

EFFECT OF DISCREPANT INFORMATION AND SEX OF MANAGER ON  
ATTRIBUTIONS AND RATINGS OF MANAGER'S PERFORMANCE

by

Paige Paula Porter

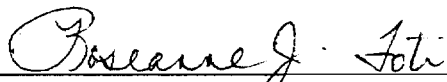
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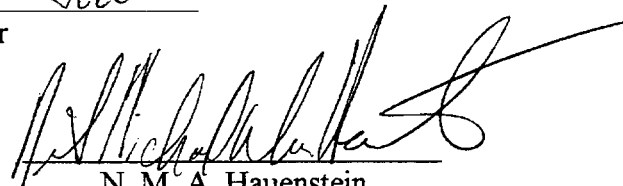
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Committee Chairperson: Roseanne J. Foti

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(ABSTRACT)

Attribution theory has been used to explain the responses of individuals to others behavior. Previous research has shown that attributions for performance can influence rater's judgments and the sex of the ratee has been shown to influence the attributions made for performance. Discrepant information was used to cue the formation of attributions and these attributions were predicted to mediate the relationship between the subjects' existing view of a manager's performance and subsequent performance ratings. It was hypothesized that different attributions would be made depending on the sex of the manager and the direction of the discrepant information (positive or negative) and that these attributions would be related to performance ratings. First, no relationship between attributions and performance ratings was found. Second, the expected pattern of attributions was only found for the female manager/positive discrepancy condition. Finally, performance ratings within the positive and negative discrepancy conditions did not differ as a function of sex. Limitations of this study, possible explanations of the current results, and suggestions for future research are discussed.

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## INTRODUCTION

The purpose of this research is to consider how attributions for prior performance influence a rater's use of discrepant information which, subsequently, affect performance evaluations. A large body of research has shown that different attributions are made for similar performance of employees (Deaux & Emswiller, 1974; Feather, 1969; Pazy, 1986). These findings are important because individuals develop dyadic relationships with their leaders or supervisors within an organization and attributions for other's behavior guide the nature of the interactions and influence the type of relationship that develops (Dienesch & Liden, 1986). The leader-member exchange theory proposed by Dienesch and Liden (1986) discusses the formation process of the leader-member relationship. In their model they suggest that leader and member characteristics influence initial interactions. Subsequently, the leader delegates assignments and makes attributions for the member's actions which mediate his/her next behavior toward the subordinate (Dienesch & Liden, 1986). If the attributions positively influence the nature of the exchange, the member will become a part of the in-group. The placement of a member into the in-group or out-group is important because the in-group is characterized by more trust, interactions, support, and rewards given to the subordinate by the leader (Heneman, Greenberger, & Aronyou, 1989).

Attributional tendencies, as well as biases, influence the process of in-group or out-group membership (Dienesch & Liden, 1986). That is, leaders may hold such strong



biases against certain member characteristics (race, gender, physical disabilities) that the leader may immediately assign him/her to the out-group because of the distorted attributions for his/her performance. In-group and out-group membership has several ramifications for the employee. For example, in-group members are often given more responsibility and/or career-building tasks and are often better informed about the supervisors expectations of performance (Dienesch & Liden, 1986; Williams & Levy, 1992). Further, in-group membership has been found to lead to different attributions for similar performance. For example, Heneman et al. (1989) found that successful performance of in-group members was attributed to ability and effort, whereas, successful performance of out-group members was attributed to luck or task difficulty. Ability and effort are perceived as being caused by the individual, whereas task difficulty and luck are factors considered to be beyond the individual's control (Weiner, Frieze, Kukla, Reed, Rest, & Rosenbaum, 1971).

Differential attributions such as these are influential during the performance appraisal process. Several moderators influence the relationship between actual performance and its evaluation (Mitchell, Green, & Wood, 1981). For example, Mitchell et al. (1981) found that the amount of control a supervisor perceives the subordinate to have influences the attributions he/she makes for the subordinate's behavior. Mitchell et al. (1981), as well as Weiner and Kukla (1970), found that successful performance that was attributed to hard work (high control) was rewarded more than successful

performance attributed to ability (low control). Moreover, poor performance attributed to lack of effort was evaluated more negatively than that attributed to lack of ability.

Rewards and sanctions can be viewed in terms of positive and negative evaluations, respectively, because appraisal systems are frequently used for deciding the distribution of scarce organizational rewards.

Self-appraisals are tools used to facilitate communication and the exchange of ideas between the supervisor and the subordinate (Thornton, 1980). To the extent that the supervisor uses the subordinate's self-appraisal in making his/her final decision about performance, the subordinate will feel he/she has more control over his/her future and will feel the appraisal process is more fair and accurate than it would be without the self-appraisal (Folger, Kanovsky, & Cropanzano, 1992). However, self-appraisals are also subject to several biases (self-serving bias, leniency, etc.) (Fahr & Werbel, 1986). Attributions for behavior have proven to influence performance appraisal decisions that are made by both the supervisor and the employee (Deaux & Emswiller, 1974; Dienesch & Liden, 1986; Green & Mitchell, 1979; Heneman et al., 1989; Jones & Nisbett, 1971; Kruglanski, 1970; Stevens & DeNisi, 1980). If the attributions made by the subordinate and supervisor are different, it is likely that performance assessments by each will not be congruent. In this case, the supervisor must decide how much weight to give to the subordinate's self appraisal when he/she makes the final performance evaluation. Little research has focused on enhancing the use of self-appraisals or the factors involved with

disparate use between subordinates. However, several explanations exist for discrepancies between self and supervisor ratings.

Jones and Nisbett (1971) provide an attributional explanation for the tendency for self-appraisals to be high compared to supervisors' ratings. They suggest that individuals are aware of all factors influencing their performance so they tend to make external attributions when their performance is less than satisfactory. However, supervisors tend to attribute poor performance of others to internal causes because their attention is directed only to the individual being evaluated (Jones & Nisbett, 1971). This attributional tendency is called the actor-observer phenomenon or fundamental attribution error. Discrepant attributions can lead to discrepant performance appraisals resulting in animosity in supervisor-subordinate relations and decreased employee performance (Green & Mitchell, 1974; Levy, Cawley, Foti, 1993).

Thus far, the importance of attributions on supervisor-subordinate relationships and subsequent performance appraisals has been discussed. Gender has been shown to influence attributions made for subordinate performance (Deaux & Emswiller, 1974; Feather, 1969; Pazy, 1986). Several other studies have shown differences in the evaluation of males and females (Eagly, Makhijani, & Klonsky, 1992; Gallivan, 1991; Griffin, Combs, Land, & Combs, 1983; Heilman, Block, Martell, & Simon, 1989; Hornsby, Benson, & Smith, 1987; Pazy, 1986; Stevens & DeNisi, 1980).

This research will focus on the attributional process involved in rating performance of male and female managers when discrepant information is received. Several differences in information processing exist among individuals and may account for differential attributions and performance ratings given to males and females. For example, some individuals rely on traditional stereotypes more than others. Bem (1981) has distinguished between people who hold traditional stereotypes and those who hold non sex-typed stereotypes. She found that individuals with traditional stereotypes tend to integrate, evaluate, and organize information according to masculine or feminine categories. They see very little overlap between the characteristics of males and females. However, non sex-typed people do have male and female prototypes but do not organize information entirely on the basis of gender (Bem, 1981).

Of particular interest for this research is the extent of the differences in attributions and ratings for women in management positions. The occupation of manager is male dominated and, therefore, the effects of differential attributions and ratings have been found to be exacerbated (Eagly et al., 1992; Heilman et al., 1989; Stevens & DeNisi, 1980). However, individuals also differ with regard to their attitude toward women as managers. Garland and Price (1977) measured the attitudes of undergraduate males toward women as managers with the Women as Managers Scale (WAMS). The higher the score on the WAMS, the more accepting the subject is to women holding management positions (Peters, Terborg, & Taynor, 1974). They found a positive relationship between the subjects' scores on the WAMS and the extent to which they attributed the success of

female managers to internal causes. The present research seeks to discover if attributions mediate the relationship between discrepant information and performance ratings of male and female managers. The literature review begins with a discussion of the evidence for attributions, as well as biases affecting attributions, and their influence in supervisor-employee interactions. A discussion of self-appraisals and of factors that influence agreement between subordinates and supervisors follows. Finally, research regarding the role attributions play in contributing to differential evaluations for males and females is discussed.

## ATTRIBUTION THEORY

Attributions are defined as the perceived causes of behavior (Green & Mitchell, 1979). Attributions play an important role when performance of another and of oneself is evaluated because the actual performance of an individual can be appraised very differently depending on what the causes of the performance are thought to be. Not only do attributions influence performance evaluations, but they are also extremely important in the development of relationships between the leader and the subordinate (Dienesch & Liden, 1986). Green & Mitchell (1979) explain attributions as mediators between the behavior of the subordinate and the behavior of the leader. Consequently, attributions mediate the relationship between the subordinate's actions and the way they are evaluated.

Harold Kelley (1971) developed a theory explaining how attributions are formed. He describes the process as one in which information about the actor's past behavior in the same situation (consistency), how the actor's past behavior in different situations (distinctiveness), and how others behave given the same situation and circumstances (consensus) is collected and analyzed to form a causal attribution. For example, if an employee arrives late to work and no one else ever arrives late (low consensus), this person is always late (high consistency), and is a poor worker overall (low distinctiveness) the supervisor will make an internal attribution. That is, he/she will attribute the employee's lateness to something about the person rather than attributing the tardiness to the task, or to the environmental circumstances. Although it seems that this rational

process should lead to fairly accurate attributions, it is time consuming and probably seldom used by busy supervisors (Kelley, 1971).

Reactions to the same performance depend on the attributions made as well as other factors. For example, a supervisor who knows an employee is behind in his/her work may attribute this to a lack of effort. However, his/her performance will be reacted to differently if that lack of effort is due to a family crisis or because the employee took a relaxing day on the golf course (Mitchell, et al., 1981). Mitchell et al. (1981) found that performance is also evaluated differently depending on its outcome. Again, if the subordinate did not finish his/her work and the consequences of this were severe for the organization, the supervisor will react with much more hostility regardless of the reason for the lack of effort than if the consequences were minimal. Mitchell et al. (1981) also point out that often an employee's evaluation is based solely on the outcome of his/her performance rather than the process that resulted in success or failure.

The process that leads to evaluation of successful or unsuccessful performance involves four types of attributions most commonly made for others' behavior; ability, effort (internal); task difficulty, and luck (external) (Weiner et al., 1971; Weiner & Kukla, 1970). These four types of attributions have also been categorized in terms of stability. Ability and task difficulty have been thought to be stable while effort and luck are considered unstable attributions (Weiner et al., 1971). Weiner et al. (1971) examined the circumstances under which certain attributions were made. They found that if the target

person had been successful at a task 100% of the time and then failed at a recent task, attributions of effort and luck were made significantly more than ability or task difficulty. This supports the notion that effort and luck are considered unstable attributes. However, it is still questionable as to whether effort is stable or unstable because working hard or being lazy (lack of effort) may be a trait-like characteristic and may be relatively stable.

The emphasis placed on the internal-external dimension of attributions has also been questioned (Ross & Fletcher, 1985). An internal attribution may be reacted to differently depending on the control the individual had over his behavior. Internal attributions of failure have been found to yield harsher reactions than external attributions (Mitchell et al., 1981). However, laziness and ability are both internal attributions which may result in very different reactions because laziness is thought to be within the individual's control. Weiner (1985) explains that controllability should be added to the stable-unstable and internal-external classifications of attributions. As Weiner (1985) notes, there are problems with every conceivable classification of attributions because every researcher bases his/her classification on his/her own rationality. However, in empirical studies controllability, stability, and locus (internal vs. external) have consistently been identified as properties of attributions (Weiner, 1985).

### Attributional Biases

As mentioned previously, the process of forming attributions is not purely rational and is subject to several biases. Kelley (1971), realizing that his attribution theory was



based on rationality and logic, admitted that forming attributions accurately is tedious and time-consuming. Therefore, he purports that a causal schemata is developed which is an organized set of attributions formed from previous experiences. This schemata is utilized as soon as enough information is received that matches the existing schema. Kelley (1971) explains that causal schemata quickens the attributional process by inferring certain causes given a single effect. Although causal schemata is efficient and necessary because of the amount of information a supervisor is bombarded with during the day, it may lead to inaccurate attributions caused by certain biases that affect appraisal of performance. Green & Mitchell (1979) discuss the notion that the less information a leader has about what caused a subordinate's performance the greater the chance that personal biases will affect the attributions for subordinate's performance. Subsequent leader behavior and performance evaluations are influenced by those attributions.

Kelley (1971b) discusses the effect of several plausible causes for behavior. The effect of any one cause on a final decision will be limited if several other plausible causes exist. This idea is called the discounting principle and has important implications for the use of performance appraisals in organizations. For example, if no plausible external causes are present, individuals will make internal attributions for behavior. Jones, Davis, & Gergen (1961) performed an experiment in which the subject was told that the person they were about to observe was seeking employment as either an astronaut or a submarine worker. The experimenter told the subject that the interviewer was looking for an inner-

directed person in the case of the astronaut or an other-directed person in the case of the submarine worker. If the confederate acted inner-directed during the interview, the subject made more internal attributions in the submarine worker condition than in the astronaut condition. Likewise, if the confederate acted other-directed, the subjects made more internal attributions in the astronaut condition than in the submarine worker condition. This study supports the theory that if no external causes are present (eg. acts opposite of what interviewer was looking for), then individuals make internal attributions for behavior. However, when external and internal plausible causes are present fewer internal attributions are made because the individual is unsure exactly what caused the behavior. This study is also congruent with the discounting principle discussed above; any one of several plausible causes may be discounted.

One of the most studied phenomenon that has severe consequences for appraisal systems which employ self and supervisor appraisals is the fundamental attribution error (also referred to as the actor-observer phenomenon). This phenomenon occurs when an actor attributes his/her own behavior to external causes while an observer attributes the behavior to internal characteristics of the actor. Jones & Nisbett (1971) explain the phenomenon in terms of Kelly's attributional theory. Kelly's theory relies on consistency, consensus, and distinctiveness information being available to the observer. However, information about the actor's past work behaviors (distinctiveness and consistency) may not be as available to the observer as it is to the actor. An actor takes an idiographic

approach when evaluating his/her own behavior because he/she is well aware of how he/she has performed in the past. However, an observer is more prone to taking a nomothetic approach during evaluations because information about other actors is most accessible (Jones & Nisbett, 1971).

Differences in evaluations of an actor's performance are also naturally going to exist because the actor and observer attend to and process information differently. The same behavior of the actor may be perceived completely differently because the actor will attend more to the external circumstances surrounding the behavior while the observer will only attend to the actor. Inherently, discrepancies exist because the factors surrounding the behavior have different degrees of salience for the actor and observer (Jones & Nisbett, 1971). The actor sees him/herself as influenced by the environment while the observer sees the environment as relatively stable and attends to the actor's behavior.

Jones, Rock, Shaver, Goethals, & Ward (1968) studied an observer's predictions of future performance and the intelligence of an actor. The subject and a confederate were asked to solve 30 problems which were extremely difficult. The experimenter gave feedback to the subject and the confederate after every problem was completed. Subjects always were told that they solved 10 problems correctly in random order. Subjects in the ascending condition saw that the confederate solved 15 problems but most of them were at the end of the set of 30 problems. In the descending condition the confederate solved most of the 15 problems first and then their correct responses tapered off. Subjects in the

descending condition attributed the confederate's performance to ability and predicted the confederate's future success more than subjects in the ascending or random conditions. However, if the subjects solved the problems in the descending pattern, they attributed their performance to increased task difficulty, not to their ability. Subjects in the ascending condition predicted their own future success more than the descending condition subjects (Jones et al., 1968). These results provide strong evidence that identical performance can yield entirely different attributions which can affect predictions of future success or failure.

The tendency for actors and observers to make different attributions for performance has been well supported. However, there are several other attributional tendencies that exist regarding evaluations. For example, the self-serving bias causes individuals to attribute success to internal factors and failure to external factors (Griffin, et al., 1983; Mitchell et al., 1981). This self-serving bias contributes to the self-supervisor evaluation discrepancies because the self makes attributions that will protect his/her self-esteem and the leader may be motivated to make mostly internal attributions for subordinates' performance because external attributions may reflect poorly on their personal performance. For example, if the supervisor explained away an employee's poor performance as caused by the environmental working conditions, blame may be put on the supervisor for not maintaining adequate conditions.

Further, personal motivation may influence the typical attributional tendencies. If a supervisor has a close relationship with a subordinate and they perform poorly, the supervisor may be inclined to make external attributions. Likewise, if the supervisor especially dislikes an employee who performs well, external attributions are more probable (Jones & Nisbett, 1971). Mitchell et al. (1981) found that "psychological distance" (e.g. power levels, degree of similarity, & liking) affects leader and member attributions for member's performance. That is, the more psychological distance between the supervisor and subordinate the more self-supervisor ratings will be discrepant (Mitchell et al., 1981). This finding directly relates to gender bias research. If a supervisor believes that women are naturally unable to be business managers, psychological distance will increase and they may make external attributions for successful performance. These external attributions for success will likely be discrepant from the female manager's attributions and their evaluations may be very different. Hence, leader expectations affect the attributions and subsequent evaluations made for the subordinate's performance.

Martin and Klimoski (1990) provide an interesting example of the information processing differences present when selves and supervisors evaluate themselves. The subjects were managers in an organization and were asked to give an overall evaluation of three subordinates and of themselves. The subjects spoke out loud into a tape recorder their thinking process during the evaluation. This research found that subjects referred to more statements about consistency and consensus when evaluating their subordinates than

when evaluating themselves. This is an indication that individuals do not compare themselves with others as much as they compare an actor with others. The managers used less negative statements when evaluating themselves than when evaluating subordinates, and also made significantly more internal attributions for subordinate performance and more external attributions for their own performance. Interestingly, the external attributions made for subordinates did not seem to influence the overall evaluation; however, the external attributions for their own performance were used to explain or make up for poor performance and did influence the overall evaluation. Finally, attributions for performance were made whether the manager had information that related to attributions or not. This implies that attributions for behavior or performance are created whether enough information is available to form an attribution or not (Martin & Klimoski, 1990). One limitation of this study which will be discussed in-depth later is the fact that the manager knew that the purpose of appraisal was for research and did not directly affect the subordinate. This had been found to decrease the likelihood that biases influence a performance appraisal (Dobbins, Cardy, & Truxillo, 1988).

### Consequences of Discrepant Self-Supervisor Appraisals

Discrepancies between supervisor and self-ratings can promote animosity, less acceptance of the appraisal system, and decreased performance from the employee (Green & Mitchell, 1979; Levy, et al., 1993). Levy et al. (1993) studied the effects of discrepant leader-member evaluations. They manipulated the feedback that the subordinate received

from the supervisor (better or worse). The second independent variable was a manipulation of attributions made by the supervisor. The supervisor made either more internal, the same, or more external attributions for the subordinate's performance than the subordinate did. The subjects answered questionnaires about their feelings towards the actual feedback, the feedback source, and the appraisal system itself. As hypothesized, subjects who received positive evaluations from the supervisor reacted more positively to the appraisal system and to the feedback. Therefore, discrepant self-supervisor ratings may contribute to less satisfaction with the organization and weaker attempts to perform well because they do not trust the appraisal system (Levy et al., 1993). Surprisingly, the results of this research found that regardless of positive or negative evaluations, subjects whose supervisors made external attributions for their performance reacted less positively to the feedback and to the appraisal system than the subjects in the internal or same attribution conditions. These findings were replicated in a subsequent field study (Levy et al., 1993). Perhaps, individuals want to be credited for their actions whether they are positive or negative because a performance appraisal system which emphasizes external causes of behavior may not give appropriate merit to the individual when he/she performs well. Performance discrepancies have proven to exist and to cause reactions on the part of the subordinate. These reactions can promote or hinder future supervisor-subordinate interactions.

Attributions may also influence the extent of supervision a supervisor feels a subordinate requires. For example, if a subordinate performs well and is closely supervised, the supervisor has two plausible causes for that behavior; he/she is a good employee (internal) or he/she performs well because he/she is being closely supervised (external). However, if a subordinate is not closely supervised and performs well, internal attributions are the only plausible causes (Mitchell et al., 1981). As found in Jones et al. (1961), when more than one plausible cause exists, any one may be discounted. In this situation, Kruglanski (1970) found external attributions will be made for the closely supervised employee and the supervisor may feel that that employee will only perform well when directly supervised. Again, attributions for behavior influence all aspects of leader-member exchanges.

The review of the literature thus far has shown strong support for the importance of attributions in leader-member exchanges and performance evaluations. The effects of discrepant self-supervisor appraisals have proven to be potentially influential in subsequent member performance and attitudes towards the organization. A discussion of the usefulness of self-appraisals and the moderators of self-supervisor appraisal agreement will follow.



## SELF-APPRAISALS

This study will use discrepant information in the form of self-appraisals to generate attributions that should then influence performance ratings. In an organizational setting, self-appraisals are often incongruent with supervisor ratings. For example, Thornton (1980) performed a meta-analysis on studies that compared self-appraisals with either supervisor, peer, or subordinate ratings and examined their psychometric characteristics. Of the 22 studies analyzed, 11 found significant differences in supervisors' and subordinate appraisals and seven found significant agreement. Self-appraisals were generally less reliable; however, low correlations between subscales indicated less halo effect for self-appraisals than for peers, subordinates, or supervisor ratings (Thornton, 1980). Meyer (1980) found the same result regarding the halo effect and suggested that perhaps individuals are the most qualified for expressing their strengths and weaknesses. Although Thornton (1980) found inconsistent results regarding agreement, the tendency for self-appraisals to be more lenient than others' appraisals was evident in all but one of the studies in the meta-analysis. In the meta-analysis by Harris and Schaubroeck (1988) self-ratings also tended to be higher than peer or supervisor ratings but none of these differences were significant. Peer-supervisor rating correlations were .62 while self-supervisor and self-peer correlations were .35 and .36 respectively. This finding supports the theory that actors evaluate themselves differently.

In general, the use of self-appraisals facilitates communication between supervisors and subordinates which reduces ambiguity and clarifies mutual expectations. The ratee is given a sense of control over his fate and blatant bias is identified easier because there is more than one source of information. The usefulness of self-appraisals is often questioned because of the frequent lack of agreement between self and supervisor ratings (Heneman, 1980). However, the research in this area has yielded inconsistent results. Farh, Werbel, and Bedeian (1988) studied the agreement between chairpersons' and professors' performance. They found that self and chairperson ratings were not significantly different on any performance dimensions, nor was the variance of the ratings. However, the professors evaluated themselves and then the chairperson looked over the self-appraisal before filling out the performance appraisal. Therefore, the self and supervisor ratings were not completely independent. Further the performance dimensions involved mostly objective ratings and the subordinates knew their responses could be validated.

Other studies (e.g. Farh & Werbel, 1986; Mabe & West, 1982) have shown that these factors tend to decrease leniency which makes self-supervisor ratings less discrepant. Nevertheless, 70% of the subjects thought the system was fairer, more accurate, and generally preferred it to the previous system in which no self-appraisal information was collected (Farh et al., 1988). The self-appraisal based system also benefitted the chairpersons in that they felt less defensive during the performance meetings, felt more justified in making their final decisions, and said that discrepancies that did arise facilitated

discussion about performance expectations (Farh et al., 1988). Farh et al. (1988) mention that self-appraisal based systems are especially advantageous for jobs in which employees work alone or are not directly supervised (e.g. managerial positions).

Most of the research involving self-appraisals has typically measured their merit in terms of reliability and criterion-related validity. However, Folger et al. (1992) argue that performance and self-appraisals should not be scrutinized psychometrically as if they were a test. They go on to explain that in order for appraisals to be treated as though they were a test three assumptions must be met; 1) it is possible to measure performance in a valid and reliable manner in all job settings, 2) raters can be accurate in their evaluations, and 3) an absolute performance criterion exists. Folger et al. (1992) purport that performance may not lend itself to reliable and valid measurement in which case psychometric issues surrounding appraisal forms are inappropriate. Further, a rater has cognitive limitations and is subject to several biases; therefore, it is unrealistic to assume that a rater can accurately evaluate himself or another. Finally, "good" performance is defined by human-beings each with different values and attitudes. There is no objective truth regarding optimal performance. Hence, the criteria on which self and supervisor appraisals are judged are value-laden and will differ depending on the individual choosing the criterion (Folger et al., 1992). Considering these arguments, it seems that the worth of the self-appraisal is not judged best psychometrically.

Folger et al. (1992) also discuss the political metaphor for performance appraisals. That is, scarce resources and organizational rewards are at stake for the employee being evaluated, yet the appraiser is also motivated to evaluate employees to his/her benefit. For example, a manager will not want his/her department to have negative evaluations because these will reflect on his/her performance. However, he/she may be threatened by a subordinate's success that may surpass his/ her own and evaluate the subordinate's performance poorly. Obviously, managers and subordinates have personal motivations and biases that affect their performance assessments. Therefore, Folger et al. (1992) argue that a subordinate's future should not hinge on the manager's supposed ability to find the subordinate's true performance level because this is inherently impossible. Instead, Folger et al. (1992) propose a due process metaphor for performance appraisal systems. This metaphor consists of three parts: 1) adequate notice, 2) fair hearing, and 3) judgment based on evidence. Adequate notice refers to published and/or easily accessible information regarding expectations of performance. Often, an employee does not know specifically what aspects of his/her job are seen as most critical and how they should be carried out. A fair hearing allows the subordinate a chance to explain his or her behavior, and the factors influencing performance. Performance appraisals are often based on how much the employee contributed to the attainment of organizational goals rather than on his or her actual behavior. Self-appraisals are necessary and important so that fair decisions are made about performance. As discussed above, accuracy of performance evaluations

may not be an attainable goal. The more the self feels he/she influenced decisions about promotion, raises, etc., (whether positive or negative) the more the appraisal system is perceived as fair. Because accuracy may be impossible, triangulation of the supervisor and subordinate's interpretation of performance should result in a fair decision which will promote satisfaction with the organization and acceptance of the appraisal system. Finally, the judgment will be based on evidence from the supervisor's and subordinate's viewpoint and may be appealed by the subordinate if he/she wishes. The due process metaphor faces the reality that conflicts of interest and self-serving motivations exist and affect the performance appraisal process. Rather than trying to correct these problems psychometrically, the due process metaphor emphasizes fairness as a goal rather than accuracy when assessing one's performance (Folger et al., 1992).

#### Moderators of Self-Supervisor Agreement

Reducing biases on the part of the subordinate and the supervisor will increase the chance for a fair evaluation. Therefore, an understanding of moderators that influence performance ratings is important so that inherent biases on the part of selves and supervisors in organizations may be limited. Type of occupation has been found to moderate self-supervisor agreement. That is, the self-supervisor ratings of management or professional occupations were more discrepant ( $r = .27$ ) than blue collar or service ratings ( $r = .42$ ) (Harris & Schaubroeck, 1988). Meyer (1980) also found that self-appraisals were less inflated for blue collar jobs than for white collar jobs.

Williams and Levy (1992) found that knowledge of how the appraisal system worked also moderated self-supervisor agreement. The more knowledge the subordinate has as measured by a perceived system knowledge questionnaire the more self and supervisor ratings agreed. However, membership in the in-group may be a third factor that could be a confound in this experiment. Members of the in-group may tend to agree with their supervisor's evaluation because of increased communication and may also be provided with information about the appraisal process.

Mabe and West (1982) conducted a meta-analysis involving the relationship between self-appraisals of ability and ability criterion measures. The studies used involved several types of abilities and found that overall there was a low correlation between one's self-evaluation and actual measures of ability. However, under certain conditions the relationships were much stronger. For example, if the self-appraisal used social comparison terminology the subject's estimation of his/her ability was much more accurate. (Accuracy was defined by the measure of ability used to validate the self-appraisal.) Further, if the subject expected the self-evaluation to be validated, or if the evaluation was anonymous, the validity of the self-appraisal increased. Individual differences such as intelligence, locus of control, and level of achievement also influenced one's ability to evaluate themselves. Regarding leniency, 15 of the 21 studies found leniency, 4 found no overestimation, and 3 found underestimation (Mabe & West, 1982).

Conditions such as validation expectation, anonymity, and low self-esteem were found to moderate the potential for leniency.

Another moderator of self-supervisor rating agreement is social comparison information. Festinger (1954) purports that information about one's position relative to others will improve the accuracy of self-evaluations. This information provides a frame of reference rather than ambiguous anchors that are subject to different interpretations. Farh (1989) found that subjects receiving information about other's performance more accurately estimated the number of pages they had proofread and the number of errors they found than subjects who did not receive any information about other's performance. Further, the correlation between self-supervisor ratings was .42 for subjects in the social comparison condition and .13 in the control condition. This finding is interesting in that it may be one explanation for frequent self-supervisor rating discrepancies. That is, supervisors are provided with social comparison information while subordinate's usually are not. Naturally, their ratings will be somewhat different because they are not using the same information during evaluation. Perhaps providing an individual with social comparison information will promote agreement and, therefore, increase acceptance of the feedback and decrease animosity between self and supervisor. However, Farh (1989) warn that social comparison information may not have the same effect in actual job settings because the individual will know that the purpose of appraisal is for the allocation of organizational rewards which has been proven to heighten leniency bias.

Meyer (1980) found that if no social comparison information is provided and people are asked to compare themselves with others, the majority consider themselves to be better than most people. Forty percent of the subjects in the meta-analysis considered themselves to be in the top 10% when compared with their coworkers. Almost everyone else considered themselves to be in the top 25%. This effect was especially apparent for managers; 80% responded that they were in the top 10% (Meyer, 1980). Kay, Meyer, & French (1965) found that on average individuals rated themselves to be in the 78th percentile. However, after discussing their performance with their supervisor, 85% believed the supervisor's appraisal would be worse than their own. Kay et al. (1965) found that the more discrepant the self-supervisor ratings the more the subordinate became defensive, dismissed the importance of the appraisal, and disparaged the supervisor. Although exaggeration of one's performance or ability can cause problems, high self-esteem is generally a positive characteristic and has been associated with high performance (Meyer, 1980).

The present study will attempt to discover the extent to which discrepant information influences attributions made and the final appraisal decision. Huber, Neale, and Northcraft (1987) discuss heuristics used in performance appraisal which contribute to unfair biases influencing the evaluation of performance. For example, anchor and adjustment is a heuristic which involves an initial opinion (anchor) that may be adjusted after additional information is provided. The critical issue, though, is that the final



decision is restricted by the strength of the original position regardless of the additional information acquired later. Rater and ratee characteristics may contribute to one's anchor or original attitude about the employee in question. For example, Huber et al. (1987) found that the length of time on the job and the employee's history of performance moderated the evaluators' judgments on training, promotion, and their overall current rating regardless of the individual's present performance level. Further, rater characteristics such as experience rating, high ratings of their own performance, and gender moderated their pay increase recommendations for the employee. Although this particular study did not include sex as a ratee characteristic, it provides evidence that ratee characteristics other than actual performance do influence evaluations.

Gender is a ratee characteristic which has proven to affect fair judgments of performance. Sandra Bem (1981) discusses the effects of sex-role socialization on one's processing of information. She explains that as children grow up they are constantly learning what attributes or characteristics are masculine or feminine as defined by society. Eventually gender schemas develop which help them to identify gender-congruent information. Bem suggests that these gender schemas are less well developed in some people. That is, individuals with strong sex-role schemas may tend to process all incoming information in terms of gender while others do not have as strong a tendency to categorize information in terms of masculine or feminine characteristics (Bem, 1981). Supervisors' individual differences may influence the extent to which sex may be used as an anchor during the evaluation of male and female employees.

## SEX DIFFERENCES

Several studies have attempted to explain findings that females are often evaluated more negatively than males, and attributions with negative consequences are frequently made for their performance. This research focuses on the attributional process involved in performance ratings to explain sex differences in performance appraisals. The notion that judgments may be impaired by cognitive limitations has been explored by Chapman and Chapman (1967, 1969). They studied the propensity of clinicians to associate certain symptoms or characteristics with mental illnesses when in actuality there is no true relationship, the relationship is not as strong as reported, or the relationship is actually in the opposite direction. This phenomenon is called illusory correlation, and Chapman (1967) found that distinctiveness and high strength of association are among its sources. Subjects were shown lists of words which were either associated with each other or were not. The words were all paired with each other an equal number of times, and three of these lists were presented to the subjects for 1.9 seconds each. The same procedure was also done with words that varied significantly in length. It was hypothesized that the long words would be more distinct and subjects would naturally assume they occurred simultaneously in the lists of word pairs. As expected, subjects reported a higher co-occurrence of the words if they were atypically long (distinct) or often accompanied each other in everyday language (high strength of association, i.e. bacon and eggs.)

Chapman and Chapman (1967) purport that clinicians continue to use tests with low validity such as the Draw-A-Person (DAP) test and the Rorshach Inkblot test<sup>1</sup> because there is high agreement among clinicians that certain problems are related to certain drawing characteristics or inkblot descriptions. Chapman and Chapman contend (1967) that the source of this agreement is due to the natural inclination to perceive two associated events to be correlated when they actually are not. Further, Chapman and Chapman (1967) found that this tendency is not unique to clinicians. Subjects who had no previous exposure to the DAP test were shown several DAP test drawings accompanied by two symptoms or complaints made by the patient who presumably drew the picture. The experimenters fixed the cards so that each symptom was paired with each type of drawing characteristic an equal number of times. The findings indicated that certain drawing characteristics (i.e. atypical eyes) were reported to correlate with certain symptoms (i.e. suspiciousness) more than with other symptoms. To ensure that the source of this illusory correlation was strength of association, a questionnaire was distributed to a new sample of subjects. These subjects were asked to indicate how strong the association was between every drawing characteristic and symptom used in the first experiment. The results indicated a high association between the characteristics and symptoms that were perceived to co-occur more than they actually did in the first experiment.

In 1969, Chapman and Chapman used valid and invalid Rorshach signs to further support the idea that association is a source of illusory correlation. They found that

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<sup>1</sup>Since 1967, advances in the scoring system of the Rorshach have improved its validity.

clinicians use invalid signs to diagnose homosexuality significantly more than the truly valid signs. The invalid signs were perceived to be related to homosexuality more because of their strong association (i.e. identifying feminine clothing in the inkblot.) This tendency was found for clinicians and subjects who had no exposure to the Rorschach test.

Chapman and Chapman (1967, 1969) conclude that awareness of the sources of illusory correlation and training may decrease misdiagnoses of clinical patients. However, they explain that training can not solve the underlying problem that a clinician's task may be beyond his/her cognitive ability. Genero and Cantor (1987) also found that clinicians judgments were more reliable if the patient's case was typical rather than atypical. It may be that some type of cognitive limitation such as illusory correlation acts to cause attributions and ratings of male and female managers to be different.

Bem (1981) has studied how individuals differ in the way they process information and how this affects their behavior. She has distinguished between people who hold traditional stereotypes and those who hold non sex-typed stereotypes. She found that individuals with traditional stereotypes tend to integrate, evaluate, and organize information according to masculine or feminine categories. They see very little overlap between the characteristics of males and females. However, non sex-typed people do have male and female prototypes but do not organize information entirely on the basis of gender (Bem, 1981).

Dobbins, Cardy, and Truxillo (1988) employed this notion as well as the discovery that the purpose of appraisal is a mediator of gender bias. It was predicted that if subjects were told that the purpose of appraisal was for promotions or to allocate raises, pro-male bias was displayed more than if they were told the purpose of appraisal was for experimental purposes. Dobbins et al. (1988) found that only in the salary increase/promotion condition did subjects who held traditional stereotypes demonstrate pro-male bias. These subjects also made fewer distinctions between females performance levels in the salary increase/promotion condition only. Because "experimental purposes" would never be a purpose of appraisal in organizations, Dobbins et al. (1988) conducted a field study which found that individuals with traditional stereotypes rated female professors less favorably than students with non-traditional stereotypes.

An explanation of the effects of purpose of appraisal was provided by Dobbins, Cardy, & Truxillo (1986). They suggested that the increase of pro-male bias only when the appraisal was used for personnel decisions is due to the fact that this requires subjects to predict future performance. In order to predict, the subjects make attributions to account for the individuals' performance. Women's performance has been shown to be attributed to factors such as luck or ease of the task rather than ability. For example, Deaux & Emswiller (1974) found that men's performance was attributed to ability more than women's even when the task was more typical of females. Considering these

findings, men might be perceived as more likely to continue a high level of performance than women.

### Sex Differences: Attributions

The relationship between attributions and performance of males and females has been explained in terms of expectations (Ross & Fletcher, 1985). That is, performance which is expected is explained by stable attributes, whereas unexpected performance is explained by unstable attributes (Etaugh & Brown, 1975; Feldman-Summers & Kieder, 1974). Feldman-Summers and Kieder (1974) found that subjects attributed success by male physicians to high ability and to ease of task and success of female physicians to effort and occasionally luck. These findings are congruent with the expectations explanation because success of male physicians was an expected phenomenon, whereas success of female physicians was not expected by the subjects. The researchers tried to manipulate expectations by separating the physician occupation into pediatrician and surgeon and asking the subjects how much they expected males and females in each profession to be successful. However, this manipulation did not work because subjects did not expect females to be better pediatricians than males, but subjects did expect males to be better surgeons than females. It seems that being a successful female physician of any kind was unexpected, thereby causing unstable attributions to be made.

Several studies have found that although gender bias is related to attributions, they can not account for differences in performance of appraisal entirely. L'Heureux-Barrett

and Barnes-Farrell (1991) found that males high performance was attributed to ability more than females. It would seem that internal and stable attributions such as ability would be used to predict future performance. However, the results indicated that expectations of future performance predicted whether rewards were allocated to men or women rather than attributions of ability. It may be that ability is not considered to be as important as specific expectations of performance. L'Heureux-Barrett and Barnes-Farrell (1991) also found that women demonstrated pro-male bias while men did not. However, this type of within subjects design forced each subject to rank male and female candidates for rewards. This may have caused sensitization of the subject to the purpose of the study and demand characteristics may have affected the results. These results suggest that it is essential for women to be predicted to achieve well in the future in order to receive organizational rewards.

#### Sex Differences: Managers

Eagly, Makhijani, and Klonsky (1992) conducted a meta-analysis of the research regarding gender bias against women in leadership positions. They found a weak effect of pro-male bias when they considered all the studies in the meta-analysis. However, evidence suggests that under certain conditions, evaluation bias can be quite strong.

Pro-male bias has consistently been found to occur when females hold male dominated positions (Eagly et al., 1992). For example, Gallivan (1991) found that men were considered to be more knowledgeable and to display a better balance of arguments than women when the topic of the essay was aggression (male-typed subject). However, males and females were rated equally on knowledge of subject and balance of arguments

on female-typed subject essays about sex-stereotyping (Gallivan, 1991). Eagly et al. (1992) found this to be especially true for female leaders of athletic teams and female business managers.

The gender-role congruence theory suggests that behavior that is discrepant from an individual's gender-typed behavior will create negative evaluations of that individual. Cash, Gillen, and Burns (1977) found that significantly more males than females were selected for masculine jobs and that significantly more females than males were chosen for feminine jobs. This finding suggests that people tend to be disregarded for jobs that do not involve gender-congruent tasks or characteristics. For example, Nieva & Gutek (1980) point out that assertiveness, competitiveness, and competence are characteristics associated with men and with leaders. Therefore, a male in a leadership position will not generate cognitive dissonance on the part of an evaluator and will result in favorable evaluations. However, females who have leadership characteristics are shunned or belittled and negative evaluations of them as leaders will result. In accordance with the gender-congruency theory it would seem that the higher level management positions, which are predominantly held by men, would create more bias against women in these positions. However, Eagly et al. (1992) found no effect of increased bias as management level increased.

As discussed earlier, female success is often attributed to external factors (Deaux & Emswiller, 1974) which influence one's attitude toward women managers. Stevens and DeNisi (1980) predicted that both men and women with low scores on the Women as Managers Scale (WAMS) would attribute success by a woman to external factors (task difficulty and luck) and failure to internal factors (effort and ability). The WAMS measures an individual's sex-role stereotypes and attitude towards women as managers.



They found a positive relationship between the WAMS score and internal attributions for females' success and a negative relationship between the WAMS score and internal attributions for the failure condition. These relationships were only significant for male subjects. However, females as a whole had significantly higher scores and lower standard deviations on the WAMS so restriction of range may have attenuated the relationship. Stevens and DeNisi concluded that women and men have similar attribution styles.

### Summary and Hypotheses

The present research investigated the effects of discrepant information on attributions and performance ratings. This study attempted to simulate this evaluation process by using self-appraisals as vehicles to present discrepant information. The discrepant information was expected to promote attributions about the manager's performance and these attributions were expected to influence the final performance evaluation. Sex of the rater was not considered because the evidence from previous studies shows that males and females have the same evaluating tendencies (e.g. Bird & Williams, 1980; Izraeli & Izraeli, 1985; Pulakos & Wexley, 1983; Pulakos, Oppler, White, & Borman, 1989; Rosen & Jerdee, 1973; Stevens & DeNisi, 1980).

To determine the effects of discrepant information, the self-appraisals given to the subject were either positive, negative, or no discrepant information was given. To assess the effect of discrepant information on male and female managers, the subjects were randomly selected to be in a male, female, or no-sex information condition. The no-sex information condition was used to serve as a control to determine how the ratings and attributions made by subjects who were aware of the manager's sex differ from subjects in the no-sex information condition. No predictions were made regarding attributions or final performance ratings made by subjects in the no-sex information condition; however,

the changes in ratings were compared to the subjects in the other conditions to find out if there were any significant similarities in the attributions and performance ratings made.

It was expected that the attributions for performance would vary depending on the direction of the discrepant information and the sex of the target manager. The specific hypotheses regarding attributions were as follows.

H1: Subjects in the male manager/positive discrepancy condition would make more internal attributions than expected by chance and fewer external attributions than expected by chance for the manager's performance.

H2: Subjects in the male manager/ negative discrepancy condition would make more external attributions than expected by chance and fewer internal attributions than expected by chance for the manager's performance.

H3: Subjects in the female manager/ positive discrepancy condition would make more external attributions than expected by chance and fewer internal attributions than expected by chance for the manager's performance .

H4: Subjects in the female manager/negative discrepancy condition would make more internal attributions than expected by chance and fewer external attributions than expected by chance for the manager's performance.

No predictions regarding attributions were made for subjects who were in the no discrepancy condition because the self-appraisal information should have been congruent with the subject's perception of the manager's performance. Because of the above predicted attributions, it followed that the final performance rating would partly depend on the attributions made by the supervisor.

H5: Attributions and performance ratings would be related. That is, internal attributions made by subjects in the male manager/positive discrepancy condition would be

positively related to performance ratings. External attributions made by subjects in the male manager/negative discrepancy condition were expected to be negatively related to performance ratings. External attributions made by subjects in the female manager/positive discrepancy condition were expected to be negatively related to performance ratings as were internal attributions made by subjects in the female manager/negative discrepancy condition.

H6: Subjects' final performance rating in the male manager/ positive discrepancy condition would be higher than the final performance rating of subjects in the female manager/positive discrepancy condition.

H7: Subjects' final performance rating in the male manager/ negative discrepancy condition would be higher than the final performance rating of subjects in the female manager/negative discrepancy condition.

An exploratory analysis was also performed to determine the extent to which individual differences in attitudes towards women managers influenced their use of discrepant information. The Women as Managers Scale (WAMS) is a questionnaire that measures one's attitude toward females in management positions (Peters et al., 1974). Further, a questionnaire was given to see if the sex of the manager and/or the self-appraisal information influenced their assignment to the in-group or out-group via less negotiating latitude (Scandura & Graen, 1984). Dansereau, Graen, and Haga (1975) purport that the amount of latitude the subordinate is given to define his/her role determines whether the subordinate will be a member of the in-group or out-group. Liden, Wayne, and Stilwell (1993) examined whether perceived similarity, liking, demographic similarity, and performance ratings were related to scores on the negotiating latitude questionnaire. They found that performance ratings given by a leader, perceived

similarity, and liking were positively related to scores on the negotiating latitude questionnaire. Demographic similarity did not predict negotiating latitude questionnaire scores after two weeks, six weeks, or six months. It was expected that negotiating latitude scores would predict performance ratings in this study because competence was manipulated through the positive and negative discrepancy information. The relationship between the mean performance ratings, the WAMS, and the negotiating latitude questionnaire were analyzed.

## METHOD

### Subjects

The subjects were 94 female (52%) and 86 male (48%) Introductory Psychology students who were recruited from the subject pool and participated to earn extra credit points. Only those subjects who scored the overall in-basket performance with a 3, 4, or 5 rating were included in the analyses (see Table 1). Only 8% of the total number of subjects were excluded from the analyses.

### Materials

The in-basket task and scoring guidelines were taken from Jaffee (1968) and adapted by the experimenter for the purposes of this study (see Appendix A). A pilot study was conducted to ensure that the manager's responses on the in-basket task were interpreted as average. Of the pilot subjects tested, 90% gave a 3, 4, or 5 rating on the in-basket task.

### Design and Procedure

A 3 (ratee sex) X 3 (self-appraisal) factorial design was implemented for this study. Subjects were asked to take the role of an upper-level manager whose task was to evaluate a lower-level manager for promotion to middle-level manager (see Appendix B). The subjects were told that they were to fill out a performance appraisal form which was to be used to make the promotion decision. In order to make a final performance rating, the subject used the manager's performance on an in-basket task and his/her self-appraisal of performance.

First, the subjects were given biographical information about the target manager (see Appendix B). The manager's name and sex were different depending on the condition. The subjects were given 20 minutes to score the manager's completed in-basket. Scoring

guidelines were provided which describe what the best course of action would have been for each item in the in-basket. The manager's responses to the in-basket task were presented as average. After the subjects scored the in-basket, they were given a performance appraisal form and told that it was filled out by the target manager. This self-appraisal had the manager's self-rating on five performance dimensions and an overall rating. The five dimensions were: problem solving, oral and written communication, delegation of responsibility, sensitivity, and rapport. The subjects were given 2-3 minutes to look over the self-appraisal which was either high, average, or low, depending on the condition. High, low, and average self-appraisals correspond to positive, negative, and no discrepancy conditions, respectively. The experimenter then asked the subjects to fill out a final performance appraisal form for the target manager. This form had the exact same dimensions as the self-appraisal form.

Next, the subjects were given a questionnaire asking to what they attributed the manager's performance - luck, task difficulty, effort, or ability. The questionnaire also asked how much the self-appraisal influenced the second performance rating. The subjects then filled out the seven question negotiating latitude questionnaire. The sex of the manager and the level of self-appraisal (direction of discrepant information) were asked to make sure the manipulations were successful. Finally, the Women as Managers Scale (WAMS) was distributed to all subjects to determine their individual acceptance of women as managers.

### Independent Variables

Sex of the Manager. The subjects were randomly assigned to evaluate a male manager, a female manager, or no information regarding gender was provided.

Discrepancy. The subjects randomly received a self-appraisal form filled out by the target manager. The self-appraisal was a 7-point likert scale with the adjectives poor, average, and exceptional for anchors on numbers 1, 4, and 7, respectively (see Appendix C). For the positive discrepancy condition, the self-appraisal had all 6's and 7's circled and an overall rating of 7. For the negative discrepancy condition, the self-appraisal had all 1's and 2's circled and had an overall rating of 1. For the no-discrepancy condition, the self-appraisals had 3's, 4's, and 5's circled and an overall rating of 4.

#### Dependent Variables

Final Performance Rating. The final performance rating was compared between subjects in each condition to test the effects of direction of discrepant information and the sex of the manager (see Appendix C).

Attributions. Subjects were asked to what they attributed the target manager's overall performance (see Appendix D). The questionnaire forced the subject to choose either task difficulty, effort, luck, or ability as reasons for the manager's performance. These attributions were couched in phrases relating to the general performance of the manager. This questionnaire also asked how much the self-appraisal influenced the final performance rating of the manager.

Negotiating Latitude Questionnaire. This questionnaire measured to what extent the subject, playing the role of upper-level manager, would allow the target manager to define his/her role (see Appendix D). Two examples of questions are: 1) How well do you feel you would understand the manager's problems and needs? 2) Regardless of how much formal authority is built into the manager's position what are the chances that you would be personally inclined to use your power to help the manager solve problems in his/her work? (Scandura & Graen, 1984).

Attitudes Towards Women as Managers. The Women as Managers Scale (WAMS) was given to distinguish between subjects who were accepting and relatively open to females in management positions and those who were not (see Appendix D). The scale is composed of 21 statements to which subjects respond using a 7-point scale from strongly disagree to strongly agree. The scale is broken into three factors: acceptance as managers (10 statements), stereotypic feminine barriers (5 statements), and stereotypic manager traits (6 statements). Peters et al. (1974) found the split-half reliability for the WAMS to be  $r=.84$  and after adjusting for length with the Spearman-Brown formula,  $r=.91$ . The higher the score on the WAMS, the greater the acceptance of women as managers.

Manipulation Checks. The subject was asked 1) how the manager rated him/herself overall (from poor to outstanding) and 2) the extent to which the manager's rating was different from their rating. These questions assessed the discrepancy manipulation. The subject was also asked the sex of the manager to check this manipulation (see Appendix D).



## RESULTS

Statistics describing the overall in-basket score, dependent variables and the manipulation check variables are provided in Tables 1 and 2 (see Appendix E for all Tables). Table 1 one shows that subjects used the entire range of responses for almost every variable and Table 2 shows the frequencies of attributions across all conditions.

### Manipulation Checks

To check the discrepancy manipulation, subjects were asked what rating the target manager had given him/herself and a oneway analysis of variance (ANOVA) was conducted on the subjects' responses. The results indicated that the subjects' responses in each discrepancy condition were significantly different,  $F(2,177) = 509.14, p < .001$ , and a post hoc Tukey test indicated that the means were all significantly different from each other (positive = 6.42, no discrepancy = 4.08, and negative = 1.5). To ensure that the subject actually perceived a discrepancy between the manager's self-rating and the manager's performance on the in-basket task, subjects responded to a question asking how different the manager's self-rating was from their score on the in-basket task. A oneway ANOVA was performed on these responses and, as expected, subjects responses in the positive ( $M = 4.63$ ) and negative discrepancy conditions ( $M = 4.45$ ) were significantly different from those in the no discrepancy condition ( $M = 3.2$ ),  $F(2,140) = 19.25, p < .001$ . To check the sex of the manager manipulation a 2 x 2 chi-square analysis was performed to test the degree of association between the subjects' perceived sex of the manager and the actual sex of the manager. The results indicate that subjects were aware of the sex of the manager if that information was provided,  $\chi^2(4, N=180) = 208.25, p < .001$  (see Table 3).

### Attributions

Hypotheses 1 - 4 predicted different patterns of attributions depending on the combination of discrepancy and gender. In order to investigate these hypotheses, a program that tested the probability of observed internal and external attributions occurring in each condition was necessary. EXACON (Bergman & El-Khoury, 1987) is a program that tests the exact probability that an observed frequency would occur by chance. Unlike chi-square tests, each cell's expected frequencies are based on different row and column totals because EXACON reduces the table into a 2 X 2 table to calculate the exact expected frequencies for each cell. Further, EXACON uses a hypergeometric distribution rather than a chi-square distribution to test the significance of the cell frequencies. Chi-square analyses simply approximate expected frequencies by the row and column totals of the entire table. With anything larger than a 2 x 2 table, chi-square tests will only indicate if there is a relationship between two variables. The specific cells which account for the significant chi-square value is unknown. Because it was necessary to determine if the number of internal and external attributions occurred greater or less than chance in each condition, EXACON was used to test hypotheses 1 - 4. The luck and task difficulty (external) attributions were grouped together as well as the effort and ability (internal) attributions for the analyses (frequencies for the test of hypotheses 1 - 4 appear in Table 5).

Hypothesis 1 stated that subjects in the male manager/positive discrepancy condition would make more internal attributions than chance and fewer external attributions than chance for the manager's performance. This hypothesis was not supported. Hypothesis 2 was also not supported because there were not significantly more external attributions than chance or significantly fewer internal attributions than

chance for subjects in the male manager/negative discrepancy condition. Support for Hypothesis 3 was found because subjects in the female manager/ positive discrepancy condition made significantly more external attributions than chance and significantly fewer internal attributions than chance (see Table 5). Hypothesis 4 was not supported because the number of internal attributions was not significantly greater than chance nor was the number of external attributions significantly fewer than chance for subjects in the female manager/negative discrepancy condition.

Analyses of the probabilities of internal and external attributions for the other conditions revealed that subjects in the no sex/negative discrepancy condition made significantly more external attributions and significantly fewer internal attributions than chance. The frequencies of attributions in all other conditions were not significantly different than chance.

Identical EXACON analyses were performed on the reported perceived sex of the manager. The results indicated that significantly fewer internal attributions than chance and significantly more external attributions than chance were made for subjects who believed that the manager was female and were given positive discrepant information. Further, subjects who reported that they did not know the sex of the manager and were presented with negative discrepant information made significantly fewer internal attributions and significantly more external attributions than chance. These results are congruent to the analysis using the actual sex of the manager. No other cells indicated a significant difference between internal and/or external attributions.

#### Relationship Between Ratings and Attributions

Hypothesis 5 predicted that overall performance ratings and attributions would be related; however, this hypothesis was not supported. To test this hypothesis, subjects'

responses in the male manager/positive discrepancy, male manager/negative discrepancy, female manager/positive discrepancy, and female manager/negative discrepancy condition were analyzed separately in four chi-square tests. Mean ratings on the 5 performance dimensions were split at the median and the chi-square analyses were conducted using both dependent measures. Low ratings were equal to 1, 2, 3, or 4<sup>2</sup> and high ratings were equal to 5, 6, or 7. Tables 6 through 9 indicate the results of each of these tests.

Because chi-square tests are insensitive to small frequencies, correlations were also calculated to see if a relationship between attributions and ratings existed. None of the correlations between attributions and mean performance ratings were significant for any of the above noted conditions,  $r = -.08$  ( $N = 20$ ),  $r = -.20$  ( $N = 20$ ),  $r = -.08$  ( $N = 20$ ),  $r = .40$  ( $N = 20$ ), respectively. The small sample sizes for each of the above correlations reduced the power to detect a relationship so a multiple regression analysis was conducted that included the entire sample. Mean performance rating was the dependent variable and sex of the manager, attribution (internal or external), and discrepancy (positive or negative), as well as all the two-way interactions and the three-way interaction were the independent variables hierarchically entered in the equation. The results indicated that there was a main effect of discrepancy  $F(3,76) = 23.79$ ,  $p < .001$ , and the change in R-square was not significant when the two-way interactions or the three-way interaction were added into the equation.

#### Comparison of Ratings by Sex of Manager

The means of the performance appraisal ratings for positive and negative discrepancy conditions are shown in Table 10. Hypothesis 6 predicted that subjects in the positive discrepancy condition would rate male managers higher than female managers on

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<sup>2</sup>The analyses were also conducted using only 1, 2, and 3 for low ratings and 5, 6, and 7 for high ratings. The results were not significant.

the five performance dimensions and the overall performance rating. A Hotellings t-test was conducted on the five performance dimensions (problem solving, communication skills, delegation of responsibility, sensitivity, and rapport) and the results indicated no significant differences,  $t(5) = .04, p > .05$ . A t-test was also performed on the final overall performance rating and no significant difference was found  $t(38) = -.40, p > .05$ .

Hypothesis 7 predicted that subjects in the negative discrepancy conditions would rate male managers higher than female managers on the dimensions of the final performance ratings. The Hotellings t-test on the five performance dimensions was not significant  $t(5) = .28, p > .05$ . The t-test on the overall ratings was also not significant  $t(37) = -1.12, p > .05$  and, therefore, hypothesis 7 was not supported.

For exploratory purposes, a 3 (actual manager sex) by 3 (discrepancy) ANOVA was performed on the mean performance ratings. This was done to see if performance ratings differed significantly between conditions that were not hypothesized to do so or if any main effects occurred. There was a main effect of discrepancy and a post-hoc Tukey test indicated that all of the means were significantly different  $F(2,177) = 56.10, p < .001$ , positive = 4.84, no discrepancy = 3.95, negative = 3.47.

The amount of influence (INFL) the discrepant information had on the subject's final performance rating was also measured and a 3 (actual sex of manager) x 3 (discrepancy) ANOVA was conducted on the subject's responses. The influence variable was measured using a 3-point scale with Not At All, Somewhat, and A Great Deal as anchors for 1, 2, and 3, respectively. There was a main effect for the discrepancy condition (see Table 4) so a post-hoc Tukey test was performed on the means. The results indicated that subjects reported that they were more influenced by the manager's self-appraisal if they were given negative discrepant information ( $M = 1.93$ ) than if they

were given positive discrepant information ( $\underline{M} = 1.62$ ),  $\underline{F}(2,177) = 4.25$ ,  $p < .05$ . The mean response for subjects in the no discrepancy conditions was not significantly different from the other conditions ( $\underline{M} = 1.75$ ).

### Exploratory Analyses

The relationship between the overall performance rating and the mean score on the negotiating latitude questionnaire and the women as managers scale was assessed. The results from a regression analysis using all subjects indicated that there was strong positive relationship between the overall performance ratings and the negotiating latitude questionnaire (see Table 11). This relationship did not vary depending on the sex of the manager. Regression analyses indicated no relationship between the WAMS, sex of manager, and the overall rating (see Table 12).

## DISCUSSION

### Hypotheses 1 - 4

Of the first four hypotheses, only hypothesis 3 was supported by the data. The finding that subjects in the female manager/ positive discrepancy condition did make more external attributions than internal attributions may be because good performance by female managers was unexpected. Feldman-Summers and Kieder (1974) and Ross and Fletcher (1985) argue that attributions are affected by the individual's expectations. It could be that success by a female manager was the most unexpected situation and this caused the predicted attributional biases to occur. Hypotheses 1, 2, and 4 were not supported by the data because there did not appear to be a difference in the assignment of internal or external attributions as a function of the sex of the manager or the level of discrepant information for subjects in the male manager/positive discrepancy, male manager/negative discrepancy, and female manager/negative discrepancy conditions. It is likely that the fundamental attribution error was responsible for the proportionately large number of internal attributions chosen (69%) (Jones & Nisbett, 1971).

Hypotheses 1 - 4 were generated from the findings of several studies published in the 1970's and early 1980's. For example, in 1974, Deaux and Emswiller and Feldman-Summers and Keider found that significantly different types of attributions were made for males and females. Further, in 1977, Garland and Price found that attitude toward women as managers (as measured by the WAMS) was positively correlated with internal attributions and negatively correlated with external attributions when subjects read descriptions of successful female managers. Stevens and DeNisi (1980) replicated this study and found the same results for subjects in the success conditions and also found a

negative relationship between internal attributions and WAMS score for subjects who were given descriptions of a female's failure.

The inability of the present study to support hypotheses 1, 2, and 4 may be an indication that people's attitudes towards male and female success are slowly changing. A comparison of the mean responses of males and females to the WAMS by subjects in 1973 (Peters et al.) and by subjects in this study indicated a significant change in attitudes of males. Out of a possible 147 points, the mean for male subjects in 1973 was 109.5,  $\underline{SD} = 19.03$  and significantly differed from the mean score for male subjects in this study,  $\underline{M} = 113.5$ ,  $\underline{SD} = 19.3$ ,  $t(428, .975) = 1.986$ ,  $p < .025$ . The means for females in 1973 and in the present study did not differ significantly,  $\underline{M} = 132.25$ ,  $\underline{SD} = 13.83$  and  $\underline{M} = 130.5$ ,  $\underline{SD} = 17.13$ , respectively,  $t(288, .975) = .77$  n.s. These results should be interpreted with caution because the large sample size enabled even a small effect to be detected. While the difference in means is significant, the actual difference in attitudes may be negligible.

Another possible explanation for the results of the hypothesis 1 - 4 is that the subjects in this experiment were passive observers. That is, they were onlookers to the performance of the manager and were not actively engaged in an activity with the actor (target manager). However, several studies have found that active observers are more likely than passive observers to make dispositional attributions because active observers need to be able to predict future behavior of others to create a sense of control more than passive observers (Miller & Norman, 1975; Snyder, Stephan, & Rosenfield, 1976). Although the subjects in this study chose predominately internal (dispositional) attributions, they may not have really believed the attributions. Further, they may have been reluctant to consider the internal attributions to truly represent the manager's personality and, therefore, not consider these attributions to be predictive of future work



behavior. The subject's in this study were told that the overall rating would be used to make a promotion decision.

An analyses of frequency of attributions was conducted on subjects in conditions for which there was no hypotheses. The results indicated that subjects in the no sex information/negative discrepancy condition made significantly fewer internal attributions than chance and significantly more external attributions than chance. This result prompted the analyses of attributions using the perceived sex of the manager rather than the actual sex of the manager because several subjects in the no sex conditions (42%) responded that the sex of the manager was male. The exploratory EXACON analyses yielded the same findings as the previous analyses indicating that subjects who reported that they did not know the sex of the manager and were given negative discrepant information chose a pattern of attributions hypothesized for subjects in the male manager/negative discrepancy condition.

It could be argued that subjects who were not given information about the sex of the manager used the prototype or category of a manager more than subjects who were told the sex of the manager. That is, the gender information could have been a cue to subjects that the study involved gender bias and their controlled processes may have been activated as a result. Cognitive processing literature suggests that controlled processes are activated when novel information is presented or when the level of discrepant information reaches a threshold (DeNisi, Cafferty, & Meglino, 1984; Feldman, 1981). Therefore, subjects in the male and female manager conditions may not have been relying on prototypes while choosing attributions; hence, the attributions may have been chosen on an idiosyncratic basis or chosen randomly. This may explain the findings of hypothesis 1, 2, and 4 but this explanation is not congruent with the result from hypothesis 3. One

potential explanation is that female managers who rated themselves exceptional may have been information so contrary to subject's prototypes that subjects made the predicted attributions to resolve the discrepancy between the information they were given and their prototype. The lack of support for hypotheses 1, 2, and 4 may be because the information presented was not drastically incongruent from their prototypes. Likewise, the fact that subjects in the no sex/positive and no sex/ no discrepancy conditions did not use attributions to resolve discrepancies may be because the information presented to them was not completely incongruent with their prototypes.

#### Hypothesis 5 - 7

Hypothesis 5 stated that attributions and ratings would be related. For example, in the male manager/positive discrepancy condition internal attributions were expected to be positively related to performance ratings, whereas internal attributions were expected to be negatively related to ratings for subjects in the female manager/negative discrepancy condition. However, there was no relationship between attributions and performance ratings for any of the four conditions analyzed. Based on previous studies, attributions were predicted to mediate the relationship between performance and ratings (Dienesch & Liden, 1986; Mitchell et al., 1981). However, hypotheses 6 and 7 were not supported indicating that there was no evidence of bias against female managers and no indication that attributions mediated the relationship between performance and ratings. These results are similar to the findings of Martin and Klimoski (1990) who found that external attributions made for other's performance did not influence the performance rating of actual managers in an organization. That is, external attributions were made but subjects still based the evaluation on a combination of the target individual's actual and reported performance.

Further analyses did indicate that the mean performance ratings for the positive, negative, and no discrepancy conditions were significantly different in the expected direction. Therefore, subjects were influenced by the manager's self-appraisal but were not influenced by the sex of the manager when evaluating their performance. Interestingly, for subjects in the negative discrepancy condition the reported extent of influence was significantly higher than subject's responses in the positive condition, yet both the positive and negative discrepancy conditions were influenced.

One explanation of these results could be that the discounting principle was taking effect. The discounting principle states that the effect of any one cause on a final decision will be limited if several other plausible causes exist (Kelley, 1971). For subjects in the negative discrepancy conditions, no external cause for the self-appraisal ratings was likely and, therefore, the subjects must have thought that the only explanation for the low ratings was that they were true. Subjects probably assumed that the manager was reporting the truth and, therefore, reported being influenced by these ratings. Subjects in the positive discrepancy condition had two plausible causes for the self-appraisal ratings 1) the manager really was an excellent manager or 2) the manager knew that self-appraisal would be used for promotion decisions so he/she inflated the ratings. Therefore, subjects put less credence into the high self-ratings and did not report that the self-appraisal information influenced their performance rating very much. Nonetheless, positive and negative discrepant information did influence performance ratings.

Researchers studying the cognitive processing approach to performance appraisal have identified attributions to be one cognitive mechanism involved in evaluation of performance. More recently, the cognitive process of categorization has been suggested to influence the way judgments are made about others. Feldman (1981) borrowed

findings from research on social cognition to develop a cognitive processing model of performance appraisal. The basic premise of his model is that individuals use categories to store information because they maximize the input of information without exceeding one's cognitive capacity. Categories are representations of raw information and are defined as a "fuzzy set" of objects or people which resemble each other in some way (DeNisi et al., 1984). This model is important for performance appraisal because raters are thought to use these representations or categories to recall information and to make a judgment regarding the ratee's performance. The category which is most available will be relied on during evaluation and may interfere with the accurate recall of specific behaviors while preserving the overall impression of the ratee (Feldman, 1981; Tversky & Kahneman, 1974; Srull & Wyer, 1989).

Fiske, Neuberg, Beattie, and Milberg (1987) describe the process of impression formation to be based on a continuum from category-based to attribute-based. They suggest that individuals initially try to categorize others and use this category to describe him or her. However, if the available informative attributes are inconsistent (like the ratings on the in-basket task) then a person will choose a category label to try to explicate the inconsistencies, and if they cannot be resolved, the search for more attribute information begins. Fiske et al. (1987) also propose that categories and the attributes that make them up all have affective tags that are positive or negative and they studied the process of combining these affective tags to form a general affective response. They manipulated the process of impression formation by providing some subjects with information that would promote a category-based process and other subjects with information that aided attribute-based impression formation. Subjects in the category based condition were either given a category label describing a stimulus person and five

attributes that were representative of the category or just a category label alone. Subjects in the attribute-based conditions were given either attributes that were not descriptive of the category label or a label and attributes which provided no information to specify a category. Fiske et al. (1987) also measured the subject's general likeability of the stimulus person and correlated these ratings with the ratings of likeability of the specific category labels and attributes.

They found that in the category-based condition, subjects' responses to the likeability of the category were significantly positively correlated with the overall likeability ratings of the stimulus person. As predicted, in the attribute-based condition, subjects likeability ratings of the attributes were correlated with overall likeability of the stimulus person but the category likeability ratings were not. The results of this study indicate that affective responses or impressions can either be a product of the affective response to the category or the attributes depending on how the information is presented. This research may shed light on the results of the present study. In this study, the manager's responses to the in-basket task were either positive, negative, or neutral. This may have made it difficult at first to categorize the worker so the affective tags the subject placed on each attribute (manager's response) may have been combined to form an overall affective response yielding a rating of 3, 4, or 5 on the 7-point scale. Because the subjects may not have created a strong category for the target manager, the positive or negative discrepant information may have just been combined with the previous attributes (in-basket responses) to yield the performance ratings. The performance ratings in this instance would act as the sum of the affective responses to the previous attributes (in-basket ratings and discrepant information).

Other issues relevant to this study are impression formation and impression change. Research has indicated that once an impression is formed individuals tend to search for impression-inconsistent information (Balzer, 1986; Foti & Hauenstein, 1993; Hastie & Kumar, 1979; Mauer & Alexander, 1991; Niedenthal & Cantor, 1986). However, biased encoding does not necessarily relate to an impression change or a change in judgment. Foti and Hauenstein (1993) describe a judgment operator that integrates and evaluates information. They found that when processing demands were high the bias towards impression-inconsistent information was high but that the final judgment was similar to the prior impression. These findings may provide an explanation for the present results. If it is reasonable to assume that subjects had formed an average impression of the target manager after rating the in-basket task, then the inconsistent information on the self-appraisal form may have influenced their judgment because processing demands were low. The analyses of the manipulation checks indicated that the discrepant information was encoded. Further, the subjects only had to attend to the discrepant information and then immediately report their rating (low processing demands). Therefore, the judgment operator was able to use the encoded, discrepant information because processing demands were low.

### Exploratory Analyses

The negotiating latitude questionnaire is a measure of the amount of latitude or freedom the subordinate is given by the supervisor to define his/her role in the organization (Dansereau, et al. 1975). The greater the degree of freedom a subordinate has, the more likely the subordinate will be considered a member of the in-group by the supervisor. As discussed in the introduction, in-group membership is important for the subordinate because it is characterized by greater trust, more interactions, and guidance,

and additional rewards given to the subordinate by the supervisor. Dienesch and Liden (1986) propose a leader-member exchange theory which describes the formation of the leader-member relationship. Sex is a member characteristic that is thought to influence the leader-member relationship. In this study, the score on the negotiating latitude questionnaire was significantly positively related to the performance ratings. However, this relationship did not vary as a function of the sex of the manager indicating that the sex of the manager did not predict the amount of latitude the subjects would have given to the target manager to define his/her role.

The sex of the manager, although perceived by the subjects, may not have been salient enough to influence the degree of latitude subjects' would have provided the target manager if they had actually been his/her supervisor. In organizational settings, frequent interactions between subordinate and supervisor affect liking, attributions, and the assignment of the subordinate to the in-group or out-group (Dienesch & Liden, 1986). Because no interactions took place between the subject and target manager, it is less likely that subordinate characteristics would influence the subject's negotiating latitude score or performance ratings.

The analyses of the WAMS scores and performance ratings indicated that no relationship existed between these dependent variables. It was not possible to predict performance ratings by subjects' attitude toward women as managers. Subjects did vary in their degree of acceptance of women as managers but this evidently did not influence their rating of female managers' performance. Again, it could be that the limited information provided about the target manager was not enough to prompt a cognitive process related to the sex of the manager, thereby not influencing subjects' ratings. However, most studies involving stereotyping have found that the more information

provided about an individual, the less likely individuals are to rely on stereotypes (Heilman, 1984; Heilman, Martell, & Simon, 1988). Further, the low processing demands in the current study may not have necessitated the use of stereotypes. Heuristics based on categories are more likely to occur when information processing demands are high (Foti & Hauenstein, 1993). Too little or too much information may act to increase processing demands, thereby yielding the greatest reliance on stereotypes. Future research may be directed toward finding the amount of information associated with the use of prototypes.

### Limitations

The one-item forced choice attribution measure could be considered a methodological shortcoming of this study because the reliability of this measure could not be assessed. Other research involving differential attributions have asked the extent to which subjects believe internal or external attributions are responsible for other's behavior and subjects respond on a Likert scale (Garland & Price, 1977; Stevens & DeNisi, 1980). This approach may be more reliable because several items could be used to tap internal and external attributions. Another benefit of this approach is that subjects are given more freedom to indicate a combination of internal and external attributions for other's behavior. However, sometimes, as in the present study, the forced-choice format is more suitable for testing the hypotheses of interest. The little information given to the subjects should have prompted the use of implicit theories. Therefore, requiring the subjects to choose an attribution should have forced out any attributional biases that were based on their implicit theories.

Further limitations of this study involve its external validity or generalizability to organizational settings. The laboratory allows researchers to investigate the underlying processes of behavior that are typical in applied settings. The greater amount of control



from extraneous variables in the laboratory allows for greater confidence that the manipulated variables caused the observed effect. Several previous studies have been successful using written vignettes describing male and female employees (Deaux & Emswiller, 1974; Feldman-Summers & Kieder, 1974; Gallivan, 1991; Garland & Price, 1977; L'Heureux-Barrett & Barnes-Farrell, 1991; Stevens & DeNisi, 1980). However, in this study only a cryptic description of the manager and handwriting typical of males and females were used to manipulate the sex of the manager. It may be that the manipulation of the sex of the manager was not complex enough to capture the hypothesized effects. In other words, in order for attributional biases to exist, more knowledge about the target manager may be necessary. The fact that similar procedures have been successful in past studies may reflect a trend away from the prototype that only males can be successful managers. It is probable that the relationship between attributions and performance ratings would be much stronger in an organizational setting because the rater has more cumulative and richer knowledge about the ratee and will have observed more behaviors for which attributions can be made. Future research in applied settings may be necessary to understand the extent to which attributions are involved in the supervisor-subordinate relationship and the evaluation of employees.

A related limitation of this study is the sample of subjects used for this experiment. In this era of political correctness, college students are especially aware of race and gender issues. This heightened awareness may have affected subjects' responses in that the sex of the manager manipulation may have been a cue that the study involved gender issues. This limitation restricts the study's generalizability to applied settings because present day supervisors may be substantially older than the sample used in this study. Although everyone has been affected by current gender issues in the workplace, individuals who

grew up in earlier decades may be more prone to consciously or unconsciously forming attributions on the basis of sex.

### Conclusions

Although most of the hypotheses in this study were not supported, the discrepancy manipulation did have an effect on performance ratings. However, the results of this study indicate that attributions were not the mechanism by which these evaluative judgments were made. Future research in the laboratory should further explore the attributional process using a better measurement device. Moreover, other cognitive mechanisms involved in resolving discrepancies between performance information should be investigated. For example, the extent that cognitive categories versus specific attributes are used may be a potential focus for future research and may shed light on the process involved when discrepant performance information is presented to the supervisor. As discussed in the review of the literature, self-appraisal information is often a source of discrepant information which is frequently used in applied settings. Thus, further research in this area may be applicable to organizations who employ self-appraisal systems.

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**Appendix A**  
**Scoring Guidelines and In-basket Task**

## **Scoring Guidelines for Manager's In-Basket Task**

The following scoring guidelines are divided into three categories of performance;

I. Analysis and Judgment, II. Creativity and Sensitivity, and III. Planning, Organization, and Communication. Read the description of the category then follow the directions provided to score the relevant items. These scoring guidelines were developed by industrial/organizational psychologists at AT&T. Although you may have a different opinion on the best course of action for each item, please use the guidelines provided for rating the manager.

### **I. Analysis and Judgment**

These items focus on the manager's ability to identify, analyze, and evaluate the pertinent information in determining the source of a problem and to make sound decisions based upon available facts.

First you will evaluate how well the manager prioritized the items. Next, you will evaluate the responses to the items that are most relevant to Analysis and Judgment. Finally, you will rate the manager's overall performance in the Analysis and Judgment category.

#### **Prioritizing the Items**

On the following page is the **best** organization of the items in order from most important to least important. This is by no means the only way they could be organized but think of this list as a guideline when making the manager's rating. You may use the space next to this list to write down the manager's order of items for comparison purposes. The manager's ranking of the item is shown in the **top right corner** of each item.

BEST LISTMANAGER'S LIST

Item #10

Item #4

Item #9

Item #7

Item #8

Item #2

Item #1

Item #3

Item #6

Item #5

## 1. Manager's Rating:

1

2

3

4

5

6

7

Poor

Average

Exceptional

From now on, it is not necessary to keep the in-basket items in order. Pull out the appropriate item and read the manager's response. Then compare the response to the best course of action as indicated by the guidelines. For example, the first item you will rate is Item #3. Pull out Item #3 from the pile of items and read the response. Use the following guideline to rate the manager's response to Item #3.

**Item #3**

**Best Course of Action:** Use the list of ratings (Item #7) and Item #2 to decide who to endorse for a merit bonus since the Vice President needs it by Monday, September 13. Make a note to plan a meeting with Thomas to discuss the merit bonus system.

2. Manager's Rating on Item #3:

1	2	3	4	5	6	7
Poor			Average			Exceptional

**Item #6**

**Best Course of Action:** Hold this memo for action at a later date because of information from Items #2 and #7. Plan to schedule a meeting with T. Phillips to discuss the company's policy concerning promotions.

3. Manager's Rating on Item #6:

1	2	3	4	5	6	7
Poor			Average			Exceptional

Use the manager's rating on Prioritizing the Items, Item #3, and Item #6 to rate the manager's overall performance on Analysis and Judgment.

4. Manager's Summary Rating on Analysis and Judgment:

1	2	3	4	5	6	7
Poor			Average			Exceptional

## **II. Creativity and Sensitivity**

These items focus on the manager's ability to demonstrate imagination when dealing with management issues, and to show consideration for the feelings and needs of others.

To rate this category use Item #4, #9, and #5 following the same procedures as above.

### **Item #4**

**Best Course of Action:** Plan to make a few observations to see if they are in fact taking more than ten minutes. If they are, post this notice in the break room.

5. Manager's Rating on Item #4:

1	2	3	4	5	6	7
Poor			Average			Exceptional

### **Item #9**

**Best Course of Action:** Hold up on any action until you return so you can investigate the situation yourself.

6. Manager's Rating on Item #9:

1	2	3	4	5	6	7
Poor			Average			Exceptional



**Item #5**

Best Course of Action: Have Chris arrange a meeting with Jones for after you return. In the meeting, plan to ask Jones why he is displeased with his job and what changes he feels could be made to satisfy him.

7. Manager's Rating on Item #5:

1	2	3	4	5	6	7
Poor			Average			Exceptional

Use the manager's ratings on Items #4, #9, and #5 to rate the manager's overall performance on Creativity and Sensitivity.

8. Manager's Summary Rating on Creativity and Sensitivity:

1	2	3	4	5	6	7
Poor			Average			Exceptional

## **Planning, Organization, and Communication**

These items focus on the manager's ability to establish a course of action to accomplish a specific goal, and express plans clearly in writing.

### **Item #1**

**Best Course of Action:** Write Phillips a letter asking for a brief extension of the deadline so that at a later date you will have more information available which will help in preparing a better list of names. Include a list of people who received "excellent" ratings on their last performance appraisal in case the deadline cannot be extended.

9. Manager's Rating on Item #1:

1	2	3	4	5	6	7
Poor			Average			Exceptional

### **Item # 10**

**Best Course of Action:** Plan to handle this yourself since Donnelly considers it to be rather important. Write a letter to Donnelly saying that his request will be handled as it is outlined and introducing yourself as the new Division Manager replacing Lobel.

10. Manager's Rating on #10:

1	2	3	4	5	6	7
Poor			Average			Exceptional

**Item #8**

**Best Course of Action:** Have Chris arrange a meeting with S. Morgan to see what help he could give in preparing to see M. K. Thomas.

11. Manager's Rating on Item #8:

1	2	3	4	5	6	7
Poor			Average			Exceptional

Use the manager's rating on Items #1, #10, and #8 to evaluate the manager's overall performance on Planning, Organization, and Communication.

12. Manager's Summary Rating on **Planning, Organization, and Communication:**

1	2	3	4	5	6	7
Poor			Average			Exceptional

---

**Overall Rating**

Rate the manager's **overall** performance on the in-basket task.

1	2	3	4	5	6	7
Poor			Average			Exceptional

Item #1

7

## AT&amp;T

## INTER-OFFICE MEMORANDUM

September 6, 1993

TO: R. J. Lobel

FROM: T. Phillips

SUBJECT: Personnel

R. J.,

Please supply me with a list of your best people as we are looking for some potential personnel supervisors and I think it important that they have worked in the Customer Relations division of our business. If you can get them to me by Monday, September 13th I'd appreciate it as that's the deadline. Thanks.

T.

---

Give the following letter to Chris to type and send to Phillips Monday morning:

To: T. Phillips

From: J.J. Holloway

Here are the people who received excellent ratings on their last performance appraisal:

Porter  
Landry  
Roberts  
Simpson

J.J. Holloway

Item #2

6

## AT&amp;T

## INTER-OFFICE MEMORANDUM

September 2, 1993

TO: R. J. Lobel

FROM: A. Jackson

SUBJECT: Community Relations

Dear R. J.,

It has come to my attention that some of your people have been seen in some questionable areas of town. You know how important good community relations are for us. Just be aware! Their names are: Rollins

Wright

Sutton

McBride

A. Jackson

---

*used this item for item #6.*

Item #3

8

## AT&amp;T

## INTER-OFFICE MEMORANDUM

September 1, 1993

TO: R. J. Lobel

FROM: M. K. Thomas

SUBJECT: Annual Increments

The following employees are scheduled for bonuses if their work warrants it. Please initial each person you wish to receive the merit bonus. This must be returned to me by Monday, September 13 or the bonuses will not be distributed.

Porter	Rollins	Calhoun
Sutton	Landry	Roberts

---

Chris, send the following memo to Thomas. J.J.

To: M.K. Thomas

From: J.J. Holloway

I am unable to endorse anyone for merit bonuses as I am new to this position and don't know who deserves bonuses yet. I am also unfamiliar with the merit bonus process so I would like to arrange a meeting to discuss it.

J.J. Holloway

Item #4

3

## AT&amp;T

## INTER-OFFICE MEMORANDUM

September 3, 1993

TO: R. J. Lobel

FROM: S. Morgan

SUBJECT: Production Hours

Please see to it that the coffee breaks of the people in your group aren't longer than 10 minutes. We're not running a country club you know.

Morgan

---

When I return I will check to see how long people are really spending on their coffee breaks. I will then determine if any action is necessary.

Item #5

10

## AT&amp;T

## INTER-OFFICE MEMORANDUM

Mr. Lobel,

I'm going to quit my job as of the 15th of this month unless something can be done about my job. I'm going crazy talking to rude customers all day without a chance to do anything else.

K. C. Jones

---

Chris,  
Send the following memo to Jones.  
Thanks,  
J.J.

To: Jones

From: J.J. Holloway

I am sorry to hear that you are unsatisfied with your position. Unfortunately, in this industry one must deal with all types of people. We are sorry to see you go.

Good luck in the future.

J.J. Holloway



Item #6

9

## AT&amp;T

## INTER-OFFICE MEMORANDUM

TO: R. J. Lobel

FROM: T. Phillips

SUBJECT: Personnel

Please let me have this form back at your earliest convenience. I've been looking over your people and I want to promote Joe Sutton to that Assistant Supervisor's opening and I need your signature.

T.

I recommend the promotion of Joe Sutton to Assistant Supervisor.

---

Division Manager

Customer Relations

---

Chris,

Send the following memo to Phillips.

J.J.

To: T. Phillips

From: J.J. Holloway

T. - Why would you want to promote Sutton? He has a terrible record and is a poor worker. Please call my office manager to set up a time to discuss promotion.

Thanks, J.J. Holloway

Item #7

1

## AT&amp;T

## INTER-OFFICE MEMORANDUM

## PROFICIENCY RATING OF NONMANAGEMENT PERSONNEL

<u>NAME</u>	<u>RATING</u>
Rollins	Poor
Porter	Excellent
Jones	Good
Reynolds	Good
Ford	Poor
Sutton	Poor
Landry	Excellent
Roberts	Excellent
Calhoun	Good
Edwards	Poor
Daly	Good
Simpson	Excellent

Ratings are either Poor, Good, or Excellent.

---

*Used this item for items #1 and #6.*

Item #8

2

## AT&amp;T

## INTER-OFFICE MEMORANDUM

September 7, 1993

TO ALL SUPERVISORS

I would like to discuss proficiency ratings of your nonmanagement personnel next week. Please prepare explanations for those personnel rated poor and discuss development plans with me.

M. K. Thomas

---

To plan the meeting with Thomas I will:  
Talk to T. Phillips about how he explains  
the poor performance of some of his employees.  
I will also ask him what he does to try to improve  
their performance.

Item #9

4

## AT&amp;T

## INTER-OFFICE MEMORANDUM

TO ALL NONMANAGEMENT PERSONNEL

No more coffee breaks until further notice. Anybody caught leaving early or going on break will be written-up.

JJ.

R. J. Lobel

*Do you want this sent out with  
your signature?*

*Chris*

---

*Chris,*

*Please do not send out this memo now. I  
will assess the situation first myself.*

*JJ.*

Item #10

5

## AT&amp;T

## INTER-OFFICE MEMORANDUM

September 6, 1993

TO: T. Phillips

E. D. Smith

R. J. Lobel

Please keep an hourly record of your people for the month of September on the new IBM cards. Failure to do this will result in my bringing this to the attention of Mr. Thomas.

Donnelly

---

When I return, I will personally write a letter to Donnelly. In this letter I will introduce myself as Lobel's replacement and I will say that I did not appreciate the threatening tone in his memo to me.

**Appendix B**  
**Instructions for Participant and Biographical Information**

## **Instructions for Participant**

You are to take the role of an upper-level manager in the AT&T Long-Distance telephone company. Recently, a middle-level management position has become available and it is your task to evaluate lower-level managers who have applied for the position. It is company policy to hire from within so the current lower-level managers are the only applicants. You will be given biographical information about the manager and will base your performance ratings on 1) an in-basket task completed by the manager and 2) a self-appraisal form filled out by the lower-level manager. (The in-basket task will be described in more detail later, but it basically involves sorting through and prioritizing memos, letters, notes, etc. and deciding what action is best.)

Information from these two sources will guide how you rate the manager in the final performance appraisal form. These final performance ratings will be the information used in determining which lower-level manager should be promoted to middle-level manager.

### **Summary of Participant's Tasks:**

1. Your first step in making the performance ratings is to evaluate the manager's responses to the in-basket task that he/she has already completed.
2. When you are done rating the manager's performance on the in-basket you will receive the manager's self-appraisal of his/her performance in general over the past six months.
3. With both of these sources of information you will complete a performance appraisal form summing up your impressions of the manager and using these ratings for the final promotion decision. The following contains biographical information about the manager you are about to evaluate.

## **Biographical Information**

1. Name: **Karen Mitchell**
2. Sex: **Female**
3. Date of Birth: **1/7/58**
4. Year Graduated from High School: **1976**
5. Post-Secondary School Attended:  
**George Washington University, Washington D.C. 1976-1980**
6. # of years with AT&T: **7.5 years**
7. Marital Status: **Married**
8. Number of Children: **2 children**



## **Rating the In-Basket Task**

The following is the in-basket task presented to the lower-level manager for completion. The first page describes the instructions **given to the manager**, followed by the memos that have the **manager's responses** to them on the **bottom half** of the page. You will be given the **best** response to help you decide the appropriate rating for the manager's response.

The following two pages are the instructions given to the manager before beginning the in-basket task. An organizational chart and a calendar are also included which was necessary for some of the manager's decisions about what actions to take and with whom to communicate. Refer to the organizational chart to familiarize yourself with the characters involved in the in-basket task. You may also use the organizational chart and calendar to evaluate some of the manager's responses.

**The following is the situation the manager was placed in before beginning the in-basket task. Remember: You will not be placed in the following situation - you will be evaluating the responses the manager has given.**

### Manager's In-Basket Task

Although the situation in this exercise is artificial, with some unrealistic restrictions on the time allowed you and the methods and activities you can employ in communicating with others, the problems you will deal with are real, having been obtained from actual situations managers have encountered on their jobs.

You are J. J. Holloway, Division Manager of Customer Relations for AT&T. Your company provides long-distance service for people all across the United States as well as foreign countries. You have just been promoted to this new job because your predecessor, R. J. Lobel, died suddenly of a heart attack on Friday evening. You were notified of your new appointment on Friday, at 8:00 p.m. Because of the need to take care of some last-minute details in your old job, you could not come to your new job until today, which is Sunday, September 12. You have to leave your office promptly in one-half hour to catch a plane for an important meeting which you had committed yourself to attend before you learned of your appointment to your present position. You will be very busy during the meeting and **will not be able to take along anything to work on.** This meeting will keep you away both Monday and Tuesday. You are working on Sunday afternoon because you want to take care of anything that might need your attention before Wednesday, the 15th.

You have an organizational chart, a calendar, and an in-basket. The in-basket contains the material your office manager has left on your desk for your attention - letters,

memos, reports, etc. You have no access to anyone to help answer questions, your files are locked and your office manager has the key.

Everything you decide to do must be in writing. Space is provided for you on the bottom of each item to write down what you will do to handle the situation. Make memos to yourself about things you will want to do after you get back. Draft letters, if appropriate, for your office manager to prepare. Record (in the form of notes) what you will say to others on the phone or in person and what your intentions are as well as your actions. Sign papers if appropriate. Note agenda for meetings you may want to call. For purposes of identification, the items have been numbered but it is up to you to decide the order in which they should be handled. You must number the items in order of priority on the blank line in the right hand corner of each item.

**Appendix C**  
**Self-appraisal and Final Performance Appraisal**

**Self-Appraisal**

Circle the number of the rating that best describes your performance.

**Problem Solving:** Rate your performance in terms of effectiveness in solving problems.

1	2	3	4	5	6	7
Poor			Average			Exceptional

**Oral and Written Communication:** Rate your proficiency in written and oral communication.

1	2	3	4	5	6	7
Poor			Average			Exceptional

**Delegation of Responsibility:** Rate your effectiveness in delegating responsibility to your subordinates.

1	2	3	4	5	6	7
Poor			Average			Exceptional

**Sensitivity:** Rate how well you show consideration for the feelings and needs of others.

1	2	3	4	5	6	7
Poor			Average			Exceptional

**Rapport:** Rate the extent to which the relationship with your subordinates is harmonious.

1	2	3	4	5	6	7
Poor			Average			Exceptional

**Overall:** Rate your overall performance.

1	2	3	4	5	6	7
Poor			Average			Exceptional

### **Performance Appraisal**

Circle the number of the rating you feel is most appropriate.

**Problem Solving:** Rate the manager's performance regarding problem solving.

1	2	3	4	5	6	7
Poor			Average			Exceptional

**Oral and Written Communication:** Rate the manager in terms of the effectiveness of his/her oral and written communication.

1	2	3	4	5	6	7
Poor			Average			Exceptional

**Delegation of Responsibility:** Rate the manager's effectiveness in delegating responsibility to subordinates.

1	2	3	4	5	6	7
Poor			Average			Exceptional

**Sensitivity:** Rate how well the manager shows consideration for the feelings and needs of others.

1	2	3	4	5	6	7
Poor			Average			Exceptional

**Rapport:** Rate the extent to which the manager's relationship with his/her subordinate is harmonious.

1	2	3	4	5	6	7
Poor			Average			Exceptional

**Overall:** Rate the manager's overall performance.

1	2	3	4	5	6	7
Poor			Average			Exceptional

## Appendix D

### Questionnaires

## **Questionnaire #1**

**Read the following statements.**

**Circle the answer you agree with the most.**

1. **After** you saw the manager's self appraisal, you believed the overall performance was due to

- a. the time, effort, and/or energy used to carry out responsibilities.
- b. the demands of the job's requirements.
- c. the quality of workers that happened to be under the manager's supervision.
- d. the manager's know-how in coordinating all facets of the responsibilities to the department.

2. To what extent did the manager's self-appraisal influence your **final performance rating** ?

1  
NOT AT  
ALL

2  
SOMEWHAT

3  
A GREAT DEAL



## **Questionnaire #2**

The following questions ask you what you think your relationship with this manager **would** be like **if you were** his/her supervisor. Please read each question carefully and answer as appropriately as you can.

1. How well do you feel you would understand the manager's problems and needs?

1	2	3	4	5
Not at All	A Little	Moderately	Quite Well	Fully

2. How well do feel that you would recognize your subordinate's potential?

1	2	3	4	5
Not at All	A Little	Moderately	Quite Well	Fully

3. Regardless of how much formal authority is built into your position, how personally inclined would you be to use your power to help the manager solve problems in his/her work?

1	2	3	4	5
Not Inclined at All	Somewhat Inclined	Moderately Inclined	Very Inclined	Extremely Inclined

4. Again, regardless of how much formal authority is built into your position, what are the chances that you would "bail out" the manager at your expense if he/she really needed it?

1	2	3	4	5
No Chance	Small Chance	Might or Might Not	Probably Would	Certainly Would

## Questionnaire #2 continued

5. Would the manager know where he/she stood with you . . . that is, would the manager usually know how satisfied you would be with him or her?

1	2	3	4	5
Rarely	Seldom	Sometimes	Usually	Almost Always

6. How would you characterize the relationship you would have with the manager?

1	2	3	4	5
Extremely Ineffective	Worse than Average	Average	Better than Average	Extremely Effective

7. How much confidence would you have in the manager to defend and justify his/her decisions if he/she were not present to do so?

1	2	3	4	5
None at All	A Little	A Moderate Amount	Very Much	An Extreme Amount

### **Questionnaire #3**

1. Overall, how did the **manager rate him/herself**?

1	2	3	4	5	6	7
Poor			Average			Exceptional

2. To what extent was the manager's self-appraisal different from **your rating** on the **in-basket task**?

1	2	3	4	5	6	7
Not at all Different			Somewhat Different			Extremely Different

3. Circle the **sex of the manager** you rated.

Female	Male	Don't Know
--------	------	------------

4. Please indicate **your** sex.

Female	Male
--------	------

## **Questionnaire #4**

**Instructions:** The following items are an attempt to assess the attitudes people have about women in business. The best answer to each statement is your personal opinion. The statements cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others. Whether you agree or disagree with any statement, you can be sure that many people feel the same way you do.

Using the numbers from 1 to 7 on the rating scale given below, mark your personal opinion about each statement in the blank that immediately precedes it. Remember, give your personal opinion according to how much you agree or disagree with each item. Please respond to all 21 items. Thank you.

### **Rating Scale**

1 = Strongly Disagree

2 = Disagree

3 = Slightly Disagree

4 = Neither Disagree nor Agree

5 = Slightly Agree

6 = Agree

7 = Strongly Agree

## p. 2 Questionnaire #4

- \_\_\_ 1. It is less desirable for women than men to have a job that requires responsibility.
- \_\_\_ 2. Women have the objectivity required to evaluate business situations properly.
- \_\_\_ 3. Challenging work is more important to men than it is to women.
- \_\_\_ 4. Men and women should be given equal opportunity for participation in management training programs.
- \_\_\_ 5. Women have the capability to acquire the necessary skills to be successful managers.
- \_\_\_ 6. On the average, women managers are less capable of contributing to an organization's overall goals than are men.
- \_\_\_ 7. It is not acceptable for women to assume leadership roles as often as men.
- \_\_\_ 8. The business community should someday accept women in key managerial positions.
- \_\_\_ 9. Society should regard work by female managers as valuable as work by male managers.
- \_\_\_ 10. It is acceptable for women to compete with men for top executive positions.
- \_\_\_ 11. The possibility of pregnancy does not make women less desirable employees than men.
- \_\_\_ 12. Women would no more allow their emotions to influence their managerial behavior than would men.
- \_\_\_ 13. Problems associated with menstruation should not make women less desirable than men as employees.
- \_\_\_ 14. To be a successful executive, a woman does not have to sacrifice some of her femininity.

## p.3 Questionnaire #4

- \_\_\_\_ 15. On the average, a woman who stays at home all the time with her children is a better mother than a women who works outside the home at least half-time.
- \_\_\_\_ 16. Women are less capable of learning mathematical and mechanical skills than are men.
- \_\_\_\_ 17. Women are not ambitious enough to be successful in the business world.
- \_\_\_\_ 18. Women cannot be assertive in business situations that demand it.
- \_\_\_\_ 19. Women possess the self-confidence required of a good leader.
- \_\_\_\_ 20. Women are not competitive enough to be successful in the business world.
- \_\_\_\_ 21. Women cannot be aggressive in business situations that demand it.

## Appendix E Tables

TABLE 1 Descriptive Statistics for All Relevant Variables

Variable	Mean	Standard Deviation	Min	Max	Reliability
Overall In-Basket Score (IB)	4.272	.716	3	5	
Problem Solving	4.317	1.060	2	7	
Communication Skills	4.228	1.214	1	7	
Delegation of Responsibility	4.394	1.376	1	7	
Sensitivity	3.544	1.427	1	7	
Rapport	3.961	1.216	1	7	
Overall Performance	4.201	.968	1	6	
Influence (INFL)	1.767	.608	1	3	
Negotiating Latitude Scale (NL)	3.426	.418	2.14	4.43	.6253
Women as Managers Scale (WAMS)	3.426	.418	2.43	7	.9075
Manager's Self-Rating (MSR)	4	2.182	1	7	
Perceived Level of Discrepancy (DISC)	4.105	1.362	1	7	



TABLE 2  
Descriptive Statistics - Attributions

ATTRIBUTION	FREQUENCIES	PERCENTAGE
Ability	73	41
Effort	49	28
TOTAL INTERNAL	122	69
Luck	14	8
Task Difficulty	41	23
TOTAL EXTERNAL	55	31

TABLE 3  
Subject's Perception of the Sex of the Manager (MSEX) by Actual Sex of the Manager (SEX)

SEX	MSEX		
	Female	Male	Unknown
Male	0	56	4
Female	57	0	3
No sex information	2	25	33
Total	59	81	40

TABLE 4  
Extent of Influence by Sex of Manager (MGRSEX) and Discrepancy (DISCREP)  
Conditions and Cell Means

Manager's Sex	Discrepancy Condition		
	Positive	No Discrepancy	Negative
Male	1.55	1.7	1.85
No Sex Information	1.75	1.6	1.85
Female	1.55	1.95	2.10
Source	Sum of Squares	df	F ratio
MGRSEX (A)	.933	2	2.8
DISCREP (B)	3.03	2	4.29*
<i>A X B</i>	1.73	4	1.23

\*  $p < .05$

TABLE 5  
Frequencies of Internal and External Attributions in Each Condition

CONDITION	Internal Attributions	Expected Frequencies	Sign.	External Attributions	Expected Frequencies	Sign.
Male/Positive*	15	13.78	.3659	5	6.21	.3659
Male/ Negative*	16	13.79	.1914	4	6.21	.1914
Female/ Positive*	9	13.79	.0163	11	6.21	.0163
Female/ Negative*	13	13.79	.4321	7	6.21	.4321
Male/ No Discrepancy	14	12.4	.2854	4	5.59	.2854
Female/ No Discrepancy	17	13.79	.0770	3	6.21	.0770
No Sex/ Positive	16	13.79	.1914	4	6.21	.1914
No Sex/ No Discrepancy	13	13.10	.5735	6	5.90	.5735
No Sex/ Negative	9	13.79	.0163	11	6.21	.0163

\* Hypothesized Cells

TABLE 6  
Relationship Between Mean Performance Ratings and Attributions for Subjects in the  
Male Manager/Positive Discrepancy Condition  
 Low = 1-4 High = 5-7

Attributions	Performance Ratings		Row Total	Chi-Square	
	Low	High		Pearson	
Internal	3	12	15	Continuity	.0000
External	1	4	5	Correction	
Column Total	4	16	20		

Note. df = 1

TABLE 7

Relationship Between Mean Performance Ratings and Attributions for Subjects in the Male Manager/Negative Discrepancy Condition

Low = 1-4 High = 5-7

Attributions	Performance Ratings		Row Total	Chi-Square	
	Low	High		Pearson	
Internal	11	5	16	Continuity Correction	1.67 .4167
External	4	0	4		
Column Total	15	5	20		

Note. df = 1

TABLE 8

Relationship Between Mean Performance Ratings and Attributions for Subjects in the Female Manager/ Positive Discrepancy Condition

Low = 1-4 High = 5-7

	Performance Ratings		Row Total	Chi-Square	
	Low	High		Pearson	
Internal	1	8	9	Continuity Correction	.6595 1.00
External	2	9	11		
Column Total	3	17	20		

Note. df = 1

TABLE 9  
Relationship Between Mean Performance Ratings and Attributions for Subjects in the  
Female Manager/ Negative Discrepancy Condition  
 Low = 1-4 High = 5-7

Attributions	Performance Ratings		Row Total	Chi-Square	
	Low	High		Pearson	
Internal	12	1	13	Continuity	.015
External	3	4	7	Correction	.058
Column Total	15	5	20		

Note. df = 1.



TABLE 10

Means of Performance Ratings for Subjects in the Male/Positive, Female/Positive, Male Negative, and Female Negative Conditions

Performance Dimension	Condition			
	Male/Positive <sup>a</sup>	Female/Positive <sup>b</sup>	Male/Negative <sup>c</sup>	Female/Negative <sup>d</sup>
Problem Solving	5.05	5.20	3.55	4.05
Communication Skills	4.60	4.65	3.95	3.90
Delegation of Responsibility	5.60	5.45	3.05	3.90
Sensitivity	4.15	4.35	2.70	3.20
Rapport	4.85	5.15	3.50	3.80
Overall	4.75	4.85	3.50	3.84

<sup>a</sup>  $\bar{N} = 20$

<sup>b</sup>  $\bar{N} = 20$

<sup>c</sup>  $\bar{N} = 20$

<sup>d</sup>  $\bar{N} = 20$

TABLE 11

Relationship Between Mean Negotiating Latitude Score and Overall Performance Rating by Actual Sex of Manager

Variable	Beta	R-Square	R <sup>2</sup> Change
Negotiating Latitude (NL)	.476***	.23	---
Sex of Manager (S1) (S2)	.118 .102	.24	.01
NL X S1	-.03	.24	.00
NL X S2	-.14		

\*\*\* p < .001

**TABLE 12**  
Relationship Between Mean Women as Managers Scale Score and Overall Performance  
Rating by Sex of Manager

Variable	Beta	R-Square	R <sup>2</sup> Change
Women as Managers Scale (WAMS)	-.05	.002	---
Sex of Manager (S1) (S2)	.02 .08	.008	.006
WAMS X S1	-.18	.01	.004
WAMS X S2	-.53		

## **PAIGE PAULA PORTER**

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### **OFFICE ADDRESS**

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### **EDUCATION**

**Master of Science Degree in Psychology**, Expected May 1994  
Concentration: Industrial/Organizational Psychology  
Virginia Polytechnic Institute and State University (Virginia Tech)  
Blacksburg, Virginia

**Thesis: Effect of Discrepant Information and Sex of Manager on Attributions and Performance Ratings**

**Bachelor of Arts Degree in Psychology Education; Minor: History**, May 1992.  
University of Delaware, Newark, Delaware  
Graduated Magna Cum Laude with a 3.89 average on a 4.0 scale

### **HONORS/AFFILIATIONS**

Student Member of the American Psychological Association  
Student Member of the Society for Industrial-Organizational Psychology  
Phi Beta Kappa Honor Society (Spring 1992).  
Phi Kappa Phi Honor Society (Spring 1991).  
Psi Chi National Psychology Honor Society (Fall 1990).  
Golden Key National Honor Society (Fall 1990).  
Dean's List (eight semesters).  
Academic Incentive Scholarship (Fall 1991 - Spring 1992).  
Treasurer, Psi Chi National Honor Society in Psychology (Fall 1991).  
Congressional Youth Leadership Conference Participant (June 1990).  
Undergraduate Research Grant from University Honors Program (Fall 1991).  
Western Branch YMCA's School's Out Program Volunteer (January 1990).

## RESEARCH EXPERIENCE

Thesis Research - Roseanne J. Foti, Ph.D (Chair), Virginia Tech  
Designed and implemented a laboratory study analyzing the effect of discrepant information and sex of manager on performance ratings and attributions made for performance.

Research Assistant - Robert Eisenberger, Ph.D, University of Delaware  
Assisted graduate students and faculty member in entering and analyzing data using SPSS-X.

## WORK EXPERIENCE

Academic Advisor, Virginia Tech, Blacksburg, Virginia.  
Assist undergraduate students in choosing curricula and courses, give presentations to students, write articles for newsletters, develop surveys and analyze results, developed advising manual. (August 1993 - present).

Graduate Teaching Assistant, Virginia Tech, Blacksburg, Virginia.  
Lab instructor for Introduction to Psychology course, led in-class discussions, graded quizzes and essays, held office hours. (August 1992 - May 1993).

Student Teacher, Brandywine High School, Wilmington, Delaware  
Planned and implemented lesson plans for high school seniors in peer facilitator training, psychology, and anthropology courses. (February 1992 - May 1992).

Pharmacy Technician, Happy Harry's Drugstore, Wilmington, Delaware  
Filled prescriptions, processed insurance plans, ran cash register, and answered phones. Completed accreditation program. (June 1986 - February 1992).

Tutor, University of Delaware, Newark, Delaware  
Tutored undergraduate students in psychology, statistics, and history. (February 1990 - December 1991).

Camp Counselor, Western Branch YMCA, Newark, Delaware.  
Coordinated and directed activities of the day camp. Involved close supervision of children ranging in age from 5 to 12. (June 1991 - August 1991).

**RELEVANT COURSEWORK**

Organizational Staffing  
Industrial Psychology I and II  
Organizational Psychology I and II  
Advanced Psychometric Theory  
Quantitative Topics in Applied Psychology  
Research Methods  
General Statistics  
Psychological Measurement  
Cognitive Psychology

**COMPUTER SKILLS:**

Experience using MS-DOS, SPSS-X, SAS, Microsoft Windows, Word for Windows, PC's and Macintosh computers.

Paige P. Porter