Can Managers Appraise Performance Too Often?

Dr. Devaun M. Kite, Accounting, Northeast Louisiana University
Dr. Jeffrey P. Katz, Management, Kansas State University
Dr. Marilyn T. Zarzeski, Accounting, University of Central Florida

Abstract

This paper discusses the relationship between the frequency of performance appraisal and escalation of commitment to a losing course of action. It is commonly thought that the more often employees are appraised, the more effective they become. Contrary to this view, we discuss conditions that cause employees, particularly project managers responsible for capital budgeting decisions, to stick with decisions that have been shown to result in negative consequences for the company. We report the results of a set of work place simulations where the frequency of performance appraisal affected the length of commitment to losing courses of action as well as the managers' perceptions about their personal benefits resulting from those decisions. The results suggest that frequent performance appraisals during the course of long-term projects may divert managers from the profit maximization goal sought by the owners of the firm.

Introduction

Critics of American management practice contend the emphasis placed on short-term profits reduces the international competitiveness of American firms because managers are evaluated on success over a relatively short period of time, typically quarterly, even if projects are longer term in nature (Thurow, 1981). Several business authors have linked this short-term emphasis to an over-reliance on quarterly and annual accounting-based financial reports (Narayanan, 1985; Chow, 1983). The reporting, they argue, limits the ability of American managers to make the best long-term decisions compared to their international counterparts because of the short-term focus on performance that American managers are forced to consider. Thus, American managers are placed in the position of worrying about their job security based on the frequency of accounting-based reports whereas their Japanese counterparts are afforded more long-term performance measures.

Most of the information found in the business literature regarding this short-term performance orientation is anecdotal. The Hubble Space Telescope, and the problems that resulted from its long term development, is a typical example of this short-term focus on long-term projects. According to Quinn and Walsh (1994), the Hubble story, "...makes for a wonderful and instructive case study." They emphasize that relentlessly pursuing controls unrelated to the overall success of the telescope focused organizational emphasis and gave rise to stagnation, deception, chaos, and finally to launching a telescope that many employees knew would not operate effectively. The importance of developing appropriate control systems, particularly performance appraisal systems, becomes more critical as the term of the project, and/or its strategic importance to the organization, increases.

Despite evidence that accounting-based performance measures can cause users of the information to behave irrationally (Magee and Dickhaut, 1978) no management research has specifically investigated whether frequent performance appraisals, based on accounting reports, cause managers to deviate from long-term profit maximization (Mintzberg, 1975; Merchant, 1985). It is expected that in certain circumstances the frequency of performance appraisal will influence a decision maker's choice (Merchant and Bruns, 1986).

For example, suppose a manager becomes aware of information about an investment that maximizes profitability but would harm the manager's reputation by drawing attention to the frequency of changes made in his/her investment strategy. To avoid appearing indecisive, the manager may typically choose an alternative which maximizes his/her reputation and short-term performance appraisal (but not necessarily maximum profit). On the other hand, if the manager's reputation is protected by the prospect of a long-term performance appraisal, which essentially ignores change until the project is complete, she/he will tend to choose the alternative that maximizes profitability because the choice will also maximizes his/her long-term performance appraisal (Kanodia, Bushman and Dickhaut, 1989).

In the typical work setting, managers with private information regarding the best alternative will maximize their performance on a short-term measurement standard, rather than maximizing profitability. Such cases increase the importance of examining the timing of performance appraisals. This paper discusses a study of strategic decisions made by two groups during four periods of a managerial decision making simulation. The performance of individuals in one group was appraised at the end of each "year" while the performance of individuals in the second group was appraised at the end of the four period simulation. The results indicate that the frequency of performance appraisal affected the length of commitment to the investment decision as well as perceptions of the personal benefits expected to result from those decisions. The present study suggests that frequent performance appraisals, under certain circumstances, may actually divert managers away from long-term profit maximization. Rather than rely on survey or archival data to assess predictions, this study utilized a strategic decision making simulation developed to test the predictions using managers as participants. A number of implications for management practioners and researchers are suggested.

Performance Evaluation and Performance

It has been shown that expectations of performance appraisal results affect employee performance (Staw and Ross, 1987). Prior research has reported that workers who anticipate a performance appraisal behave differently than those who do not. For example, one prior study examining financial auditors charged with uncovering organizational accounting problems found that when the auditors who had conducted the prior year audit, and were expecting a performance appraisal, paid more attention to audit evidence inconsistent with their expectations and were less extreme in their judgments than auditors in a new appraisal situation. Importantly, when no performance appraisal was anticipated by either group, there was no difference in decision making between the two groups of auditors (Tan, 1991).

It is proposed that different levels of performance appraisal frequency will result in different employee expectations and, therefore, different approaches to performance. Specifically, with regard to the link between performance and appraisal, the expectation that being effective is based on being judged effective by a superior. The consequences of this impression management may result in negative effects to the organization. In other words, the use of appraisals may influence an individual's self-presentation motive. In such cases, individuals who escalate commitment to a failing course of action do so as a dysfunctional reaction to the frequency of their performance appraisal because they don not want to show indecisiveness (Staw and Ross, 1978).

The reaction of individuals who anticipate performance appraisal may be explained by impression management theory, also known as self-presentation theory. The essence of impression management is that people attempt to establish, monitor, and control the presentation of their identities to others so that they may control the outcomes that stem from interactions with others. In organizations, desired outcomes such as bonuses are often contingent upon the results of performance appraisals. Because the outcome of the performance appraisal is important, motivation exists to manage the image presented to the evaluator.

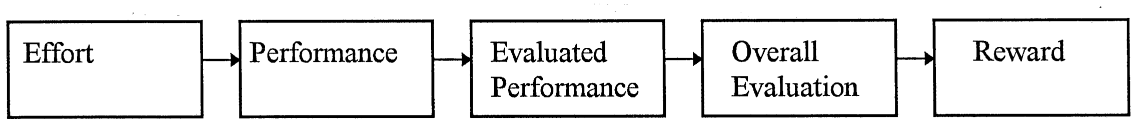
When a manager or decision maker is informed of the type of performance appraisal to expect, the individual considers the potential rewards/punishments expected for each possible course of action, including the type of impression which will be presented, and acts to maximize expected benefits. The frequency with which an individual is evaluated should affect the perceived expected benefits of particular courses of action. When considering whether to remain with the original project or switch to a better alternative, the individual will weigh the perceived results of each option. The perceived results are often times dependent on the frequency of performance appraisal. On the other hand, if the individual is considering switching and anticipates a short term performance evaluation, it may appear that the change will be included in the appraisal before the total positive results have materialized. Therefore, the individual is motivated to remain with the short-term alternative, thus escalating his/her original investment. Figure 1 is a graphic display of the performance appraisal process especially the relationship between worker effort and the overall appraisal.

There are two reasons for this escalation of commitment phenomenon. First, the individual may wish to present an image of consistency and confidence. Norms of society tend to encourage consistency and discourage inconsistency. Therefore, workers manage impressions to establish the image of consistency (Brown, 1968). Second, remaining with the original choice prevents admitting that a mistake was made. Research has demonstrated how distasteful it is for managers to admit making a mistake; it has been shown that managers will sacrifice monetary payoffs to minimize public embarrassment (Schlenker, 1980). This tendency has been labelled the "MUM effect" whereby individuals tend to keep mum about negative messages even though the consequences may seriously adversely affect the organization (Kardes and Kimble, 1984).

These predictions assume that all managers act opportunistically. However, some may constrain their behavior out of ethical sensibilities or conscience (Noreen, 1988). In the previous example, managers are faced with a choice between what is best for the firm and what is personally optimal. Some individuals may consider what's best for the firm regardless of how it affects their personal image or salary. If this is the case, a short term performance appraisal will not affect behavior differently than will a longer term performance appraisal. For this reason it is important to consider a measure of the person's tendency to place organizational goals ahead of personal goals.

It is predicted that the *Frequency of Performance Appraisal* (long-term versus short-term) will influence the length of time an individual escalates commitment, once his/her tendency to consider organizational goals over personal goals has been taken into account. More specifically, individuals appraised at frequent intervals are expected to escalate commitment to an investment longer than those appraised less frequently (Ross and Staw, 1993; Arkes and Blumer, 1985). Thus hypothesis 1 states:

Figure 1
The Performance Appraisal Process



H1 When the variability associated with *Jobfirst* is removed, the *Length of Escalation* will be greater when an individual is evaluated in the short run than when an individual is evaluated over the long run.

Management research further predicts that the *Frequency of Performance Appraisal* will influence the individual's perception of his/her *Personal Benefits from Escalating,* that is his/her perceived individual benefits for remaining with the original course of action. Specifically, because more frequent performance appraisal draws attention to changes in investments, individuals should perceive more *Personal Benefits from Escalating* in the short-term than in the long-term (Brockner, 1992). Thus hypothesis 2 states:

H2 When the variability associated with *Jobfirst* is removed, the perceived *Personal Benefits from Escalating* will be greater when an individual is evaluated in the short run than when an individual is evaluated over the long run.

Figure 2 displays the relationship between the two hypotheses.

Method

The hypotheses were tested using a management decision making case study simulation. Subjects acted as managers who performed strategic capital budgeting decisions for four periods, representing fiscal years. Appraisal of the subjects' performance was varied between the frequent (short-term) and infrequent (long-term) conditions. Each subject was randomly assigned to one of two experimental scenarios: short-term (56 subjects), who were informed they would be evaluated each year or long-term (53 subjects), who were informed they would be evaluated at the end of the project's life. In order to determine whether the frequency of performance appraisal affected behavior, it was necessary to create a scenario where all subjects would prefer to remain with their original investment choice. Therefore, the simulation materials attempted to induce escalation by creating a scenario including job insecurity and high policy resistance to the original investment choice consistent with Fox and Staw's escalation study (1979). Background information, instructions for completing the materials and rules for earning payment were presented at the outset of the experiment.

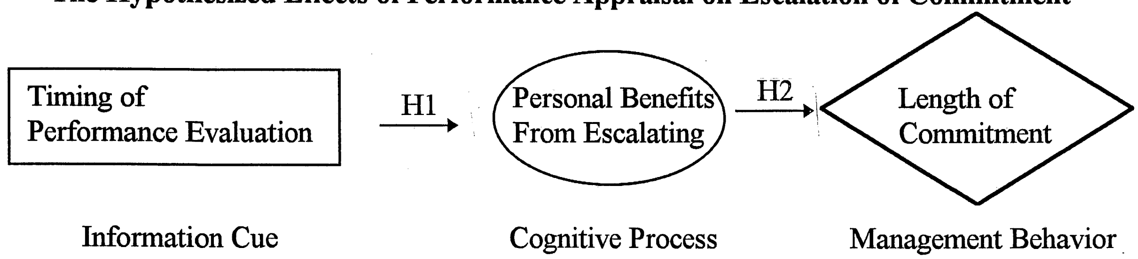
Incentive Structure

Participants were motivated to participate in the experiment and to behave in a self-interested manner through the use of cash prizes that were used as rewards simulating performance bonus systems in place in most organizations. The rewards were based on how completely the subject completed the task and on the subject's performance on the final evaluation.

Procedure and Task

In the first period subjects chose between two virtually identical capital investments. In the second period they received feedback regarding this choice; a performance appraisal (short-term appraisal subjects only); and private information about an alternative investment which would cut production costs by 75 percent (the best alternative for the organization). Subjects then chose between

Figure 2
The Hypothesized Effects of Performance Appraisal on Escalation of Commitment



their original investment and the new alternative investment. Following the investment decision subjects considered the specific benefits which would accrue to themselves if they had chosen to escalate commitment.

During the third period, subjects received feedback regarding the previous investment choice; a performance appraisal (short-term subjects only); and private information regarding the superior alternative (the same alternative offered in the second period). They then chose to remain with their previous choice or switch to the alternative. Finally in the fourth period, all subjects received feedback regarding the previous investment choice and an overall performance appraisal.

Measures

Personal Benefits from Escalating were measured using a listing in which decision makers were asked to rate a number of benefits that they may receive by escalating their commitment to an original decision. This list was found to be a reliable measure of escalation benefits (Cronbach's Alpha=.83). Table 1 reports the list of personal benefits rated by the decision makers.

To measure and control for the manager's intrinsic work motivation and the belief that the job comes first, *Jobfirst* was used as a measure of the subjects' altruistic consideration for the firm. It was measured with a question on the post simulation questionnaire which asked subjects to respond on a five-point scale to the statement, "In general, when I do a job, I am more concerned about doing the job "right" than with how it will affect me, my bank account, my family, etc." Table 2 reports the experimental protocol.

Results

Manipulation checks administered at the conclusion of the simulation indicate the subjects understood and responded to the experimental design (see Table 3). Hypothesis 1 predicted that managers whose performance is appraised frequently will escalate commitment longer than those whose performance is appraised based on the term of the project. Descriptive analysis showed that 62 percent of the long-term subjects switched immediately compared to only 50 percent of the short-term subjects. At the second opportunity to switch, 6 percent of the long-term subjects switched compared to 11 percent of the short-term subjects switched. Overall, more short-term subjects escalated their commitment to a losing course of action (39%) than did long-term subjects (32%). The results of analysis with *Jobfirst* as a covariate revealed that *Frequency of Performance Appraisal* was significantly associated with the *Length of Escalation* (F=1.744, p=.09). These results lend support to the notion that the frequency of performance appraisal effects escalation of commitment and suggests that investigation of the relationship between *Frequency of Performance Ap-*

Table 1
List of Personal Benefits From Escalation Decision
Cronbach's (1951) Alpha =.8250

1. I would appear to have confidence in my decisions and to be standing up for what I believe in.
2. I would not have to admit to the Board of Directors or my boss that my original choice was not the best, that I had made a "mistake."
3. I would not look like I couldn't make up my mind or that I was uncertain of my decisions.
4. I would receive acceptable performance evaluations and might become permanent Capital Procurement Manager.
5. I would avoid possible questions about my ethics for acting on "private" information.
6. I would avoid receiving an unacceptable performance evaluation and possible demotion.
7. I would appear to know what I was doing and as competent in my original decision process.

Table 2
Experimental Procedure

Short-term Condition	Long-term Condition
Period 1	**Period 1**
1. Make investment choice.	1. Make investment choice.
Period 2	**Period 2**
1. Receive Feedback.	1. Receive Feedback.
2. Receive Evaluation.	2. Receive private information regarding alternative.
3. Receive private information regarding alternative.	3. Make investment choice.
4. Make investment choice.	4. Provide responses to fixed-list.
5. Provide responses to fixed-list.	
Period 3	**Period 3**
1. Receive feedback.	1. Receive feedback.
2. Receive evaluation.	2. Receive private information regarding. alternative (same as Period 2, Item 3).
3. Receive private information regarding alternative (same as Period 2, Item 3).	3. Make investment choice.
4. Make investment choice.	
Period 4	**Period 4**
1. Receive feedback.	1. Receive feedback.
2. Receive evaluation.	2. Receive evaluation.

praisal and *Personal Benefits from Escalating* is warranted.

It was also predicted that subjects whose performance is appraised frequently will perceive more *Personal Benefits from Escalating* than will subjects appraised less frequently, once the variability arising from consideration of firm utility (jobfirst) before personal utility is removed. The results revealed that *Frequency of Performance Appraisal* had a significant effect on *Personal Benefits from Escalating* ($p \leq =.05$). These results support the prediction that image management is a consideration when project managers decide among a set of alternatives.

To investigate why short term evaluation might encourage escalation, four significant differences between long term and short term subjects' answers on the post-experimental questionnaire provide some information (see Table 4). First, short-term subjects felt more pressure to "stick with" their original decision than did long-term subjects ($p=.03$). Second, short-term subjects cared more about what "grade" they would receive on their performance appraisals than did long-term subjects ($p=.001$). This difference indicates that the more frequently managers were appraised, the greater their concern with the outcome of the appraisal. It is likely that since short term subjects received more evaluations, the outcome of these evaluations was more salient to them. Finally, the subjects were aware of the timing of their performance appraisal. In response to the statement "My performance as Acting Capital Procurement Manager was evaluated annually" the mean for short-term subjects was significantly higher than the mean for long-term subjects ($p=.0001$). These responses provided evidence that the subjects were aware of the frequency of their performance ap-

Table 3
Mean Responses to Manipulation Checks--Full Sample

Measured on a five point scale (coded 1=strongly disagree to 5=strongly agree).

	Mean	SA	A	N	D	SD
Administration:						
I looked back at my original list of consequences even though the instructions asked me not to do so (Please answer honestly, there is no penalty or reward for any answer).	1.37	0	4.6	3.7	15.6	75.2
I found the format of the experiment (e.g., using the envelopes) understandable.	4.17	38.5	48.6	4.6	7.3	.9
Job Insecurity:						
I felt secure in my job as Capital Procurement Manager.	3.13	8.3	34.9	24.8	23.9	7.3
Poor outcomes from my recommendations clearly would have meant losing the job of Acting Capital Procurement Manager.	3.95	28.4	48.6	12.8	10.1	0
I needed to protect my position as Acting Capital Procurement Manager in the company.	3.63	12.8	53.2	18.3	12.8	1.8
Policy Resistance:						
The Board of Directors was supportive of my recommendations.	2.45	9	15.6	29.4	35.8	18.3
There was much resistance to my recommendations.	3.44	8.3	41.3	36.7	13.8	0
The Board of Directors was reluctant to accept my recommendations.	3.64	10.1	56.9	20.2	12.8	0

praisal. This provides evidence that the frequency of performance appraisal affected cognitive processes differentially.

In order to determine whether the *Frequency of Performance Appraisal* had a different affect on benefits related to an individual's image and extrinsic benefits relating to performance, an analysis of covariance was conducted. The results showed that *Frequency of Performance Appraisal* had a significant effect on the individual's image (p=.030) but did not effect extrinsic benefits relating to performance (p=.223). That is, how frequently managers were appraised affected their self-image but not their reliance on the bonus pay resulting from short term performance.

It appears that *Frequency of Performance*

Table 4
Mean Responses to Manipulation Checks--Short versus Long Term

	Short Term Mean	Long Term Mean	t	p
Manipulation Check: The Timing of Performance Evaluation				
My performance as Acting Capital Procurement Manager was evaluated annually.	4.30	2.55	9.25	.000
Incentive Structure: Equality across Treatments				
I wanted to earn lottery tickets.	3.28	3.21	.30	.761
I believed that the better my decisions the more lottery tickets I would earn.	3.46	3.36	.47	.642

Table 5
Hypothesis 1: Comparison of Personal Benefits from Escalating between Short and Long-term Conditions

Panel A: Mean Ratings of short and long-term (with Personal Benefits from Escalating Measured using Statements 2 and 3).

Mean Rating is the sum of two ratings ranging from "Not at all important" = 1, to "Extremely important" = 5.

	Short Mean	Long Mean	t (one-tailed p value)
Personal Benefits From Escalating	6.21	5.08	t = 2.36 (p = .01)

Panel B: Mean Ratings of short and long-term (with Personal Benefits from Escalating Measured using Statements 1 and 7).

Mean Rating is the sum of two ratings ranging from "Not at all important" = 1, to "Extremely important" = 5.

	Short Mean	Long Mean	t (one-tailed p value)
Personal Benefits From Escalating	7.00	7.00	t = 0

Table 6
Hypothesis 2
Correlations Between Personal Benefits from Escalating and Length of Commitment

Personal Benefits From Escalating-(all Statements)	
Periods Until Switching	.3372*
	*p < .000
Personal Benefits From Escalating-(Statements 2 and 3)	
Periods Until Switching	.2161

Appraisal specifically affects an individual's perception of the ability to present a positive (with long term evaluation) or negative (with short term evaluation) image. These findings are consistent with and fully supportive of impression management theory.

Discussion

This study is the first to offer predictions regarding the effect of accounting-based appraisal processes on the motivation processes underlying capital budgeting decisions for managers. The study asked whether the frequency of performance appraisal affects an individual's escalation behavior and the individual's perception of the benefits of a decision. The results suggest that the length of commitment to an investment is generally affected by the frequency of performance appraisal. The results also suggest that the frequency of appraisal affects consequences which the individual considers. In the short-term, the prospect of embarrassment from switching was more important to managers than in the long-term condition. This occurred because the long-term performance appraisal acts as an agreement by the organization to ignore interim information and concentrate on the overall outcome. Given an appropriate compensation system, long-term performance appraisal makes it possible for the individual to avoid damage to his or her reputation. Short-term performance appraisal, on the other hand, directs an individual to consider the negative personal repercussions from switching because the organization will also implicitly consider these outcomes in the annual performance evaluation.

When applying the lessons learned from this study, practicing managers and management researchers should be cognizant of three guidelines for developing or implementing performance appraisal systems particularly in the context of longer term projects. These guidelines are: matching the performance appraisal timing to the duration of the project, developing processes to eliminate the "mum" effect, and developing rewards that reflect long term profit maximization.

Timing of Evaluation

In order to determine the appropriate timing of performance appraisal it is beneficial for the evaluator to be familiar with the project and with the tasks being evaluated. When supervisors have considerable experience in the tasks of their subordinates they are more likely to attribute to performance to external causes, such as the impact additional information has on the individual's ability to reach long term objectives, than would an evaluator who is inexperienced with the project (Mitchell and Kalb, 1982) Thus, becoming familiar with the project and allowing the project manager the latitude to suggest when performance appraisals should be conducted would be a useful practice to reduce the escalation of commitment to deleterious courses of action.

Reducing the "Mum" Effect

The mum effect occurs when decision makers are afraid to reveal that events subsequent to a strategic decision indicate a need to re-evaluate, and perhaps reverse, a decision. Several management authors have discussed conditions wherein decision makers are encouraged to remain quiet about the likely negative effects of their decisions (Garland and Brown, 1972; Kreps and Wilson, 1982). As this study showed, when there are personal benefits to escalation, then the employee may choose this course of action. On the other hand, when the organization rewards revealing new privately-held information that managers may obtain as part of their work, the organization will benefit from a profit maximizing decision (Merchant, 1989).

Reward Structure

The final guideline for practioners involves developing a reward structure that encourages co-operative rather than competitive behavior within the company (Axelrod, 1984). Managerial tools to accomplish this include the development of group rewards for accomplishment of milestones in the completion of the project and developing rewards based on overall cost/benefit analysis of the decisions that were changes from the initial investments made in the project. Such analysis is useful in rewarding managers for changes that result in overall cost savings to the firm.

Suggestions For Future Research

Implications for future research exist in several areas. First, while using an investment choice as the decision context was not expected to affect the results, further research should extend the potential for similar results to other management decisions. Another extension of this research would be to examine the effect of including the results of other decisions in the performance appraisal. If the results of this study are replicated in other contexts, the optimum design of accounting systems and reports should be investigated thoroughly.

Lastly, since this study indicated that performance appraisal affected an individual's perception of the negative repercussions from switching, future research should seek to determine an improved measurement of these repercussions. By developing a better measure, future management research may learn ways to derail the negative repercussions before they result in escalation behaviors.

References

1. Arkes, H. and C. Blumer, "The Psychology of Sunk Cost," *Organizational Behavior and Human Decision Processes*, Vol. 35, February, pp. 124-140, 1985.
2. Axelrod, R., *The Evolution of Cooperation*, Basic Books, Inc., New York, 1984.
3. Brockner, J., "The Escalation of Commitment to a Failing Course of Action: Toward Theoretical Progress," *Academy of Management Review*, Vol. 17, January, pp. 39-61, 1992.
4. Brown, B.R., "The Effects of Need to Maintain Face on Interpersonal Bargaining," *Journal of Experimental Social Psychology*, Vol. 4, January, pp. 107-122, 1968.
5. Chow, C., "The Effects of Job Standard Tightness and Compensation Scheme on Performance: An Exploration of Linkages," *The Accounting Review*, Vol. 58, October, pp. 667-685, 1983.
6. Cronbach, F., "Coefficient Alpha and the Internal Structure of Tests," *Psychometrika*, Vol. 16, September, pp. 297-334, 1951.
7. Fox, F. and B. Staw, "The Trapped Administrator: Effects of Job Insecurity and Policy Resistance upon Commitment to a Course of Action," *Administrative Science Quarterly*, Vol. 24, September, pp. 449-471, 1979.
8. Garland, H. and B. Brown, "Face-saving as Affected by Subjects' Sex, Audiences' Sex, and Audience Expertise," *Sociometry*, Vol. 35, June, pp. 280-289, 1972.
9. Kanodia, C., R. Bushman and J. Dickhaut, "Escalation Errors and the Sunk Cost Effect: An Explanation Based on Reputation and Information Asymmetries," *Journal of Accounting Research*, Vol. 27, Spring, pp. 59-77, 1989.
10. Kardes, F. and C. Kimble, "Strategic Self Presentation as a Function of Message Valence and the Prospect of Future Interaction," *Representative Research in Social Psychology* Vol. 14, No. 1, pp. 2-11, 1984.
11. Kreps, D. and R. Wilson, "Reputation and Imperfect Information," *Journal of Economic Theory*, Vol. 27, August, pp. 253-279, 1982.
12. Magee, R. and J. Dickhaut, "Effects of Compensation Plans on Heuristics in Cost Variance Investigations," *Journal of Accounting Research*, Vol. 16, Autumn, pp.

294-314, 1978.

13. Merchant, K., "Budgeting and the Propensity to Create Budgetary Slack," *Accounting Organizations and Society,* Vol. 10, No. 2, pp. 201-210, 1985.
14. Merchant, K., *Rewarding Results: Motivating Profit Center Managers*, Harvard Business School Press, Boston,1989.
15. Merchant,K. and W. Bruns, "Measurements to Cure Management Myopia," *Business Horizons,* Vol. 29, May-June, pp. 56-64, 1986.
16. Mintzberg, H., *Impediments to the Use of Management Information*, National Association of Accountants, New York, and The Society of Management Accountants of Canada, Hamilton, Ontario, 1975.
17. Mitchell, T. and L. Kalb, "Effects of Job Experience on Supervisor Attributions for a Subordinate's Poor Performance," *Journal of Applied Psychology,* Vol. 67, pp. 181-188, 1982.
18. Narayanan, M., "Managerial Incentives for Short-term Results," *The Journal of Finance,* Vol. 40, No. 5, pp. 1469-1484, 1985.
19. Noreen, E., " The Economics of Ethics: A New Perspective on Agency Theory," *Accounting Organizations and Society,* Vol. 13, No. 4, pp. 359-369, 1988.
20. Quinn, R. and J. Walsh, "Understanding Organizational Tragedies: The Case of the Hubble Space Telescope," *Academy of Management Executive,*Vol. 8, No. 1, pp. 62-67, 1994.
21. Ross, J. and B. Staw, "Organizational Escalation and Exit: Lessons from the Shoreham Nuclear Power Plant," *Academy of Management Journal,* Vol. 36, August, pp. 701-732, 1993.
22. Schlenker, B. R., *Impression Management: The Self-Concept, Social Identity, and Interpersonal Relations*, Brooks/Cole, Monterey, California, 1980.
23. Staw, B, and J. Ross, "Behavior in Escalation Situations: Antecedents, Prototypes, and Solutions," In *Research in Organizational Behavior* Vol. 9 B, edited by B. Staw and L.Cummings, JAI Press, Greenwich, Connecticut, pp. 39-78, 1987.
24. Staw, B., and J. Ross, "Commitment to a Policy Decision: A Multi-Theoretical Perspective," *Administrative Science Quarterly,* Vol. 23, March, pp. 40-64, 1978.
25. Tan, H., "Effects of Expectation and Prior Involvement on Memory for Audit Evidence and Judgment: The Moderating Role of Accountability," *Unpublished Manuscript,* Paton Accounting Center, Graduate School of Business Administration, University of Michigan, Ann Arbor, 1991.
26. Thurow, L., "Where Management Fails," *Newsweek,* Vol. 98, December 7, pp. 78, 1981.