESCALATION OF COMMITMENT TO A FAILING COURSE OF ACTION: TOWARD THEORETICAL PROGRESS

JOEL BROCKNER
Columbia University

Escalating commitment (or escalation) refers to the tendency for decision makers to persist with failing courses of action. The present article first reviews evidence suggesting that escalation is determined, at least in part, by decision makers' unwillingness to admit that their prior allocation of resources to the chosen course of action was in vain (the self-justification explanation). A distinction is drawn in the second part of the article between alternative (to self-justification) explanations of escalating commitment: Some are designed to replace self-justification, whereas others are intended to supplement self-justification, that is, to add explanatory power beyond that which can be accounted for by self-justification. There is little evidence that the replacement theories provide a better explanation than does self-justification; however, theories designed to supplement self-justification are likely to lead to a more complete explanation. The article concludes by describing several research strategies that may lead to progress in explaining escalating commitment.

In the past 15 years, organizational and social psychologists, as well as economists, have showed renewed interest in the processes by which decision makers escalate their commitment to failing courses of action (Arkes & Blumer, 1985; Brockner & Rubin, 1985; Northcraft & Wolf, 1984; Staw, 1981; Teger, 1980; Thaler, 1980). The mechanisms underlying escalating commitment may offer explanations of such diverse behaviors as shown by people who wait for an inordinately long time for a bus to take them someplace to which they could have walked just as easily, the couple who persist in a souring romantic relationship, the organization that sticks with a failing venture, and the nation that finds itself "knee-deep in the big muddy" in an international conflict, such as the United States in Vietnam in the 1960s and 1970s.

The defining features of escalating commitment situations have been described elsewhere (Brockner & Rubin, 1985; Staw, 1981). Very briefly, in all such instances decision makers allocate some resources—their money, time, even their self-identities—in the hope of attaining some goal or goals.

The author would like to thank Glen Whyte for his constructive comments on an earlier version of this article.

After having made an investment, however, the decision makers find themselves in "no man's land." That is, they receive negative feedback suggesting that, at the very least, they have not yet attained their goals; moreover, they are not certain that additional investments will be sufficient to bring about goal attainment. Indeed, it is the uncertainty surrounding goal attainment that prompts decision makers to view their allocated resources simultaneously as either investments or expenses. That is, if the resources allocated lead to goal attainment, then they may be viewed as investments; if they do not, they are considered to be expenses. Furthermore, decision makers must have a real choice in deciding whether to persist with or withdraw from the previously chosen course of action. In short, escalation situations include repeated (rather than one-shot) decision making in the face of negative feedback about prior resource allocations, uncertainty surrounding the likelihood of goal attainment, and choice about whether to continue.

There is a good deal of theoretical controversy concerning the explanation of escalation (see Brockner & Rubin, 1985; Staw & Ross, 1987; and Teger, 1980, for reviews of theory and empirical research). Many (but not all) of the explanations fall into one of two broad categories, which are concerned with complementary aspects of human nature. First, the tendency to escalate may be explained, at least in part, by expectancy theory (e.g., Vroom, 1964). According to such a viewpoint, decision makers assess the *probability* that additional resource allocations will lead to goal attainment, as well as the *value* of goal attainment (i.e., rewards minus costs), and thereby generate a subjective expected utility associated with the decision to allocate additional resources. For example, Levi (1982) showed that decision makers were more likely to escalate their commitment to a failing course of action if the reasons for the negative feedback were seen as unstable rather than stable. Presumably, decision makers' expectations that additional resource allocations would bring about the desired goal would be greater in the former than the latter instance. In a related vein, Rubin and Brockner (1975) discovered that individuals' persistence at a task at which they were failing was greater both when they sensed that they were drawing ever closer to their goals and when the goals were relatively high in value.

The second category of explanations views people following a self-justifying or rationalizing behavior rather than being guided by the tenets of expectancy theory. Couched originally in Festinger's (1957) theory of cognitive dissonance, this viewpoint posits that decision makers become entrapped in a previous course of action because of their unwillingness to admit—to themselves and/or others—that the prior resources were allocated in vain. Put simply, people do not like to admit that their past decisions were incorrect; what better way to (re)affirm the correctness of those earlier decisions than by becoming even more committed to them?

In sum, the decision to allocate additional resources to a failing course of action may be governed by two somewhat different forces: (a) the pro-

spectively rational side of people that focuses on information related to the expectancies and values associated with continued commitment to the course of action. This side of decision makers ignores the impact of prior investments, unless the nature of those prior investments helps them to determine whether it "makes sense" to continue (Northcraft & Wolf, 1984; O'Reilly & Caldwell, 1981), and (b) the rationalizing or self-justifying side of people, in which escalation reflects decision makers' unwillingness to admit that they were mistaken in having become committed to the initially chosen course of action.

The purpose of this article is to bring greater theoretical order to this burgeoning area of research and to offer suggestions for future research that should enable management theorists to make even greater progress in explaining escalation. An important assumption of this article is that complex phenomena such as escalation lend themselves to more than one explanation. Some of the initial conceptual and empirical work on escalating commitment embraced self-justification as one of the most important driving forces, if not the most important (Rubin & Brockner, 1975; Staw, 1976, 1981; Teger, 1980). However, it was premature *at that point* to assign high explanatory power to the self-justification argument, because very little research had been performed.

More recently, the self-justification explanation of escalating commitment has come under repeated and severe attacks (Bazerman, 1984; Bowen, 1987; Whyte, 1986). It is therefore appropriate for researchers to wonder just what status should be assigned to the self-justification explanation of escalating commitment. Is it the primary explanation of escalation behavior, as some of the earlier writings suggested? Or, does it explain little or nothing about escalation, as the more recent articles seem to imply? (On the basis of the available empirical evidence, which will be presented next, the answer seems to be "somewhere in the middle" of these two rather extreme positions.)

In light of these recent attacks, it is important to evaluate whether self-justification should continue to maintain its place as one of the major theories of escalation. Again, the recent critiques of the self-justification explanation are well-founded, to the extent that they argue that self-justification does not entirely explain decision makers' escalation decisions. However, to the extent that these critiques imply that self-justification is irrelevant to escalation decisions (i.e., that self-justification accounts for little or none of the variance in escalation), the criticisms are misleading. The following comments from the recent critiques imply that research to date provides little clear support of the self-justification explanation:

Prior escalation studies, having not met the criteria for demonstrating the phenomenon, should be questioned regarding the theoretical value of the reported results. The findings of prior research may be vulnerable to alternative interpretations. (Bowen, 1987: 54)

Prospect theory suggests a different explanation. . . . Escalating commitment is seen as an artifact of the framing of deci-

sions. As a result, escalating commitment may occur in a much wider variety of circumstances than is suggested by the view that it is a product of self-justification motives. (Whyte, 1986: 311)

Moreover, readers of these critiques have inferred that the analyses severely downplay (if not entirely eliminate) the role of self-justification in escalating commitment. For example, Fiegenbaum and Thomas (1988) offered the following interpretation of Whyte's (1986) analysis:

Whyte (1986) argued that prospect theory provides the psychological mechanism by which to explain escalating commitment to a failing course of action without the need to invoke self-justification processes. (Fiegenbaum & Thomas, 1988: 99)

In short, the initial investigations of escalating commitment prematurely concluded that self-justification was a major determinant, and more recent conceptualizations seem to imply that it is not at all necessary to invoke self-justification theory. Thus, one purpose of this article is to evaluate the current status of the self-justification explanation of escalating commitment.

This article is divided into two sections. The first section reviews empirical evidence supportive of the self-justification explanation of escalating commitment. Two features of the review of empirical evidence are noteworthy. First, it will be shown that a variety of research strategies (and independent researchers) have produced results supportive of the self-justification explanation. The predominant research strategy has been to explore the situational and dispositional determinants of escalating commitment. Whereas the results of studies using this strategy have been interpreted by some as consistent with self-justification theory (e.g., Staw, 1976), other theorists have offered alternative explanations of the results of these studies (Bowen, 1987; Whyte, 1986). Therefore, it is important to determine whether other research strategies also yield results supportive of the self-justification explanation. One key conclusion drawn in the first part of the article is that the results of studies using *different* research strategies provide converging evidence in favor of the self-justification explanation of escalating commitment.

Second, the review of empirical research provides some evidence that self-justification is superior to alternative theories offered by Bowen (1987) and White (1986) in accounting for escalation. Thus, to borrow from the terminology employed in matters of construct validation, the literature review attempts to provide evidence of convergent validity for the self-justification explanation (i.e., different data leading to the same conclusion) as well as *divergent* validity for that explanation (i.e., self-justification does a better job in accounting for the evidence than do alternative explanations).

The second section of the article has two major purposes: (a) to provide a more comprehensive or balanced theoretical perspective on the determinants of escalation and (b) to offer research strategies that should enable

management scholars to further explain escalation. The major conclusion of the first part of the article is that self-justification theory indeed deserves mention as one of the important explanations of escalating commitment. Although useful, however, this theory is limited in its ability to account for escalation. The second part of the article explicitly recognizes these limits, provides other explanations that may account for escalation, and offers suggestions for future research.

It is important to mention that in describing resource allocations in escalation situations as rationalizing, this author is referring to the *process* of decision making and not necessarily to its associated *outcomes*. To say that entrapped decision makers are driven by rationalizing or self-justification processes is *not* equivalent to saying that the outcomes of such processes *always* are decidedly negative. It is true that, once decision makers become gripped by the pressures of self-justification, they are *more likely* to make decisions that are associated with negative outcomes. However, negative outcomes are not necessarily the result of the escalation process. This distinction between process and outcome is similar to the one made by Janis (1982) in his provocative analysis of "groupthink." Janis described groupthink as a dynamic often observed in small, cohesive decision-making groups; one of the ultimate effects of the concurrence-seeking tendency of such groups was to make bad decisions or fiascos. However, behind the essence of groupthink are the processes that such groups exhibit and not the negative outcomes that often result from such processes.

EMPIRICAL EVIDENCE SUPPORTIVE OF SELF-JUSTIFICATION THEORY

According to dissonance theory (Festinger, 1957), the greater the decision makers' unwillingness to admit that their prior resource allocations were in vain, the more likely they are to continue allocating resources to the failing course of action. Thus, the more that has been invested in the course of action (either psychologically, materially, or both), the more unwilling the decision makers should be to give up, and, therefore, the greater the likelihood of escalation. This logic predicts that the joint presence of two conditions should lead to the greatest likelihood of escalation: (a) negative feedback concerning the outcomes of the original resource allocation and (b) a high need to justify the correctness of the initial resource allocation. Numerous studies exploring the antecedents of escalation fall into one of two categories, in which (a) both of these two variables are operationalized or (b) negative feedback is held constant (at a high level), and one or more than one operationalization of the need-to-justify factor is introduced. Taken together, the results of these studies are consistent with predictions derived from the self-justification explanation of escalating commitment. For example, in an early study in which negative feedback and the need to justify were manipulated orthogonally (Staw, 1976), subjects played the role of a company's financial vice president who had to decide how much money to allocate for continued research and development in one of the company's

operating divisions. In all instances, a certain amount of money had been allocated to the operating division five years earlier; prior to making the second resource allocation decision, subjects received feedback about the outcome of the initial allocation of funds. Half of the subjects were led to believe that the prior commitment of funds had proved to be financially successful to the corporation (positive feedback condition), whereas the other half were told just the opposite (negative feedback condition). In addition, half of the participants had made the initial resource allocation decision (personal responsibility condition); presumably, those in the personal responsibility condition felt more of a need to justify the initial resource allocation decision than did those in the no responsibility condition, who had been informed that the initial decision had been made "by their predecessors in the organization." As predicted by self-justification theory, the mean amount allocated to the previous course of action was higher in the negative feedback/personal responsibility condition than in all other groups.

Davis and Bobko (1986) utilized a very different financial resource allocation task, in which both feedback and the need to justify were manipulated orthogonally. Similar to the Staw (1976) study, half of the subjects were personally responsible for the initial funding decision and half were not. Moreover, for 50 percent of the subjects, the outcome feedback was framed (Tversky & Kahneman, 1981) negatively ("after two years of operation the program has *failed to place* 60.1% of all participants in either part-time or full-time jobs"), whereas for the remaining 50 percent the feedback was framed positively ("after two years of operation the program has *placed* 39.9% of all participants in either part-time or full-time jobs"). Continued commitment to the failing course of action was greater when subjects were, rather than were not, personally responsible for the initial allocation, but only when the outcome was framed negatively. Perhaps the negative (more than the positive) frame led subjects to interpret the outcome feedback as unfavorable, which, when coupled with high personal responsibility, heightened individuals' need to justify their previous investments.

Additional tests of the self-justification explanation are provided by studies in which *all* participants receive negative feedback concerning the outcome of their initial resource allocation. Feedback was not varied in these studies; however, decision makers' needs to justify were. The self-justification prediction is that escalation will be greater in the high "need to justify" conditions compared to the low "need to justify" conditions. For example, in a study by Bazerman, Beekun, and Schoorman (1982), undergraduates assumed the role of vice president of a corporation, in which part of their duties was to evaluate the past performance (and make predictions about the future performance) of their subordinates. All subjects were informed that the target person was a regional director of the organization who had been promoted two years earlier from the position of merchandise manager; the regional director's performance during his first two years in office was rather negative. Half of the subjects were personally responsible

for the director's promotion to this position (personal responsibility condition), whereas half were not responsible (no responsibility condition). Consistent with self-justification theory, subjects evaluated the poorly performing target much more favorably in the personal, as compared to the no responsibility, condition (see also Schoorman, 1988).

In several other studies, the need-to-justify variable was operationalized in ways other than personal responsibility for the initial resource allocation. Fox and Staw (1979) orthogonally manipulated the decision makers' job insecurity as well as the amount of resistance they encountered from their board of directors at the time that the initial allocation decision was made. Those in the job insecurity condition were led to believe that they had been temporarily assigned to the (desirable) vice president role, whereas those in the job security condition were informed that their job assignment was permanent. The job insecurity manipulation was cross cut, and half of the participants were told that the board of directors was quite dissatisfied with the participants' initial funding decision and that the board reluctantly deferred to the participants' judgment (prior resistance condition). The remaining half were told that the board was firmly convinced that the participants had made the correct initial resource allocation decision (no resistance condition).

Both the job insecurity and prior resistance variables should affect the extent to which subjects felt the need to justify their earlier resource allocations. Presumably, such needs should be greater in the job insecure condition than job secure condition; they should also be greater in the prior resistance condition when compared to the no resistance condition. If so, then subsequent resource allocations should be greater in the former conditions (job insecure, prior resistance) than in the latter ones (job secure, no resistance); these were precisely the results that Fox and Staw (1979) obtained.

Strube and Lott (1984) performed an interesting study on Type A-B differences in susceptibility to escalating commitment, an experiment which was not only one of the few to delineate individual differences in proneness to escalation, but also one that yielded results that were consistent with the self-justification explanation. In some escalation situations (i.e., particularly those that require decision makers to wait for a period of time in order to achieve their goals), the "currency" of investment is time. The Type A behavior pattern thus becomes relevant because one of its defining features is time urgency. Burnam, Pennebaker, and Glass (1975) asked both Type A and Type B individuals to judge when they thought one minute of time had elapsed; these researchers also measured the actual amount of elapsed time. For Type A people, only 52.6 seconds had actually elapsed, whereas for Type B persons, 75.0 seconds had elapsed. Thus, for a given amount of real time, Type A people experience that more time has passed than have Type Bs.

Strube and Lott (1984) explored subjects' involvement in an entrapping waiting situation as a function of their Type A-B classification, as well as the

presence or absence of objective cues concerning the passage of time. When objective time cues were present (all people could easily monitor the actual amount of elapsed time), Type As and Bs did not differ in their level of commitment to the course of action. However, when objective cues were absent, and the subjects were required to rely on their subjective estimates of the passage of time, Type As became much more entrapped than Type Bs. One explanation for this latter finding is that Type As felt that they had invested more than Type Bs; because they had more to justify (prior commitment), Type As may have found it more difficult to withdraw from their prior courses of action. (See Strube, Deichmann, & Kickham, *In press*, for supportive evidence.)

In summary, studies that have used different investment situations and operationalizations of the negative feedback and need-to-justify variables have yielded results consistent with the self-justification explanation of escalating commitment. (See Brockner et al., 1986, Experiment 1; Leatherwood & Conlon, 1987; and Lydon & Zanna, 1990, for additional supportive evidence.) However, several authors remain unconvinced that the sorts of studies just reviewed provide clear support for the self-justification explanation (Bowen, 1987; Whyte, 1986). For example, Whyte (1986) suggested that the results of Staw's (1976) classic study are best explained by prospect theory. Given that the results of at least some of the previously mentioned studies can be interpreted as being consistent with explanations other than self-justification theory, it is important to determine whether additional sorts of research evidence can be marshalled to bolster the self-justification explanation.

In fact, two other research strategies seem to yield results strongly supportive of the self-justification explanation. The first strategy explores the relationship between individuals' behavioral level of escalation and their self-reports of their psychological states. The key empirical question is whether their escalation behavior was accompanied by self-reports of the need to justify their prior resource allocations. For example, Brockner and Rubin (1985, Chapter 7) found that decision makers who acted as if they were entrapped (i.e., those who escalated their commitment to the failing course of action) also reported that the need to justify their prior investment in the course of action heightened their commitment. More specifically, subjects reported the extent to which several self-justification motives for their resource allocation behavior pertained to them ("I had already invested so much, it seemed foolish not to continue," and "Once I had invested a certain amount, I had to keep going; otherwise all of that previous investment would have been a waste," Brockner & Rubin: 148). In many studies (e.g., Strube & Lott, 1984) it was found that decision makers who exhibited greater behavioral escalation were more likely to endorse these self-justification measures. For purposes of divergent validity, it is important that the entrapped participants did not rate other potentially plausible reasons for their behavior ("I wanted to make more money," "I was confident that I

would be able to make more money") as any more self-descriptive than their less entrapped counterparts.

Other researchers have explored the relationship between individuals' behavioral manifestation of escalation and their self-reports of various measures that seem related to self-justification. As Ross and Staw (1986: 276) noted:

Bazerman, Schoorman, and Goodman (1980) found that (continued) commitment (to the failing course of action) was associated with the perceived importance of a decision, the extent of disappointment with initial losses, and the perceived interconnectedness of current and past decisions in the situation—all factors that one might expect to be correlated with commitment if there were a need for individuals to be correct or justify previous decisions. (parentheses added)

In these studies, different subjects responded to the self-report measures at different points of investment (as in a cross-sectional research design). In other studies, the researchers queried the *same* decision makers at different points in the resource-allocation process (as in a longitudinal research design). Once again, people attached greater importance to the self-justification motive (but not to other plausible motives) as they allocated more and more resources to the failing course of action (Brockner & Rubin, 1985).

The second research strategy adopted in several studies is to explore whether other behaviors stemming from the self-justification motive (besides continued resource allocation) are systematically influenced by conditions known to affect escalation. In particular, it seems likely that decision makers concerned with self-justification will search for retrospectively focused information as they contemplate subsequent resource-allocation decisions. As Conlon and Parks (1987: 344) noted, "Retrospective focusing occurs partly because justification and exoneration require a plausible explanation of how or why a setback occurred."

To test the hypothesis that self-justification pressures give rise to retrospective focusing, Conlon and Parks (1987) performed a very important experiment in which they replicated the conditions studied by Staw (1976); subjects were either personally responsible or not responsible for a prior resource allocation that yielded negative or positive outcomes. Prior to making their subsequent allocation decision, all subjects were given an opportunity to study a variety of sources of information. These sources of information had been rated by other judges as either retrospective or prospective in their orientation. The retrospective items included: (a) justification of R&D expenditures, "a summary of all of the memos and reports written to justify the expenditure to the division" earlier (Conlon & Parks: 350), (b) CEO's (chief executive officer's) performance reports, which summarized "all of the feedback that the division received from the CEO about its per-

formance" (Conlon & Parks: 350), and (c) reports on all R&D projects in the organization during the previous five years, which not only included the results of the projects but also provided reasons for the outcomes. The prospective items were: (a) five-year sales and earnings forecast, a "statistically based forecast of the division's projected sales and earnings over the next five years" (Conlon & Parks: 350), and (b) future R&D prospectus, "a report compiled by the divisional R&D director detailing a 5-year plan for R&D expenditures and their expected results" (Conlon & Parks: 350).

The results of the study were striking. In the condition in which subjects were personally responsible for a prior resource allocation that yielded negative feedback, 75 percent preferred to see the retrospective information; however, across all other conditions fewer than 20 percent of the participants preferred to obtain the retrospective information. The condition in which Conlon and Parks's subjects were most apt to prefer the retrospective information (the personal responsibility/negative feedback cell) was the one in which Staw (1976) and others have found escalating commitment to be most pronounced.

Caldwell and O'Reilly (1982) studied the self-relevant information that decision makers sought to present to significant others as a function of situational factors known to affect escalating commitment. All subjects played the role of administrative manager in a small, growing technical company. Half had chosen an individual to serve as the contract officer in their company (choice condition), whereas the other half were told that this individual had been hired by the president of the company (no choice condition). All participants then were informed that their company had lost a major government contract due to the poor performance of the contract officer. Fifty percent were held responsible for this negative outcome by the company president and board of directors (high responsibility condition), whereas fifty percent were not held responsible (low responsibility condition).

All subjects were given a packet of information that supposedly had been collected from company files, related to the hiring and performance of the contract officer. Subjects were asked to select the information pertaining to the hiring decision and subsequent performance of the contract officer, which would be presented to top management. Some of this information was likely to satisfy individuals' need to justify the correctness of the decision to hire the contract officer (For example, "You saw an outline of the proposal that the contract officer prepared and were quite satisfied. It conformed to the format used in other government proposals that had been funded.") Other information would have cast subjects as decision makers in a much more unfavorable light (For example, "Your secretary had indicated that several requests for information from the contract officer had gone unanswered.") As expected, subjects chose to present information that was more favorable in the high choice condition than the low choice condition, and in the high responsibility condition compared to the no responsibility condition; the high choice and high responsibility conditions were precisely the ones under which subjects should have been most concerned with justifying

the correctness of their past decisions, and which have been shown in other studies to lead to escalated commitment.

In summary, three very different types of research studies have yielded results supportive of the self-justification explanation of escalating commitment. First and most predominant are studies that operationalize feedback from prior resource allocations and decision makers' needs to justify those prior resource allocations; the typical finding is that escalation is greatest when both feedback is negative and justification needs are high. The second strategy explores self-report data to determine whether behavioral escalation is related to individuals' self-justification needs; at least several studies have established that such a relationship exists (e.g., Strube & Lott, 1984). Third, researchers have evaluated whether other manifestations of the self-justification motive—besides escalated commitment—vary as a function of the conditions known to affect escalation; several studies have established that the preconditions for escalated commitment also influence the information that individuals seek (Conlon & Parks, 1987) as well as the information that they present to others (Caldwell & O'Reilly, 1982), further suggesting that a self-justification process was at work.

Of course, the results of many individual studies are open to alternative explanations; they also are of questionable external validity. For example, in the prototypical study exploring the effect of feedback and need to justify on escalation, decision makers operate in somewhat of an informational vacuum; that is, they lack data that might suggest whether (and how much) it is wise to persist with the previous course of action (Conlon & Wolf, 1980). Moreover, studies showing a simple correlation between escalating commitment and subjects' self-reports of how much they were influenced by self-justification do not specify the *causal* relationship between behavior and self-report. However, a key virtue of the self-justification explanation is that it can account for all of the findings presented above. In contrast, it is necessary to invoke a wide variety of alternative interpretations to account for results gathered through the different research strategies, thereby making these alternatives less compelling.¹

OTHER EXPLANATIONS OF ESCALATING COMMITMENT

Although self-justification has provided a dominant theory of escalating commitment, other explanations have been offered. An important distinction should be made about these other explanations. Some should be viewed as *additions* or supplements to the self-justification explanation.

¹ Furthermore, as Jerry Ross pointed out (personal communication, 1990), the laboratory setting may not be overly conducive to studying self-justification processes for several reasons. First, subjects' level of ego involvement is likely to be limited in many, if not most, laboratory experiments. Second, there are strong norms for most subjects (college students) to act or appear "rational" in the lab. Therefore, because most empirical investigations have been conducted under laboratory conditions, they may lead us to underestimate the role of the self-justification motive in the escalation process.

Supplementary explanations recognize that other factors influence escalating commitment *in addition* to the need to justify previous decisions. One such example is expectancy theory, as was mentioned previously (see also Staw, 1981). Other explanations seem to have been offered in the spirit of *replacing* the self-justification explanation. Replacement explanations posit that other factors influence escalating commitment *instead* of the need to justify previous decisions. For example, Whyte (1986) suggested that the tendency for decision makers to persist with a failing course of action may be explained by prospect theory (Tversky & Kahneman, 1981).

A central tenet of this paper is that self-justification theory explains a significant portion of escalation behavior, but certainly not all of it. Therefore, the thesis of this article is very amenable to the notion that other theories in addition to self-justification explain escalation to a significant extent. Before such theories are discussed, it may be useful to consider the viewpoints that seek to replace self-justification theory. Two of these "replacement" alternative explanations have made their way into the published literature (Bowen, 1987; Whyte, 1986). Importantly, it is possible to interpret several findings in the literature as more supportive of self-justification than these replacement explanations. It is in this sense that the self-justification explanation has "divergent" validity, in addition to the convergent validity established by the studies cited in the section of the paper that was just concluded.

Theories Designed to Replace Self-Justification

Prospect theory. Prospect theory explains individuals' risk-taking propensities under conditions of uncertainty (Kahneman & Tversky, 1979). It assumes that *changes* of wealth from some reference point are highly salient to decision makers. Perhaps most intriguing about prospect theory is its prediction that individuals' risk preferences will change, depending upon whether movement from the reference point is perceived to be in the positive direction (gains) or negative direction (losses). The theory posits that the subjective value function is concave in the domain of gains and convex in the domain of losses. Therefore, decision makers generally are risk averse in the domain of gains, preferring, for example, a sure win of \$50 over a 50 percent chance to win \$100 and a 50 percent chance to win \$0. Moreover, they typically are risk seeking in the domain of losses, preferring to take a 50 percent chance on losing \$100 and a 50 percent chance of losing \$0 than to accept a sure loss of \$50. Therefore, in sharp contrast to the economic principle of invariance, decision makers' risk preferences depend on how the (same) problem is framed. A further assumption of the theory is that the value function is steeper in the domain of losses than gains (i.e., losses loom larger than gains), a principle known as loss aversion (Kahneman & Tversky, 1984).

Whyte (1986) suggested that prospect theory provides a more compelling explanation of escalating commitment than does self-justification theory. As more and more resources are allocated to the failing course of

action, decision makers have two options: either they can cut their losses or they can continue to commit themselves to the previous course of action. Prospect theorists assume that individuals in an escalation dilemma experience themselves to be in the domain of losses (negative movement from the initial reference point). Given loss aversion, and given the convex value function in the domain of losses, individuals will be risk seeking (i.e., they will prefer to allocate additional resources in the hope of turning the situation around, rather than to accept the sure loss if they were to stop allocating resources at that point).

Are the results of the previously reviewed studies—which were considered collectively to provide support for the self-justification explanation—better accounted for by prospect theory? Although further research is needed, the findings of at least several studies seem to yield results more supportive of self-justification theory. Consider the findings of Davis and Bobko (1986), who discovered that individuals who are personally responsible for a course of action that was negatively framed were more likely to persist with that course of action than if another person had made the initial resource allocation. Such findings are certainly consistent with self-justification theory. Prospect theorists may reason, however, that decision makers who were personally responsible for the initial resource allocation are more likely to *have the psychological experience* of moving from the reference point into the domain of losses than if someone else had made the initial resource allocation. Decision makers responsible for the initial resource allocation should be averse to the sure loss associated with not persisting with the initial course of action. Furthermore, given the convex shape of the value function in the loss domain, they should be willing to accept the risk associated with continued commitment, in the hope of achieving their ultimate goals.

If this reasoning is correct, however, prospect theory may be hard-pressed to explain the portion of the Davis and Bobko (1986) study that explored individuals' tendencies to escalate their commitment to a positively framed course of action as a function of personal responsibility. If the decision to allocate resources to the initial course of action reflects risk taking (the assumption of prospect theory in the negative frame condition), then according to prospect theory, decision makers should be *less* willing to escalate their commitment in the positive frame condition when they, rather than another person, were responsible for the initial resource allocation. Put in a different way, the tendency to be risk averse in the domain of gains should have led to reduced commitment when individuals were (rather than they were not) personally responsible for the initial commitment of resources. However, *Davis and Bobko (1986) found no effect of personal responsibility on continued commitment to the previous course of action in the positive frame condition.*

Thus, both self-justification and prospect theory seem to suggest that in the negative frame condition, escalation will be greater when personal responsibility for the initial allocation is high rather than low. However,

prospect theory seems to predict a significant effect of personal responsibility in the positive frame condition (such that escalation will be lower in the high than in the low responsibility condition). Self-justification concerns should be irrelevant in the positive frame condition because the positive frame should minimize individuals' desires to prove themselves correct; after all, the positive frame has already done that. If so, then according to the self-justification explanation, individuals' level of personal responsibility should have little effect in the positive frame condition. *Taken together*, the results of the Davis and Bobko (1986) study (i.e., a positive significant effect of personal responsibility on escalation in the negative frame condition and no effect of personal responsibility in the positive frame condition) seem more supportive of self-justification than prospect theory.

Decision dilemma theory. Bowen (1987) suggested that in most of the previous escalation research, participants have not received clearly negative feedback about their initial resource allocation. According to this analysis, the tendency to persist with the previous course of action may stem not from the need to justify the correctness of previous decisions, but rather from any or all of the following motives: (a) economic considerations, that is, people may have "felt that they were making the economically prudent decision under equivocal circumstances" (Bowen, 1987: 56–57), (b) curiosity ("an additional opportunity to permit a strategy to work"), (c) the need to make a greater effort to see if it will bring the project to fruition, or (d) to learn about the phenomenon ("to allow for the collection of additional data and the passage of time which might promote an increased understanding of the situation").

Several pertinent facts seem to counter Bowen's implication that self-justification is largely irrelevant in explaining the results of previous escalation studies. First, it seems highly unlikely that subjects who were led to believe that their initial resource allocations had fared poorly did not experience negative feedback. For example, in a study using Staw's (1976) popular paradigm, Conlon and Parks (1987) asked subjects to complete a feedback manipulation check, which included questions like, "To what extent did the previous funding produce the desired result?" Responses could range from "not at all" (1) to "a very great extent" (7). The average rating in the negative feedback condition hovered around 2.00, which, in an absolute sense, suggested that decision makers experienced the feedback as negative.

Furthermore, Brockner and Rubin (1985) asked the same individuals at various stages of escalation how confident they were that they would achieve their desired goal. In fact, they reported feeling *less* confident as their degree of entrapment heightened, suggesting that they experienced the feedback as negative. In a more recent study, Garland (1990) manipulated participants' prior commitment to a failing venture. The greater the prior commitment, the more likely were people to persist with the previously chosen course of action. However, there was no relationship between the magnitude of their prior commitment and their beliefs that the project would

be profitable. Put differently, participants' greater proneness to continue (as a function of the size of their prior investment) was not accompanied by greater confidence that the project would be economically successful. Thus, the results of the Brockner and Rubin (1985) and Garland (1990) studies suggest that persistence with the previously chosen venture was *not* based on economic considerations.

Previously in this article it was reported that decision makers who exhibited greater behavioral escalation were more likely to report that self-justification motivated their behavior. For purposes of divergent validity of the self-justification explanation, it is worth noting that entrapped decision makers did not rate other plausible motives as important determinants of their behavior, some of which seem related to those inherent in Bowen's theory. For example, economic considerations were not rated as especially salient; decision makers felt increasingly less confident that they would achieve their goals as their degrees of escalation deepened. Moreover, highly committed decision makers were not likely to say that they were motivated by the desire to achieve economic goals. The failure to list reasons such as economic factors may be especially noteworthy, because these rationales usually are more socially acceptable than self-justification explanations. In addition, they did not report being motivated by their intrinsic enjoyment of the investment task, which might well have occurred if curiosity about the outcome or the desire to learn more about the process was their primary motivation. In summary, escalation of commitment was accompanied by a greater tendency to endorse the self-justification self-report measures of motivation. However, escalation was *not* accompanied by a greater tendency to endorse other self-report measures of motivation, such as several posited to be important by Bowen (1987).

Theories Designed to Supplement Self-Justification

The central thesis of this article is that self-justification explains escalation to a significant, but not total, extent. It is therefore fitting to consider some of the theoretical perspectives that should enable management scholars to explain escalation more comprehensively. Even the theories that were "argued against" in the previous section of this article (prospect theory and decision dilemma theory) are likely to be useful in this context. This author's objection to prospect and decision dilemma theory stems from the context in which they were offered: to replace self-justification theory. Evidence cited previously in this article suggests that self-justification theory provides one explanation of escalation. However, prospect theory, decision dilemma theory, as well as numerous other perspectives are likely to provide important explanations of escalation at least some of the time. For instance, Garland's (1990) finding that greater sunk costs in a failing project increased the likelihood of persistence may well be explained by prospect theory.

Staw and Ross (1987) provided an extensive overview of the various categories of factors that may affect escalating commitment. Importantly,

they also have suggested that these factors are likely to be *differentially* important, depending upon the stage of the escalation process. At the outset, decision makers are likely to be affected by "project" considerations, in which the expected costs and revenues associated with the venture are analyzed. If the latter are expected to exceed the former, then the project is initiated. It is at this stage that project variables derived from expectancy theory are likely to be especially influential.

Psychological and social factors become increasingly important in the next stage of the escalation process. Psychological considerations include the theories discussed thus far in the article: self-justification, prospect theory, and decision dilemma theory. However, other psychological factors may mediate escalation. For example, decision makers may deny or distort the negative feedback they receive concerning their initial resource allocations, in an attempt to convince themselves that things do not look so bad. (Note that such a tendency may or may not be the result of a self-justification process.)

Brockner and Rubin (1985) noted that at least four types of social variables may influence escalating commitment, including: (a) whether the allocation decisions are made by individuals or groups, (b) whether decision makers have been exposed to the escalation behaviors of relevant models, (c) whether an audience is observing the decision makers' escalation behavior, and (d) whether decision makers are competing against a nonsocial or social entity in attempting to achieve their goals. For example, people who are waiting for a bus to take them someplace to which they could have walked just as easily are not competing against another person in the escalation process. However, union members on strike against their company who vow that they have too much invested to quit the strike are likely to view themselves as competing against other people (management). Moreover, attributes and behaviors of the social entity are likely to be additional determinants of escalation decisions.

Note that extensive literatures have been developed around each of these types of social factors, though not predominantly explored in the domain of escalating commitment. However, a handful of studies have applied concepts from these large literatures to the escalation context. For example, the group polarization literature (e.g., Isenberg, 1986) has shown that group decisions tend to accentuate individuals' prior preferences; in fact, a study by Whyte (1990) has extended this principle into the domain of escalation decisions. Groups consisting of individuals leaning toward escalation were even more likely to escalate after group discussion than before it, whereas groups whose members were leaning away from escalation were even less likely to escalate after group discussion than before it. Research on modeling (e.g., Bandura, 1977), which explores the conditions under which people are more likely to imitate the behavior of others, also has proven to be relevant in the escalation context (Brockner et al., 1984). Self-presentation theory (e.g., Goffman, 1959) is potentially important in explaining the effects of an onlooking audience (Brockner, Rubin, & Lang,

1981) or a social (rather than nonsocial) opponent on escalation (Teger, 1980).

Staw and Ross (1987: 60) suggested that at even later stages of escalation, "structural" factors perpetuate continued involvement. As these authors noted:

Many structural factors that affect commitment have the properties of side bets. . . . The decision to change jobs, for example, is not simply a trade-off between two workplaces, but a larger decision between homes, schools, neighborhoods, and friendship patterns. Becker (1960) emphasized that side bets are built up gradually over time as one executes a particular course of action. In virtually the same way, organizations create economic, technical, and political side bets as a project is installed and developed over time.

Most germane to the present discussion is the locking-in effect of such side bets when the initial course of action turns sour. Staw and Ross (1987: 60) provided an example of the committing effect of economic and technical side bets:

As a new product is developed it may necessitate the opening of new plants, accumulation of equipment, hiring of staff, and the development of distribution channels. These are all side bets that are incurred to support and implement a given project over its lifespan. These are also serious considerations in decisions whether to persist or withdraw from a project if it does not appear to be succeeding.

Staw and Ross's (1987) analysis of the antecedents of escalation has several important implications. First, their work provides a framework of the theories—and factors derived from those theories—that are likely to explain escalating commitment. Self-justification is one of the theories in this framework, but there are many others. If complex phenomena like escalation are multiply determined, then the aforementioned literatures are likely to provide further insight (beyond self-justification theory) into the causes of escalation.

Of course, the framework of theories provided by Staw and Ross need to be put to further empirical tests, within the domain of escalation. Although a good deal of research has been performed evaluating the self-justification explanation of escalation, relatively little empirical research has been conducted evaluating the efficacy of other theories in accounting for escalation. Fortunately, each theoretical perspective brings with it a host of situational and individual difference variables that are likely to influence escalation. For example, Whyte (1990) found that group discussion polarized individuals' proneness toward escalation. The group polarization literature, in turn, suggests that the cohesion of the group should moderate the magnitude of the polarization effect. Thus, in the future, researchers on group escalation should study the effect of the group cohesion variable.

Leader behavior within the group also may affect escalation. For example, powerful leaders who are able to control the distribution of information and thereby create a *false* sense of progress toward the group's goal may engender greater escalation to a failing course of action.

Research on modeling has shown that imitative behavior is most likely to occur when individuals are uncertain about the correct way to respond. Therefore, individual and situational determinants of uncertainty should influence the extent to which escalation decisions are influenced by relevant models. For instance, several studies have shown that individuals with low self-esteem (those who are generally more uncertain about their opinions) are more likely to imitate the behavior of models than are their counterparts with high self-esteem (Brockner, O'Malley, Hite, & Davies, 1987; Weiss, 1977). Therefore, if models influence escalation, they may be more likely to do so for persons with low, rather than high, self-esteem.

Proponents of self-presentation theory suggest that the organization's culture also should influence escalating commitment. A fundamental assumption emerging from studies of organizational culture is that employees generally act in a manner consistent with the organization's values, a tendency likely to reflect employees' self-presentational motives (at least in part). Therefore, the nature of the organization's values should influence employee behavior. If the culture of the organization is one (a) that makes people unwilling to admit failure or (b) that values consistency in behavior (Staw & Ross, 1987), then it is more likely that escalation will occur. However, if people are free to admit that they have erred, or if experimentation is highly valued in the organization, then escalation should be less apt to occur.

Research on self-presentation processes within the escalation context also may help clarify a matter of considerable theoretical and practical interest: whether decision makers' escalation stems from their need to justify previous investments in their own eyes, the eyes of others, or both. Previous discussions of this issue have suggested that the entrapped decision maker is probably motivated by both internal and external pressures (Brockner & Rubin, 1985; Staw, 1981). However, future research needs to move beyond the simple position that "both matter." Managers and scholars need to know the *situational and dispositional factors that moderate* the relative influence of internal and external justification pressures on the entrapped decision maker. Certain individuals seem to be especially concerned with how they appear in the eyes of others, such as those who are characteristically high in self-monitoring (Snyder, 1987) or public self-consciousness (Buss, 1980). For these individuals, then, escalation may be motivated primarily by their needs for external justification. For example, the degree of escalation exhibited by such persons should be greatly influenced by the presence or absence of an evaluative audience, or by face-saving variables similar to those studied by Fox and Staw (1979).

Other people—for example, those who are low self-monitors—are more motivated by internal (rather than external) sources of information

(e.g., personal standards or attitudes). These individuals should be more concerned with justifying the correctness of their actions in their own eyes. Therefore, their level of escalation should be influenced by factors affecting their own rather than others' beliefs that they were responsible for the initial allocation of resources. Such factors may be found in the dissonance literature, which has shown that determinants of the private perception of responsibility include choice, foreseeability of the negative outcomes, and other implicating or exonerating information (Leatherwood & Conlon, 1987; Staw, 1981).

In summary, situational and individual factors derived from the literatures on group polarization, modeling, and self-presentation theory should provide further insight into the explanation of escalation. Similarly, theory and research on organizational inertia, which includes the structural determinants of resource allocation behavior, also may help explain escalation, particularly that which occurs at relatively late stages in the process.

Another feature of Staw and Ross's (1987) framework is the notion that the various categories of factors are likely to be *differentially* important at different stages of escalation. Not only must multiple theoretical perspectives be brought to bear in explaining escalation, but also the importance of each theory depends on, or interacts with, the stage of the escalation process. If this reasoning is correct, then, in the future, at least some of the researchers on the causes of escalation will need to adopt a longitudinal approach, in which the same antecedents are studied at different stages in the process.

Longitudinal research on the causes of escalating commitment may be performed in a number of ways. Ross and Staw (1986) adopted the longitudinal approach in their case field study of Expo 86. Moreover, it is possible to invoke this approach under more controlled conditions. For example, several laboratory experiments have shown that when the costs associated with resource allocations were made salient to decision makers *early* in the process, escalation was less apt to occur (compared to when such costs were not made salient; Brockner et al., 1981; Rubin & Brockner, 1975). In a subsequent study, the researchers manipulated not only the presence or absence of cost salience, but also *the point in time* at which the cost salience manipulation occurred. For half of the participants, the manipulation occurred relatively early in the process, that is, prior to any resource allocation (early condition); this procedure replicated the one used in the aforementioned studies. For the remaining half, the cost salience manipulation took place considerably later in the process, that is, after resources had been allocated (late condition). The results in the early condition replicated those found earlier: escalation was reduced by the heightening of cost salience. However, within the late condition there was no difference in escalating commitment as a function of the cost salience manipulation.

In a second study, Brockner and his colleagues (1982) varied decision makers' face-saving concerns as well as the point in time at which these concerns became salient. The face-saving variables—operationalized

through the presence of an evaluative audience and individual differences in the decision makers' public self-consciousness—had no effect on individuals' resource allocation behavior relatively *early* in the process. However, these same factors were shown to have significant effects on investment behavior *later* in the process. The results of these studies are consistent with Staw and Ross's (1987) implication that project considerations (i.e., expectancy theory variables such as cost considerations) are more influential determinants of resource allocation behavior earlier than later, and that social factors (e.g., face-saving concerns) are more important later than earlier.

Critical studies testing competing explanations. In general, when a given phenomenon can be explained by a variety of theories, it is useful to conduct critical studies in which the competing theories make different predictions about the results. The obtained results may then indicate which of the theories is "correct." Escalating commitment appears to be the result of numerous factors and processes, some having to do with self-justification and others not. *To a certain extent*, therefore, it is recommended that future research on escalation include critical studies that compare competing explanations (e.g., Staw & Ross, 1978). This should enable us to evaluate whether one theory is more appropriate than the other(s) *in a given instance*.

To be sure, there is a potential danger in the conduct of critical studies that test competing explanations of escalation. Researchers may falsely conclude that certain theories are "right" and others "wrong" in a *universalistic* sense. Given the stage analysis of escalation, which posits that different factors are likely to influence escalation at different points in the process, the *relative* predictive power of the various theories may depend upon the stage of escalation. At the very least, researchers who compare competing explanations need to take the stage variable into account. If one theory is superior to another at one stage of the process, it does not mean that the same will hold true at a different stage of escalation.

SUMMARY AND CONCLUSIONS

The present article provides evidence that self-justification theory provides an important explanation of escalation behavior, in sharp contrast to the position espoused in several recent articles (Bowen, 1987; Whyte, 1986). However, self-justification offers at best only a partial explanation of escalating commitment. To explain escalation more completely, researchers should invoke several theoretical perspectives at the individual level (e.g., expectancy theory, prospect theory), interpersonal and group levels (e.g., group polarization, modeling processes, self-presentation theory) and organizational levels of analysis (e.g., theories of organizational inertia). Moreover, the various theories are likely to have different degrees of explanatory power as a function of the decision makers' level of prior commitment, emphasizing the need for the antecedents of escalation to be studied longitudinally.

REFERENCES

- Arkes, H., & Blumer, C. 1985. The psychology of sunk costs. *Organizational Behavior and Human Decision Processes*, 35: 124-140.
- Bandura, A. 1977. *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bazerman, M. H. 1984. The relevance of Kahneman and Tversky's concept of framing to organizational behavior. *Journal of Management*, 10: 333-343.
- Bazerman, M. H., Beekun, R. I., & Schoorman, F. D. 1982. Performance evaluation in dynamic context: The impact of a prior commitment to the ratee. *Journal of Applied Psychology*, 67: 873-876.
- Bazerman, M. H., Schoorman, F. D., & Goodman, P. 1980. *A cognitive evaluation of escalation processes in managerial decision making*. Unpublished manuscript, Boston University.
- Becker, H. S. 1960. Notes on the concept of commitment. *American Journal of Sociology*, 66: 32-40.
- Bowen, M. G. 1987. The escalation phenomenon reconsidered. Decision dilemmas or decision errors? *Academy of Management Review*, 12: 52-66.
- Brockner, J., Houser, R., Birnbaum, G., Lloyd, K., Deitcher, J., Nathanson, S., & Rubin, J. Z. 1986. Escalation of commitment to an ineffective course of action: The effect of feedback having negative implications for self-identity. *Administrative Science Quarterly*, 31: 109-126.
- Brockner, J., Nathanson, S., Friend, A., Harbeck, J., Samuelson, C., Houser, R., Bazerman, M., & Rubin, J. Z. 1984. The role of modeling processes in the 'knee deep in the big muddy' phenomenon. *Organizational Behavior and Human Decision Processes*, 33: 77-99.
- Brockner, J., O'Malley, M., Hite, T., & Davies, D. 1987. Reward allocation and self-esteem: The role of modeling and equity restoration. *Journal of Personality and Social Psychology*, 52: 844-850.
- Brockner, J., & Rubin, J. Z. 1985. *Entrapment in escalating conflicts: A social psychological analysis*. New York: Springer-Verlag.
- Brockner, J., Rubin, J. Z., Fine, J., Hamilton, T., Thomas, B., & Turetsky, B. 1982. Factors affecting entrapment in escalating conflicts: The importance of timing. *Journal of Research in Personality*, 16: 247-266.
- Brockner, J., Rubin, J. Z., & Lang, E. 1981. Face-saving and entrapment. *Journal of Experimental Social Psychology*, 17: 68-79.
- Burnam, M. A., Pennebaker, J. W., & Glass, D. C. 1975. Time consciousness, achievement striving, and the Type A coronary-prone behavior pattern. *Journal of Abnormal Psychology*, 84: 76-79.
- Buss, A. H. 1980. *Self-consciousness and social anxiety*. New York: Freeman.
- Caldwell, D. F., & O'Reilly, C. 1982. Response to failure: The effects of choice and responsibility on impression management. *Academy of Management Journal*, 25: 121-136.
- Conlon, E. J., & Parks, J. M. 1987. Information requests in the context of escalation. *Journal of Applied Psychology*, 72: 344-350.
- Conlon, E. J., & Wolf, G. 1980. The moderating effects of strategy, visibility, and involvement on allocation behavior. *Organizational Behavior and Human Performance*, 26: 172-192.
- Davis, M., & Bobko, P. 1986. Contextual effects on escalation processes in public sector decision making. *Organizational Behavior and Human Decision Processes*, 37: 121-138.
- Festinger, L. 1957. *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson.

- Fiegenbaum, A., & Thomas, H. 1988. Attitudes towards risk and the risk-return paradox: Prospect theory explanations. *Academy of Management Journal*, 31: 85–106.
- Fox, F. V., & Staw, B. M. 1979. The trapped administrator: Effects of job insecurity and policy resistance upon commitment to a course of action. *Administrative Science Quarterly*, 24: 449–471.
- Garland, H. 1990. Throwing good money after bad: The effect of sunk costs on the decision to escalate commitment to an ongoing project. *Journal of Applied Psychology*, 75: 728–731.
- Goffman, E. 1959. *The presentation of self in everyday life*. New York: Doubleday-Anchor.
- Isenberg, D. 1986. Group polarization: A critical review and meta-analysis. *Journal of Personality and Social Psychology*, 50: 1141–1151.
- Janis, I. L. 1982. *Groupthink* (2nd ed.). Boston: Houghton-Mifflin.
- Kahneman, D., & Tversky, A. 1979. Prospect theory: An analysis of decisions under risk. *Econometrica*, 47: 263–291.
- Kahneman, D., & Tversky, A. 1984. Choices, values, and frames. *American Psychologist*, 39: 341–350.
- Leatherwood, M. L., & Conlon, E. J. 1987. Diffusibility of blame: Effects on persistence in a project. *Academy of Management Journal*, 30: 836–847.
- Levi, A. 1982. *Escalating commitment and risk taking in dynamic decision behavior*. Unpublished manuscript, Yale University.
- Lydon, J. E., & Zanna, M. P. 1990. Commitment in the face of adversity: A value-affirmation approach. *Journal of Personality and Social Psychology*, 58: 1040–1047.
- Northcraft, G. B., & Wolf, G. 1984. Dollars, sense, and sunk costs: A life-cycle model of resource allocation decisions. *Academy of Management Review*, 9: 225–234.
- O'Reilly, C. A., & Caldwell, D. F. 1981. The commitment and job tenure of new employees: Some evidence of post decisional justification. *Administrative Science Quarterly*, 26: 597–616.
- Ross, J., & Staw, B. M. 1986. Expo 86: An escalation prototype. *Administrative Science Quarterly*, 31: 274–297.
- Rubin, J. Z., & Brockner, J. 1975. Factors affecting entrapment in waiting situations: The Rosenkrantz and Guildenstern effect. *Journal of Personality and Social Psychology*, 31: 1054–1063.
- Schoorman, F. D. 1988. Escalation bias in performance appraisals: An unintended consequence of supervisor participation in hiring decisions. *Journal of Applied Psychology*, 73: 58–62.
- Snyder, M. 1987. *Public appearances/private realities: The psychology of self-monitoring*. New York: Freeman.
- Staw, B. M. 1976. Knee-deep in the big muddy: A study of escalating commitment to a chosen course of action. *Organizational Behavior and Human Performance*, 16: 27–44.
- Staw, B. M. 1981. The escalation of commitment to a course of action. *Academy of Management Review*, 6: 577–587.
- Staw, B. M., & Ross, J. 1978. Commitment to a policy decision: A multi-theoretical perspective. *Administrative Science Quarterly*, 23: 40–64.
- Staw, B. M., & Ross, J. 1987. Understanding escalation situations: Antecedents, prototypes, and solutions. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior*, vol. 9: 39–78. Greenwich, CT: JAI Press.
- Strube, M. J., Deichmann, A. K., & Kickham, T., In press. Time urgency and the Type A

- behavior pattern: Time investment as a function of cue salience. *Journal of Research in Personality*.
- Strube, M. J., & Lott, C. L. 1984. Time urgency and the Type A behavior pattern: Implications for time investment and psychological entrapment. *Journal of Research in Personality*, 18: 395-409.
- Teger, A. 1980. **Too much invested to quit**. New York: Pergamon Press.
- Thaler, R. 1980. Toward a positive theory of consumer choice. *Journal of Economic Behavior and Organization*, 1: 39-60.
- Tversky, A., & Kahneman, D. 1981. The framing of decisions and the psychology of choice. *Science*, 211: 453-458.
- Vroom, V. 1964. **Work and motivation**. New York: Wiley.
- Weiss, H. M. 1977. Subordinate imitation of supervisory behavior: The role of modeling in organizational socialization. *Organizational Behavior and Human Performance*, 19: 89-105.
- Whyte, G. 1986. Escalating commitment to a course of action: A reinterpretation. *Academy of Management Review*, 11: 311-321.
- Whyte, G. 1990. **Entrapment: Are groups less susceptible?** Paper presented at the annual meeting of the Academy of Management, San Francisco.

Joel Brockner is a professor of management in the Graduate School of Business at Columbia University. He received his Ph.D. from Tufts University. His current research interests include the effects of layoffs on the employees who remain, self-esteem processes, and decision making.