

THE EFFECTS OF SEX OF THE LEADER, SEX OF THE SUBORDINATE,
LOCUS OF CAUSE, STABILITY OF CAUSE, AND LEADER INVOLVEMENT
ON ATTRIBUTIONS AND CORRECTIVE ACTIONS

by

Gregory Hoyle Dobbins
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APPROVED:

Joseph A. Sgro, Chairman

David A. Bownas

Christopher M. Peterson

Steven E. Markham

Stephen J. Zaccaro

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Blacksburg, Virginia

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Introduction

In the last 50 years, the field of leadership has undergone numerous theoretical and empirical shifts. Despite these efforts, a single perspective which adequately encompasses the various aspects of the field has failed to emerge. Stogdill (1974) summarized the field of leadership as follows:

Four decades of research on leadership have produced a bewildering mass of findings. It is difficult to know what, if anything, has been convincingly demonstrated by replicated research. The endless accumulation of empirical data has not produced an integrated understanding of leadership (pg. 7).

A new theoretical conceptualization of leadership is needed. One approach that may fulfill this need is Green and Mitchell's (1979) Attributional Model of Leadership.

The Attributional Model of Leadership

Figure 1 presents a diagram of the Attributional Model of Leadership. This model specifies the process by which leaders respond to ineffective subordinate behavior. In the first step of the model, leaders make an attribution for the cause of subordinate poor performance. Green and Mitchell propose that leaders use Kelley's (1967) principle of covariation to make this attribution. In effect, leaders analyze the consistency, consensus, and distinctiveness of the

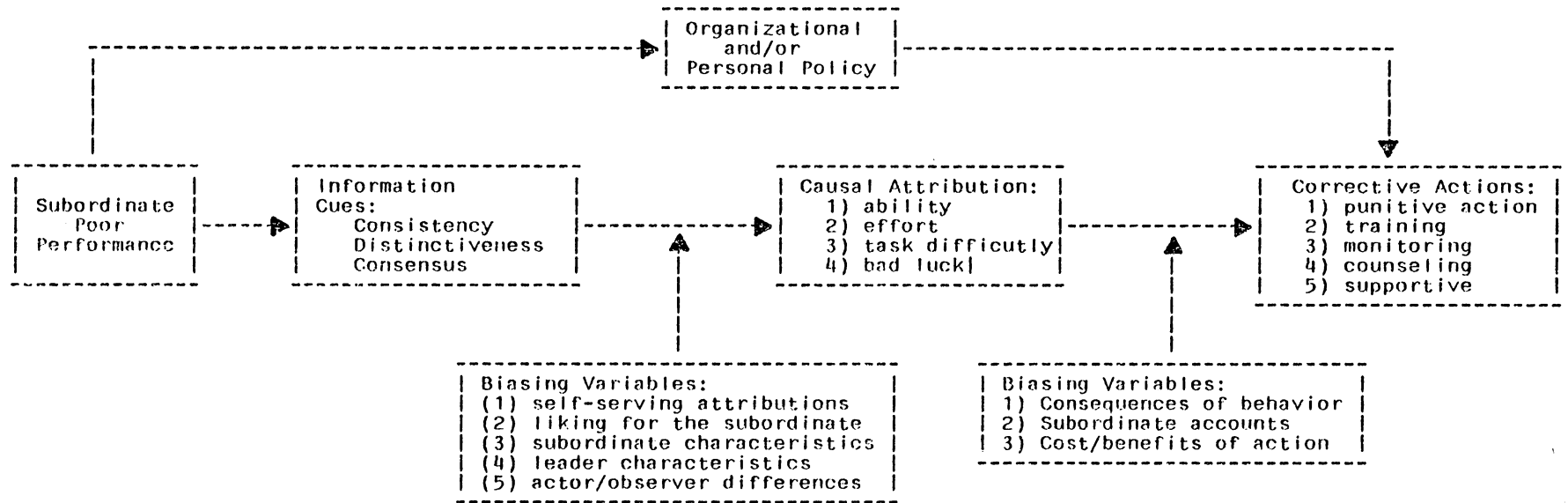


Figure 1: Green and Mitchell's Attributional Model of Leadership

subordinate's behavior and then make a causal attribution based upon these data. Green and Mitchell further indicate that this causal attribution may be affected by factors such as self-serving biases, the leader's liking for the subordinate, actor/observer differences, and the personal characteristics of the leader and subordinate.

In the second step of the model, leaders select a corrective response to be taken toward the poorly performing subordinate. Green and Mitchell indicate that this decision is based almost entirely upon the causal attribution. They realize, however, that the selection of corrective actions may be biased by the consequences of the subordinate's poor performance, the accounts provided by the subordinate, and the costs and benefits that are associated with the corrective action.

Green and Mitchell further propose that organizational and personal policy may circumvent the attribution process. When personal or organizational policy specifies that a specific response should be taken toward a poor performer, leaders may simply implement the stated penalty without first performing a causal analysis. In effect, organizational and personal policy may "short-circuit" the attributional process.

The sections below delineate those variables that are critical for an attributional orientation to leadership. The next section discusses factors that affect the formation of leader attributions.

Step 1: The Formation of Attributions

Heider (1958) examined the manner in which observers perceive

and explain the behavior of others. He proposed that each individual brings a level of "trying" and "power" into a situation. "Power" refers to personal characteristics of the individual such as ability, intelligence, etc. These factors indicate whether a goal "can" be obtained. "Trying" refers to the amount of effort exerted by the individual. Heider stated that observers are motivated to determine the "power" and "trying" of others so that they can understand and predict events in the environment.

The basic theoretical perspective developed by Heider has undergone numerous revisions and extensions. Of particular interest for an attributional orientation to leadership is the covariation principle.

Covariation Principle

Kelley (1973) proposed that observers examine the covariation between possible causes and a given effect and attribute the effect to "that condition which is present when the effect is present and which is absent when the effect is absent" (p. 109). He indicated that observers analyze the temporal consistency of the effect, distinctiveness of the effect across objects, and consensus of the effect across individuals. Effects which are high on consistency, consensus, and distinctiveness are attributed to situational factors while effects that are high in consistency, low on consensus, and low in distinctiveness are attributed to the person.

McArthur (1972) tested Kelley's covariation principle by presenting subjects with information describing a behavior and asking subjects to assign causality for the behavior to internal or external factors. The consensus, distinctiveness, and consistency of the behavior were

manipulated in the descriptions. The results generally supported the principle of covariation. The high consensus, high consistency, and high distinctiveness pattern (which indicated that most others responded as the person did and his response to the stimulus was consistent across time and distinctive from his responses to other stimuli) was attributed to situational factors. The low consensus, high consistency, and low distinctiveness pattern (which indicated that few others responded to the stimulus in the manner that the person did, the person responded consistently in that manner, and the person responded similarly to other stimuli) was attributed to the person. Similar results were reported by Ruble and Feldman (1976) and Zuckerman (1978).

Mitchell and Wood (1980) investigated whether leaders make attributions for subordinate poor performance according to Kelley's covariation principle. Twenty-three nursing supervisors were presented with six written descriptions of poor performance and were asked to make attributions for each of the incidents. Each incident was either high or low on consistency, consensus, and distinctiveness. As predicted by the Kelley model, supervisors made external attributions when the subordinate performed well on other tasks, the subordinate performed well on this task in the past, and other subordinates had difficulty performing this task (high distinctiveness, low consistency, and high consensus). Internal attributions were made when the subordinate performed poorly on other tasks, the subordinate made similar mistakes in the past, and other subordinates seldom made the same error (low distinctiveness, high consistency, and low consensus).

Based upon these results, Mitchell and Wood concluded that leaders make attributions for subordinate poor performance according to the principle of covariation.

Causal Schemata

It should be obvious that individuals often encounter situations which contain inadequate consistency, consensus, and distinctiveness information. Kelley (1972) stated:

It would be foolish to suggest that anything like a large data matrix is filled out with observations before a causal inference is made. The covariation framework should be regarded as simply the context within which some limited small sample of observations is interpreted. It is obvious that the individual is often lacking the time and motivation necessary to make multiple observations. In these circumstances, he may make a causal inference on the basis of a single observation of the effect (pg. 113).

Kelley (1972) proposed that individuals use a causal schema to make attributions in these situations. A causal schema is a set of assumptions concerning how two or more causes combine to produce an effect. Kelley indicated that each causal schema is built from prior experiences and is activated by appropriate environmental cues.

Kelley (1972) identified several causal schemata which are often used to make attributions. One of these, the multiple sufficient causal schema, is based upon the belief that an event will occur if any of several possible causes is present. Kelley proposed that this causal

schema is used to explain commonplace events of moderate magnitude. For example, success on an easy task can be explained by either ability or effort. In contrast, extreme or unusual events are hypothesized to be explained with a multiple necessary causal schema. This causal schema is based upon the belief that an unusual event will occur only if several causes are present. For example, success on an extremely difficult task requires both ability and effort.

The multiple sufficient and multiple necessary causal schemata have been the topic of a number of empirical investigations. This research has generally supported Kelley's (1972) predictions. For example, Cunningham and Kelley (1975) presented subjects with moderate (e.g., "a theater critic wrote a rather favorable review of a new play") and extreme (e.g., "a theater critic described the play as one of the best of the decade") events. As predicted, subjects used the multiple sufficient causal schema to explain outcomes of moderate magnitude and the multiple necessary causal schema to explain outcomes of extreme magnitude. Similar results have been reported by Kun and Weiner (1973).

Weiner's Classification Scheme

Weiner and his associates (Weiner, Frieze, Kukla, Reed, Rest, & Rosenbaum, 1972; Weiner & Kukla, 1970; Weiner, Nierenberg, & Goldstein, 1976) have identified four causes which are often used to explain success and failure in achievement situations: ability, effort, task difficulty, and luck. These causes are interpreted as representing the dimensions of locus and stability of causality. Locus of causality refers to whether the cause is internal (e.g., effort or ability) or

external (e.g., task difficulty or luck) to the person. Stability refers to whether the cause tends to fluctuate over time (e.g., effort or luck) or remains relatively stable (e.g., ability or task difficulty).

Weiner has examined the antecedent conditions that produce effort, ability, task difficulty, and luck attributions. Ability attributions are primarily determined by information about past successes and failures on similar tasks (Frieze & Weiner, 1971; Weiner & Kukla, 1970). Effort attributions are a function of performance outcomes (Kukla, 1972; Weiner & Kukla, 1970), pattern of performance (Jones, Rock, Shaver, Goethals, & Ward, 1968), perceived muscular tension, sweating, persistence at the task, and covariation of performance with the incentive value of the goal (Weiner, 1980). Task difficulty attributions are a function of objective task characteristics and norms about performance (Kukla, 1972). Luck attributions are determined by independence of outcomes, randomness of outcomes, and the uniqueness of the event (Weiner, 1980).

Summary

The principles discussed in this section indicate that leaders should examine the consistency, consensus, and distinctiveness of a subordinate's behavior and make attributions of ability, effort, luck, or task difficulty. Research has demonstrated, however, that attributions may be biased by numerous variables. Some of these biasing variables are delineated below.

Biasing Factors in the Attribution Process

Self-Serving Attributions

According to Heider's (1958) "naive analysis of action", attributions of causality are influenced by the wishes of the observer as well as by objective data. The tendency for individuals to take personal responsibility for their successes and to attribute their failures to situational causes has been referred to as "self-serving bias" (Miller & Ross, 1975), "attributional egotism" (Snyder, Stephan, & Rosenfield, 1978), and "egocentric perception" (e.g., Forsyth & Schlenker, 1977).

Three major hypotheses have been offered to explain such biases. According to the motivational hypothesis, attributions are biased because individuals are motivated to protect or enhance their self-esteem (Snyder, Stephan, & Rosenfield, 1978; Zuckerman, 1979). The self-presentation hypothesis proposes that individuals make unbiased attributions, but that these attributions become biased when reported in public. According to this perspective, individuals report biased attributions in order to maintain or promote a positive identity and gain credit, social approval, and other rewards (Forsyth & Schlenker, 1977; Weary-Bradley, 1978; 1979). The third explanation for self-serving biases is the expectancy-confirmation hypothesis (Miller & Ross, 1975). It is based upon Heider's (1958) observation that individuals attribute expected events to internal factors and unexpected events to external factors. If it is assumed that individuals generally expect to succeed in achievement settings, then fulfillment of these high expectations would be attributed to internal factors. Failure, on the other hand, would disconfirm high expectations and thus be attributed to external

factors.

Recent research has compared the three interpretations of self-serving attributions. Reiss, Rosenfeld, Meiburg, and Tedeschi (1981) examined the motivational and self-presentation hypotheses. Subjects were given a social intelligence test and received false feedback indicating that they had performed either very well or very poorly. Subjects' causal attributions for their performance were assessed on a device that was described as either an "infallible lie detector", "fallible lie detector", or an "apparatus without any lie detector properties". This procedure provided a method to contrast the motivational and self-presentation explanations. According to the self-presentation hypothesis, subjects' attributions should be biased only when the device is described as a "fallible lie detector" or "apparatus without any lie detector properties". According to the motivational hypothesis, subjects' attributions should be biased regardless of how the device is described. The data strongly supported the motivational hypothesis, i.e., subjects' attributions were biased regardless of how the device was described.

Other studies have compared the motivational and expectancy-confirmation explanations of self-serving biases. Miller (1976) manipulated performance outcome (success/failure) as well as level of task involvement. As predicted by the motivational hypothesis, high involvement subjects who failed made greater external self-attributions than did low involvement subjects who failed. High involvement success subjects made greater internal self-attributions than did low involvement success subjects.

Zuckerman (1979) reviewed numerous other studies that have examined the effects of motivational variables on attributions and concluded:

At this point, it would be wrong to state that motivational factors are the sole determinant of self-serving attributions, or that the available evidence is firm proof of motivationally-based distortions. It must be contended, however, that insofar as the evidence reviewed presently is concerned, the motivational explanation is more effective than any of its informational alternatives (pg. 267).

In summary, the above evidence suggests that leaders' attributions will be biased by motivational factors.

Sex of the Actor

Sex of the actor has also been found to influence observers' attributions. Deaux and Emswiller (1974) found that men's successes are attributed to ability while women's successes are attributed to hard work, good luck, or an easy task. Feather and Simon (1975) found that women's failures are attributed to lack of ability while men's failures are attributed to bad luck, task difficulty, or lack of effort. Other investigators (Cash, Gillen & Burns, 1977; Etaugh & Brown, 1975; Feldman-Summers & Kiesler, 1974; Taynor & Deaux, 1975) have reported similar results.

Dobbins, Pence, Orban, and Sgro (in press) examined the effects of sex of the subordinate on leaders' attributions and corrective actions. Subjects responded to a scenario of either a male or female

subordinate who missed a critical deadline due to either internal or external factors. Subjects made attributions for the poor performance and rated the appropriateness of various corrective actions that could be taken toward the subordinate. Sex of the subordinate was found to affect leaders' attributions and corrective actions. Leaders made more external attributions and selected less punitive corrective actions when the subordinate was male than when the subordinate was female. These results indicate the importance of considering sex of the subordinate as a factor in the Attributional Model of Leadership.

Sex of the Observer

Sex of the observer has been found to influence the interpretation of behavior. Del Boca and Ashmore (1980) found that male observers perceived a target person lower on traditionally masculine characteristics than did female observers. Similarly, Lord, Phillips, and Rush (1980), Butterfield and Powell (1981), and Pence (Note 1) found that male observers rated leaders lower on initiating structure than did female observers. Rose and Andippan (1978) further demonstrated the importance of sex of the observer by demonstrating that males have higher performance expectations than do females. These combined findings indicate a need to further examine the effects of sex of the leader in the Attributional Model of Leadership.

Step 2: The Selection of Corrective Actions

The second step in the Attributional Model of Leadership involves the selection of corrective actions. This step is based upon the work of Weiner and his associates (Lanzetta & Hannah, 1969; Rest,

Nierenberg, Weiner, & Heckhausen, 1973; Weiner & Kukla, 1970; Weiner, Kukla, Frieze, Reed, Rest, & Rosenbaum, 1972). They have examined the manner in which attributions influence the administration of rewards and punishments in achievement settings. For example, Weiner and Kukla (1970) asked subjects to rate the extent to which rewards or punishments should be given to students who possessed high or low ability, exerted high or low effort, and performed "excellent", "fair", or "poor". The results indicated that: (a) high performance was rewarded more and punished less than low performance regardless of the cause for performance; (b) the individual was rewarded more and punished less when he exerted high rather than low effort; (c) high effort was especially rewarded when the individual had low ability and achieved high performance; and (d) low effort was especially punished when the individual had high ability and performed poorly. These results have been replicated in other studies (Lanzetta & Hannah, 1969; Rest, Nierenberg, Weiner, & Heckhausen, 1973; Weiner, Kukla, Frieze, Reed, Rest, & Rosenbaum, 1972).

Building upon the research of Weiner and his colleagues, Green and Mitchell (1979) proposed that leaders' attributions determine the corrective actions which are taken toward subordinates. Specifically, they proposed that: (a) subordinate poor performance which is caused by the internal-unstable factor of lack of effort will result in punitive corrective actions such as reprimands or docking of pay; (b) subordinate poor performance which is caused by the stable factors of lack of ability or task difficulty will result in corrective actions which increase the subordinate's ability to perform the task (e.g., training or

job redesign); and (c) subordinate poor performance which is caused by external factors will result in supportive corrective actions such as sympathy and encouragement to try again.

Six recent studies (Dobbins et al., in press; Green & Liden, 1980; Ilgen, Mitchell, & Frederikson, 1981; Mitchell & Kalb, 1981; 1982; Mitchell & Wood, 1980) have evaluated the extent to which attributions determine leaders' corrective actions. Each of these studies manipulated the locus of cause for a subordinate's poor performance and measured leaders' ratings of various corrective actions. For example, Green and Liden (1980) described a subordinate who performed poorly because "the necessary materials did not arrive" (external cause) or because "the subordinate took an extended lunch break" (internal cause). Subjects were asked to rate the appropriateness of nine corrective actions. Results indicated that poor performance which was caused by internal factors was responded to more punitively than poor performance which was caused by external factors. This basic finding has been replicated in other studies (Dobbins et al., in press; Ilgen, Mitchell, & Frederikson, 1981; Mitchell & Kalb, 1981; 1982).

Methodological Problems

The above studies failed to consider the effects that the stability of cause for poor performance has on the selection of corrective actions. This oversight is particularly surprising since Green and Mitchell (1979) delineated predictions for both the stability and locus dimensions. For example, they stated:

In general, we would suspect that internal attributions will

result in the leader focusing his or her response on the subordinate. Effort attributions should result in punitive actions such as reprimands or docking of pay, while ability attributions should result in training. (pg. 204)

Without an empirical examination of the effects that both the locus and stability of causality have on the selection of corrective actions, it is impossible to fully evaluate the Attributional Model of Leadership.

Overview of the Present Studies

The research reported in this dissertation examined four issues.

Sex of the Leader and Sex of the Subordinate

Past research has demonstrated that: (a) observers make different attributions for the performance of male and female individuals (Cash, Gillen, & Burns, 1977; Deaux & Emswiler, 1974; Etaugh & Brown, 1975; Feather & Simon, 1975; Taynor & Deaux, 1975); (b) male and female leaders allocate rewards based upon different norms (Austin & McGinn, 1977; Callahan-Levy & Messe, 1979; Major & Deaux, 1982); (c) male and female subordinates are differentially evaluated in performance appraisal settings (Gutek & Stevens, 1979; Haefner, 1977; Rosen & Jerdee, 1974; Wendelken & Inn, 1981); and (d) male and female observers differ in the perception and interpretation of behavior (Butterfield & Powell, 1981; Del Boca & Ashmore, 1980; Lord, Phillips, & Rush, 1980).

Despite the above findings, researchers examining attributional influences in leadership have failed to consider sex of the leader and sex of the subordinate as variables (see Dobbins et al., in press, for an exception). One purpose of the present research was to determine whether sex of the leader and sex of the subordinate affect attributions and corrective actions.

Motivational Factors

Past research in social psychology (Forsyth & Schlenker, 1977; Milier, 1976; Reiss, Rosenfeld, Melburg, & Tedeschi, 1981; Snyder, Stephan, & Rosenfield, 1978; Zuckerman, 1979) has demonstrated that

motivational factors have a large influence upon individuals' attributions. Despite these findings, self-serving biases have not been investigated in leadership. A second purpose of the present research was to determine whether motivational variables affect leaders' attributions and corrective actions.

Locus and Stability of Cause

A third purpose of the present research was to determine whether both the locus and stability of the cause for poor performance influence the selection of corrective actions. While this issue is central to the attributional orientation to leadership, past research (Dobbins et al., in press, Green & Liden, 1980; Mitchell & Kalb, 1981; 1982; Mitchell & Wood; 1980) has examined only the locus variable. Such investigations do not provide an adequate test of the attributional orientation to leadership.

External Validity

A fourth purpose of the present research was to determine whether predictions derived from the attributional orientation to leadership can be supported in situations that simulate actual leader-subordinate interactions. Past research (Dobbins et al., in press; Green & Liden, 1980; Mitchell & Kalb, 1982; Mitchell & Wood, 1980) has presented subjects with written vignettes and required them to make attributions and rate the appropriateness of various corrective actions. This research may be criticized as artificial. In response to this criticism, the present studies evaluated the Attributional Model of Leadership in situations that simulated actual leader-subordinate

interactions. Replication in this context is essential if the attributional approach is to be generalized to actual organizations.

Study I: The Effects of Locus of Cause, Stability of Cause, Sex of the Subordinate, and Sex of the Leader on Corrective Actions

Green and Mitchell (1979) and Mitchell, Green and Wood (1981) proposed that leaders' attributions determine the selection of corrective actions. Specifically, they predicted that: (a) subordinate poor performance which is attributed to lack of effort will result in punitive corrective actions such as reprimands or docking of pay; (b) subordinate poor performance which is attributed to lack of ability or task difficulty will result in corrective actions which increase the subordinate's ability to perform the task (e.g., training or job redesign); and (c) subordinate poor performance which is attributed to bad luck or other external factors will result in supportive actions such as sympathy and encouragement to try again.

Past evaluations of Green and Mitchell's Attributional Model of Leadership have examined the effects of locus of cause for subordinate poor performance on leaders' corrective actions. For example, Green and Liden (1980) presented subjects with vignettes that described a subordinate who performed poorly because he "took an extended lunch break" (internal cause) or "did not receive the necessary raw materials" (external cause). Similar manipulations have been used by other researchers (Dobbins et al., in press; Mitchell & Kalb, 1981; 1982; Mitchell & Wood, 1980). These studies have demonstrated that leaders' corrective actions are more focused on the subordinate and more punitive when the cause for poor performance is internal rather than external. They have failed to examine, however, the effects that the

stability of the cause for subordinate poor performance has on the selection of corrective actions.

The present study examined the effects that both the locus and stability of the cause for poor performance have on the use of five corrective actions. These actions are: (a) train the subordinate; (b) punish the subordinate; (c) monitor the subordinate; (d) counsel the subordinate about work standards; and (e) provide support and sympathy to the subordinate. These corrective actions have been used in past research (Dobbins et al., in press; Green & Liden, 1980; Ilgen, Mitchell, & Fredrickson, 1981; Mitchell & Kalb, 1982).

Train the Subordinate

A leader who is faced with an incident of subordinate poor performance caused by the stable factors of ability or task difficulty should take corrective actions which increase the subordinate's state of "can"; i.e., the subordinate's ability to perform the task (Heider, 1958). Training the subordinate is one action which should be effective in this situation. Consistent with this rationale, Kipnis (Goodstadt & Kipnis, 1970; Kipnis & Cosentino, 1969) found that leaders use information giving behaviors when poor performance is due to ineptness. Thus, and as predicted by Green and Mitchell (1979), leaders should be more inclined to train the subordinate when poor performance is caused by the stable factors of ability or task difficulty than the unstable factors of effort or luck. This prediction is formally stated in Hypothesis 1.

Hypothesis 1: Leaders will be more inclined to train the

subordinate when poor performance is caused by stable rather than unstable factors.

Punish the Subordinate

Weiner (1974) predicted that failure due to internal causes (ability and effort) will be more deserving of punishment than failure due to external causes (task difficulty and luck). Research supports this contention but also indicates that failure due to the internal-unstable factor of lack of effort is more punished than failure due to the internal-stable factor of lack of ability (Goodstadt & Kipnis, 1970; Kipnis & Cosentino, 1969; Lanzetta & Hannah, 1969; Weiner & Kukla, 1970). These findings suggest that the locus and stability of the cause for poor performance will interact to affect the punitiveness of leaders' corrective actions. This prediction is formally stated in Hypothesis 2.

Hypothesis 2: Leaders will respond more punitively toward the subordinate when poor performance is caused by internal rather than external factors. Furthermore, leaders will respond more punitively when poor performance is caused by the internal-unstable factor of effort than the internal-stable factor of ability.

Monitor the Subordinate

Green and Mitchell (1979) did not delineate any specific predictions concerning the corrective action of monitoring the subordinate. It would appear, however, that this corrective action would be more effective when poor performance is caused by unstable rather than stable factors. This prediction is stated in Hypothesis 3.

Hypothesis 3: Leaders will be more inclined to monitor the subordinate's future work behavior when poor performance is caused by unstable rather than stable factors.

Counsel the Subordinate about Work Standards

Green and Mitchell (1979) did not offer any specific predictions concerning the corrective action of counseling the subordinate. It would appear, however, that while this action may increase the subordinate's level of motivation and persistence at the task, it should not change the individual's ability or task difficulty. Thus, supervisors should be more inclined to counsel the subordinate about work standards when poor performance is caused by unstable rather than stable factors.

Hypothesis 4: Leaders will be more inclined to counsel the subordinate about work standards when poor performance is caused by unstable rather than stable factors.

Provide Support and Sympathy to the Subordinate

Green and Mitchell (1979) predicted that subordinate poor performance which is caused by external factors will result in supportive corrective actions such as sympathy and encouragement to try again. This prediction is formally stated in Hypothesis 5.

Hypothesis 5: Leaders will be more inclined to make sympathetic responses toward the subordinate when poor performance is caused by external rather than internal

factors.

Sex Effects in the Attributional Model of Leadership

The present study also investigated the effects that sex of the leader and sex of the subordinate have on leaders' attributions and corrective actions. Hypotheses for these variables are delineated below.

Sex of the Subordinate

Past research has demonstrated that men's successes are attributed to ability while women's successes are attributed to hard work, good luck, or an easy task (Deaux & Emswiller, 1974; Taynor & Deaux, 1975). In addition, women's failures are attributed to lack of ability while men's failures are attributed to bad luck, a difficult task, or lack of effort (Cash, Gillen, & Burns, 1977; Etaugh & Brown, 1975; Feather & Simon, 1975). These findings suggest that leaders will make different attributions for the poor performance of male and female subordinates. Specifically, leaders should make more internal and more stable attributions for the poor performance of female subordinates than the poor performance of male subordinates. This prediction is formally stated in Hypothesis 6.

Hypothesis 6: Leaders will make more internal and more stable attributions for the poor performance of a female subordinate than the poor performance of a male subordinate.

Other research indicates that there is a general tendency to give men more favorable evaluations than women. Male job applicants tend to

be selected more frequently than equally qualified females for managerial, scientific, and semi-skilled positions (Guttek & Stevens, 1979; Haefner, 1977; Rosen & Jerdee, 1974). Male candidates are also rated more positively than female candidates along such dimensions as acceptability and service potential (Guttek & Stevens, 1979; Rosen, Jerdee, & Prestwich, 1975). These findings suggest that leaders will take different corrective actions toward male and female poorly performing subordinates.

Hypothesis 7: Leaders will take different corrective actions toward male and female poorly performing subordinates.

Sex of the Leader

Ashmore and Tumia (1980) demonstrated that a target person is rated lower on masculine characteristics by male than by female observers. Similarly, Lord, Phillips, and Rush (1980), Butterfield and Powell (1981), and Pence (Note 1) found that leaders were rated lower on initiating structure by male than by female observers. Rose and Andippan (1978) further demonstrated the importance of sex of the observer by showing that males have higher performance expectations for job applicants than do females. These results suggest that male and female leaders may differ in their perceptions of and attributions for a subordinate's poor performance. This prediction is formally stated in Hypothesis 8.

Hypothesis 8: Male and female leaders will make different attributions for a subordinate's poor performance.

Research has also demonstrated that males and females differ in the distribution of rewards (Austin & McGinn, 1977; Leventhal & Anderson, 1970; Leventhal & Lane, 1970; Major & Deaux, 1982; Messe & Callahan-Levy, 1979; Mikula, 1974). In a typical reward allocation study, a group of subjects is presented with a task that is directed by a leader. Following the performance of the task, the leader is given a fixed amount of money and instructed to distribute the money among the group members and keep a portion for him or herself. When the performance of the leader is superior to that of group members, male leaders tend to distribute the money based upon a norm of equity while female leaders typically distribute the money based upon a norm of equality (Austin & McGinn, 1977; Leventhal & Anderson, 1970; Leventhal & Lane, 1970; Major & Deaux, 1982; Messe & Callahan-Levy, 1979; Mikula, 1974).

One implication of this research is that sex of the leader and cause for subordinate poor performance may interact to affect corrective actions. Specifically, female leaders may respond to a subordinate in a manner that is independent of the cause for poor performance (i.e., based upon a norm of equality). Male leaders, on the other hand, may respond to a poor performer as a function of the cause for failure (i.e., based upon a norm of equity). Some support was obtained for this prediction in a recent study by Dobbins et al. (in press). These investigators found that male leaders responded more punitively toward the subordinate when the cause for poor performance was internal rather than external. Female leaders, on the other hand, responded with equal punitiveness regardless of the cause for poor performance.

The present study will attempt to replicate and extend this finding.

Hypothesis 9: Sex of the leader and cause for subordinate poor performance will interact to affect leaders' corrective actions. Specifically, the cause for subordinate poor performance will have a greater influence on the corrective actions selected by male leaders than the corrective actions selected by female leaders.

Overview

In the present experiment, male and female leaders supervised either a male or female subordinate who was working on a clerical task. The subordinate was a confederate of the experimenter and performed poorly due to internal-stable, internal-unstable, external-stable, or external-unstable causes. Leaders directed, observed, evaluated, and selected appropriate corrective actions. This procedure allowed an evaluation of the nine hypotheses in a situation that simulated actual leader-subordinate interactions.

Method

Subjects

Seventy-one male and 77 female undergraduate Introductory Psychology students served as leaders in the experiment. Each subject received extra-credit for participating.

Design

The design was a 2 X 2 X 2 X 2 between-groups factorial experiment incorporating the variables of locus of cause for poor

performance (internal versus external), stability of cause for poor performance (stable versus unstable), sex of the leader, and sex of the subordinate. The number of subjects in each treatment condition ranged from 9 to 12.

Procedure

Subjects reported to the "supervisor's office" and were presented with the following instructions.

In this experiment, you will supervise the work of another individual. This individual will be your subordinate. Your job as a supervisor is to get this individual to perform effectively on a work task. If the subordinate performs satisfactorily, then you have been effective as a leader. If the subordinate performs poorly, then you have been ineffective as a leader.

In a couple of minutes, the experimenter will take you to the "workroom" to meet your subordinate. This individual is another Introductory to Psychology student like you and has been informed that you will serve as his or her supervisor. This student signed-up for the experiment in another folder in the lobby of Derring Hall.

You and the subordinate will be working for Brown Supply Company. Brown Supply Company is a large warehouse located in Northern Virginia. Your subordinate will be decoding orders which arrive at the company and transcribing them on to standardized "shipping forms".

Your first task as a leader is to train and motivate your subordinate to perform effectively. You will have as much time as needed for this training. Once you have completed your instructions, the subordinate will work for a three minute practice period. During this period, you can provide further clarification of the task if you feel that it is needed.

After training the subordinate to perform the ordering task, you will come back to your office for 15 minutes. During this time period, the subordinate should complete as many forms as possible.

At the end of the 15-minute work session, the experimenter will pick up the subordinate's work and bring it to you. You will evaluate the quality and quantity of this work. This will be easy since you will have a listing of how all forms should have been completed.

After you have evaluated the work completed by the subordinate, you will call this individual into your office for a brief "post-performance" interview. During this 3-5 minute interview, you should provide the subordinate with some feedback concerning his or her performance. You should then dismiss the subordinate and complete a brief questionnaire.

The leader was taken to the "workroom" to meet the subordinate. This individual was a confederate of the experimenter. Having a confederate in this role had two procedural advantages. First, the

quality and quantity of work which was completed by the subordinate could be held constant across all treatment conditions. Second, interactions between the leader and subordinate could be standardized.

The leader explained the ordering task to the subordinate and then presented the subordinate with a packet of twenty uncompleted forms.¹ The leader then started a timer to measure the 15 minute work period and went back to his or her office.

Once returning to the office, the supervisor was presented with the following written definition of satisfactory performance.

This handout explains the manner in which you should evaluate the subordinate's performance on the ordering task. If the subordinate completes fourteen or more forms, then the quantity of his or her work is satisfactory. If the subordinate makes five or less errors, then the quality of his or her performance is also satisfactory. If, on the other hand, the subordinate does not complete fourteen or more forms, then the quantity of his or her performance is unsatisfactory. If the subordinate makes more than five errors, then the quality of his or her work is also unsatisfactory.

The description of satisfactory performance was based upon pretesting. Thirty subjects were explained the ordering task and given three forms to complete. These subjects then predicted the number of

¹Appendix A contains forms and order blanks.

forms that would be accurately completed by an average, high, and low performer during a fifteen minute work period. The cutoff for satisfactory performance was based upon subjects' responses to this question.

The supervisor and experimenter remained in the office during the 15-minute work session. At the end of this session, the experimenter left and returned with the work that was "completed by the subordinate". In reality, this work was a standardized sample constructed by the experimenter. It consisted of 11 completed forms which contained a total of 11 errors. Thus, the "subordinate's work" was below acceptable standards in both quality and quantity.

The supervisor evaluated the quality and quantity of the work and then conducted a five minute post-performance interview with the subordinate. The supervisor was given two general questions to guide this interview. These questions are presented below.

1. Determine what the subordinate thinks about the work task. How does the subordinate think that he or she performed? Did the subordinate like the work task? Why or why not?

2. Provide the subordinate feedback concerning his or her performance. Tell the subordinate the number of forms that he or she completed and the number of errors made on these forms. Inform the subordinate whether his or her performance is satisfactory or unsatisfactory. Determine the subordinate's general reaction to this performance

information.

The supervisor then dismissed the subordinate and completed a questionnaire which measured: (a) perceptions of subordinate performance; (b) attributions for subordinate performance; and (c) the appropriateness of various corrective actions. A copy of this questionnaire is presented in Appendix B.

Manipulation of the Cause for Performance

The manipulation of the locus and stability variables occurred during the post-performance interview. The subordinate made responses which led the supervisor to attribute the poor performance to either internal-stable, internal-unstable, external-stable, or external-unstable factors. The responses which were used in the four cause conditions are presented below.

Internal-Stable Cause. "I worked hard, but I'm really not good at tasks that require working with numbers. I once worked at drug store and was responsible for filling out inventory sheets. I made so many errors that they moved me to the soda fountain."

Internal-Unstable Cause. "I guess that I could have worked a little bit harder on the task. I could have applied myself a little bit more."

External-Stable Cause. "I'm normally pretty good at clerical type tasks, but the ordering task was really hard. It was really easy to

skip or miscode a number."²

External-Unstable Cause "I worked real hard on the task, but had difficulty concentrating since I was up until about 4:00 a.m. last night studying for a test. It was just a bad day for me. I would do much better on any other day."

These responses were constructed based upon the antecedent conditions delineated by Weiner (1980). The confederates were trained to ensure that their responses were equivalent and perceived as natural and realistic by supervisors.³ Pretesting and post-experimental interviews revealed that these manipulations were effective.

Dependent Measures

Performance Measure. Three items measured leaders' perceptions of subordinate performance (see Table 1). These items were highly correlated ($r_{12}=.726$; $r_{13}=.429$; $r_{23}=.277$) and were summed to form a single measure (coefficient alpha=.719).

Attribution Measures. Eight questions measured leaders' attributions for the subordinate's poor performance (see Table 2). Questions 1 and 2 were identical to those used by Green and Liden (1980). Questions 3 through 8 were a modification of the locus and

²The experimenter emphasized this manipulation by informing the subject that the ordering task is "very difficult". This information was necessary to distinguish between the external-stable and internal-stable conditions.

³Three males and three females served as confederates in the experiment. Confederates were crossed with the treatment conditions to avoid confounding.

stability subscales of Russell's (1982) Causal Dimension Scale.

Responses made to the eight subordinate attribution items⁴ were analyzed using a principal component analysis with a Varimax rotation. This analysis revealed a two-factor solution accounting for 61 percent of the variance in responses. The factor loadings for each of the eight subordinate attribution items are presented in Table 3.

Factor coefficient scores were calculated for each supervisor in the present study based upon the factor weights. Two new dependent measures were formed through this procedure: Factor I (Locus of Attributed Cause) and Factor II (Stability of Attributed Cause).

Corrective Action Measures. The final sixteen items on the questionnaire required supervisors to rate the appropriateness of various actions which could be taken toward the subordinate. Four of these items were "fillers" and were used to disguise the intent of the study. The other 12 actions are presented in Table 4.

Responses⁵ made to the twelve items were analyzed using a principal component analysis with a Varimax rotation. This analysis revealed a five factor solution. The factor loadings for the twelve items are presented in Table 5.

⁴One hundred and fifty-six additional leaders responded to the these questions in the second and third studies. These responses were combined with the data in the present study and used in the factor analysis. Responses were combined to increase the stability of the factor loadings.

⁵One hundred and fifty-six additional leaders responded to the these questions in the second and third studies. These responses were combined with the data in the present study and used in the factor analysis. Responses were combined to increase the stability of the factor loadings.

Factor coefficient scores were calculated for each supervisor in the present study based upon the factor weights. This procedure resulted in five new dependent measures: Factor I-Train the Subordinate; Factor II-Punish the Subordinate; Factor III-Monitor the Subordinate; Factor IV-Counsel the Subordinate about Work Standards; and Factor V-Provide Support and Sympathy to the Subordinate.

Table 1: Subordinate Performance Items

1. How would you describe the subordinate's overall job performance?

1	2	3	4	5	6	7	8	9
Unsatisfactory				Average				Outstanding

2. How would you describe the quality (accuracy, neatness, thoroughness) of the subordinate's work?

1	2	3	4	5	6	7	8	9
Unsatisfactory				Average				Outstanding

3. How would you describe the quantity (volume of work completed, productivity level) of the subordinate's work?

1	2	3	4	5	6	7	8	9
Unsatisfactory				Average				Outstanding

Table 2: Subordinate Attribution Items^a

1. To what extent was the subordinate's performance caused by his or her personal characteristics such as personality, attitude, abilities, motivation, or other internal factors?

1 2 3 4 5 6 7 8 9
Very Little Moderately Very Much

2. To what extent was the subordinate's performance caused by characteristics of the situation such as a difficult task, unclear instructions, or other external factors?

1 2 3 4 5 6 7 8 9
Very Little Moderately Very Much

3. Is the cause of the subordinate's performance something that reflects an aspect of the:

Subordinate 1 2 3 4 5 6 7 8 9 Situation

4. Is the cause of the subordinate's performance:

Outside of Inside of
the subordinate 1 2 3 4 5 6 7 8 9 the subordinate

5. Is the cause of the subordinate's performance:

Something about Something about
the subordinate 1 2 3 4 5 6 7 8 9 the situation

6. Is the cause of the subordinate's performance:

Permanent 1 2 3 4 5 6 7 8 9 Temporary

7. Is the cause of the subordinate's performance:

Variable Stable
over time 1 2 3 4 5 6 7 8 9 over time

8. Is the cause of the subordinate's performance:

Changeable 1 2 3 4 5 6 7 8 9 Unchangeable

^aItems 1, 4, and 6 were reverse-scored.

Table 3: Factor Loadings for Eight Subordinate Attribution Items

	<u>FACTOR1</u>	<u>FACTOR2</u>
ITEM 1	0.661	-0.013
ITEM 2	0.640	0.042
ITEM 3	0.814	0.005
ITEM 4	0.779	-0.092
ITEM 5	0.805	-0.133
ITEM 6	-0.112	0.823
ITEM 7	-0.032	0.855
ITEM 8	-0.034	0.879

Table 4: Corrective Action Items^a

1. Decrease the subordinate's pay
2. Provide the subordinate with more detailed instructions
3. Add a written reprimand to the subordinate's file
4. Give extensive training to the subordinate
5. Take no action toward the subordinate
6. Counsel the subordinate about work standards
7. Terminate the subordinate
8. Provide support and sympathy to the subordinate
9. Verbally reprimand the subordinate
10. Give the subordinate another brief training session
11. Further monitor the situation
12. Watch the subordinate more closely

^aAll corrective action measures were rated on a 9-point Likert scale anchored by "Not Appropriate", "Moderately Appropriate", and "Very Appropriate".

Table 5: Factor Loadings for the Corrective Action Measures

	<u>FACTOR1</u>	<u>FACTOR2</u>	<u>FACTOR3</u>	<u>FACTOR4</u>	<u>FACTOR5</u>
CA1	-0.019	0.870	0.052	0.008	-0.065
CA2	0.835	-0.059	0.090	-0.024	-0.166
CA3	0.038	0.706	0.133	0.424	-0.140
CA4	0.795	0.097	0.116	0.113	0.206
CA5	-0.364	-0.150	-0.049	0.007	0.587
CA6	0.171	-0.064	0.126	0.821	-0.049
CA7	-0.013	0.824	-0.091	0.014	-0.072
CA8	0.045	-0.094	-0.036	-0.102	0.862
CA9	-0.130	0.275	0.016	0.771	-0.037
CA10	0.782	-0.084	0.214	-0.011	-0.280
CA11	0.164	-0.045	0.897	-0.028	-0.074
CA12	0.166	0.086	0.851	0.211	-0.008

CA1=Decrease the subordinate's pay

CA2=Provide the subordinate with more detailed instructions

CA3=Add a written reprimand to the subordinate's file

CA4=Give extensive training to the subordinate

CA5=Take no action toward the subordinate

CA6=Counsel the subordinate about work standards

CA7=Terminate the subordinate

CA8=Provide support and sympathy to the subordinate

CA9=Verbally reprimand the subordinate

CA10=Give the subordinate another brief training session

CA11= Further monitor the situation

CA12=Watch the subordinate more closely

Results

Since cell sizes were slightly unequal, all analyses were conducted using nonorthogonal statistical procedures in which only unique variance is accounted for in the sum of squares. This procedure is consistent with the recommendation of Herr and Gaebelein (1978).

Subordinate Performance Measure

An analysis of variance was conducted on the subordinate performance measure and failed to detect any significant effects (see Table 6). This finding indicates that perceptions of subordinate performance were not confounded with the treatment manipulations.

Subordinate Attribution Measures

Univariate analyses of variance were conducted on the two subordinate attribution measures.⁶ The results of these analyses are described below.

Factor I (Locus of Attributed Cause). The analysis of variance on Factor I coefficient scores revealed a significant locus of cause main effect (see Table 7). Supervisors made greater internal attributions for the poor performance when the cause was internal ($M = -.264$) rather than external ($M = .428$).

Factor II (Stability of Attributed Cause). Significant stability of cause and sex of the leader main effects were found on Factor II coefficient scores (see Table 8). All leaders made more stable

⁶Two subjects did not respond to all eight attribution items and thus were not used in these analyses.

attributions for the poor performance when the cause was stable ($M=.409$) than when the cause was unstable ($M=-.412$). In addition, female leaders attributed the poor performance to more stable factors ($M=.226$) than did male leaders ($M=-.222$).

Effectiveness of Manipulations. The above findings indicate that the locus and stability manipulations were effective. Leaders made greater internal attributions for the subordinate's poor performance when the cause was internal rather than external. In addition, leaders attributed the poor performance more to stable factors when the cause was stable rather than unstable.

Sex Effects on Attributions: Tests of Hypotheses 6 and 8. Hypothesis 6 predicted that leaders would make greater internal and more stable attributions for poor performance when the subordinate was female. Analyses of variance on the subordinate attribution measures failed to support this prediction.

Hypothesis 8 predicted that male and female leaders would make different attributions for a subordinate's poor performance. Analyses of variance on the two attribution measures provided support for this prediction. Female leaders attributed the subordinate's poor performance to more stable factors than did male leaders.

Corrective Action Measures

Univariate analyses of variance were conducted on the corrective action measures.⁷ These analyses were selected as most appropriate

⁷Two subjects did not respond to all twelve corrective action items

since specific predictions had been delineated for each corrective action and the correlations among the action measures were small (see Table 9).

Factor I: Train the Subordinate. The stability manipulation significantly affected Factor I coefficient scores (see Table 10). Leaders were more inclined to train the subordinate when the cause for poor performance was stable ($M=.291$) rather than unstable ($M=-.370$).

The Locus of Cause X Sex of Leader X Sex of Subordinate interaction also affected Factor I coefficient scores. This interaction is depicted in Figure 2. Simple effects analyses revealed a significant Locus of Cause X Sex of Subordinate interaction when the leader was female ($F(1,130)=8.01, p<.01$). Female leaders were more inclined to train the female subordinate when the cause was internal rather than external ($F(1,130)=5.97, p<.05$). No other significant effects were detected for the locus of cause or sex of the subordinate variables.

Test of Hypothesis 1. Hypothesis 1 predicted that leaders would be more inclined to train the subordinate when the cause for poor performance was stable rather than unstable. The analysis of variance on Factor I coefficient scores supported this prediction.

Factor II: Punish the Subordinate. Sex of the leader and locus of cause interacted to affect Factor II coefficient scores (see Table 11). An analysis⁸ of this interaction revealed that male leaders responded

and thus could not be used in these analyses.

⁸All significant two-way interactions were analyzed using Duncan's Multiple Range Test.

more punitively toward the subordinate when the cause for poor performance was internal ($M=.399$) rather than external ($M=.007$). Female leaders, on the other hand, responded with equal punitiveness to internal ($M=-.095$) and external ($M=-.094$) causes.

Locus of cause, stability of cause, and sex of subordinate also interacted to affect Factor II coefficient scores (see Figure 3). Simple effects analyses revealed a significant Sex of the Subordinate X Stability of Cause interaction in the external cause condition ($F(1,130)=3.99, p<.05$). Leaders in the external cause condition were more inclined to punish a male subordinate when the cause for poor performance was unstable rather than stable ($F(1,130)=3.95, p<.05$). No other significant effects were detected for the stability of cause or sex of the subordinate variables.

Test of Hypothesis 2. Hypothesis 2 predicted a Locus of Cause x Stability of Cause interaction on the punitive action dependent measure. The analysis of variance on Factor II coefficient scores failed to support this prediction.

Factor III: Monitor the Subordinate. The sex of the leader variable significantly affected Factor III coefficient scores (see Table 12). Male leaders were more inclined to monitor the subordinate ($M=.127$) than were female leaders ($M=-.163$).

The Locus of Cause X Stability of Cause X Sex of Subordinate interaction also affected Factor III coefficient scores (see Figure 4). Simple effects analyses revealed a significant Locus of Cause X Stability of Cause interaction ($F(1,130)=5.93, p<.05$) when the subordinate was

female. Leaders in the internal cause condition indicated that monitoring the female subordinate was more appropriate for unstable than stable causes ($F(1,130)=4.80, p<.05$). No other significant effects were detected for the locus or stability manipulations.

Test of Hypothesis 3. Hypothesis 3 predicted that leaders would be more inclined to monitor the subordinate when the cause for poor performance was unstable rather than stable. The analysis of variance on Factor III coefficient scores failed to support this prediction.

Factor IV: Counsel the Subordinate about Work Standards. The stability manipulation significantly affected Factor IV coefficient scores (see Table 13). Leaders were more inclined to counsel the subordinate when the cause for poor performance was unstable ($M=.301$) rather than stable ($M=-.032$).

Test of Hypothesis 4. Hypothesis 4 predicted that leaders would be more inclined to counsel the subordinate about work standards when the cause for poor performance was unstable rather than stable. The results of the analysis of variance on Factor IV coefficient scores provided support for this prediction.

Factor V: Provide Support and Sympathy to the Subordinate. The Sex of the Leader X Sex of the Subordinate, Sex of the Leader X Locus of Cause, and Sex of the Leader X Stability of Cause interactions significantly affected Factor V coefficient scores (see Table 14). Male leaders were equally supportive of male ($M=.104$) and female subordinates ($M=-.113$) while female leaders were more supportive of

female ($M=.269$) than male subordinates ($M=-.186$). In addition, male leaders indicated that supporting the subordinate was more appropriate when the cause was stable ($M=.266$) rather than unstable ($M=-.286$) or external ($M=.304$) rather than internal ($M=-.292$). Female leaders, on the other hand, indicated that providing support for the subordinate was equally appropriate for internal ($M=.002$), external ($M=.078$), stable ($M=-.023$), and unstable ($M=.113$) causes.

Test of Hypothesis 5. Hypothesis 5 predicted that leaders would be more inclined to support the subordinate when the cause for poor performance was external rather than internal. The analysis of variance on Factor V coefficient scores supported this prediction, but only when the leader was male.

Sex Effects on Corrective Actions: Tests of Hypotheses 7 and 9. Hypothesis 7 predicted that leaders' choices of corrective actions would be influenced by sex of the subordinate. Analyses of variance on the five corrective action measures revealed that sex of the subordinate affected Factor I (Train the Subordinate), Factor II (Punish the Subordinate), Factor III (Monitor the Subordinate), and Factor V (Provide Support and Sympathy to the Subordinate). Such effects occurred, however, only after the data had been moderated based upon locus of cause, stability of cause, or sex of the leader. Thus, hypothesis 7 received little support.

Hypothesis 9 predicted that sex of the leader and cause for subordinate poor performance would interact to affect corrective actions. Analyses of variance on the five corrective action measures

provided some support for this prediction. Sex of the leader interacted with cause for subordinate poor performance to affect Factor II (Punish the Subordinate) and Factor V (Provide Support and Sympathy to the Subordinate). Furthermore, the pattern of these interactions was as predicted, i.e., the corrective action ratings made by male leaders were more influenced by the cause manipulations than were the corrective action ratings made by female leaders.

Table 6: Analysis of Variance on Subordinate Performance Measure

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Locus of Cause (L)	1	11.457	1.38
Stability of Cause (S)	1	0.133	0.02
L X S	1	3.174	0.38
Sex of Leader (LSEX)	1	7.014	0.85
L X LSEX	1	3.685	0.45
S X LSEX	1	0.640	0.08
S X L X LSEX	1	3.582	0.43
Sex of Subordinate (SSEX)	1	7.642	0.92
L X SSEX	1	5.429	0.66
S X SSEX	1	0.870	0.11
S X L X SSEX	1	14.122	1.71
LSEX X SSEX	1	32.001	3.87
L X LSEX X SSEX	1	20.098	2.43
S X LSEX X SSEX	1	30.335	3.66
L X S X LSEX X SSEX	1	4.785	0.58
Error	132	1094.885	
Total	147	1241.858	

*p<.05

**p<.01

Table 7: Analysis of Variance on Factor I (Locus of Attributed Cause)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Locus of Cause (L)	1	18.041	19.94**
Stability of Cause (S)	1	0.333	0.37
L X S	1	3.336	3.69
Sex of Leader (LSEX)	1	3.249	3.59
L X LSEX	1	0.439	0.49
S X LSEX	1	0.001	0.01
S X L X LSEX	1	0.150	0.17
Sex of Subordinate (SSEX)	1	0.072	0.08
L X SSEX	1	0.848	0.94
S X SSEX	1	0.302	0.33
S X L X SSEX	1	0.132	0.15
LSEX X SSEX	1	0.896	0.99
L X LSEX X SSEX	1	2.606	2.88
S X LSEX X SSEX	1	0.664	0.73
L X S X LSEX X SSEX	1	0.024	0.03
Error	130	117.640	
Total	145	148.327	

*p<.05

**p<.01

Table 8: Analysis of Variance on Factor II (Stability of Attributed Cause)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Locus of Cause (L)	1	1.516	1.79
Stability of Cause (S)	1	24.957	29.53**
L X S	1	0.271	0.32
Sex of Leader (LSEX)	1	7.150	8.46**
L X LSEX	1	0.882	1.04
S X LSEX	1	1.126	1.33
S X L X LSEX	1	0.007	0.01
Sex of Subordinate (SSEX)	1	0.455	0.54
L X SSEX	1	1.428	1.69
S X SSEX	1	1.392	1.65
S X L X SSEX	1	0.197	0.23
LSEX X SSEX	1	0.993	1.18
L X LSEX X SSEX	1	0.040	1.05
S X LSEX X SSEX	1	0.587	0.69
L X S X LSEX X SSEX	1	1.247	1.48
Error	130	109.862	
Total	145	151.703	

*p<.05

**p<.01

Table 9: Correlations among the Corrective Action Measures

	Factor I	Factor II	Factor III	Factor IV	Factor V
Factor I	-----	0.006	-0.065	0.049	-0.012
Factor II	0.006	-----	0.036	0.046	0.052
Factor III	-0.065	0.036	-----	-0.014	0.004
Factor IV	0.049	0.046	-0.014	-----	0.026
Factor V	-0.012	0.052	0.004	0.026	-----

Table 10: Analysis of Variance on Factor I (Train the Subordinate)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Locus of Cause (L)	1	0.985	1.12
Stability of Cause (S)	1	15.163	17.19**
L X S	1	0.001	0.01
Sex of Leader (LSEX)	1	0.031	0.03
L X LSEX	1	0.020	0.02
S X LSEX	1	0.019	0.02
S X L X LSEX	1	0.639	0.73
Sex of Subordinate (SSEX)	1	0.595	0.68
L X SSEX	1	2.422	2.75
S X SSEX	1	0.031	0.04
S X L X SSEX	1	0.158	0.18
LSEX X SSEX	1	0.544	0.62
L X LSEX X SSEX	1	3.810	4.32*
S X LSEX X SSEX	1	2.733	3.10
L X S X LSEX X SSEX	1	0.973	1.10
Error	130	114.690	
Total	145	143.853	

*p<.05

**p<.01

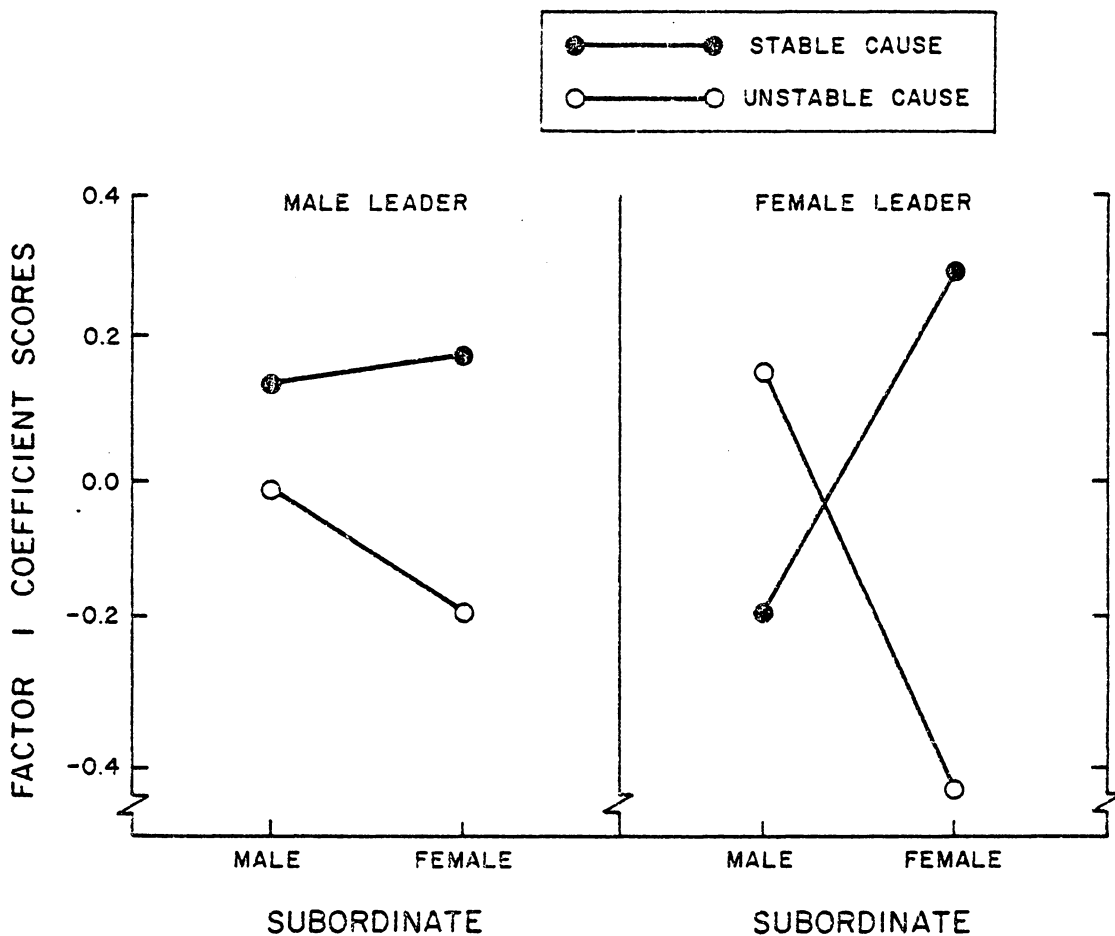


Figure 2: Locus of Cause X Sex of Leader X Sex of Subordinate
Interaction on Factor I (Train the Subordinate)

Table 11: Analysis of Variance on Factor II (Punish the Subordinate)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Locus of Cause (L)	1	0.204	0.22
Stability of Cause (S)	1	1.799	1.98
L X S	1	0.211	0.23
Sex of Leader (LSEX)	1	5.544	6.10*
L X LSEX	1	5.221	5.74*
S X LSEX	1	0.994	1.09
S X L X LSEX	1	0.405	0.45
Sex of Subordinate (SSEX)	1	0.037	0.05
L X SSEX	1	0.035	0.04
S X SSEX	1	0.728	0.80
S X L X SSEX	1	3.725	4.10*
LSEX X SSEX	1	0.378	0.42
L X LSEX X SSEX	1	2.400	2.65
S X LSEX X SSEX	1	2.947	3.26
L X S X LSEX X SSEX	1	0.003	0.01
Error	130	118.179	
Total	145	143.330	

* $p < .05$

** $p < .01$

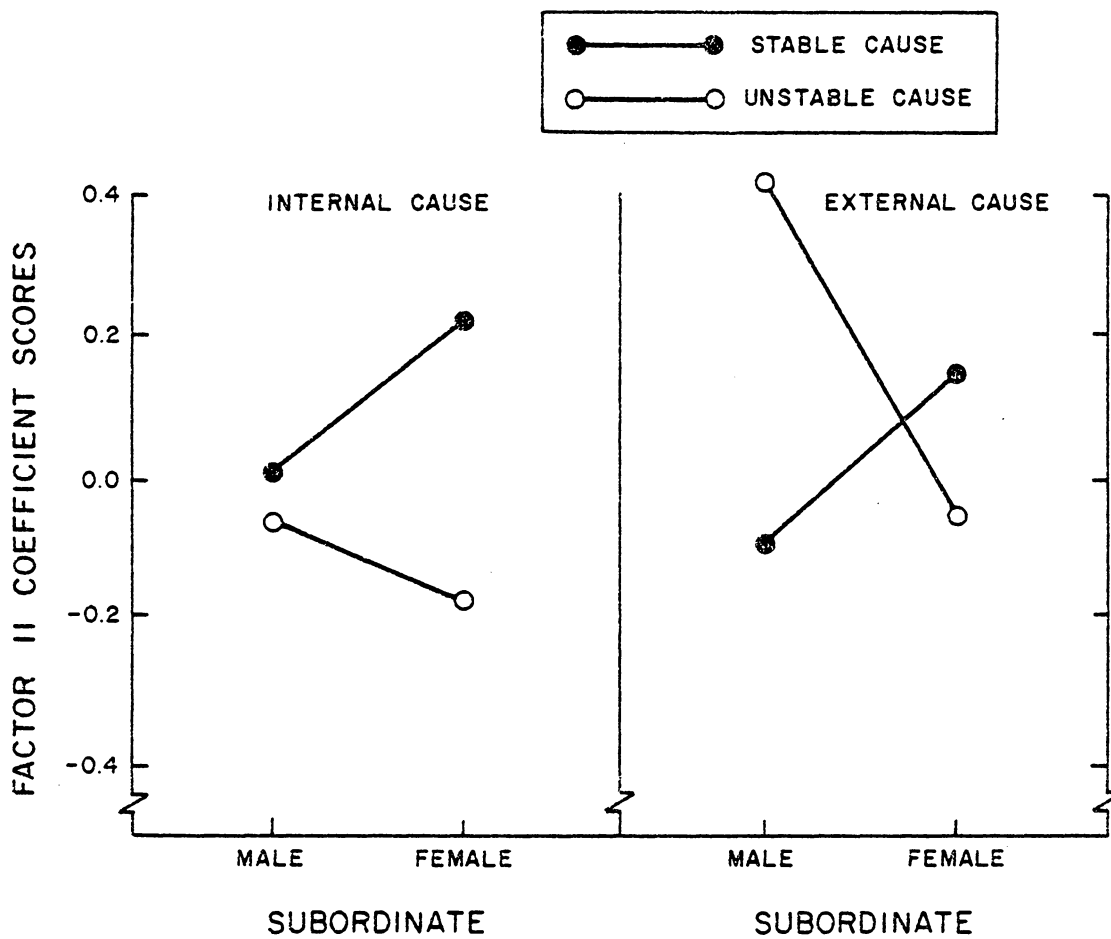


Figure 3: Locus of Cause X Stability of Cause X Sex of Subordinate Interaction on Factor II (Punish the Subordinate)

Table 12: Analysis of Variance on Factor III (Monitor the Subordinate)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Locus of Cause (L)	1	0.134	0.16
Stability of Cause (S)	1	0.141	0.17
L X S	1	1.579	1.86
Sex of Leader (LSEX)	1	3.465	4.06*
L X LSEX	1	0.733	0.86
S X LSEX	1	0.605	0.71
S X L X LSEX	1	1.111	1.31
Sex of Subordinate (SSEX)	1	0.251	0.30
L X SSEX	1	0.002	0.01
S X SSEX	1	0.008	0.01
S X L X SSEX	1	4.129	4.84*
LSEX X SSEX	1	0.079	0.09
L X LSEX X SSEX	1	0.285	0.34
S X LSEX X SSEX	1	0.016	0.02
L X S X LSEX X SSEX	1	0.592	0.70
Error	130	110.916	
Total	145	123.423	

* $p < .05$

** $p < .01$

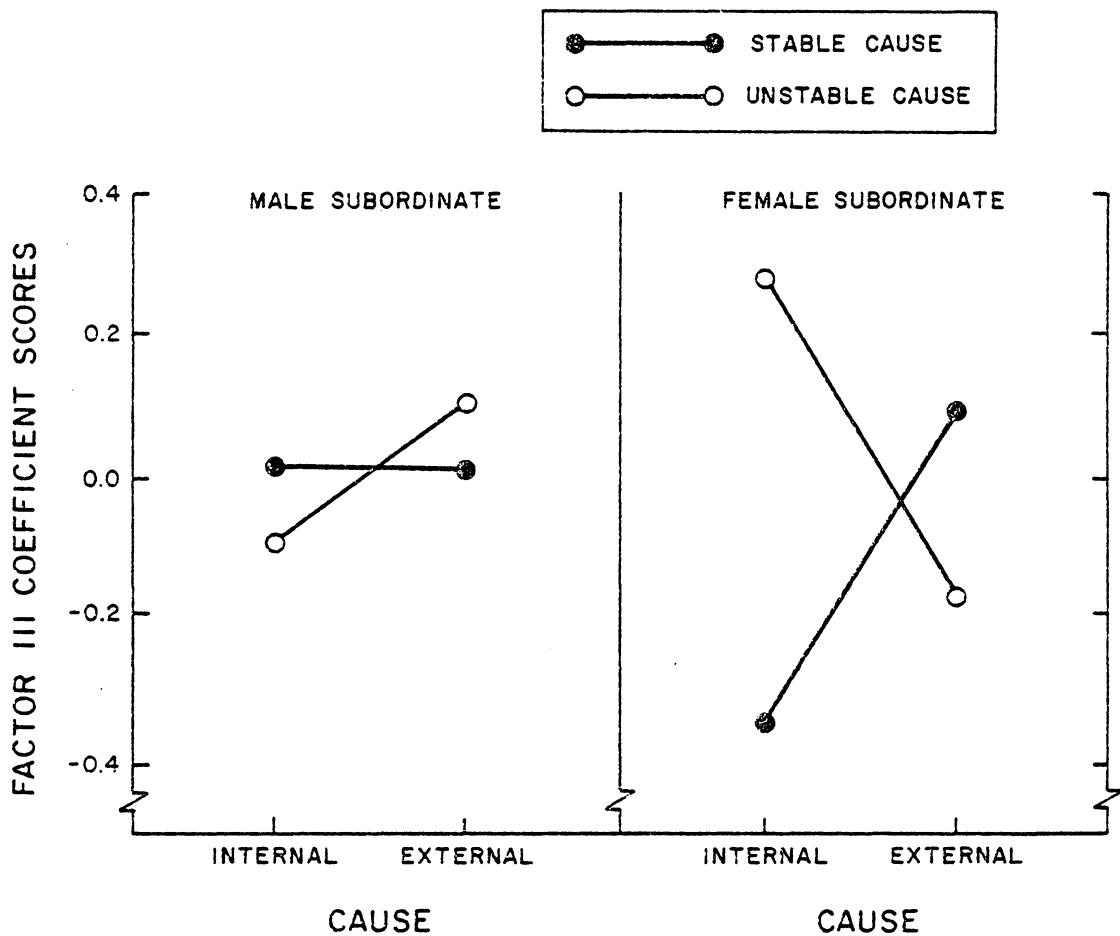


Figure 4: Locus of Cause X Stability of Cause X Sex of Subordinate Interaction on Factor III (Monitor the Subordinate)

Table 13: Analysis of Variance on Factor IV (Counsel the Subordinate)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Locus of Cause (L)	1	0.018	0.02
Stability of Cause (S)	1	3.930	4.72*
L X S	1	0.118	0.14
Sex of Leader (LSEX)	1	0.037	0.04
L X LSEX	1	0.127	0.15
S X LSEX	1	0.661	0.79
S X L X LSEX	1	0.248	0.29
Sex of Subordinate (SSEX)	1	3.142	3.78
L X SSEX	1	0.575	0.69
S X SSEX	1	0.099	0.12
S X L X SSEX	1	0.325	0.38
LSEX X SSEX	1	0.640	0.77
L X LSEX X SSEX	1	0.034	0.04
S X LSEX X SSEX	1	0.019	0.02
L X S X LSEX X SSEX	1	0.089	0.10
Error	130	111.181	
Total	145	122.099	

* $p < .05$

** $p < .01$

Table 14: Analysis of Variance on Factor V (Provide Support and Sympathy to the Subordinate)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Locus of Cause (L)	1	4.877	6.50*
Stability of Cause (S)	1	1.854	2.47
L X S	1	0.009	0.01
Sex of Leader (LSEX)	1	0.065	0.09
L X LSEX	1	3.077	3.97*
S X LSEX	1	5.304	6.84**
S X L X LSEX	1	1.559	2.01
Sex of Subordinate (SSEX)	1	0.673	0.87
L X SSEX	1	2.386	3.08
S X SSEX	1	0.642	0.83
S X L X SSEX	1	0.163	0.21
LSEX X SSEX	1	5.012	6.46*
L X LSEX X SSEX	1	0.314	0.41
S X LSEX X SSEX	1	2.420	3.12
L X S X LSEX X SSEX	1	0.889	1.15
Error	130	97.499	
Total	145	123.535	

*p<.05

**p<.01

Discussion

The results provide support for the contention (Green & Mitchell, 1979; Mitchell, Green, & Wood, 1981) that both the locus and stability of the cause for subordinate poor performance affect leaders' corrective actions. In the present study, the stability manipulation affected Factor I (Train the Subordinate), Factor IV (Counsel the Subordinate about Work Standards), and Factor V (Provide Support and Sympathy to the Subordinate), and the locus manipulation affected Factor II (Punish the Subordinate) and Factor V (Provide Support and Sympathy to the Subordinate).

These results are consistent with two recent investigations (Heilman & Guzzo, 1978; Pence, Pendleton, Dobbins, & Sgro, 1982). Both of these studies presented subjects with written descriptions of management trainees and asked subjects to rate the appropriateness of various personnel actions. Included in each description was a one year performance evaluation and a cause for the performance (ability, effort, luck, and task difficulty). The employees were described as either high (Heilman & Guzzo, 1979) or low performers (Pence et al., 1982). As was the case in the present study, both the locus and stability of the cause affected the dependent measures. It is apparent that both the locus and stability dimensions must be considered when examining organizational phenomenon from an attributional orientation.

The results have serious implications for much of the research conducted by Mitchell and his colleagues (Green & Liden, 1980; Mitchell & Kalb, 1981; 1982; Mitchell & Wood, 1980). These researchers have tested predictions of the Attributional Model of Leadership by

manipulating the locus of causality and asking leaders to rate the appropriateness of various corrective actions. The stability dimension has not been explicitly considered in this research, and may, in fact, have been confounded with the locus dimension in some studies (e.g., Dobbins et al., in press; Green & Liden, 1980). The results of the present study indicate that such confounding may have serious consequences. Significant locus effects may be produced by the confounded factor of stability. Future research must avoid this problem and explicitly manipulate or control both the locus and stability variables.

Sex of the subordinate exerted very little influence on leaders' attributions and corrective actions. This finding is contrary to past research (Cash, Gillen, & Burns, 1977; Deaux & Emswiller, 1974; Dobbins et al., in press; Etaugh & Brown, 1975; Feather & Simon, 1975; Gutek & Stevens, 1979; Haefner, 1977; Rosen & Jerdee, 1974; Taynor & Deaux, 1975; Wendelken & Inn, 1981). Differences between the experimental procedures of the present study and the procedures of past research may be responsible for the conflicting results. For example, Dobbins et al.'s leaders had limited contact with the subordinate. Thus, they may have been forced to rely heavily upon their implicit theories of males and females when making attributions and selecting corrective actions. Leaders in the present study, on the other hand, had more contact with the subordinate. They trained the subordinate to perform the task and conducted a post-performance interview with the subordinate. Furthermore, they were presented with a clear statement describing the cause of the poor performance.

Because of this extensive information, leaders in the present study may have relied less upon their implicit theories of males and females when making attributions and selecting corrective actions. Sex of the subordinate may bias leaders' attributions and corrective actions mainly when ambiguity exists concerning the cause of poor performance. Such a conclusion is consistent with the finding that performance ratings are more biased by sex variables when the rater has limited contact with the ratee (Dobbins, Stuart, Pence, & Sgro, Note 2; Wendelken & Inn, 1981).

The present investigation found that male leaders attributed the subordinate's poor performance more to unstable factors than did female leaders. One possible explanation for this result may be found in the literature on performance expectations and attributions. Rose and Andippan (1978) demonstrated that male leaders have higher expectations for subordinate performance than do female leaders. These high expectations should cause male leaders to perceive the subordinate's poor performance as "unexpected". Since unexpected outcomes are attributed to unstable factors (McMahan, 1973; Valle & Frieze, 1976), male leaders should be inclined to make unstable attributions for subordinate poor performance. Such an explanation is speculative and must be examined in future research.

The present data also revealed that male and female leaders responded differently to the cause manipulations on Factor II (Punish the Subordinate) and Factor V (Provide Support and Sympathy to the Subordinate). Male leaders responded more punitively when the cause for poor performance was internal rather than external and provided

more support to the subordinate when the cause was stable rather than unstable or external rather than internal. Female leaders, on the other hand, were equally inclined to respond punitively or provide support to the subordinate when the cause was internal, external, stable, or unstable. These findings support the contention that male leaders' corrective actions are more influenced by the cause of a subordinate's poor performance than are female leaders' corrective actions. As suggested by Dobbins et al. (in press), male leaders appear to respond to poor performers based upon a norm of equity while female leaders respond based upon a norm of equality.

Leaders in actual organizations may be more involved in their roles than were subjects in the current study. This high level of involvement may produce biased attributions (Miller, 1976) and affect the selection of corrective actions. The second study examined this possibility and determined whether the findings of the present study would replicate in a second experimental setting.

Study II: The Effects of Involvement, Locus of Cause, and Stability of Cause on Leaders' Attributions and Corrective Actions

Heider (1958) proposed that individuals are motivated to make attributions which protect and enhance their self-esteem. As was noted earlier, this prediction has been supported in a variety of investigations (Miller, 1976; Reiss, Rosenfeld, Melburg, & Tedeschi, 1981; Snyder, Stephan, & Rosenfield, 1978).

Building upon the work of Heider, Green and Mitchell (1979) proposed that leader attributions and corrective actions will be biased by motivational factors. The purpose of the present study was to test this prediction. Furthermore, the present study provided a second test of the hypotheses derived in Study I.

Hypotheses

Involvement of the Leader

Miller (1976) required subjects to complete a social insight test that was described as "a predictor of life success" (high involvement) or "unrelated to life success" (low involvement). Subjects received either "failure" or "success" feedback and then made attributions for their performance. Miller found that high involvement subjects perceived failure as threatening and protected self-esteem by attributing their performance to external factors. Low involvement subjects, on the other hand, perceived failure as less threatening and made less external attributions for their performance.

Building upon the work of Miller, it would be expected that a

leader's involvement in a work task would bias the attributions made for his or her own performance. A high involvement leader should perceive failure as threatening and protect self-esteem by attributing his performance to external factors. A low involvement leader, on the other hand, should perceive failure as less threatening and thus make less external self-attributions. This prediction is stated in Hypothesis 1.

Hypothesis 1: High involvement leaders will make more external self-attributions than will low involvement leaders.

Green and Mitchell (1979) predicted that leader involvement in a work task will also affect the attributions made for subordinate poor performance. High involvement leaders should perceive poor performance as threatening and thus be inclined to "blame" the subordinate. Low involvement leaders, on the other hand, should perceive poor performance as less threatening and thus be less inclined to blame the subordinate. This prediction is formally stated in Hypothesis 2.

Hypothesis 2: High involvement leaders will make more internal attributions for subordinate poor performance than will low involvement leaders.

Hypothesis 3 is an extension of Hypothesis 2. It is based upon the demonstration (Dobbins et al., in press; Green & Liden, 1980; Mitchell & Kalb, 1982; Mitchell & Wood, 1980) that internal and external attributions produce different corrective actions.

Hypothesis 3: High and low involvement leaders will take different corrective actions toward the poorly performing subordinate.

The Locus and Stability of Causality

The locus and stability of the cause for subordinate poor performance were also manipulated in the present study. These manipulations provided a second empirical test of the hypotheses derived in Study 1. These predictions are restated below.

Hypothesis 4: Leaders will be more inclined to train the subordinate when poor performance is caused by stable rather than unstable factors.

Hypothesis 5: Leaders will respond more punitively toward the subordinate when poor performance is caused by internal rather than external factors. Furthermore, leaders will respond more punitively toward the subordinate when poor performance is caused by the internal-unstable factor of effort than the internal-stable factor of ability.

Hypothesis 6: Leaders will be more inclined to monitor the subordinate's future work behavior when poor performance is caused by unstable rather than stable factors.

Hypothesis 7: Leaders will be more inclined to counsel the subordinate when poor performance is caused by unstable rather than stable factors.

Hypothesis 8: Leaders will be more inclined to make sympathetic responses toward the subordinate when poor performance is caused by external rather than internal factors.

Overview

High and low involvement leaders supervised a subordinate who was working on a clerical ordering task. The subordinate was a confederate of the experimenter and performed poorly due to internal-stable, internal-unstable, external-stable, or external-unstable causes. The leaders directed, observed, evaluated, and then selected appropriate corrective actions. This procedure allowed an evaluation of the above predictions in a situation that simulated actual leader-subordinate interactions.

Method

Subjects

Fifty-four male and 54 female undergraduate Introductory Psychology students served as leaders in the experiment. Subjects received extra-credit for their participation.

Design

The design was a 2 X 2 X 2 between-groups factorial experiment incorporating the variables of level of involvement (high versus low), stability of the cause for poor performance (stable versus unstable), and locus of the cause for poor performance (internal versus external). The number of subjects within each treatment condition ranged from 12

to 14. Sex of the leader and sex of the subordinate were balanced within each treatment condition.

Procedure

The procedure for Study II was similar to that used in Study I. Subjects reported to the "supervisor's office" and were presented with instructions. In the high involvement condition, the instructions stated:

In this experiment, you will supervise the work of another individual. This individual will be your subordinate. Your job as a supervisor is to get your subordinate to perform effectively on a work task. If the subordinate performs satisfactorily, then you have been effective as a leader. If the subordinate performs unsatisfactorily, then you have been ineffective as a leader.

Your first task as a leader is to train and motivate your subordinate to perform effectively. You will have as much time as needed for this training. Once you have completed your instructions, the subordinate will work on the ordering task for a three minute practice period. During this practice period, you can provide further clarification of the task if you feel that it is needed.

After training the subordinate to perform the ordering task, you will go back to your office for 15 minutes. During this time period, the subordinate should complete as many forms as possible.

At the end of the 15-minute work session, the experimenter will pick up the subordinate's work and bring it to you. You will evaluate the quality and quantity of this work. This will be easy since you will have a listing of how all forms should have been completed.

If the subordinate completes fourteen or more forms, then the quantity of his or her work is satisfactory. If the subordinate makes five or less errors, then the quality of his or her performance is also satisfactory. If, on the other hand, your subordinate does not complete fourteen or more forms, then the quantity of his or her performance is unsatisfactory. If your subordinate makes more than five errors, then the quality of his or her work is also unsatisfactory.

After you have evaluated the subordinate's work, you should call the subordinate into your office for a brief "post-performance" interview. During this 3-5 minute interview, you should provide the subordinate with some feedback concerning his or her performance. You should then dismiss the subordinate and complete a brief questionnaire.

Brown Manufacturing Company has a history of rewarding successful leaders. In keeping with this tradition, effective performance in the present experiment will be rewarded with an additional bonus point. That is, if you are able to train and motivate your subordinate to

achieve satisfactory performance, you will receive two instead of one extra-credit point. You will receive these two points only if you are able to get your subordinate to achieve satisfactory performance.

The experiment is very similar to a leadership test that has been used at the Officer Candidate School at Fort Benning, Georgia. In seven separate studies involving over 8,000 men and women, the Army has demonstrated that individuals who are able to train and motivate a subordinate to perform satisfactorily on clerical tasks have high leadership potential and become successful leaders in both the military and civilian sector. Thus, your performance in this experiment will provide insight into your own leadership potential.

The instructions were identical in the low-involvement condition except that the final two paragraphs were omitted. Thus, low-involvement leaders were not informed that their performance is a good predictor of leadership potential or did not have the opportunity to acquire a bonus point by performing effectively.

The leader was taken to the "workroom" to meet the subordinate. This individual was not another subject, but instead a confederate of the experimenter. Having a confederate in this role had two procedural advantages. First, the quality and quantity of work which was completed by the subordinate could be held constant across all treatment conditions. Second, interactions between the leader and subordinate could be standardized.

The leader explained the ordering task to the subordinate and presented the subordinate a packet of twenty uncompleted forms. The leader then started a timer to measure the 15 minute work period and went back to his or her office.

The supervisor and experimenter remained in the office during the 15-minute work session. At the end of this session, the experimenter left and returned in approximately three minutes with the work that was "completed by the subordinate". In reality, this work was a standardized sample constructed by the experimenter and was below acceptable standards in both quality and quantity. This work was identical to the sample used in Study I.

The supervisor evaluated the quality and quantity of the work and then conducted a five minute post-performance interview with the subordinate. The supervisor then dismissed the subordinate and completed a questionnaire which measured: (a) perceptions of his or her own performance; (b) attributions for his or her performance; (c) perceptions of subordinate performance; (d) attributions for subordinate performance; and (e) the appropriateness of various corrective actions. A copy of this questionnaire is presented in Appendix C.

Manipulation of the Cause for Poor Performance

The locus and stability of the cause for poor performance were manipulated following the same procedures used in Study I.

Dependent Measures

Subordinate Performance Measure. Three items were used to measure leaders' perceptions of subordinate performance. These items

were identical to those used in Study I and were summed to form a single measure (coefficient alpha=.775).

Leader Performance Measure. Leaders were asked to indicate "How would you describe your performance as a supervisor" on a 9-point Likert scale anchored by "Unsatisfactory", "Average", and "Outstanding".

Self-Attribution Measures. Eight questions measured leaders' attributions for their own performance (see Table 15). Questions 1 and 2 were a revision of those used by Green and Liden (1980), and questions 3 through 8 were a modification of the locus and stability subscales of Russell's (1982) Causal Dimension Scale.

Responses made to the eight self-attribution items in Studies I, II, and III were combined⁹ and analyzed using a principal component analysis with a Varimax rotation. This analysis revealed a two-factor solution accounting for 66 percent of the variance in responses. The factor loadings for each of the self-attribution items are presented in Table 16.

Factor coefficient scores were calculated for each supervisor in the present study based upon the factor weights. This procedure resulted in two new dependent measures: Factor I (Locus of Self-Attribution) and Factor II (Stability of Self-Attribution).

Subordinate Attribution Measures. Eight items measured leaders'

⁹There were 148 leaders in Study I and 24 leaders in Study III. Responses were combined to increase the stability of the factor loadings.

attributions for the subordinate's poor performance. These questions were identical to those used in Study I.

Responses made to the eight subordinate attribution items in Studies I, II, and III were combined and analyzed using a principal component analysis with a Varimax rotation. This analysis was described in detail in Study I. Factor coefficient scores were calculated for each supervisor in the present study based upon the factor weights. This procedure resulted in two new dependent measures: Factor I (Locus of Attributed Cause) and Factor II (Stability of Attributed Cause).

Corrective Action Measures. Supervisors rated the appropriateness of 12 actions which could be taken toward the subordinate. These items were identical to those used in the first study.

Ratings of the corrective action items made in Studies I, II, and III were combined and analyzed using a principal component analysis with a Varimax rotation. A detailed description of this analysis is presented in Study I. Factor coefficient scores were calculated for each supervisor in the present study based upon the factor weights. This procedure resulted in five new dependent variables: Factor I-Train the Subordinate; Factor II-Punish the Subordinate; Factor III-Monitor the Subordinate; Factor IV-Counsel the Subordinate about Work Standards, and Factor V-Provide Support and Sympathy to the Subordinate.

Table 15: Self-Attribution Items^a

1. To what extent was your performance caused by personal characteristics such as your personality, attitudes, abilities, motivation, or other internal factors?

1 2 3 4 5 6 7 8 9
Very Little Moderately Very Much

2. To what extent was your performance caused by characteristics of the situation such as a difficult task, unclear instructions, incompetent help, or other external factors?

1 2 3 4 5 6 7 8 9
Very Little Moderately Very Much

3. Is the cause of your performance something that:

Reflects an aspect of you 1 2 3 4 5 6 7 8 9 Reflects an aspect of the situation

4. Is the cause of your performance:

Outside of you 1 2 3 4 5 6 7 8 9 Inside of you

5. Is the cause of your performance:

Something about you 1 2 3 4 5 6 7 8 9 Something about the situation

6. Is the cause of your performance:

Permanent 1 2 3 4 5 6 7 8 9 Temporary

7. Is the cause of your performance:

Variable over time 1 2 3 4 5 6 7 8 9 Stable over time

8. Is the cause of your performance:

Changeable 1 2 3 4 5 6 7 8 9 Unchangeable

^aItems 1, 4, and 6 were reverse-scored.

Table 16: Factor Loadings for Eight Self-Attribution Items

	<u>FACTOR1</u>	<u>FACTOR2</u>
Item 1	0.48774	-0.33006
Item 2	0.60035	0.15904
Item 3	0.80294	-0.21190
Item 4	0.66714	-0.38234
Item 5	0.82484	-0.23653
Item 6	-0.28902	0.78906
Item 7	-0.12278	0.80867
Item 8	-0.05470	0.81231

Results

Performance Measures

Univariate analyses of variance were conducted on the subordinate and leader performance measures. The results of these analyses are described below.

Subordinate Performance Measure. The manipulations did not significantly affect supervisors' ratings of subordinate performance (see Table 17). This finding indicates that perceptions of subordinate performance were not confounded with the treatment manipulations.

Supervisor Performance Measure. The manipulations did not significantly affect leaders' ratings of their own performance (see Table 18). This finding indicates that leaders' perceptions of their own performance were not confounded with the treatment manipulations.

Self-Attribution Measures

Univariate analyses of variance were conducted on the two self-attribution measures. The results of these analyses are described below.¹⁰

Factor I (Locus of Self-Attribution). The involvement manipulation significantly affected Factor I coefficient scores (see Table 19). Supervisors made greater external attributions for their poor performance in the high involvement condition ($M=.378$) than in the low

¹⁰One subject did not complete all self-attribution items and thus could not be used in these analyses.

involvement condition ($M = -.122$).

Factor II (Stability of Self-Attribution). The manipulations did not affect Factor II coefficient scores (see Table 20).

Test of Hypothesis 1. Hypothesis 1 predicted that leaders in the high involvement condition would make more external self-attributions than leaders in the low involvement condition. The analysis of variance on Factor I coefficient scores provided support for this prediction. This finding parallels the results obtained by Miller (1976) and indicates that the involvement manipulation was effective.

Subordinate Attribution Measures

Univariate analyses of variance were conducted on the two subordinate attribution measures. The results of these analyses are described below.¹¹

Factor I (Locus of Attributed Cause). The locus manipulation significantly affected Factor I coefficient scores (see Table 21). Supervisors made greater internal attributions when the cause was internal ($M = -.602$) rather than external ($M = .375$).

Factor II (Stability of Attributed Cause). The stability manipulation significantly affected Factor II coefficient scores (see Table 22). Supervisors made more stable attributions for the poor performance when the cause was stable ($M = .382$) rather than unstable

¹¹One subject did not complete all subordinate attribution items and thus was not used in these analyses.

($M = -.409$).

Test of Hypothesis 2. Hypothesis 2 predicted that the involvement manipulation would affect leaders' attributions for subordinate performance. Analyses of variance on the two subordinate attribution measures provided no support for this prediction.

Corrective Action Measures

Univariate analyses of variance were conducted on the corrective action measures.¹² This technique was selected as most appropriate since specific predictions had been delineated for each corrective action measure and the correlations among the different action measures were small (see Table 23).

Factor I: Training. A significant stability main effect was found on Factor I coefficient scores (see Table 24). Leaders indicated that it was more appropriate to train the subordinate when the cause was stable ($M = .178$) rather than unstable ($M = -.254$).

Test of Hypothesis 4. Hypothesis 4 predicted that leaders would be more inclined to train the subordinate when the cause for poor performance was stable rather than unstable. The analysis of variance conducted on Factor I coefficient scores supported this prediction.

Factor II: Punish the Subordinate. The manipulations did not significantly affect Factor II coefficient scores (see Table 25).

¹²Three subjects did not rate all twelve corrective action items and thus were not used in these analyses.

Test of Hypothesis 5. Hypothesis 5 predicted a Locus x Stability interaction on the punitive action measure. The analysis of variance conducted on Factor II coefficient scores revealed no support for this prediction.

Factor III: Monitor the Subordinate. A locus of causality main effect was obtained for Factor III coefficient scores (see Table 26). Leaders indicated that it was more appropriate to monitor the future work behavior of the subordinate when the cause was external ($M=.240$) rather than internal ($M=-.339$).

Test of Hypothesis 6. Hypothesis 6 predicted that leaders would be more inclined to monitor the future work behavior of the subordinate when poor performance was caused by unstable rather than stable factors. The analysis of variance on Factor III coefficient scores revealed no support for this prediction.

Factor IV: Counsel the Subordinate about Work Standards. The stability manipulation significantly affected Factor IV coefficient scores (see Table 27). Leaders were more inclined to counsel the subordinate when the cause for poor performance was unstable ($M=.131$) rather than stable ($M=-.334$).

Test of Hypothesis 7. Hypothesis 7 predicted that leaders would be more inclined to counsel the subordinate when the cause for poor performance was unstable rather than stable. The analysis of variance conducted on Factor IV coefficient scores supported this prediction.

Factor V: Provide Support and Sympathy to the Subordinate. The locus manipulation significantly affected Factor V coefficient scores (see Table 28). Leaders indicated that supporting the subordinate was more appropriate when the cause was external ($M=.224$) rather than internal ($M=-.224$).

Test of Hypothesis 8. Hypothesis 8 predicted that leaders would be more inclined to provide support and sympathy to the subordinate when the cause was external rather than internal. The analysis of variance conducted on Factor V coefficient scores supported this prediction.

Involvement Effects on Corrective Actions: Test of Hypothesis 3. Hypothesis 3 predicted that high and low involvement leaders would select different corrective actions. The analyses of variance on the five corrective action measures revealed no support for this prediction.

Table 17: Analysis of Variance on Subordinate Performance Measure.

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Involvement (I)	1	14.867	1.57
Locus of Cause (L)	1	14.867	1.57
I X L	1	0.100	0.10
Stability of Cause (S)	1	6.992	0.74
I X S	1	12.750	1.35
L X S	1	25.534	2.70
I x L x S	1	10.795	1.14
Error	100	944.225	
Total	107	1030.768	

*p<.05

**p<.01

Table 18: Analysis of Variance on Supervisor Performance Measure

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Involvement (I)	1	3.781	2.33
Locus of Cause (L)	1	5.228	3.08
I X L	1	0.745	0.44
Stability of Cause (S)	1	5.437	3.21
I X S	1	0.005	0.01
L X S	1	3.153	1.86
I x L x S	1	0.229	0.14
Error	100	169.619	
Total	107	188.916	

*p<.05

**p<.01

Table 19: Analysis of Variance on Factor I (Locus of Self-Attribution)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Involvement (I)	1	6.562	6.41*
Locus of Cause (L)	1	3.204	3.13
I X L	1	0.010	0.01
Stability of Cause (S)	1	1.362	1.33
I X S	1	0.815	0.80
L X S	1	0.023	0.02
I x L x S	1	0.219	0.21
Error	99	101.336	
Total	106	113.772	

* $p < .05$

** $p < .01$

Table 20: Analysis of Variance on Factor II (Stability of Self-Attribution)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Involvement (I)	1	2.824	2.59
Locus of Cause (L)	1	4.143	3.80
I X L	1	0.054	0.05
Stability of Cause (S)	1	1.319	1.21
I X S	1	0.024	0.02
L X S	1	3.577	3.28
I x L x S	1	0.152	0.14
Error	99	107.995	
Total	106	120.183	

* $p < .05$

** $p < .01$

Table 21: Analysis of Variance on Factor I (Locus of Attributed Cause for Subordinate Poor Performance)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Involvement (I)	1	0.118	0.13
Locus of Cause (L)	1	25.623	27.11**
I X L	1	0.002	0.01
Stability of Cause (S)	1	0.027	0.03
I X S	1	0.040	0.01
L X S	1	0.935	0.99
I x L x S	1	0.498	0.53
Error	99	93.557	
Total	106	120.665	

* $p < .05$

** $p < .01$

Table 22: Analysis of Variance on Factor II (Stability of Attributed Cause for Subordinate Poor Performance)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Involvement (I)	1	1.143	1.21
Locus of Cause (L)	1	2.359	2.49
I X L	1	0.216	0.23
Stability of Cause (S)	1	16.397	17.31**
I X S	1	0.751	0.79
L X S	1	0.001	0.01
I x L x S	1	0.002	0.01
Error	99	93.805	
Total	106	105.149	

*p<.05

**p<.01

Table 23: Correlations among the Corrective Action Measures

	Factor I	Factor II	Factor III	Factor IV	Factor V
Factor I	-----	0.021	0.035	0.043	0.006
Factor II	0.021	-----	-0.091	0.030	-0.106
Factor III	0.035	-0.091	-----	0.051	-0.017
Factor IV	0.043	0.030	0.051	-----	-0.038
Factor V	0.006	-0.106	-0.017	-0.038	-----

Table 24: Analysis of Variance on Factor I (Train the Subordinate)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Involvement (I)	1	0.524	0.51
Locus of Cause (L)	1	0.013	0.01
I X L	1	0.808	0.79
Stability of Cause (S)	1	4.997	4.88*
I X S	1	0.051	0.05
L X S	1	0.012	0.01
I x L x S	1	0.025	0.03
Error	97	99.271	
Total	104	105.588	

*p<.05

**p<.01

Table 25: Analysis of Variance on Factor II (Punish the Subordinate)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Involvement (I)	1	2.312	2.18
Locus of Cause (L)	1	0.025	0.02
I X L	1	1.195	1.13
Stability of Cause (S)	1	0.198	0.19
I X S	1	0.008	0.01
L X S	1	0.006	0.01
I x L x S	1	0.474	0.45
Error	97	102.891	
Total	104	107.083	

*p<.05

**p<.01

Table 26: Analysis of Variance on Factor III (Monitor the Subordinate)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Involvement (I)	1	1.575	1.34
Locus of Cause (L)	1	8.912	7.59**
I X L	1	1.154	0.98
Stability of Cause (S)	1	0.096	0.08
I X S	1	0.768	0.65
L X S	1	0.025	0.02
I x L x S	1	0.001	0.01
Error	97	113.930	
Total	104	126.358	

*p<.05

**p<.01

Table 27: Analysis of Variance on Factor IV (Counsel the Subordinate)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Involvement (I)	1	0.793	0.79
Locus of Cause (L)	1	0.007	0.01
I X L	1	0.307	0.31
Stability of Cause (S)	1	4.286	4.27*
I X S	1	1.493	1.49
L X S	1	0.393	0.39
I x L x S	1	1.010	1.01
Error	97	97.478	
Total	104	105.742	

*p<.05

**p<.01

Table 28: Analysis of Variance on Factor V (Provide Support and Sympathy to the Subordinate)

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F Value</u>
Involvement (I)	1	0.068	0.06
Locus of Cause (L)	1	5.817	5.02*
I X L	1	1.644	1.42
Stability of Cause (S)	1	0.885	0.76
I X S	1	0.728	0.63
L X S	1	0.426	0.37
I x L x S	1	0.134	0.12
Error	97	112.446	
Total	104	122.108	

* $p < .05$

** $p < .01$

Discussion

The results provide further support for Green and Mitchell's (1979) contention that both the locus and stability of cause affect leaders' corrective actions. Leaders in the present study rated training the subordinate as more appropriate when the cause was stable and counseling the subordinate as more appropriate when the cause was unstable. Furthermore, providing support and sympathy to the subordinate was rated as more appropriate when the cause was external. These results replicate the findings reported in Study I and provide strong support for the Attributional Model of Leadership.

The involvement manipulation affected leaders' self-attributions. As predicted, leaders made greater external self-attributions in the high involvement condition than in the low involvement condition. This finding replicates the "ego-serving" bias (Miller, 1976; Riess, Rosenfeld, Melburg, & Tedeschi, 1981; Snyder, Stephan, & Rosenfield, 1978) and demonstrates that leaders' self-attributions are influenced by motivational processes.

The failure to obtain an involvement main effect on the subordinate attribution and corrective action measures is surprising. The stability and locus manipulations may have been so clear that they precluded the distortion of information and biasing of attributions. High involvement leaders may have been motivated to make internal attributions for subordinate poor performance, but the clarity of the cause manipulation may have prevented such biases from occurring. Motivational factors may affect leaders' attributions and corrective actions only when the cause for performance is unclear. Study III was conducted to examine

. this possibility.

Study III: A Further Examination of the Effects of Involvement on
Leaders' Attributions and Corrective Actions

Study II found no support for the prediction that a leader's involvement in a work task influences the attributions made for subordinate poor performance or the selection of corrective actions. One possible explanation for this finding is that the causal manipulation presented to leaders was so clear and unambiguous that it prevented the distortion of information and biasing of attributions. Leader involvement in a work task may affect attributions and corrective actions when the cause for poor performance is ambiguous. Study III was conducted to explore this possibility.

In Study III, high and low involvement leaders supervised the work of three subordinates who constructed "moon tents" (Kolb, McIntyre, & Rubin, 1971). All three of the subordinates were confederates of the experimenter. One of the subordinates performed poorly on the work task. No explicit cause was given for the poor performance. Leaders evaluated the group and rated the appropriateness of various corrective actions that could be taken toward the poorly performing subordinate.

Hypotheses

Building upon the work of Miller¹³ (1976), it would be expected that high involvement leaders will perceive failure as threatening and

¹³Miller's study was described in Study II.

thus attribute their poor performance to external factors (since such an attribution protects self-esteem). Low involvement leaders, on the other hand, should perceive failure as less threatening and thus make less external self-attributions. This prediction was supported in Study II and will be further examined in Study III.

Hypothesis 1: High involvement leaders will make more external self-attributions than will low involvement leaders.

Green and Mitchell (1979) predicted that leader involvement will also affect the attributions made for subordinate performance. High involvement leaders should be inclined to blame the subordinate for poor performance since such an attribution protects self-esteem. Low involvement leaders, on the other hand, should be less inclined to blame the subordinate. This prediction is formally stated in Hypothesis 2.

Hypothesis 2: High involvement leaders will make more internal attributions for the subordinate's poor performance than will low involvement leaders.

Hypothesis 3 is an extension of Hypothesis 2. It is based upon the demonstration (Dobbins et al., in press; Green & Liden, 1980; Mitchell & Kalb, 1982; Mitchell & Wood, 1980) that internal and external attributions produce different corrective actions.

Hypothesis 3: High and low involvement leaders will take different corrective actions toward the poorly performing subordinate.

Hypotheses 2 and 3 were not supported in Study II. The present study is a re-examination of these hypotheses in a setting in which the cause for subordinate poor performance is ambiguous.

Method

Subjects

Twelve male and 12 female undergraduate Introductory Psychology students served as leaders in the study. Subjects received extra-credit for their participation.

Design

The level of leader involvement was the only variable manipulated. Both the high and low involvement groups contained an equal number of male and female leaders. All of the subordinates were males.

Procedure

Subjects reported to the "supervisor's office" and were presented with instructions. In the high involvement condition, subjects were informed of the following.

In this experiment, you will supervise the work of three other individuals. These individuals are your subordinates. Your job as a supervisor is to train and motivate your subordinates to perform effectively.

In a couple of minutes, the experimenter will take you to the "workroom" to meet your subordinates. These individuals are other Introductory Psychology students like

yourself who signed up for this experiment in another folder in Derring Hall. They have been informed that you will serve as their supervisor.

You and your subordinates will be working for Brown Toy Company, a large corporation which is located in Northern Virginia. Your subordinates will be manufacturing moon tents¹⁴ from raw materials. Moon tents are a new addition to Brown's toy line. Company profits are tied directly to moon tent production, i.e., profits are high when tent production is high and profits are low when tent production is low.

Your first task as a leader is to train and motivate your subordinates to construct as many moon tents as possible. You can take as much time as you like to perform this task.

When you have finished instructing and motivating your subordinates, a 15-minute work session will begin. Your subordinates will have exactly 15-minutes to complete as many moon tents as possible.

You can remain in the work area during the first part of the work period and provide additional information and encouragement to your subordinates. You cannot, however, actually make moon tents yourself.

When you are satisfied that your group does not

¹⁴A detailed description of the moon tent task is provided in Appendix D.

require any further assistance, you should go back to your office and complete a series of "daily reports". Completing reports is part of a typical manager's job at Brown Toy Company.

At the end of the 15 minute work period, you should go to the work area and collect the completed tents. You should take this work back to your office and evaluate the productivity of the group and each individual. Tents which have stray ends should be rejected as unsatisfactory and should not count toward the group's performance.

If your subordinates complete sixty-five or more high quality tents, then you have been effective as a leader. If they complete less than sixty-five tents, then you have been ineffective as a leader.

Brown Toy Company has a history of rewarding successful leaders. In keeping with this tradition, effective performance in the present experiment will be rewarded with an additional bonus point. That is, if you are able to train and motivate your subordinates to achieve satisfactory performance, you will receive three instead of two extra-credit points. You will receive these three points only if you are able to train and motivate your subordinates to complete 65 or more high quality moon tents.

The experiment is very similar to a leadership test that has been used at the Officer Candidate School at Fort Benning, Georgia. In seven separate studies involving over

8,000 men and women, the Army has demonstrated that individuals who are able to train and motivate a small group of subordinates to perform satisfactory on tasks similar to this experiment have high leadership potential and become successful leaders in both the military and civilian sector. Thus, your performance in this experiment will provide some insight concerning your own leadership potential.

The instructions were identical in the low-involvement condition except that the final two paragraphs were omitted. Thus, low-involvement leaders were not informed that their performance is a good predictor of leadership potential or did not have the opportunity to acquire bonus points by performing effectively.

The three subordinates were confederates of the experimenter. They had limited interactions among themselves but responded enthusiastically to the supervisor. Two of the subordinates always completed 22-24 tents (High Performers) during the work session while the other subordinate completed 13-15 tents (Low Performer).

The supervisor evaluated each subordinate's work and then completed a questionnaire which measured: (a) perceptions of his or her own performance; (b) attributions for his or her own performance; (c) perceptions of the group's performance; (d) perceptions of each subordinate's performance; (e) attributions for each subordinate's performance; and (f) the appropriateness of taking different corrective actions toward each subordinate. A copy of the questionnaire is presented in Appendix E.

Dependent Measures¹⁵

Performance Measures. Three performance items were included in the questionnaire (see Table 29). The first item measured leaders' perceptions of their own performance. The second and third items measured leaders' perceptions of subordinate performance. These latter two questions were summed ($r_{23}=.88$) to form a single subordinate performance measure.

Self-Attribution Measures. Eight items measured leaders' attributions for their own performance. These questions were identical to those used in Study II.

Responses made to the eight self-attribution items in Studies I, II, and III were combined and analyzed using a principal component analysis with a Varimax rotation. This analysis was described in detail in Study II. Factor coefficient scores were calculated for each supervisor in the present study based upon the factor weights. This procedure resulted in two new dependent measures: Factor I (Locus of Self-Attribution) and Factor II (Stability of Self-Attribution).

Subordinate Attribution Questions. Eight items measured leaders' attributions for the subordinate's poor performance. These questions were identical to those used in Studies I and II.

Responses made to the eight subordinate attribution items in Studies I, II, and III were combined and analyzed using a principal

¹⁵The questionnaire contained items about all three subordinates. Only those items about the poor performer are presented.

Table 29: Performance Measures in Study III

1. How would you describe your performance as a supervisor?

1	2	3	4	5	6	7	8	9
Unsatisfactory				Average				Outstanding

2. How would you describe the subordinate's overall job performance?

1	2	3	4	5	6	7	8	9
Unsatisfactory				Average				Outstanding

3. How would you describe the quantity (volume of work completed, productivity level) of the subordinate's work?

1	2	3	4	5	6	7	8	9
Unsatisfactory				Average				Outstanding

component analysis with a Varimax rotation. This analysis was described in detail in Study I. Factor coefficient scores were calculated for each supervisor in the present study based upon the overall factor weights. This procedure resulted in two new dependent measures: Factor I (Locus of Attributed Cause) and Factor II (Stability of Attributed Cause).

Corrective Action Measures. Supervisors rated the appropriateness of twelve actions which could be taken toward the poorly performing subordinate. These items were identical to those used in Studies I and II.

Responses made to these items in Studies I, II, and III were combined and analyzed using a principal component analysis with a Varimax rotation. This analysis was described in detail in Study I. Factor coefficient scores were calculated for each supervisor in the present study based upon the overall factor weights. This procedure resulted in five new dependent variables: Factor I-Train the Subordinate; Factor II-Punish the Subordinate; Factor III-Monitor the Subordinate; Factor IV-Counsel the Subordinate about Work Standards; and Factor V-Provide Support and Sympathy to the Subordinate.

Results

Performance Measures

Independent t-tests were conducted on the leader and subordinate performance measures. The results of these analyses are described below.

Leader Performance Measure. The involvement manipulation did not significantly affect the leader performance measure ($t=.558$, $df=22$, $p>.05$, two-tailed test).

Subordinate Performance Measure. The involvement manipulation did not significantly affect the subordinate performance measure ($t=.479$, $df=22$, $p>.05$, two-tailed test).

Self-Attribution Measures

Independent t -tests were conducted on the two self-attribution measures. The results of these analyses are described below.

Factor I (Locus of Self-Attribution). The involvement manipulation significantly affected Factor I coefficient scores ($t=2.27$, $df=22$, $p<.05$, one-tailed test). High involvement leaders made greater external attributions ($M=.83$) for their performance than did low involvement leaders ($M=.01$).

Factor II (Stability of Self-Attribution). The involvement manipulation did not significantly affect Factor II coefficient scores ($t=-1.00$, $df=22$, $p>.05$, two-tailed test).

Test of Hypothesis 1. Hypothesis 1 predicted that high involvement leaders would make more external self-attributions than would low involvement leaders. The t -test on Factor I coefficient scores supported this prediction.

Subordinate Attribution Measures

Independent t -test were conducted on the two subordinate

attribution measures. The results of these analyses are described below.

Factor I (Locus of Attributed Cause). The involvement manipulation significantly affected Factor I coefficient scores ($t = -2.47$, $df = 22$, $p < .05$, one-tailed test). High involvement leaders made greater internal attributions ($M = -.24$) for subordinate poor performance than did low involvement leaders ($M = .24$).

Factor II (Stability of Attributed Cause). The involvement manipulation did not affect Factor II coefficient scores ($t = .261$, $df = 22$, $p > .05$, two-tailed test).

Test of Hypothesis 2. Hypothesis 2 predicted that high involvement leaders would make more internal attributions for the subordinate's poor performance than would low involvement leaders. The t -test on Factor I coefficient scores supported this prediction.

Corrective Action Measures

Two-tailed t -tests were conducted on the five corrective action measures. These analyses failed to detect a significant involvement effect on any corrective action measure.

Test of Hypothesis 3

Hypothesis 3 predicted that high and low involvement leaders would take different corrective actions toward the poorly performing subordinate. The t -tests conducted on the corrective action measures provided no support for this prediction.

Discussion

The results confirm the predictions stated in the first hypothesis. Leaders in the high involvement condition made more external self-attributions than did leaders in the low involvement condition. This finding parallels results obtained by Miller (1976) and indicates that the involvement manipulation was effective.

The second hypothesis, i.e., high involvement leaders will make more internal attributions for subordinate poor performance than will low involvement leaders, was also supported. This finding confirms Mitchell, Green, and Wood's (1981) prediction that high involvement leaders "are more likely to see the cause as something internal to the subordinate (for which they cannot be blamed) than something about the task (which might be seen as an indication of poor supervision)" (pg. 206).

The significant effect of the involvement manipulation on the subordinate attribution measure is contrary to the findings of Study II. These conflicting results are consistent with the proposition that the ambiguity of the cause for poor performance moderates the relationship between motivational factors and attributional biases. When the cause for poor performance is clear and unambiguous (as was the case in Study II), attributions for subordinate poor performance are not biased by motivational processes. However, when the cause for subordinate poor performance is ambiguous (as was the case in Study III), motivational processes exert a large influence on attributions. The tenableness of this position could be directly evaluated in a future study by simultaneously manipulating level of involvement and ambiguity

of cause.

The third hypothesis, i.e., high and low involvement leaders will take different corrective actions toward the poorly performing subordinate, was not supported. This finding is surprising since the involvement manipulation affected leaders' attributions for the subordinate's poor performance. A post-hoc power analysis (Cohen, 1972) was performed to determine whether lack of statistical power was responsible for this null result. The following information was used to calculate power: (a) $\alpha = .05$, two-tailed test; (b) sample size = 12 per condition; and (c) effect size ($d = .5$).¹⁶ Under these conditions, the power of each t -test was .21. Fifty-seven subjects would be needed in each treatment condition to test Hypothesis 3 with a power of .75.

¹⁶ $d = \frac{\mu_1 - \mu_2}{\sigma}$ was set to .5 based upon the effect sizes observed in Studies I and II. Cohen notes that this is a "medium sized" effect.

General Discussion

The present research was conducted to examine three questions.

1. Are leaders' attributions biased by sex of the leader, sex of the subordinate, and motivational factors?
2. Does the stability and locus of the cause for subordinate poor performance affect leaders' corrective actions?
3. Can predictions derived from Green and Mitchell's (1979) Attributional Model of Leadership be supported in situations that simulate leader-subordinate interactions?

Each of these three questions are examined below.

Biases in the Attribution Process

Sex of the Subordinate

Sex of the subordinate exerted minor influence on leaders' attributions and corrective actions. To further examine the effects of this variable, the data in Study II were reanalyzed by collapsing across the involvement variable and including sex of the leader and sex of the subordinate as factors. The design of the reanalysis was identical to Study I, i.e., a 2 (Locus of Cause) X 2 (Stability of Cause) X 2 (Sex of the Leader) X 2 (Sex of the Subordinate) factorial experiment. The results of these analyses were consistent with the findings of Study I. Sex of the subordinate exerted little influence on the attribution and corrective action measures.

The above results are contrary with findings from other studies (Cash, Gillen, & Burns, 1977; Deaux & Emswiller, 1974; Dobbins et al., in press; Etaugh & Brown, 1975; Rose & Andippan, 1978; Taynor & Deaux, 1975). For example, Etaugh and Brown (1975) found that failure was attributed to lack of ability when the individual was female and to bad luck, a difficult task, or lack of effort when the individual was male. In addition, Dobbins et al. (in press) found that sex of the subordinate significantly influenced leaders' attributions and corrective actions.

The level of ambiguity concerning the cause of performance may be responsible for the above conflicting results. When leaders have limited information regarding the cause of poor performance (cf., Dobbins et al., in press), sex of the subordinate may have a potent effect on attributions and corrective actions. When the cause for subordinate poor performance is clearly presented (as was the case in Studies I and II), sex of the subordinate may exert little influence on the leadership attribution process.

Sex of the Leader

Male leaders in Study I attributed the subordinate's poor performance to more unstable factors than did female leaders. Omega-squared estimates¹⁷ revealed that this effect accounted for only 4 percent of the variance in leaders' attributions, a small figure when compared to the variance accounted for by the stability manipulation

¹⁷Omega-squared estimates were calculated for each significant effect in Studies I, II and III. These estimates are presented in Appendix E.

(omega-squared=.17). Furthermore, the reanalyses of the data in Study II did not reveal a sex of the leader effect on the subordinate attribution measures. These findings suggest that sex of the leader exerts minor influence on leaders' attributions.

Motivational Factors

Manipulating leader involvement in a work task was used to examine the extent to which motivational processes bias attributions and corrective actions. Study III found that high involvement leaders made more internal attributions for the subordinate's poor performance than did low involvement leaders. No similar effect was found, however, in Study II. One critical difference between these two studies was the ambiguity concerning the cause of poor performance. The data would seem to indicate that motivational factors bias leaders' attributions mainly when the cause for subordinate performance is ambiguous. Future research should examine this issue by manipulating level of involvement and ambiguity of cause within a single study.

Studies II and III did not obtain any support for the prediction that leader involvement influences the choice of corrective actions. As was noted earlier, this null result could reflect a lack of statistical power. Present research is examining this issue using a more powerful design.

The Locus and Stability of the Cause for Poor Performance

It is strikingly clear from Studies I and II that leaders' corrective actions are influenced by both the locus and stability of the cause for a subordinate's poor performance. Specifically, the following main effects

were found:

1. Leaders were more inclined to train the subordinate when the cause was stable rather than unstable (Studies I and II);
2. Leaders were more inclined to counsel the subordinate when the cause was unstable rather than stable (Studies I and II);
3. Leaders were more inclined to monitor the subordinate when the cause was external rather than internal (Study II);
4. Leaders were more inclined to provide support and sympathy to the subordinate when the cause was external rather than internal (Study II).

These results add to the list of investigations which have demonstrated that the choice of corrective actions is influenced by the locus of the cause for subordinate poor performance (Dobbins et al., in press; Green & Liden, 1980; Mitchell & Kalb, 1982; Mitchell & Wood, 1980). More importantly, however, the results indicate that the stability of the cause for subordinate poor performance is also a major determinant of corrective actions. Further examinations of both the locus and stability variables should result in a better theoretical representation of the process by which leaders respond to poor performers.

It should be noted that the effects of the locus and stability

manipulations were, in some instances, moderated by sex of the leader. Male leaders indicated that Factor II (Punish the Subordinate) was more appropriate and Factor V (Monitor the Subordinate) was less appropriate when the cause for poor performance was internal rather than external. Female leaders, on the other hand, indicated that it was equally appropriate to monitor or punish the subordinate in the internal and external cause conditions. These findings are consistent with Dobbins et al.'s (in press) hypothesis that male leaders respond to poor performers based upon a norm of equity and that female leaders respond to poor performers based upon a norm of equality.

External Validity

Several aspects of the present studies may limit the degree of generalization to actual organizations. First, the length of the leader-subordinate interaction was much shorter than that found in work groups. Second, subjects were undergraduate students with little supervisory experience. Third, the dependent measures in the three studies were behavioral intentions (as contrasted to actual behavior). Thus, the relationship between the manipulations and leaders' corrective actions may be overstated (Ajzen & Fishbein, 1980). Fourth, supervisors were prompted to make attributions by items on the questionnaire. This method does not demonstrate that leaders respond with an attributional analysis when interacting with poor performers in actual organizations.

Despite these limitations, laboratory research often has great implications for organizational settings (Berkowitz & Donnerstein, 1982; Dipboye & Flanagan, 1979; Wendelken & Inn, 1981). This is

particularly true when, as was the case in the present research, the focus is upon basic cognitive processes. The leadership attribution process should retain a certain degree of commonality whether it occurs in the laboratory or in an actual organization.

Issues for Future Research

Figure 5 presents a revision of the Attributional Model of Leadership. This revised model is based upon the results of the present research.

Four major differences exist between the revised model and Green and Mitchell's (1979) original proposal. These differences are described below.

Bias in the Attribution Process

The revised Attributional Model of Leadership proposes that sex of the subordinate, actor-observer differences, liking for the subordinate, and motivational factors bias leaders' attributions mainly when the cause for subordinate poor performance is ambiguous. Ambiguity may arise from inadequate or conflicting information or from inconsistencies in the subordinate's work history.

Dimensions of Causal Attribution

The revised Attributional Model of Leadership proposes that both the locus and stability of the attributed cause for subordinate poor performance affect the selection of corrective actions.

Response to Causal Attributions

The revised Attributional Model of Leadership indicates that sex of

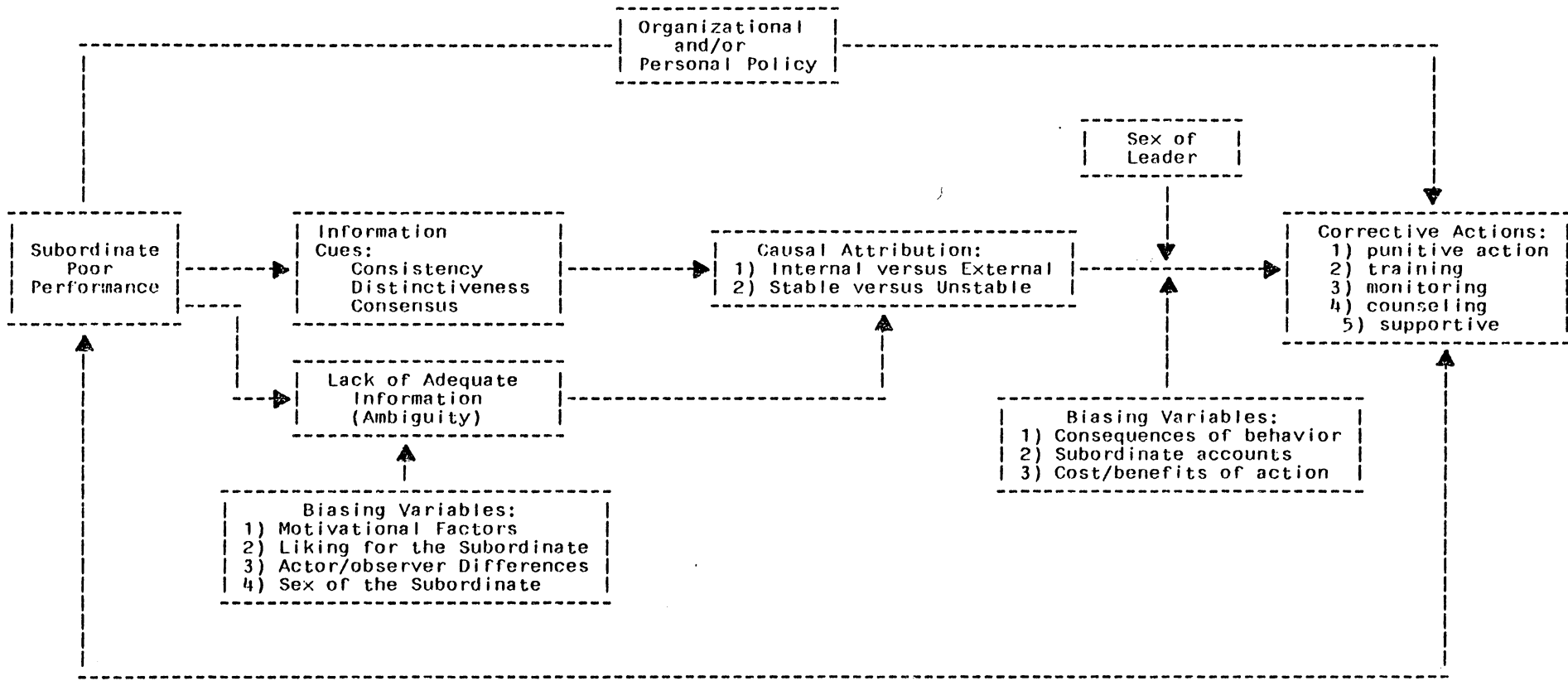


Figure 5: The Revised Attributional Model of Leadership

the leader moderates the manner in which the cause for poor performance affects the choice of corrective actions. Specifically, it is proposed that male leaders tend to respond to poor performers based upon a norm of equity while female leaders tend to respond based upon a norm of equality.

Leadership Effectiveness

The revised Attributional Model of Leadership explicitly recognizes that corrective actions are taken to improve group performance and that certain corrective actions may be more effective than others. Furthermore, since corrective actions are guided by attributions, the revised model proposes that effective leaders may have different attributional patterns than ineffective leaders. For example, they may be more accurate in their causal analysis and avoid the biasing effects of extraneous variables (e.g., sex of the subordinate, involvement in the task, actor-observer differences, etc.).

Summary

The revised Attributional Model of Leadership is somewhat crude. It does, however, include changes which are suggested by the data in the present studies. Hopefully, it provides a direction for future research and begins to delineate those variables that affect the use of corrective actions.

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Appendix A: Letters and Order Forms

GALEGOS & HASARIAN

IMPORTERS OF

Oriental Giftwares

PAINTINGS . RUGS . ANTIQUES

CABLE. "GALHAS", D. C.

WASHINGTON, D. C. 20014

January 3, 1981

Dear Sir:

Please send the following items to our office.

- #7340 64 015 Bookcase, 37 1/2 in wide x 55 in, 15 in deep
- #7340 35 025 Cabinet, file, 4-drawer, w/o lock
- #7340 64 060 Desk, executive, double pedestal, 4 box drawers,
1 file drawer, size 60 in x 30 in
- #7340 64 080 Chair, swivel, executive w/arms, fabric-vinyl
upholstery combination

As always, we will pay upon arrival of the order.

Sincerely,

PHONE:

Richard A. Hollaman Co.

BUILDING & PUBLIC WORKS CONTRACTORS

PUBLIC WORKS • HOUSE BUILDERS • MAINTENANCE
SPRAY & BRUSH PAINTING • DESIGN & DECORATING

OFFICES AND PLANT

August 1, 1982

Dear Sir:

Please send the following items to our office.

	<u>item</u>		<u>quantity</u>	<u>price</u>
6863	21 005	Cleaner, bowl	20	17.82
6863	21 008	Cleaner, all purpose	20	308.80
6863	21 020	Cleaner, glass	20	51.80
6863	27 011	Cleaner, wax remover	2	21.80

Please bill these items to our account.

Sincerely,

President

APPENDIX B: Questionnaire Used in Study I

Questions 1-11, 26, 29, 33, and 34 are filler items.

LEADER BEHAVIOR STUDY

NAME: _____

SSN: _____

SEX: _____

CLASS: FRESHMAN SOPHMORE JUNIOR SENIOR

MAJOR: _____

Instructions: Please answer the following questions.

1. What actions(s) would you take toward the subordinate? A list of possible actions is attached to the back of this questionnaire. You may select one or more of these actions or create your own. Please write your answer in the space below.

2. Why did you select this action(s)?

3. How would you describe your performance as a supervisor?

1	2	3	4	5	6	7	8	9
Unsatisfactory				Average				Outstanding

Instructions: Think about the cause or causes that explain your performance as a supervisor. The items below ask your impressions or opinions about this cause. Circle the number that represents your feelings concerning the cause of your performance.

4. To what extent was your performance caused by personal characteristics such as your personality, attitudes, abilities, motivation, or other internal factors?

1	2	3	4	5	6	7	8	9
Very Little				Moderately				Very Much

5. To what extent was your performance caused by characteristics of the situation such as a difficult task, unclear instructions, incompetent help, or other external factors?

1	2	3	4	5	6	7	8	9
Very Little				Moderately				Very Much

6. Is the cause of your performance something that:

Reflects an aspect										Reflects an aspect
of you	1	2	3	4	5	6	7	8	9	of the situation

7. Is the cause of your performance:

Outside of										Inside of
you	1	2	3	4	5	6	7	8	9	you

8. Is the cause of your performance:

Something about										Something about
you	1	2	3	4	5	6	7	8	9	the situation

9. Is the cause of your performance:

Permanent	1	2	3	4	5	6	7	8	9	Temporary
-----------	---	---	---	---	---	---	---	---	---	-----------

10. Is the cause of your performance:

Variable										Stable
over time	1	2	3	4	5	6	7	8	9	over time

11. Is the cause of your performance:

Changeable	1	2	3	4	5	6	7	8	9	Unchangeable
------------	---	---	---	---	---	---	---	---	---	--------------

Instructions: Think about the subordinate's performance on the ordering task. The items below ask your impressions or opinions about his or her performance. Circle the number which represents your feelings concerning the subordinate's performance.

12. How would you describe the subordinate's overall job performance?

1	2	3	4	5	6	7	8	9
Unsatisfactory				Average				Outstanding

13. How would you describe the quality (accuracy, neatness, thoroughness) of the subordinate's work?

1	2	3	4	5	6	7	8	9
Unsatisfactory				Average				Outstanding

14. How would you describe the quantity (volume of work completed, productivity level) of the subordinate's work?

1	2	3	4	5	6	7	8	9
Unsatisfactory				Average				Outstanding

Instructions: Think about the cause or causes that explain the subordinate's performance on the ordering task. The items below ask your impressions or opinions about this cause. Circle the number that represents your feelings concerning the cause of the subordinate's performance.

15. To what extent was the subordinate's performance caused by his or her personal characteristics such as personality, attitude, abilities, motivation, or other internal factors?

1	2	3	4	5	6	7	8	9
Very Little				Moderately				Very Much

16. To what extent was the subordinate's performance caused by characteristics of the situation such as a difficult task, unclear instructions, or other external factors?

1 2 3 4 5 6 7 8 9
Very Little Moderately Very Much

17. Is the cause of the subordinate's performance something that reflects an aspect of the:

Subordinate 1 2 3 4 5 6 7 8 9 Situation

18. Is the cause of the subordinate's performance:

Outside of Inside of
the subordinate 1 2 3 4 5 6 7 8 9 the subordinate

19. Is the cause of the subordinate's performance:

Something about Something about
the subordinate 1 2 3 4 5 6 7 8 9 the situation

20. Is the cause of the subordinate's performance:

Permanent 1 2 3 4 5 6 7 8 9 Temporary

21. Is the cause of the subordinate's performance:

Variable Stable
over time 1 2 3 4 5 6 7 8 9 over time

22. Is the cause of the subordinate's performance:

Changeable 1 2 3 4 5 6 7 8 9 Unchangeable

Instructions: Presented below are a list of actions that you could take toward the subordinate. Rate how appropriate you feel each of these actions are. More than one item may be rated as having the same appropriateness.

23. Decrease the subordinate's pay

1 2 3 4 5 6 7 8 9
Not Moderately Very
Appropriate Appropriate Appropriate

24. Provide the subordinate with more detailed instructions

1 2 3 4 5 6 7 8 9
Not Moderately Very
Appropriate Appropriate Appropriate

25. Add a written reprimand to the subordinate's file

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

26. Recommend the subordinate for promotion

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

27. Give extensive training to the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

28. Take no action toward the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

29. Add a letter of praise to the subordinate's file

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

30. Counsel the subordinate about work standards

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

31. Terminate the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

32. Provide support and sympathy to the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

33. Verbally praise the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

34. Increase the subordinate's pay

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

35. Verbally reprimand the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

36. Give another brief training session

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

37. Further monitor the situation

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

38. Watch the subordinate more closely

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

Possible Actions To Take Toward The Subordinate

1. Decrease the subordinate's pay
2. Provide the subordinate with more detailed instructions
3. Add a written reprimand to the subordinate's file
4. Recommend the subordinate for promotion
5. Give extensive training to the subordinate
6. Take no action toward the subordinate
7. Add a letter of praise to the subordinate's file
8. Counsel the subordinate about work standards
9. Terminate the subordinate
10. Provide support and sympathy to the subordinate
11. Verbally praise the subordinate
12. Increase the subordinate's pay
13. Verbally reprimand the subordinate
14. Give another brief training session
15. Further monitor the situation
16. Watch the subordinate more closely

APPENDIX C: Questionnaire Used in Study II

Questions 26, 29, 33, and 34 are filler items.

LEADER BEHAVIOR STUDY

NAME: _____

SSN: _____

SEX: _____

CLASS: FRESHMAN SOPHMORE JUNIOR SENIOR

MAJOR: _____

Instructions: Please answer the following questions.

1. What actions(s) would you take toward the subordinate? A list of possible actions is attached to the back of this questionnaire. You may select one or more of these actions or create your own. Please write your answer in the space below.

2. Why did you select this action(s)?

3. How would you describe your performance as a supervisor?

1	2	3	4	5	6	7	8	9
Unsatisfactory				Average				Outstanding

Instructions: Think about the cause or causes that explain your performance as a supervisor. The items below ask your impressions or opinions about this cause. Circle the number that represents your feelings concerning the cause of your performance.

4. To what extent was your performance caused by personal characteristics such as your personality, attitudes, abilities, motivation, or other internal factors?

1	2	3	4	5	6	7	8	9
Very Little				Moderately				Very Much

5. To what extent was your performance caused by characteristics of the situation such as a difficult task, unclear instructions, incompetent help, or other external factors?

1	2	3	4	5	6	7	8	9
Very Little				Moderately				Very Much

6. Is the cause of your performance something that:

Reflects an aspect										Reflects an aspect
of you	1	2	3	4	5	6	7	8	9	of the situation

7. Is the cause of your performance:

Outside of										Inside of
you	1	2	3	4	5	6	7	8	9	you

16. To what extent was the subordinate's performance caused by characteristics of the situation such as a difficult task, unclear instructions, or other external factors?

1 2 3 4 5 6 7 8 9
Very Little Moderately Very Much

17. Is the cause of the subordinate's performance something that reflects an aspect of the:

Subordinate 1 2 3 4 5 6 7 8 9 Situation

18. Is the cause of the subordinate's performance:

Outside of Inside of
the subordinate 1 2 3 4 5 6 7 8 9 the subordinate

19. Is the cause of the subordinate's performance:

Something about Something about
the subordinate 1 2 3 4 5 6 7 8 9 the situation

20. Is the cause of the subordinate's performance:

Permanent 1 2 3 4 5 6 7 8 9 Temporary

21. Is the cause of the subordinate's performance:

Variable Stable
over time 1 2 3 4 5 6 7 8 9 over time

22. Is the cause of the subordinate's performance:

Changeable 1 2 3 4 5 6 7 8 9 Unchangeable

Instructions: Presented below are a list of actions that you could take toward the subordinate. Rate how appropriate you feel each of these actions are. More than one item may be rated as having the same appropriateness.

23. Decrease the subordinate's pay

1 2 3 4 5 6 7 8 9
Not Moderately Very
Appropriate Appropriate Appropriate

24. Provide the subordinate with more detailed instructions

1 2 3 4 5 6 7 8 9
Not Moderately Very
Appropriate Appropriate Appropriate

25. Add a written reprimand to the subordinate's file

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

26. Recommend the subordinate for promotion

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

27. Give extensive training to the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

28. Take no action toward the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

29. Add a letter of praise to the subordinate's file

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

30. Counsel the subordinate about work standards

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

31. Terminate the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

32. Provide support and sympathy to the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

33. Verbally praise the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

34. Increase the subordinate's pay

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

35. Verbally reprimand the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

36. Give another brief training session

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

37. Further monitor the situation

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

38. Watch the subordinate more closely

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

Possible Actions To Take Toward The Subordinate

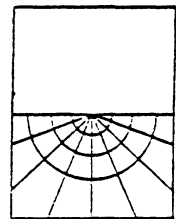
1. Decrease the subordinate's pay
2. Provide the subordinate with more detailed instructions
3. Add a written reprimand to the subordinate's file
4. Recommend the subordinate for promotion
5. Give extensive training to the subordinate
6. Take no action toward the subordinate
7. Add a letter of praise to the subordinate's file
8. Counsel the subordinate about work standards
9. Terminate the subordinate
10. Provide support and sympathy to the subordinate
11. Verbally praise the subordinate
12. Increase the subordinate's pay
13. Verbally reprimand the subordinate
14. Give another brief training session
15. Further monitor the situation
16. Watch the subordinate more closely

APPENDIX D: Description of Moon Tent Task

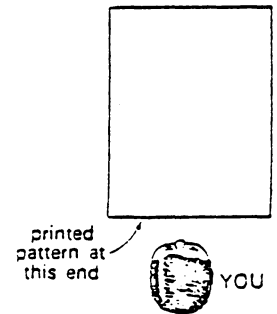
DIRECTIONS FOR MAKING THE MOON TENT

The following are directions for making a Moon Tent. For each step there is a picture showing you what to do and another picture showing how it should then look. Check this before going on to the next step. There are 14 steps.

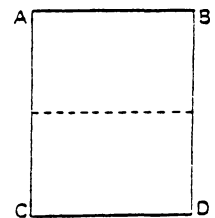
1. You should have a piece of paper that is blank on one side and looks like this on the other side:



2. Turn the paper over so that the *blank side* is facing up and the pattern is nearest you.



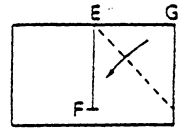
3. Fold AB to CD.



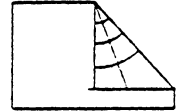
It should look like this:



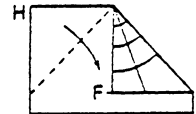
4. Fold G to F.



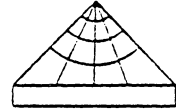
It should now look like this:



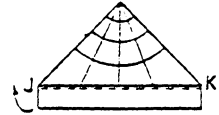
5. Bend down H to F.



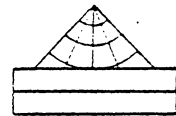
It should now look like this:



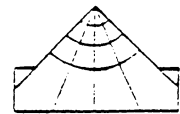
6. Fold one layer of paper (up direction) along JK.



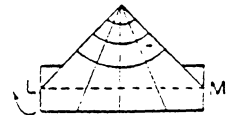
It should now look like this:



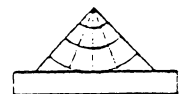
7. Turn the moon tent over to the other side. It should now look like this:



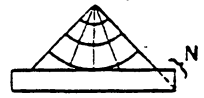
3. Fold (up direction) along LM.



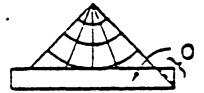
It should now look like this:



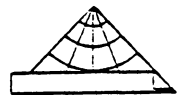
9. Tuck section N (just the top layer of paper) back around the edge of the tent, so it is between the back of the tent and the back layer of paper.



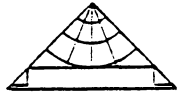
Fold section O (back piece) toward you over the edge of the tent and press flat.



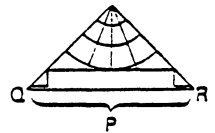
It should now look like this:



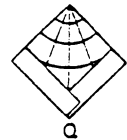
10. Do the same thing to the *left end* (don't turn it over). It should look like this:



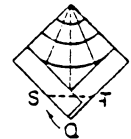
11. Pick up the tent and hold it in your hands with open side (P) down. Open up P with your fingers and keep pulling it apart until points Q and R meet.



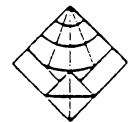
Turn the paper so that Q is facing up and R is underneath. It should look like this:



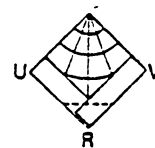
12. Fold up Q along ST.



It should now look like this:



13. Turn over so that R is facing up.
Fold up on UV.

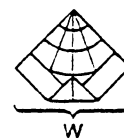


It should now look like this:



14. Open up W and stand up your Moon Tent!

For "quality control" make sure Q & R stay up along the tent.



APPENDIX E: Questionnaire Used in Study III

LEADER BEHAVIOR STUDY

NAME: _____

SSN: _____

SEX: _____

CLASS: FRESHMAN SOPHMORE JUNIOR SENIOR

MAJOR: _____

Part I

Instructions: Please answer the following questions.

1. How many acceptable moon tents did your group complete?

2. How would you describe the group's overall level of performance?

1	2	3	4	5	6	7	8	9
Unsatisfactory				Average				Outstanding

3. How would you describe your performance as a supervisor?

1	2	3	4	5	6	7	8	9
Unsatisfactory				Average				Outstanding

Instructions: Think about the cause or causes that explain your performance as a supervisor. The items below ask your impressions or opinions about this cause. Circle the number that represents your feelings concerning the cause of your performance.

4. To what extent was your performance caused by personal characteristics such as your personality, attitudes, abilities, motivation, or other internal factors?

1	2	3	4	5	6	7	8	9
Very Little				Moderately				Very Much

5. To what extent was your performance caused by characteristics of the situation such as a difficult task, unclear instructions, incompetent help, or other external factors?

1	2	3	4	5	6	7	8	9
Very Little				Moderately				Very Much

6. Is the cause of your performance something that:

Reflects an aspect of you	1	2	3	4	5	6	7	8	9	Reflects an aspect of the situation
------------------------------	---	---	---	---	---	---	---	---	---	--

7. Is the cause of your performance:

Outside of you	1	2	3	4	5	6	7	8	9	Inside of you
-------------------	---	---	---	---	---	---	---	---	---	------------------

8. Is the cause of your performance:

Something about you	1	2	3	4	5	6	7	8	9	Something about the situation
------------------------	---	---	---	---	---	---	---	---	---	----------------------------------

9. Is the cause of your performance:

Permanent	1	2	3	4	5	6	7	8	9	Temporary
-----------	---	---	---	---	---	---	---	---	---	-----------

10. Is the cause of your performance:

Variable over time	1	2	3	4	5	6	7	8	9	Stable over time
-----------------------	---	---	---	---	---	---	---	---	---	---------------------

11. Is the cause of your performance:

Changeable	1	2	3	4	5	6	7	8	9	Unchangeable
------------	---	---	---	---	---	---	---	---	---	--------------

PLEASE CONTINUE TO THE NEXT PAGE

7. Is the cause of the subordinate's performance:

Something about the subordinate	1	2	3	4	5	6	7	8	9	Something about the situation
------------------------------------	---	---	---	---	---	---	---	---	---	----------------------------------

8. Is the cause of the subordinate's performance:

Permanent	1	2	3	4	5	6	7	8	9	Temporary
-----------	---	---	---	---	---	---	---	---	---	-----------

9. Is the cause of the subordinate's performance:

Variable over time	1	2	3	4	5	6	7	8	9	Stable over time
-----------------------	---	---	---	---	---	---	---	---	---	---------------------

10. Is the cause of the subordinate's performance:

Changeable	1	2	3	4	5	6	7	8	9	Unchangeable
------------	---	---	---	---	---	---	---	---	---	--------------

Instructions: Presented below are a list of actions that you could take toward _____. Rate how appropriate you feel each of these actions are. More than one item may be rated as having the same appropriateness.

11. Decrease the subordinate's pay

1	2	3	4	5	6	7	8	9
Not Appropriate				Moderately Appropriate				Very Appropriate

12. Provide the subordinate with more detailed instructions

1	2	3	4	5	6	7	8	9
Not Appropriate				Moderately Appropriate				Very Appropriate

13. Add a written reprimand to the subordinate's file

1	2	3	4	5	6	7	8	9
Not Appropriate				Moderately Appropriate				Very Appropriate

14. Recommend the subordinate for promotion

1	2	3	4	5	6	7	8	9
Not Appropriate				Moderately Appropriate				Very Appropriate

15. Give extensive training to the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

16. Take no action toward the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

17. Add a letter of praise to the subordinate's file.

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

18. Counsel the subordinate about work standards

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

19. Terminate the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

20. Provide support and sympathy to the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

21. Verbally praise the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

22. Increase the subordinate's pay

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

23. Verbally reprimand the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

24. Give another brief training session

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

25. Further monitor the situation

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

26. Watch the subordinate more closely

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

PLEASE CONTINUE TO THE NEXT PAGE

Part III

Instructions: Think about the performance of _____ in the moon tent task. The following questions refer specifically to this individual. The first two questions ask your impressions or opinions about _____ performance.

1. How would you describe _____ overall job performance?

1 2 3 4 5 6 7 8 9
Unsatisfactory Average Outstanding

2. How would you describe the quantity (volume of work accomplished, productivity level) of his or her work?

1 2 3 4 5 6 7 8 9
Unsatisfactory Average Outstanding

Instructions: Think about the cause or causes that explain _____ performance in the moon tent task. The items below ask your impressions or opinions about this cause(s). Circle the number which represents your feelings concerning the cause of _____ performance.

3. To what extent was the subordinate's performance caused by his or her personal characteristics such as personality, attitude, abilities, motivation, or other internal factors?

1 2 3 4 5 6 7 8 9
Very Little Moderately Very Much

4. To what extent was the subordinate's performance caused by characteristics of the situation such as a difficult task, unclear instructions, or other external factors?

1 2 3 4 5 6 7 8 9
Very Little Moderately Very Much

5. Is the cause of the subordinate's performance something that reflects an aspect of the:

Subordinate 1 2 3 4 5 6 7 8 9 Situation

6. Is the cause of the subordinate's performance:

Outside of Inside of
the subordinate 1 2 3 4 5 6 7 8 9 the subordinate

7. Is the cause of the subordinate's performance:

Something about the subordinate 1 2 3 4 5 6 7 8 9 Something about the situation

8. Is the cause of the subordinate's performance:

Permanent 1 2 3 4 5 6 7 8 9 Temporary

9. Is the cause of the subordinate's performance:

Variable over time 1 2 3 4 5 6 7 8 9 Stable over time

10. Is the cause of the subordinate's performance:

Changeable 1 2 3 4 5 6 7 8 9 Unchangeable

Instructions: Presented below are a list of actions that you could take toward _____ . Rate how appropriate you feel each of these actions are. More than one item may be rated as having the same appropriateness.

11. Decrease the subordinate's pay

1 2 3 4 5 6 7 8 9
Not Moderately Very
Appropriate Appropriate Appropriate

12. Provide the subordinate with more detailed instructions

1 2 3 4 5 6 7 8 9
Not Moderately Very
Appropriate Appropriate Appropriate

13. Add a written reprimand to the subordinate's file

1 2 3 4 5 6 7 8 9
Not Moderately Very
Appropriate Appropriate Appropriate

14. Recommend the subordinate for promotion

1 2 3 4 5 6 7 8 9
Not Moderately Very
Appropriate Appropriate Appropriate

15. Give extensive training to the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

16. Take no action toward the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

17. Add a letter of praise to the subordinate's file.

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

18. Counsel the subordinate about work standards

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

19. Terminate the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

20. Provide support and sympathy to the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

21. Verbally praise the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

22. Increase the subordinate's pay

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

23. Verbally reprimand the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

24. Give another brief training session

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

25. Further monitor the situation

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

26. Watch the subordinate more closely

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

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15. Give extensive training to the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

16. Take no action toward the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

17. Add a letter of praise to the subordinate's file.

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

18. Counsel the subordinate about work standards

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

19. Terminate the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

20. Provide support and sympathy to the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

21. Verbally praise the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

22. Increase the subordinate's pay

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

23. Verbally reprimand the subordinate

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

24. Give another brief training session

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

25. Further monitor the situation

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

26. Watch the subordinate more closely

1	2	3	4	5	6	7	8	9
Not				Moderately				Very
Appropriate				Appropriate				Appropriate

APPENDIX F: Omega-Squared Estimates for Significant Effects

STUDY I

<u>DEPENDENT MEASURE</u>	<u>OMEGA-SQUARED</u>
<u>Factor I (Locus of Attributed Cause)</u>	
Locus of Cause	.12
<u>Factor II (Stability of Attributed Cause)</u>	
Stability of Cause	.19
Sex of the Leader	.04
<u>Factor I (Train the Subordinate)</u>	
Stability of Cause	.12
Locus of Cause X Sex of Leader	
X Sex of Subordinate	.03
<u>Factor II (Punish the Subordinate)</u>	
Sex of Leader	.04
Locus of Cause X Sex of Leader	.04
Stability of Cause X Locus of Cause	
X Sex of Subordinate	.03
<u>Factor III (Monitor the Subordinate)</u>	
Sex of Leader	.03
Stability of Cause X Locus of Cause	
X Sex of Subordinate	.03
<u>Factor IV (Counsel the Subordinate)</u>	
Stability of Cause	.03
<u>Factor V (Provide Support to the Subordinate)</u>	
Locus of Cause	.04
Locus of Cause X Sex of Leader	.02
Stability of Cause X Sex of Leader	.05
Sex of Leader X Sex of Subordinate	.04

STUDY II

<u>DEPENDENT MEASURES</u>	<u>OMEGA-SQUARED</u>
<u>Factor I (Locus of Self-Attribution)</u>	
Involvement	.06
<u>Factor I (Locus of Attributed Cause)</u>	
Locus of Cause	.21
<u>Factor II (Stability of Attributed Cause)</u>	
Stability of Cause	.16
<u>Factor I (Train the Subordinate)</u>	
Stability of Cause	.05
<u>Factor III (Monitor the Subordinate)</u>	
Locus of Cause	.07
<u>Factor IV (Counsel the Subordinate)</u>	
Stability of Cause	.04
<u>Factor V (Provide Support to the Subordinate)</u>	
Locus of Cause	.05

STUDY III

<u>DEPENDENT MEASURES</u>	<u>OMEGA-SQUARED</u>
<u>Factor I (Locus of Self-Attribution)</u>	
Involvement	.15
<u>Factor I (Locus of Attributed Cause)</u>	
Involvement	.17

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THE EFFECTS OF SEX OF THE LEADER, SEX OF THE SUBORDINATE,
LOCUS OF CAUSE, STABILITY OF CAUSE, AND LEADER
INVOLVEMENT ON ATTRIBUTIONS AND CORRECTIVE ACTIONS

by

Gregory H. Dobbins

(ABSTRACT)

The present research tested predictions of Green and Mitchell's (1979) Attributional Model of Leadership. Seventy-one male and 77 female undergraduate Introductory Psychology students served as leaders in Study I. They supervised either a male or female subordinate on a clerical task. The subordinate was a confederate of the experimenter and performed poorly due to internal-stable (Ability), internal-unstable (Effort), external-stable (Task difficulty), or external-unstable (Luck) factors. Leaders made attributions for the poor performance and rated the appropriateness of five corrective actions: (a) training; (b) punishment; (c) monitoring; (d) counseling; and (e) providing support.

Analyses revealed that leaders were more inclined to train and less inclined to counsel when the cause was stable (ability and task difficulty) rather than unstable (effort and luck). Furthermore, sex of the leader interacted with locus of cause to affect ratings of corrective actions. Male leaders responded more punitively and provided less support when the cause for poor performance was internal rather than external. Female leaders, on the other hand, indicated that it was

equally appropriate to punish and support the subordinate in the internal and external cause conditions.

Studies II and III examined the effects of involvement in a work task on leaders' attributions and corrective actions. High and low involvement leaders supervised a subordinate who performed poorly due to internal-stable, external-stable, internal-unstable, and external-unstable causes. The leader made attributions for the poor performance and then rated the appropriateness of corrective actions.

The results replicated the findings of Study I for the locus and stability variables. In addition, high involvement leaders made more internal attributions for the subordinate's poor performance than did low involvement leaders. The involvement manipulation did not affect leaders' ratings of the corrective actions.

The data were interpreted to provide general support for an attributional orientation to leadership. The process by which sex of the subordinate and motivational factors bias leaders' attributions was delineated. Specific revisions were made to Green and Mitchell's Attributional Model of Leadership.