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By Namrita Bendapudi

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For the degree of Master of Science

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Jane R. Williams
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John T. Hazer

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THE EFFECT OF THE RATER'S IMPLICIT PERSON THEORY ON THE PERFORMANCE EVALUATIONS OF MALE AND FEMALE MANAGERS

A Thesis

Submitted to the Faculty

of

Purdue University

by

Namrita Bendapudi

In Partial Fulfillment of the

Requirements for the Degree

of

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For my grandmothers, Bendapudi Jayalakshmi and T V Parvathamma,

of whom I only have the most beautiful memories.

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ABSTRACT

Bendapudi, Namrita. M.S., Purdue University, August 2012. The Effect of the Rater's Implicit Person Theory on the Performance Evaluations of Male and Female Managers. Major Professor: Jane Williams.

Previous research has found that the clarity of information provided to raters about women managers' performance affects ratings of their competence, likeability, and overall evaluation. The current study sought to contribute to this literature by examining whether individual differences of raters can explain the reason for differential performance evaluations of male and female managers, despite them both performing equally. For this purpose, the current research extended the findings of Heilman and colleagues by replicating their methodology while introducing a moderator variable, the rater's Implicit Person Theory (IPT). The IPT differentiates people into either entity theorists (that is, those who believe that behavior is trait-based and therefore fixed and stable) and incremental theorists (those who believe that behavior is situationally mediated and hence, changeable). Specifically, it was proposed that the effects found in the previous study would be stronger when the rater possessed an entity theory as opposed to an incremental theory. In doing so, this research attempted to provide an understanding of why male and female managers might be given different ratings, all other things being equal. Analyses revealed results that were consistent with, as well as some that were quite inconsistent with, previous findings. Rater IPT was found to have a significant effect on ratings provided by male participants but not those of female participants. Other findings and implications are discussed and limitations and future research directions are stated.

CHAPTER 1. INTRODUCTION

Although women make up about 47% of the workforce, there are few women in executive-level positions in organizations and only 15 female CEOs in the Fortune 500 companies (Catalyst, 2009). The Catalyst (2009) also reports that although this number has been slowly increasing over the past decade, currently only 3% of the total number of CEOs are women. This underrepresentation of women in the senior ranks of management has been attributed to many obstacles that women face in the course of their careers. Obstacles can be both *internal,* such as personality factors (Kaufman, Isaken, & Lauer, 1996) and stereotype threat (Bergeron, Block, & Echtenkamp, 2006), and *external*, such as denial of access to developmental opportunities and challenging assignments, lack of support from colleagues, supervisors and management (Ohlott, Ruderman, & McCauley, 1994) and difficulty in forming mentoring relationships (Noe, 1988). In particular, the effects of these barriers have been found to be more profound when the jobs are managerial in nature or leadership based (Ohlott et al., 1994). These hindrances might prevent women from obtaining the required line management experience that is so essential for advancing through the ranks in an organization, further contributing to the disproportionate number of women in executive-level positions (Lyness & Heilman, 2006; Wellington, Kropf, & Gerkovich, 2003).

Since the time that women have entered the workforce, gender bias has been found to be prevalent in most areas of organizations. Particularly, the discrimination based on gender that exists in performance evaluations makes it quite difficult for women to occupy senior positions, and therefore, it has been a significant area of study. Although there has been a considerable amount of research done in this area (e.g., Bauer & Baltes, 2002; Bowen, Swim, & Jacobs, 2000), the current study aims to contribute to the literature by examining whether individual differences of raters can explain the reason for

differential performance evaluations of male and female managers, despite them both performing equally. For this purpose, the methodology of Heilman, Wallen, Fuchs, & Tamkin's (2004) study was replicated while introducing a moderator variable, the rater's Implicit Person Theory (IPT). The moderating effects of rater IPT might help in understanding the results obtained by Heilman and colleagues further. Specifically, Heilman and colleagues found that factors other than the actual performance itself, such as amount of information provided to raters and the gender of the ratee, influenced the evaluations of male and female managers. This study incorporates the framework of IPT to examine whether people evaluate the target differently based on the kind of IPT they hold, given the same amount of information about a target person. IPT classifies people into entity and incremental theorists and describes how holding one theory or the other impacts the way individuals perceive behavior, as well as how they make assumptions about themselves and others' behavior (Chiu, Hong, & Dweck, 1997; Dweck, Chiu, & Hong, 1995; Plaks, Stroessner, Dweck, & Sherman, 2001). The fundamental difference between the two kinds of theorists is that entity theorists believe that traits are fixed and non-malleable, while incremental theorists believe that traits are malleable and can be changed and developed over time (Chiu et al., 1997; Dweck et al., 1995; Levy, Stroessner, & Dweck, 1998; Plaks et al., 2001). Although, the IPT has been previously studied by researchers in the domain of stereotype formation and endorsement (e.g., Levy et al., 1998 and Plaks et al., 2001), IPT has not been used as such to explain the occurrence of discrimination based on gender stereotypes in the workplace.

1.1 Previous Research

Stereotypes

Stereotypes are a kind of schemata that consist of categories and their associated prototypes (Feldman, 1981) and are formed from a set of characteristics related to personal attributes, such as gender, race and age (Kaufmann et al., 1996; Krzystofiak,

Cardy, & Newman, 1988). They may develop in individuals due to cultural and situational factors as well as due to individual differences (Feldman, 1981; Hilton & von Hippel, 1996) that determine which elements of the incoming information are considered salient and attention worthy by the perceiver, and will be subsequently used in categorization of new incoming information. For example, expectations based on cultural backgrounds may result in perceivers holding certain prototypes of people in certain occupations. When a new target is perceived, the perceiver will categorize the incoming new information (and make subsequent assumptions) about the target based on already existing prototypes.

And while stereotypes may aid in the processing of large amounts of information through the process of categorization, they can also lead to negative outcomes, such as biases in evaluations (Feldman, 1981). This is because they are often used to make assumptions based on the existing categories and characteristics associated with them. Hence, it is very likely that raters of performance are no exception to using stereotypes for the easy understanding and processing of information. In such a case, individual information about the ratee is often over-ridden by that of the existing category and any subsequent processing of information is then made based on the characteristics of the category and not that of the individual person (Feldman, 1981).

Gender and Role Stereotypes

Of particular relevance to the current study are gender and role stereotypes, and the way in which these influence performance evaluations at the workplace. The commonly held stereotypes about men and women in general, as well as about managerial roles in particular, contribute to this stereotype-based bias that affects performance ratings.

Gender Stereotypes

Historically, the way men and women function has varied. Men have typically been the "providers" exhibiting *agentic* or masculine characteristics of toughness, forcefulness and achievement orientation (Heilman, 2001; Lyness & Heilman, 2006). Women have typically been "caregivers" – kind, nurturing and relationship oriented and are said to possess *communal* characteristics (Heilman, 2001; Lyness & Heilman, 2006). These behaviors have helped to reinforce the stereotypes typically associated with each gender, and these stereotypes have proven to be very consistent and uniformly held across both genders (Heilman, 2001).

Researchers have also identified that gender stereotypes have descriptive and prescriptive aspects (Heilman, 2001; Rudman & Glick, 2001). Essentially, descriptive aspects describe the *typical* characteristics of a woman or a man. Prescriptive stereotypes, on the other hand, indicate how a man or woman *ought* to be. People hold both types of stereotypes – if asked, they describe how each gender typically behaves, but they also hold expectations about how each gender *should* behave. Based on the prescriptive components of stereotypes, women and men are assigned certain social roles, and are expected to possess and display the attributes associated with the assigned role. Displaying behavior that is deviant from the expectations of the assigned roles is, more often than not, met with disapproval. The distinction between the descriptive and prescriptive stereotypes that are commonly held by people is important when understanding bias in the workplace, because of the ways in which gender stereotypes can conflict with role stereotypes.

Role Stereotypes

Research also suggests that people develop stereotypes for specific roles held by individuals. For instance, when considering the role of a manager, most individuals report images of an authoritative, directive, and in-control person; in other words, characteristics that are closely associated with men or *agentic* characteristics (Lyness & Heilman, 2006). The considerable overlap between attributes associated with men and those required of

successful managers has led to the "think manager-think male" phenomenon (Schein, 1973, 1975; Schein, Mueller, Lituchy, & Liu, 1996). Thus, the managerial role (as well as the leadership role) has been "sex-typed" as a masculine job. As with gender stereotypes, role stereotypes also have descriptive and prescriptive components that guide expectations about future behavior and may influence evaluations of current behavior.

The Backlash Effect

The existence of these stereotypes and the sex typing of specific jobs leads to role incongruity between the characteristics typically associated with managers and those associated with women (Eagly & Koenig, 2008). This perceived lack of fit between the attributes ascribed to women and the attributes ascribed to men, which are presumed to be essential for being successful in a masculine sex-typed job, results in expectations that women cannot perform as well as men on such jobs due to the supposed incongruence between the person and the job (i.e., the Lack of Fit Model; Heilman, 1983, 2001).

However, if a woman were to adopt masculine characteristics when working in a masculine sex-typed job in order to mitigate or soften the negative effects of communal expectations and to fit into the role of a manager, then she will be seen as displaying *agentic* characteristics (i.e., those characteristics typically associated with men like aggression, dominance, competitiveness, etc.). This behavior would not only be a direct violation of the prescriptive gender stereotype but also of the descriptive stereotype of the typical communal woman as well. In other words, this is perceived as a bad fit between what the agentic woman is like and what a woman should actually be like, even though there is congruence between the characteristics the woman possesses and those required to be successful in the particular masculine sex-typed job (Heilman, 2001). This lack of conformity to societal ideals or a standard referent results in economic and social sanctions and ultimately proves to be detrimental to a woman's career (Heilman, 2001; Rudman & Fairchild, 2004). This has been termed as the *backlash effect* (Rudman & Glick, 2001). Subsequently, it is no surprise then that women do not experience a similar kind of success in their careers as men, despite potentially being equally, if not more,

competent than their male counterparts. It must be kept in mind that the negative reactions occur not so much due to the performance levels of women as they occur due to the threat of dominance that agentic women pose to men in an otherwise traditionally hierarchical work setting (Rudman & Glick, 2001). Gender stereotypes create negative expectations about women's performance in male sex-typed roles that result in unfavorable evaluations (Heilman, 2001). Because of this, failure is considered an expected outcome for women, owing to the "lower" status they occupy in society (Foschi, 1996; Nivea & Gutek, 1980).

Bias in the Performance Appraisal Process

Performance ratings are used as an input or the basis for many personnel decisions such as selection and/or promotion (Farr & Levy, 2007). While the goal of organizations is to develop appraisal systems that result in fair and unbiased ratings, it is likely that the factors that influence perceptions described previously also have an equally strong impact on the performance appraisal rating process and actual performance itself.

Because performance evaluations are mostly judgmental processes, there is a considerable amount of subjectivity involved in them (Feldman, 1981; Heilman & Haynes, 2008). Often raters do not have concrete information on which to base evaluations. This is especially true in managerial- and executive-level positions where the nature of the work does not lend itself easily to objective measures of performance (Heilman, 2001). In the absence of definite information and the presence of increased ambiguity, there is a greater chance for cognitive distortion to occur resulting in biases and rater errors (Feldman, 1981; Nieva & Gutek, 1980). However, it is not the subjectivity alone that leads to distortions in ratings. In the case of evaluating men and women in managerial positions, researchers suggest that gender stereotypes may serve as the link that converts the subjectivity to discrimination (Cardy & Dobbins, 1986; Heilman & Haynes, 2008). Thus, performance evaluations may not be solely based on the performance of the ratee. Rather, research suggests that evaluations are also influenced by inferences drawn from personality traits, observed behaviors as well as non-

performance cues (such as sex, race etc.) (Krzystofiak et al., 1988; Nivea & Gutek, 1980).

In a series of studies, Heilman and colleagues (e.g., Heilman & Haynes, 2005; Heilman & Okimoto, 2007; Heilman et al., 2004) have examined factors, other than actual performance, that influence performance evaluations of women in male sex-typed jobs. One factor that is particularly relevant to the present study is how the type of information provided to raters impacts performance and likability ratings. Heilman et al. (2004) manipulated gender and clarity of information regarding the performance outcome associated with a task on a male gender-typed job and examined the effects on ratings. They found that when information about the performance outcome was ambiguous, women were rated as less competent and less achievement oriented compared to men but also less interpersonally hostile. There was no significant difference in likeability. However, when information about the outcome was clear (performance was clearly high), women were rated as competent and achievement oriented but at the same time they were also rated as less likeable and more interpersonally hostile. The differences in ratings were also found to be related to the gender type of the job. Specifically, female employees in male gender-typed jobs were found to be less likable and more interpersonally hostile than those in female gender-typed or neutral jobs. This negative impression was also found to affect career outcomes in the form of recommendations for salary and special opportunities as well as for preference as a boss.

Previous research has found that, in the absence of concrete information, there is a greater possibility of inconsistent information (e.g., success of a woman on a male gender-typed job) being debunked or discounted (Feldman, 1981) and the associated negative expectations leading to cognitive distortions and lowered ratings. However, where clear-cut information is available indicating a woman's competence and success on a male gender-typed job, she still faces problems that are not experienced by her male counterparts. That is, the information about a woman's success also indicates to the rater that the woman possesses agentic characteristics. Thus, these successful women may be rated as competent but would not be liked, given that their behavior is in violation of the prescriptive gender stereotype.

As evidenced above, it appears that evaluations are not based solely on performance. Instead, the observed behavior of the individual on the job *and* the inferences made from it play an important role in the overall evaluation. Even in the case when competence is "established," likeability of the target individual still tends to affect important personnel decisions. Cardy and Dobbins (1986) reported that liking is an integral part of performance evaluations and it is difficult to separate liking from the performance dimension. While this holds true for all employees, male and female, this performance-liking relationship is more salient for women due to the existence of the backlash effect, and more so in male gender-typed jobs. In the context of the present study, the agentic behavior of a woman in a male sex-typed job should result in an unfavorable evaluation and social disapproval/dislike due to the violation of either gender or role stereotypes.

The Social Context of the Performance Appraisal Process

Over the past two decades, researchers have shifted their focus to the social context of the performance appraisal process as reported by Levy and Williams (2004) who identified a number of distal and proximal variables in the environment and organization that affect rater and ratee behaviors and ultimately influence the appraisal process. Similarly, Murphy (2008) proposed a multi-factor model, in which he stated that among other factors, individual characteristics of the rater play an important role in performance ratings and evaluation. Based on the models formulated by Levy and Williams (2004) and Murphy (2008), this study proposed that an individual difference variable of the rater, Implicit Person Theory (IPT), has an influence on the ratings of behavior and performance of ratees. IPT is a plausible theoretical approach to examine in the current study because researchers have suggested that it may influence how individuals hold and endorse stereotypes (Levy et al., 1998; Plaks et al., 2001). This is because IPT serves as a framework through which the same information can be viewed yet seen differently by the perceivers depending on the IPT they hold. Recently, Heslin, Latham, and VandeWalle (2005) have also proposed that one's IPT may affect bias in

performance evaluations but they did not specifically look for gender differences in their study. The current research, then, is meant to integrate the work of Heilman and colleagues and the findings of Heslin et al. (2005) and others who have theorized about the role of IPT in endorsing differential treatment of people based on stereotypes. In the current study, the effects of gender stereotypes on performance ratings were examined along with investigating whether IPT plays a moderating role.

Implicit Person Theory

IPT describes an individual difference variable that characterizes s how perceivers might hold different views about behavior, even the same behavior. IPT identifies people as either *entity* or *incremental* theorists. The fundamental difference between the two is that entity theorists believe that traits are stable and fixed while incremental theorists believe that traits are can be changed and developed over time (Chiu et al., 1997; Dweck et al., 1995; Levy et al., 1998; Plaks et al., 2001). The IPT that an individual holds might influence the way this person perceives behavior, and makes assumptions about his or her behavior as well as about the behavior of others (Chiu et al., 1997; Dweck et al., 1995; Plaks et al., 2001).

Researchers report a number of basic differences between entity and incremental theorists. Entity theorists consider traits as the basic unit of analysis to understand human behavior, actions, and outcomes. These individuals focus on traits to make causal inferences about behavior, believe that trait relevant behavior is relatively stable over time and across situations, use knowledge of trait information to confidently make predictions about other traits relevant to the current behavior, and make predictions about future behavior as well. Entity theorists base their judgments on a relatively small sample of behavior, because they believe that traits initially displayed will continue to be displayed in the near and distant future and they expect relatively little variability in behavior over time (Chiu et al., 1997; Dweck et al., 1995; Levy et al., 1998; Plaks et al., 2001).

Incremental theorists, on the other hand, use process analysis to find causal explanations for behavior and focus more on psychological and behavioral mediating factors rather than traits (Chiu et al., 1997; Dweck et al., 1995; Levy et al., 1998; Plaks et al., 2001). These incremental theorists do not believe in the finality of outcomes because, according to them, an opportunity for change always exists. They anticipate that effort can lead to improvements in behavior. They do not make judgments based on traits, but rather give credence to situational factors that may have also affected behavior. This is to say that they do not believe that the present behavior that is displayed is necessarily indicative of future behavior. Therefore, the IPT that perceivers hold provides a framework by which they interpret and judge their own and others' behavior. Although the perceivers' implicit theories do not rigidly determine their own behavior, there is evidence that these theories do influence how perceivers view incoming information about others.

Researchers have studied the influence of IPT in the context of various human attributes. In the past, IPT has been used as a theoretical framework to account for differences in judgments of others' behaviors (e.g., Erdley & Dweck, 1993), social identities (e.g., Hong, Chan, Chiu, Wong, Hansen, Lee, Tong, & Fu, 2003), attributions about intelligence, ability and effort (e.g., Hong, Chiu, Dweck, Lin, & Wan, 1999) and so forth. In the context of work, Heslin and colleagues have done a considerable amount of research on the effect of the rater/manager's IPT on various aspects of the organization, namely, performance improvement, coaching behaviors, procedural justice, and goal orientation. Particularly, they found that the incrementalism of managers was positively related to the extent to which they coached their employees (Heslin, VandeWalle, & Latham, 2006), to employees' perceptions of managers having provided a procedurally fair appraisal process (Heslin & VandeWalle, 2009), and a manager's ability to recognize a change or improvement in performance (Heslin, Latham, & VandeWalle, 2005).

Implicit Person Theory and Stereotypes

The differential processing of incoming information by entity and incremental theorists could be a possible explanation for the endorsement and persistence of stereotypes (Levy et al., 1998). This is evident in the emphasis on traits vs. process analyses that leads entity and incremental theorists to differentiate between what elements of the incoming information they consider worthy of their attention. In separate studies, Levy et al. (1998) and Plaks et al. (2001) found distinct differences in the way entity and incremental theorists process incoming information. For instance, entity theorists evaluate incoming information with either a positive or a negative evaluative tag. This categorizing helps them in coding information to interpret other behaviors later. Entity theorists focus on inferring traits leading them to pay attention to consistent information rather than inconsistent information or irrelevant information. Their trait expectancy makes them more receptive to expectancy-confirming information rather than expectancy-disconfirming information. This indicates that they are also less likely to adjust their expectancy when faced with disconfirming information. For example, if people hold a certain set of beliefs regarding a person of a particular race, they will only pay attention to behaviors or characteristics of the target person that are consistent with the stereotypical expectations associated with that particular race, and ignore those attributes that disconfirm the stereotype. This leads them to endorse and agree with existing stereotypes and hold onto those beliefs more rigidly. Inconsistent information proves to be a challenge to their existing beliefs. Therefore, they may show an avoidance tendency towards inconsistent information and may ignore it by selectively paying attention only to consistent information. If information cannot be ignored, they are more likely to debunk or discount it. They consider inconsistent information as random "noise" and therefore uninformative, as it disconfirms their existing beliefs and suggests that their basic beliefs about people and personalities are incorrect.

On the other hand, incremental theorists pay equal if not more attention to both inconsistent and consistent information (Plaks et al., 2001). A mix of both does not violate but instead supports their belief about the changeability of behavior. They may even seek out disconfirming information because they regard it as attention worthy. They

view stereotypes as not entirely true and attribute the target's behavior to the influence of social factors. They, therefore, do not evaluate, encode, and categorize incoming information based on traits but do so based on psychological and behavioral mediators such as "motivation, emotional state, construal of the situation" (Plaks et al., 2007, p. 878). For example, when entity theorists observe a female manager helping a coworker, they may attribute this behavior to the communal trait of being "nice" that is typically associated with women. Incremental theorists, on the other hand, would look at situational factors and/or the psychological state of the manager before making a causal inference for the behavior. They may assume that the co-worker needed help (contextual mediator) or this specific manager was motivated by something to help this employee, rather than making stereotypical attributions.

In sum, the differences that exist between entity and incremental theorists result in the differential processing of incoming information by perceivers and in the adoption of various strategies for processing this information. There are three strategies that are followed during processing of discrepant information by perceivers: a) ignore or overlook the inconsistent information, b) debunk or discount it, or c) recategorize sufficiently inconsistent information. The option the perceiver chooses depends not only on individual differences but also on cultural and societal norms. These differences and norms determine which characteristics will be used in categorization, all other things being equal (Feldman, 1981). Comparing the findings of Levy et al. (1998) and Plaks et al. (2001) about the differential processing of information by entity and incremental theorists with the consequences of the backlash effect as outlined by Heilman (2001), a parallel can be drawn between the way entity theorists process inconsistent information and the way backlash occurs. Heilman (2001) proposed that consequences of the backlash effect include (a) devaluing success and denying credit for the success, which is the same as ignoring or debunking and discounting a female manager's successful performance (inconsistent information) by entity theorists, or (b) acknowledging competence but at the same time disapproving, or not liking, the behavior (indicated by information inconsistent with the existing stereotype), which is similar to recategorization of inconsistent information by entity raters. Therefore, there exists a parallel between the

outcomes from the methods of information processing used by entity theorists (as reported by Levy et al., 1998; Plaks et al., 2001) and the outcomes of the backlash effect (Heilman, 2001; Feldman, 1981). The findings of these various studies have many implications for understanding the effects of gender stereotyping in the performance appraisal process, which is the focus of the present study.

Heilman and colleagues found that in order to be considered competent, women are required to display agentic characteristics, i.e., exhibit certain traits and behave in a way that is inconsistent with the communal stereotype of a woman. However, taking into consideration the findings associated with entity theorists' processing of information, if a female managers' performance that was truly on par with that of an agentic man were evaluated by an entity rater, evidence of the female's inconsistent behavior would need to be very concrete and overwhelming or would probably be simply overlooked or discounted/debunked and attributed to external causes. This would probably result in lower ratings of performance but higher likability ratings as was found by Heilman et al. (2004). The current study predicts that in the event that this inconsistent information is so concrete and overwhelming that it cannot be ignored, the female manager would be rated as competent but will not be liked because she violated the communal stereotype of a woman by behaving in an agentic way and will be subsequently evaluated unfavorably. However, if the rater holds an incremental theory, ratings would be more reflective of the actual performance, regardless of whether the female managers behave agentically or communally, and whether the information provided is ambiguous or concrete.

1.2 Current Study and Hypotheses

While making job performance evaluations, raters recall two types of information, performance relevant and performance irrelevant information (Feldman, 1981). Both types of information are partially determined by the stereotype that represents the category to which the stimulus belongs, and by which stereotype is readily available for recall. In the absence of concrete information, people make use of trait information to make inferences about behavior (Krzystofiak et al., 1988). These inferences are made on

the basis of "job-related" behavior and also on the basis of other traits and general behavior. That is, inferences are made about behaviors from performance-relevant as well as performance-irrelevant information. These inferences, in turn, influence the categorization and prototype matching that takes place and determines the direction of attention, organization, and subsequent recall of information. Stereotypes are frequently employed in processing information, since they are convenient to use and reduce demands on the perceiver and help manage large amounts of information (Feldman, 1981; Powell, Butterfield, & Parent, 2002). As Feldman (1981) observed, the information that supervisors have about their subordinates' performance is often not concrete and at best "fragmentary." Therefore, the absence or ambiguity of ratees' performance information will influence the extent to which their evaluation is based on true performance, and the extent to which it is based on other dimensions, non-performance or otherwise.

In the context of the current study, it was predicted that a rater's IPT would determine the role that gender stereotypes play in the information processing stage while making evaluations. In addition, it was anticipated that the amount of information given would also bring out differences in the way entity and incremental theorists evaluate agentic and communal men and women. As stated previously, using the methodology employed by Heilman et al. (2004) with slight modifications, the present study examined how entity and incremental theorists rate target persons (male and female managers) on their competence, likeability and overall impression of their ability as a manager. Performance was kept constant across experimental conditions. However, the amount of information provided about the quality of the performance of the male and female managers was manipulated in the different conditions. Based on the literature and the theory, it is assumed that the IPT of the raters as well as the type/clarity of information provided about the performance of the target person will moderate the backlash effect and that this effect will be stronger for entity theorists than incremental theorists such that there will be differences in entity theorists' ratings of female managers based on whether the information provided about the female managers is concrete versus ambiguous. In addition, in the event that the female manager is not considered competent or not

considered likeable (consistent with the strong link that likeability has with a favorable overall impression, Cardy & Dobbins, 1986), female managers will not be rated favorably overall by entity theorists, regardless of the clarity of information provided about them. However, no such differences arise when incremental theorists rate female managers, regardless of the clarity of information that is provided to them about the female managers' performance. Therefore, the following is hypothesized.

Hypothesis 1: Competence

1a: There will be a main effect for manager gender on ratings of competence. Specifically, male managers will be rated as higher on competence than female managers.
1b: There will be a main effect for information provided on ratings of competence. Specifically, managers about whom information provided was concrete will be rated as more competent than managers about whom the information provided was ambiguous.
1c: There will be a significant interaction between manager gender, type of information, and rater IPT on ratings of competence. Specifically, when the information is concrete, male and female managers will be rated as competent by both entity and incremental theorists. However, when information is ambiguous, female managers will be rated as competent only by incremental theorists but not by entity theorists, while male managers will be rated as competent by both types of theorists.

Hypothesis 2: Likeability

2a: There will be a main effect for manager gender on likeability ratings. Specifically, male managers will be rated as higher on likeability than female managers.
2b: There will be a main effect for information provided on likeability ratings. Specifically, managers about whom information provided was concrete will be rated as more likeable than managers about whom the information provided was ambiguous.
2c: There will be a significant interaction between manager gender, type of information, and rater IPT on ratings of likeability. Specifically, when the information provided to

raters about the managers' performance is ambiguous, male and female managers will be rated as likeable by both entity and incremental theorists. However, when information provided to raters about the managers' performance is concrete, female managers will be rated as likeable only by incremental theorists but not by entity theorists, while male managers will be rated as likeable by both types of theorists.

Hypothesis 3: Overall Evaluation

3a: There will be a main effect for manager gender on overall evaluations. Specifically, male managers will be rated as higher on overall evaluation than female managers.

3b: There will be a main effect for information provided on overall evaluations. Specifically, managers about whom information provided was concrete will be rated more favorably overall than managers about whom the information provided was ambiguous.

3c**:** There will be a significant interaction between manager gender and rater IPT on the overall evaluations. Specifically, female managers will be rated favorably overall by incremental theorists and unfavorably overall by entity theorists and male managers will be rated favorably overall by both entity and incremental theorists.

CHAPTER 2. METHODS

2.1 Participants

The participants were undergraduates who were recruited from a large Midwestern University via Experimetrix and were offered research credit for participating in the study. All participants were at least 18 years old at the time of the study. The total number of participants in the sample was 304. The major hypotheses were examined using the 92% of individuals who responded correctly to the second manipulation check item by indicating that they thought that this job was mostly held by men. This included 272 of the original 304 participants, and the reduced sample of 272 was subsequently used for testing the hypotheses. There were 205 (75%) females and 67 males (25%). There was N=7 missing data in this sample so the analyses were conducted on a sample of 265 participants which included 198 females (75%) and 67 males (25%). This distribution was very similar to that of the original sample of the current study (N = 304). The mean age of the participants was 23.21 years (*SD* = 5.52), and they had, on average, worked for 7.30 years and had 1.23 years of managerial experience.

2.2 Design

In this study, a between subjects experimental design was used in which each subject was exposed to manipulations of two different levels of two independent variables: sex of stimulus person (male or female) and clarity of performance outcome (concrete or ambiguous). In addition, participants were also required to complete the IPT measure in order to determine whether they were entity or incremental theorists. Individuals reviewed either a male or a female target with either concrete or ambiguous

information provided about their performance. Participants were assigned to one of the four conditions randomly by the computer.

2.3 Experimental Manipulation

Sex of Stimulus Person

Each participant was exposed to either a male or a female target person. Information about sex was manipulated by names given in the background information.

Clarity of Information about Quality of Performance of Target Person

The clarity of information given about the quality of performance of the target person was manipulated. There were two conditions – ambiguous and concrete information. In the ambiguous condition, the participants were told that the "individual is yet to undergo a performance appraisal." In the concrete information condition, participants were given more detailed information and were told that the "individual is an exceptional performer and is in the top 5% of all other employees at the same level." (Refer to Appendix A for a detailed description).

2.4 Measures

Dependent Variables

Competence

In this study, competence was defined as the perceived work-related capability of the stimulus person based on the description provided to the participants. Competence was measured with the stem "*To what extent do you think this individual is"* followed by three adjectives, either *"Competent," "Productive,"* or "*Effective."* Responses were collected on a 9-point Likert-type scale with anchors 1 (Not at all) to 9 (Very much). Cronbach's alpha was examined for this scale and was found to be .83 in the current study.

Likeability

The original Likeability scale used by Heilman et al. (2004) was modified slightly to suit the specific design of this study. Instead of the two original items, *"How much do you think you would like this individual?"(very much–not at all)* and a bipolar adjective scale rating *(likable–not likable),* likeability of the stimulus individual was measured using two items "*Likeable"* and "*All in all, how much would you like this individual to be your boss?* " The first item was measured on a 9-point Likert-type scale (1 = Not at all to 9 = Very Much). The second item was also measured on a 9-point Likert-type scale (1 = Very Much to 9 = Not at all) and was reverse coded. The Cronbach's Alpha for the two items in the Likeability scale was found to be .71 (r = .01, p >.05).

Overall Evaluation

Participants were asked to rate the individual on his/her capability as a future leader. The item, "*Overall, how much do you think this person would be a good executive?"* is measured on a 9 point Likert-type scale (1 = Very Much to 9 = Not at all) and is reverse coded.

Moderating Variable

Implicit Person Theory

Implicit Person Theory was assessed with a measure developed by Levy and Dweck (1997). It is an 8-item measure, containing both entity and incremental items (four for each) on a 6-point Likert-type scale (1 = Strongly Disagree to 6 = Strongly Agree). A sample entity item is, "*Everyone is a certain kind of person, and there is not much that can really change about that*" and a sample incremental item is, "*People can substantially change the kind of person they are*." The incremental items were reverse coded and a mean IPT score was calculated for each participant. A higher score represented stronger endorsement of an entity theory. In the past, internal consistency of the IPT scale data ($\alpha = .94$) was found to be high (Levy et al., 1997). The test-retest reliability was .82 over a 1-week period and .71 over a 4-week period (Levy & Dweck, 1997). Cronbach's alpha for this study for the scale in this study was found to be .89.

Manipulation Checks

In order to determine whether participants were paying attention to the background information of the target while reading, they were asked to answer the question, "*What was the profession of the person you just reviewed?"* To make certain that the job was seen as male-gender typed participants were asked to indicate whether people in the job of AVP for Sales were *mostly men (more than 60% men), mostly women*

(more than 60% women), or *about equal numbers of men and women*. In addition, participants were also asked to indicate "*How surprised were you to find this individual in this job?"* on a 9-point Likert-type scale (1 = Very much surprised to 9 = Not at all surprised).

Demographic Measures

Participants were asked to provide information regarding their sex, age, major and the amount of general and managerial work experience they possessed. These items and items for all of the measures can be found in Appendix B.

2.5 Procedure

Subjects signed up for this study through the Psychology Department's online subject-pool website. At their respective sessions, the participants were seated at individual computers and were told by the experimenter that the study was concerned with impression formation at the workplace. The task was administered on computers via Medialab. The task began with a description of the profile of a fictitious company (an aircraft parts manufacturer) and details were provided about the products manufactured (fuel tanks, propellers, etc) in order to communicate the male gender-typed nature of the job to the participants. Next, participants were shown names of the 10 Assistant Vice Presidents for Sales (AVPs) in the company, 8 of who were male and 2 were female. Participants were also given a job description summary of an AVP for Sales, containing information such as, trains and supervises junior executives, breaks into new markets, keeps abreast of industry trends, and generates new clients. This was done to further reinforce the male sex-typed nature of the job. Participants were told that the computer would randomly pick 1 manager out of the 10 who they would have to review. In reality, based on the condition, participants were either assigned to only an *Andrea Martin* (female target person) or a *James Bookman* (male target person). Next, information about the target individual was given, including education, experience and personal interests.

This information was consistent for the female and male managers. Finally, information about the target person's performance in the form of a statement was provided. This information was either detailed in content (i.e., the concrete condition) or vague (i.e., the ambiguous condition). For example in the concrete information condition, participants were given the following information about the manager's performance:

> "Andrea (James) has recently undergone the company-wide annual performance review and she (he) received consistently outstanding evaluations. She (he) has been designated as a "stellar performer" based on sales volumes, number of new client accounts, and actual dollars earned. She (he) has been identified as one of a small group of rising stars. Her (his) performance is in the top 5% of all company AVPs."

In the ambiguous information condition, participants were given the following information about the manager's performance:

> "Andrea (James) is about to undergo her (his) annual performance review. Her (his) evaluation will be based on sales volume, number of new client accounts, and actual dollars earned."

After reading the information, participants were asked to rate the target person on a series of items that measured the competence, likeability, and overall effectiveness of the individual as well as three manipulation check items and five demographic items. In addition, participants were asked to rate the stimulus person on 18 other items from the original measure used by Heilman et al. (2004) to assess *Interpersonal Hostility* and *Achievement*-related attributes of the stimulus person. However, these 18 other items were only used as filler items to mask the real intent of the current study and were not included in the main analyses.

The order of the administration of the IPT measure was randomized where half the participants completed it before the task and the other half after the task. Participants were told that the IPT measure was connected to another study being conducted by a different researcher to study the views of people regarding behavior. Accordingly, the IPT measure was administered in paper and pencil format so as not to arouse suspicion.

After the participants completed answering all the questionnaires, they were completely debriefed, and the purpose and the nature of the study were explained.

CHAPTER 3. RESULTS

3.1 Manipulation Checks

To make sure the manipulations were effective, participants responded to three manipulation check items. First, it was important that participants retained information from the background knowledge they had been provided about the profession of the target person and were asked, "*What was the profession of the person you just reviewed."* Participants wrote in a brief description of the job. After reviewing and coding responses, the results showed that 80% of the participants gave a correct answer. Second, it was also important that participants perceived the job to be male-gender typed and were asked to indicate whether this job (i.e., AVP for Sales in the aircraft parts industry) was held mostly by men, mostly by women, or both in equal numbers. Results indicated that 92% of participants thought that this job was mostly held by men. A third question asked was, "*How surprised were you to find this individual in this job?"* This question was asked to assess whether individuals would report more surprise in the female gender condition than the male condition. However, there were no significant differences across conditions.

It was important that the participants were aware that the profession of the stimulus person was predominantly occupied by men because this was one way of making sure that the male sex-typed nature of the job, as communicated through the description of an AVP in the aircraft parts industry, was clear. Thus, the major hypotheses were examined using the 92% of individuals who responded to the second manipulation check item correctly. This included 272 of the original 304 participants and the reduced sample of 272 was subsequently used for testing the hypotheses and for performing other analyses. Again, perceiving the target job to be male-gender typed was a critical element for the research question investigated in the current study.

In order to ensure that running the analyses based on this sub sample of participants who answered the second manipulation check item correctly, the hypotheses were also examined on the sub sample of participants who got the first manipulation check item, that is, *What was the profession of the person you just reviewed*, correctly. However, the results were found to be no different than those obtained with the other sub sample. Hence, the final results obtained with the sub sample of participants who got the second item correct was included as it yielded a higher sample size (92% of the original sample).

3.2 Preliminary Analyses

Table 1 reports the means, standard deviations, and correlations between all variables in the study. Mean likeability ratings were significantly but weakly related to competence ratings ($r = .13$, $p < .05$) and strongly related to overall evaluation ($r = .66$, $p < .01$). This relationship suggests that participants who rated the target as likeable also rated the target to be competent to some extent, and more positively overall. In addition, competence ratings were negatively related to clarity of information provided ($r = -.46$, $p < .01$) and negatively but weakly related to manager gender ($r = -.13$, $p < .05$). Also, likeability ratings were negatively related to clarity of information ($r = -.15$, $p < .05$).

Table 2 reports frequencies and percentages of dummy coded variables (manager gender, clarity of information, and participant gender) where female managers, concrete information, and female participants, respectively, were used as the referent category. Participants across both the conditions (Sex of Target Manager, Information about Performance) were evenly distributed. However, the sample consisted of more females (N = 168) than males (N=67).

In addition, the data were tested for order effects which turned out to be non-significant.

3.3 Tests of Hypotheses

All hypotheses were tested for statistical significance using two-tailed tests at the alpha level of $p < .05$. Results were considered to approach significance if the test for significance was at or below the .10 level but greater than or equal to .05.

A hierarchical regression analysis was conducted in which all independent variables (manager gender, clarity of information, and rater IPT) as well as participant gender were entered in the first step, all two-way interactions in the second step, all three-way interactions in third step, and the four-way interaction in the fourth step. Although participant gender had not been included in the hypotheses, a post-experimental decision was made to include it in the analyses in order to determine whether participant gender interacted with any of the other variables to help understand them better.

For each of the significant interactions, slope analyses were conducted to determine whether or not there were significant differences between conditions at high and low levels of the continuous predictor, rater's IPT using procedures outlined by Aiken and West (1991). First, high and low values were computed for the continuous predictor, the rater's IPT, by adding (for low) and subtracting (for high) one standard deviation from the mean. Table 3 reports the results of the regression analysis examining the main effects of gender of the stimulus manager, clarity of information provided about performance, participant gender, and the IPT of the raters, all two-way and three-way interaction effects, and the four-way interaction effect of the four independent variables on each of the three dependent variables.

Hypotheses 1a-1c

Hypotheses 1a-1c predicted the main effects for manager gender and clarity of information, as well as a three-way interaction between these two variables and rater IPT on the dependent variable, competence. Therefore, competence ratings were regressed on manager gender, clarity of information, participant gender, and IPT score, and the interactions between these variables.

Hypotheses 1a-1b

Hypothesis 1a predicted that male managers would be rated as more competent than female managers. Counter to our predictions, manager gender (β = -.13, t = -2.44, p < .01) had significant main effects on competence ratings indicating that competence scores were higher when the target was female (M = 8.26, SD = .93) rather than male (M = 8.02, SD = .95). The results were in the opposite direction from the hypothesized prediction. Therefore, Hypothesis 1a was not supported.

Hypothesis 1b predicted that managers about whom concrete information was provided would be rated higher on competence. Clarity of information (β = -.47, t = -8.74, p < .01) did have a significant main effect on competence ratings indicating that target managers were given higher ratings of competence when information provided about performance was concrete (M = 8.58, SD = .66) rather than ambiguous (M = 7.70, SD = .97). Therefore, Hypothesis 1b was supported.

Hypothesis 1c

Hypothesis 1c predicted that female managers would be rated as competent by both entity and incremental theorists when information provided about their performance was concrete, but only by incremental theorists when information provided was ambiguous. Male managers, on the other hand, would be rated as competent by both entity and incremental theorists regardless of the clarity of information provided to raters about their performance. However, in Step 3, the three-way interaction between manager gender, clarity of information, and IPT was not significant (β = -0.08, n. s.). Therefore, Hypothesis 1c was not supported.

Additional Results

Although IPT did not have a main effect on competence ratings, the two-way interaction between IPT and the clarity of information was significant in Step 2 (β = 0.15, t = 1.99, p < .05) and is plotted in Figure 2 to facilitate better understanding. Overall,

both participants with high and low scores on IPT rated targets as higher on competence when information provided was concrete rather than ambiguous. However, participants with low IPT scores (incremental theorists) rated targets *higher* on competence than did participants with high IPT scores (entity theorists) when information was concrete. When the information was ambiguous however, the results were reversed. That is, participants with low IPT scores (incremental theorists) rated targets *lower* on competence than did participants with high IPT scores (entity theorists) when information was ambiguous.

Also, the three-way interaction between participant gender, manager gender, and clarity of information had a significant effect on competence ratings (β = -0.88, t = -2.53, $p < .01$) and is plotted in Figure 3 to clearly illustrate the effect. Follow-up analyses were conducted according to the procedures outlines by Aiken and West (1991) to further examine the different patterns of ratings provided by female and male participants. Results revealed that the interaction between clarity of information was not significant for female participants (β = -0.03, t = -.24, p = .81). That is, regardless of whether the information provided about the target's performance was concrete or ambiguous, female participants rated female managers higher on competence as compared to male managers. Overall, female participants rated the male and female managers described with concrete information as higher on competence than male and female managers with ambiguous information provided. On the other hand, the interaction between manager gender and clarity of information was marginally significant for male participants (β = -0.36, t = -1.89, p = .06), who rated male managers and female managers somewhat similarly on competence when information provided about the performance of targets was concrete. When information provided was ambiguous, male participants tended to rate female managers higher on competence than male managers.

Hypotheses 2a-2c

Hypotheses 2a-2c predicted the main effects for manager gender and clarity of information, as well as a three-way interaction between these two variables and rater IPT on the dependent variable, likeability. Therefore, likeability ratings were regressed on

manager gender, clarity of information, participant gender, and IPT score, and the interactions between these variables.

Hypotheses 2a-2b

Hypothesis 2a predicted that male managers would be rated as more likeable than female managers. However, manager gender did not have a significant main effect on likeability and so Hypothesis 2a was not supported.

Hypothesis 2b predicted that managers about whom concrete information was provided would be rated higher on likeability. Step 1 shows that clarity of information had a significant main effect on likeability ratings (β = -0.16, t = -2.63, $p < .01$) such that likeability ratings were higher when information provided about performance was concrete (M = 6.20, SD = 1.45) rather than ambiguous (M = 5.79, SD = 1.24). Thus, Hypothesis 2b was supported.

Hypothesis 2c

Hypothesis 2c predicted that female managers will be likeable by both entity and incremental theorists when information provided about the target's performance is ambiguous, but only by incremental theorists when information provided about the target's performance is concrete. Male managers, on the other hand, will be rated as likeable by both entity and incremental theorists regardless of the clarity of information provided to raters about their performance. However, the three-way interaction between manager gender, clarity of information, and IPT was not significant, showing that Hypothesis 2c was not supported.

Additional Results

However, the three-way interaction between participant gender, clarity of information, and IPT had a significant effect on likeability ratings (β = .64, t = 2.20, $p <$

.05) and is plotted in Figure 4 to facilitate a better understanding. Follow-up analyses were conducted according to the procedures outlines by Aiken and West (1991) to further examine the different patterns of ratings provided by female and male participants. However the interactions between information and IPT proved to be non-significant for both female participants (β = -.04, t = -.40, p = .70) and male participants (β = .22, t = 1.27, p = .21). Female participants who had higher scores on IPT (indicating an entity orientation) rated targets similarly on likeability regardless of whether the information provided about their performance was concrete or ambiguous. On the other hand, female participants who scored lower on the IPT (indicating an incremental orientation) rated target managers higher on likeability when information provided was concrete, rather than when the information was ambiguous. In contrast, male participants who had lower scores on IPT (indicating an incremental orientation) rated targets similarly on likeability regardless of whether the information provided about their performance was concrete or ambiguous. On the other hand, male participants who scored higher on the IPT (indicating an entity orientation) rated target managers higher on likeability when information provided was concrete, rather than when the information was ambiguous.

Hypotheses 3a-3c

Hypotheses 3a-3c predicted the main effects for manager gender and clarity of information, as well as a three-way interaction between these two variables and rater IPT on the dependent variable, overall evaluation. Therefore, overall evaluation ratings were regressed on manager gender, clarity of information, participant gender, and IPT score, and the interactions between these variables.

Hypotheses 3a-3b

Hypothesis 3a predicted that male managers would be rated more favorably overall than female managers. However, manager gender did not have a significant main effect on overall evaluation and Hypothesis 3a was not supported.

Hypothesis 3b predicted that managers about whom concrete information was provided would be rated more favorably overall. However, clarity of information did not have a significant main effect on overall evaluation and Hypothesis 3b was not supported.

Hypothesis 3c

Hypothesis 3c predicted that female managers would be rated favorably by incremental theorists and unfavorably overall by entity theorists, regardless of whether the information provided about their performance was concrete or ambiguous. Male managers would be rated favorably overall by both entity and incremental theorists regardless of whether the information provided about their performance was concrete or ambiguous. Hypothesis 3c was not supported.

Only the two-way interaction between the participant gender and manager gender had a significant effect on ratings of overall evaluation (β = -.70, t = -3.24, p < .01) and is plotted in Figure 5 to see the effects across conditions. One-tailed independent groups *t*-tests were conducted to probe the interaction manager gender and participant gender further. Results indicated that there was not much difference in the way female participants rated female and male managers overall as compared to female managers as the *t*-test was not significant t (203) = -.77, p = .44 (two-tailed), whereas male participants rated female managers favorably overall as compared to male managers, t (65) = 2.78, p < .01 (two-tailed).

CHAPTER 4. DISCUSSION

4.1 Major Findings and Contributions

The current study was conducted to gain a better understanding of the underlying mechanisms of the occurrence of discrimination in evaluations of male and female managers at work. For this purpose, the methodology and design of the study conducted by Heilman et al. (2004) was replicated, while introducing a moderator variable, Implicit Person Theory (IPT) of the rater, into the framework. Heilman and colleagues had found that the clarity of information provided about women managers' performance affected their ratings of competence, likeability, and overall evaluation, such that existing gender stereotypes resulted in bias even when female managers had clearly demonstrated their proficiency at their job. The goal of the current research was to increase understanding of how individual characteristics of the rater might influence performance evaluations of male and female managers, even when performance of the managers is equal. Previous studies (e.g., Levy et al., 1998; Plaks et al., 2001) have shown that entity theorists tended to endorse and hold onto stereotypical information more strongly compared to incremental theorists, because entity and incremental theorists process incoming information differently and pay attention to different aspects of information. Subsequently, while forming impressions, entity theorists tend to find stereotype confirming information more salient and make use of it more than do incremental theorists, who tend to use both stereotype-consistent and inconsistent information. The current study sought to extend the findings of Heilman et al. (2004) by proposing that the effects found by them would be stronger when the rater possessed an entity theory as opposed to an incremental theory. In doing so, this research attempted to provide an understanding of why male and female managers might be given different ratings, all other things being equal.

Consistent with previous research (e.g., Heilman et al. 2004), the current study found that providing concrete information about a target's performance resulted in higher ratings of competence and likeability (Hypothesis 1b and 2b). This suggests that when the evidence about performance is strong and clearly presented, raters do not ignore the performance information and tend to provide higher ratings for the managers with clearly high performance, regardless of manager gender. This result implies that providing concrete performance information is one way to reduce the impact of subjective biases in performance appraisal. Providing more information, rather than less or vague information, reduces chances for cognitive distortion to occur as the evidence of performance is presented clearly to the rater. In such circumstances, it is less likely that the rater will use non-performance based information, such as the gender of the ratee, to make an evaluation.

However, other results were in the opposite direction to those of Heilman et al. (2004) and the predictions of this study. Specifically, in the current study, women managers were rated as more competent than men and these ratings were not influenced by the clarity of information provided about their respective performances. Moreover, target gender did not affect likeability ratings and overall evaluations. The reason for these unexpected findings is not clear. Perhaps, future research can explore contexts and situations in which, contrary to expectations, women may be evaluated more favorably than men and whether the current framework can be extended to understand this occurrence better.

A noteworthy point that can be considered to understand these and other unexpected results found in this study is the fact that participants did not express surprise at finding women in the job of an AVP of sales in an airplane parts manufacturing company. The third manipulation item that asked participants, *How surprised were you find this individual in this job?* revealed no significant differences across conditions. This indicates that perhaps, participants did not perceive the presence of a woman in an AVP role as unusual, or that they did not clearly make the connection between a female executive and the male gendered AVP role.

The current study predicted that rater IPT would moderate the relationships between the independent variables (manager gender and clarity of information) and the outcome variables, such that entity and incremental theorists would rate male managers as competent, likeable, and favorably overall, regardless of the amount of clarity in the information provided to them about the target manager's performance. When female managers are rated, however, only incremental theorists would be expected to rate them as being equally competent, likeable, and favorable overall as men, without being affected by the clarity of information provided about the target's performance. Entity theorists, on the other hand, were expected to pay attention to the clarity of information provided about the target female manager and were expected to provide high ratings of competence, likeability, and unfavorable overall evaluations only when the information provided was concrete but not when it was ambiguous.

Although the IPT of the rater did not have significant main effects on any of the outcome variables or the predicted three-way interactions (i.e., Hypotheses 1c, 2c and 3c), IPT did interact significantly with clarity of information to affect competence ratings. In general, when information provided was concrete, higher ratings were given to the managers on competence, regardless of IPT (see Figure 2). When information provided was concrete, higher competence ratings were given to the managers by raters lower on IPT (incremental theorists) than by raters higher on IPT (entity theorists). However, when information provided was ambiguous, raters high on IPT (entity theorists) tended to give higher ratings on competence compared to those raters lower on IPT (incremental theorists). These findings are consistent with past research that the top-down conceptually-driven effects of implicit theories on person perceptions are most salient when these perceptions are based on ambiguous or vague information (Plaks, Levy, & Dweck, 2009). Again, this finding suggests that providing concrete performance information is an effective way to reduce implicit theory-driven biases in judgments. When performance information was ambiguous, raters applied their lay theories to guide their perception of the manager's performance, because there is an increased tendency to rely on existing schemata, such as lay theories, to process and understand incoming information (Feldman, 1981). The results also indicated that clarity of information

influenced the ratings provided by incremental theorists far greater than those provided by entity theorists. For example, although entity theorists did rate those targets with ambiguous information as less competent than those with concrete information, the difference in the ratings was much smaller than the difference in the ratings provided by incremental theorists when the information was ambiguous and when it was concrete. Specifically, when information provided was ambiguous, incremental theorists rated managers as far less competent than did entity theorists. Whereas, when information provided was concrete, incremental theorists rated target managers as far more competent than did entity theorists. These results provide an indication of how differently entity and incremental theorists tend to make use of information. While entity theorists tend to make similar assumptions about a target's competence whether the information provided is concrete or ambiguous, incremental theorists do not make such assumptions based on ambiguous information. However, when the latter are provided with substantial evidence of a target's performance, they tend to be more generous with their ratings of competence compared to entity theorists. Relative to incremental theorists, by definition, entity theorists tend to infer competence traits from ambiguous behavioral evidence and, in this study, were more likely to infer that a manager with *seemingly* good performance was a competent manager. This is typical of entity theorists as they use available information to explain and predict a target's behavior and base their inferences on relatively small samples of behavior (Chiu et al., 1997; Dweck et al., 1995; Levy et al., 1998; Plaks, et al., 2001).

Although it was not hypothesized that participant gender would affect the ratings provided on the outcome variables, the analyses revealed that sex of the participants did have either significant two- or three-way interactions with each of the three independent variables on certain outcomes . First, rater gender significantly interacted with manager gender and clarity of information to predict competence ratings (see Figure 3). Male participants rated female managers high on competence regardless of whether the information provided about them was concrete or ambiguous. However, in the case of male managers, male participants found those male targets with concrete information to be more competent. The pattern of the ratings provided by female participants was more

consistent in that they rated female managers as more competent than male managers when the information provided was concrete and when it was ambiguous. They also rated male and female managers about whom concrete information was provided as more competent than male and female managers about whom the information was provided was ambiguous. Second, rater gender also interacted with both IPT of the raters and type of information provided to predict likeability ratings. Clarity of information provided about performance did not affect the likeability ratings of targets by male raters who scored low on IPT (incremental theorists) and female raters who scored high on IPT (entity theorists), but clarity of information did affect the ratings in the other conditions (see Figure 4). Thirdly, rater gender also interacted with manager gender to predict overall evaluations of the target managers. Specifically, female managers were rated the most favorably overall by male participants and male managers were rated most favorably by female participants. However, both male and female managers were given lower but similar ratings of overall evaluation by female and male participants respectively. These findings are interesting and noteworthy of further work to explore how IPT might interact with rater-ratee gender mixes to predict outcomes for males and females, but such exploratory work is beyond the scope of the current research.

4.2 Limitations

As is the case with any empirical research, the present study has several limitations. The manipulation of the gender of the stimulus person and the portrayal of the male sex-typed nature of the job in this study may not have been strong enough. Thus, these manipulations may not have been sufficient in simulating the lack of fit between the gender of the stimulus person (when it was female) and the masculine nature of the job. Without this lack of perceived fit, it would be difficult to find significant differences of the expected nature. In the present study, manager gender was manipulated by name only to ensure that all other factors remained equal between the hypothetical male and female managers. Presenting the background information using more realistic methods of simulation could have given more freedom to participants to form perceptions of the male

or female managers based on gender-related attributes. In addition, as discussed earlier, the third manipulation check item that asked participants if they were surprised to have found the individual that they had been asked to review in the job of AVP of sales, non significant results were obtained across conditions, furthering the need to explore the inconsistent findings that were obtained in the current study.

Although most participants had prior work experience, the present sample was primarily a student sample and the study was conducted in a university setting. Participants may not have had the kind of contact or interaction in real work settings that is required to form stereotypes of roles in the workplace. Subsequently, the ratings provided by these student raters may or may not have been primarily driven by non-performance cues (such as gender of the target stimulus person). Also, as student participants enrolled in the study to receive credit, their level of accountability and motivation to process the information given and provide accurate ratings might have been low. The generalizability of the results may be questionable due to the nature of the sample, as the study was conducted to examine phenomenon that was known to occur in workplace settings. Using a sample of employees from a real-world organization could provide a different perspective, as these participants are more likely to find the task relevant to their daily routine at work and would be more motivated and driven to make judgments and provide evaluations in the context of a real job.

It must be also considered that the majority of the sample was female. The original study by Heilman et al. (2004) had a more balanced sample in terms of participants' sex and they found that participant gender did not have significant main effects or interactions with other variables to affect any of the outcome variables. However, the results from the present study highlight the importance of analyzing gender bias in job performance evaluations separately for male and female raters. Male and female raters may exhibit different kinds of biases in making performance evaluations, with male raters exhibiting the conventional gender bias against female managers and female raters exhibiting in-group gender bias that favors female managers. Additionally, there were only 67 male participants in the sample (N = 265) and low power owing to the

small sample size of male participants could also be a potential explanation for some of the results that were obtained in this study.

4.3 Future Directions and Research

The unexpected findings that considered female managers to be more competent and likeable than male managers can be further explored in future studies as these findings repudiate the backlash theory to an extent. Although the hypotheses were tested on an undergraduate student sample, these students form the future workforce of the country. As mentioned in the discussion, it is possible that a positive in-group bias of female participants, who were in the majority, could have influenced ratings. Subsequently, the relationship between the IPT one holds and the influence of the in-group bias can be studied to understand the underlying dynamics of this interaction, and under what circumstances IPT versus in-group bias occurs. That is, future research can explore contexts in which participants are more, or less, influenced by the IPT they hold over and above the biases, or vice versa.

Another finding that is worthwhile for future exploration is the similarity in behavior of entity and incremental theorists when given concrete versus ambiguous information. Future research can explore the circumstances and situations under which entity and incremental theorists are expected to behave similarly, as well as the situations in which they process information differently. For example Levy et al. (1998) and Plaks et al. (2001) found differences in the way entity and incremental theorists process prototype-consistent and –inconsistent information. The results of the present study can be used to extend previous findings to determine whether specific characteristics of the information provided (such as clarity) can influence the differential processing of information by entity and incremental theorists.

LIST OF REFERENCES

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Aiken, L. S., & West, S. G. (1991). Multiple regression: Testing and interpreting interactions. Newbury Park, CA: Sage.

Bauer, C. C., & Boris, B. (2002). Reducing the effects of gender stereotypes on performance evaluations. *Sex Roles, 47(9),* 465-476.

Bergeron, D., Block, C., & Echtenkamp, A. (2006). Disabling the able: Stereotype threat and women's work performance. *Human Performance, 19(2),* 133-158.

Bowen, C. C., Swim, J. K., & Jacobs, R. R. (2000). Evaluating gender biases on actual job performance of real people: A meta-analysis. *Journal of Applied Social Psychology, 30(10),* 2194-2215.

*Cann, A., & Garnett, A. (1984). Sex stereotype impacts on competence ratings by children. *Sex Roles, 11(3),* 333-343.

Cardy, R., & Dobbins, G. (1986). Affect and appraisal accuracy: Liking as an integral dimension in evaluating performance. *Journal of Applied Psychology, 71(4),* 672-678.

Catalyst (2009, July). Women CEOs of the Fortune 1000. Catalyst. Retrieved August 15, 2009 from http://www.catalyst.org/publication/322/women-ceos-of-the-fortune-1000

Catalyst (2009, October). Women in U. S. management. Catalyst. Retrieved August 15, 2009 from http://www.catalyst.org/publication/206/women-in-us-management.

Cejka, M., & Eagly, A. (1999). Gender-stereotypic images of occupations correspond to the sex segregation of employment. *Personality and Social Psychology Bulletin, 25(4),* 413.

Chiu, C., Hong, Y., & Dweck, C. (1997). Lay dispositionism and implicit theories of personality. *Journal of Personality and Social Psychology, 73,* 19-30.

Dweck, C., Chiu, C., & Hong, Y. (1995). Authors Response: Implicit Theories: Elaboration and Extension of the Model. *Psychological Inquiry, 6(4),* 322-333.

*Eagly, A. (1987). Sex differences in social behavior: A social-role interpretation. Hillsdale, NJ: Lawrence Erlbaum.

Eagly, A., & Koenig, A. (2008). Gender Prejudice: On the risks of occupying incongruent roles. In E. Borgida & S. T. Fiske (Eds.), Beyond common sense: Psychological science in the courtroom (1st ed., pp. 63-82). Malden, MA: Blackwell Publishing Ltd.

*Eagly, A., & Steffen, V. (1984). Gender stereotypes stem from the distribution of women and men into social roles. *Journal of Personality and Social Psychology, 46,* 735-754.

Erdley, C., & Dweck, C. (1993), Children's implicit personality theories as predictors of their social judgments. *Child Development, 64,* 863-878.

Farr, J., & Levy, P. (2007). Performance Appraisal. In L.L. Koppes (Ed.) The science and practice of industrial-organizational psychology: The First Hundred Years. Lawrence Erlbaum.

Feldman, J. (1981). Beyond attribution theory: Cognitive processes in performance appraisal. *Journal of Applied Psychology, 66(2),* 127-148.

Foschi, M. (1996). Double standards in the evaluation of men and women. *Social Psychology Quarterly, 59(3),* 237-254.

Gorman, E. H. (2005). Gender stereotypes, same gender preferences, and organizational variation in the hiring of women: Evidence from law firms. *American Sociological Review, 70,* 702-28.

Heilman, M. (1983). Sex bias in work settings: The Lack of Fit model. *Research in Organizational Behavior, 5,* 269-298.

Heilman, M. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of Social Issues: Gender, Hierarchy, and Leadership, 57,* 657-674.

Heilman, M., & Haynes, M. (2008). Subjectivity in the appraisal process: A facilitator of gender bias in work settings. In E. Borgida & S. T. Fiske (Eds.), Beyond common sense: Psychological science in the courtroom (1st ed., pp. 63-82). Malden, MA: Blackwell Publishing Ltd.

Heilman, M., & Okimoto, T. (2007). Why are women penalized for success at male tasks?: The implied communality deficit. *Journal of Applied Psychology, 92(1),* 81-92.

Heilman, M., Wallen, A., Fuchs, D., & Tamkins, M. (2004). Penalties for success: Reactions to women who succeed at male gender-typed tasks. *Journal of Applied Psychology, 89(3),* 416-427.

Heslin, P., Latham, G., & VandeWalle, D. (2005). The effect of implicit person theory on performance appraisals. *Journal of Applied Psychology, 90(5),* 842-856.

Heslin, P., & Vandewalle, D. (2011). Performance Appraisal Procedural Justice: The Role of a Manager's Implicit Person Theory. *Journal of Management, 37(6),* 1694-1718.

Heslin, P., Vandewalle, D., & Latham, G. (2006). Keen to help? Managers' Implicit Person Theories and their subsequent employee coaching. *Personnel Psychology, 59(4),* 871.

Hilton, J., & Von Hippel, W. (1996). Stereotypes. *Annual Review of Psychology, 47(1),* 237-271.

Hong, Y. Y., Chan, G., Chiu, C. Y., Wong, R. Y. M., Hansen, I. G., Lee, S., Tong, Y., & Fu, H. (2003). How are social identities linked to self-conception and intergroup orientation?: The moderating effect of implicit theories. *Journal of Personality and Social Psychology, 85,* 1147-1160.

Hong, Y. Y., Chiu, C. Y., Dweck, C. S., Lin, D., & Wan, W. (1999). Implicit theories, attributions, and coping: A meaning system approach. *Journal of Personality and Social Psychology, 77(3),* 588-599.

Kaufmann, G., Isaksen, S., & Lauer, K. (1996). Testing the “glass ceiling” effect on gender differences in upper level management: The case of innovator orientation. *European Journal of Work and Organizational Psychology, 5(1),* 29-41.

Krzystofiak, F., Cardy, R., & Newman, J. (1988). Implicit personality and performance appraisal: The influence of trait inferences on evaluations of behavior. *Journal of Applied Psychology, 73(3),* 515-521.

Levy, S., Stroessner, S., & Dweck, C. (1998). Stereotype formation and endorsement: The role of implicit theories. *Journal of Personality and Social Psychology, 74*, 1421-1436.

Levy, P. E., & Williams, J. R. (2004). The social context of performance appraisal: A review and framework for the future. *Journal of Management, 30(6),* 885-909.

Lyness, K., & Heilman, M. (2006). When fit is fundamental: Performance evaluations and promotions of upper-level female and male managers. *Journal of Applied Psychology, 91(4),* 777-785.

Murphy, K. (2008). Explaining the weak relationship between job performance and ratings of job performance. *Industrial and Organizational Psychology, 1(2),* 148-168.

Nieva, V., & Gutek, B. (1980). Sex effects on evaluation. *The Academy of Management Review, 5(2),* 267-276.

Noe, R. (1988). An investigation of the determinants of successful assigned mentoring relationships. *Personnel Psychology, 41(3),* 457-479.

Ohlott, P., Ruderman, M., & McCauley, C. (1994). Gender differences in managers' developmental job experiences. *The Academy of Management Journal, 37(1),* 46-67.

Plaks, J., Levy, S., & Dweck, C. S. (2009). Lay theories of personality: Cornerstones of meaning in social cognition. *Social and Personality Psychology Compass, 3,* 1069-1081.

Plaks, J., Stroessner, S., Dweck, C., & Sherman, J. (2001). Person theories and attention allocation: Preferences for stereotypic versus counterstereotypic information. *Journal of Personality and Social Psychology, 80(6),* 876-893.

Powell, G., Butterfield, D., & Parent, J. (2002). Gender and managerial stereotypes: Have the times changed? *Journal of Management, 28(2),* 177-193.

*Rudman, L., & Fairchild, K. (2004). Reactions to counterstereotypic behavior: The role of backlash in cultural stereotype maintenance. *Journal of Personality and Social Psychology, 87*, 157-176.

Rudman, L., & Glick, P. (2001). Prescriptive gender stereotypes and backlash against agentic women. *Journal of Social Issues, 57(4)*, 743–762.

Schein, V.E. (1973). The relationship between sex role stereotypes and requisite manage ment characteristics. *Journal of Applied Psychology*, *57*, 95-100.

Schein, V.E. (1975). Relationships between sex role stereotypes and requisite management characteristics among female managers. *Journal of Applied Psychology, 60*, 340-344.

Schein, V. E., Mueller, R., Lituchy, T., & Liu, J. (1996). Think manager-think male: A global phenomenon? *Journal of Organizational Behavior, 17*, 33-41.

*Stroh, L., Brett, J., & Reilly, A. (1992). All the right stuff: A comparison of female and male managers' career progression. *Journal of Applied Psychology, 77(3),* 251-260.

Wellington, S., Kropf, M., & Gerkovich, P. (2003). What's holding women back? As barriers shift, lack of line experience has become a chief obstacle. *Harvard Business Review, 81,* 18-20.

*Asterisks denote references cited only in Appendix C: Proposal Introduction.

TABLES

Table 1 Means, Standard Deviations, Intercorrelations and Reliabilities for all Major Variables (N = 265)

		M	*SD*	1	2	3	4	5	6	7	8	9	10
1	**Manager Gender**[+]			--									
2	**Clarity of Information**[++]			-.02	--								
3	**Sex of Participants**[#]			.05	-.11	--							
4	**Age of Participants**	23.21	5.52	.02	-.03	.01	--						
5	**Total Work Experience**	7.30	8.22	-.04	-.10	.08	.50**	--					
6	**Total Managerial Work Experience**	1.23	2.72	-.02	-.01	.12*	.58**	.38**	--				
7	**IPT Mean Score**	3.46	.91	-.03	.03	-.21**	-.13*	-.14*	-.11	--			
8	**Competence**	8.12	.98	-.13*	-.46**	-.05	-.02	.07	-.07	.03	(.83)		
9	**Likeability**	5.99	1.38	-.09	-.15*	-.05	.03	-.05	.07	.04	.13*	(.71)	
10	**Overall Evaluation**	4.17	2.98	-.02	-.09	.05	.09	.05	-.03	.05	-.02	.66**	--

\+ Manager Gender coded as Female = 0, Male = 1
++ Clarity of Information as Concrete = 0, Ambiguous = 1
\# Sex of Participants coded as Female = 0, Male = 1
* Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)

Table 2 Frequencies and Percentages of Dummy Coded Variables

	Sex of Manager N = 265		**Clarity of Information** N =265		**Sex of Participant** N =265	
	Female (=0)	**Male (=1)**	**Concrete (=0)**	**Ambiguous (=1)**	**Female (=0)**	**Male (=1)**
Frequency	127	138	130	135	198	67
Percent	47.9	52.1	49.1	50.9	74.8	25.5

Table 3 Test of Hypotheses - Hierarchical Regression Analyses (N = 265)

Model/Predictor	Competence			Likeability			Overall Evaluation		
	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1		.24			.040			.02	
Participant gender	-.09			-.06			.09		
Manager Gender	-.13**			-.09			-.02		
Clarity of Information	-.47**			-.16**			-.08		
IPT (Standardized)	.02			.03			.07		
Step 2		.26	.02		.07	.03		.07	.05
Participant Gender	-.01			-.05			.28		
Manager Gender	-.07			.23			.66		
Clarity of Information	-.26			-.35			-.18		
IPT (Standardized)	-.10			.32			.38		
Manager Gender x Participant Gender	-.02			-.26			-.70**		
Manager Gender x Clarity of Information	-.08			-.16			-.13		
Manager Gender x IPT (Standardized)	-.08			-.13			-.13		
Clarity of Information x Participant Gender	-.18			.32			.21		
Clarity of Information x IPT (Standardized)	.15*			.05			-.03		
Participant Gender x IPT (Standardized)	.09			-.22			-.17		
Step 3		.29	.02		.09	.02		.09	.02
Participant Gender	-.14			-.11			.31		
Manager Gender	-.41			.15			.81**		
Clarity of Information	-.84**			-.73*			-.13		
IPT (Standardized)	.01			.45			.66		
Manager Gender x Participant Gender	.36			-.16			-.85**		
Manager Gender x Clarity of Information	.68*			.19			-.31		
Manager Gender x IPT (Standardized)	-.02			.08			-.08		
Clarity of Information x Participant Gender	.50			.79*			.21		
Clarity of Information x IPT (Standardized)	-.10			-.34			-.50		
Participant Gender x IPT (Standardized)	-.05			-.44			-.45		
Manager Gender x Participant Gender x Clarity of Information	-.88**			-.44			.16		
Manager Gender x Participant Gender x IPT (Standardized)	-.06			-.13			-.07		
Manager Gender x Clarity of Information x IPT (Standardized)	-.08			-.25			-.03		
Clarity of Information x Participant Gender x IPT (Standardized)	.37			.64*			.53		

Table 3 Test of Hypotheses - Hierarchical Regression Analyses (N = 265) (contd.)

Model/Predictor	Competence			Likeability			Overall Evaluation		
	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 4		.29	.00		.10	.01		.09	.00
Participant Gender	-.15			-.12			.30*		
Manager Gender	-.42			.13			.79**		
Clarity of Information	-1.04**			-1.07**			-.40		
IPT (Standardized)	.13			.66			.83*		
Manager Gender x Participant Gender	.38			-.12			-.81**		
Manager Gender x Clarity of Information	.87**			.50			-.06		
Manager Gender x IPT (Standardized)	-.20			-.22			-.32		
Clarity of Information x Participant Gender	.78*			1.27**			.59		
Clarity of Information x IPT (Standardized)	-.56			-1.13*			-1.13*		
Participant Gender x IPT (Standardized)	-.18			-.66			-.62		
Manager Gender x Participant Gender x Clarity of Information	-1.14**			-.88*			-.19		
Manager Gender x Participant Gender x IPT (Standardized)	.13			.20			.19		
Manager Gender x Clarity of Information x IPT (Standardized)	.40			.57			.61		
Clarity of Information x Participant Gender x IPT (Standardized)	.95			1.63**			1.31*		
Participant Gender x Manager Gender x Clarity of Information x IPT (Standardized)	-.61			-1.04			-.82		

*Statistic is significant at $p < .05$ (2-tailed); ** Statistic is significant at $p < .01$ (2-tailed)
Key: β=Standardized regression coefficient; R^2=Variance explained; ΔR^2=Change in variance explained

FIGURES

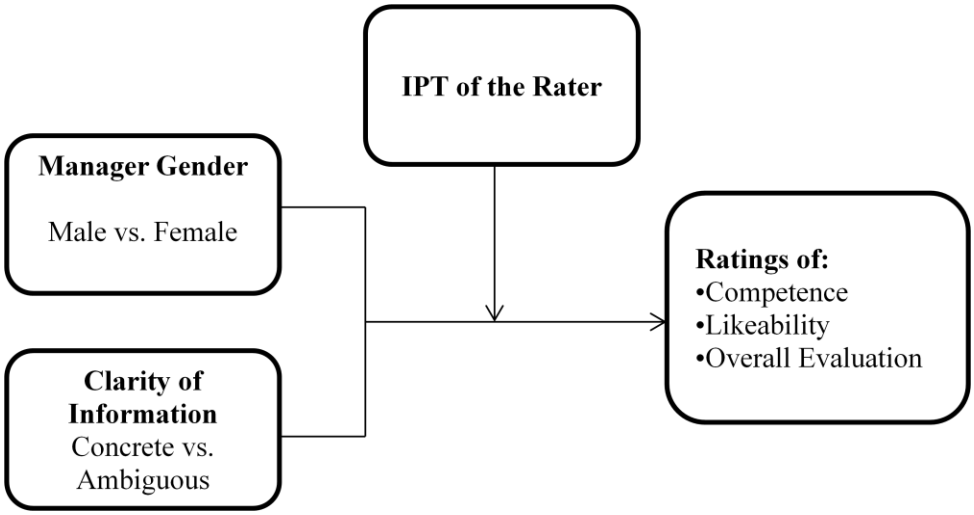

Figure 1 Proposed Theoretical Model

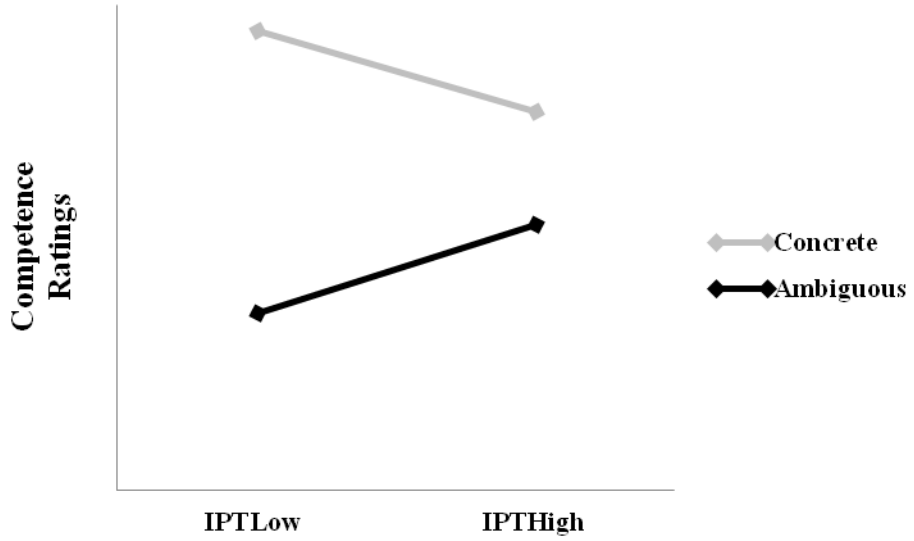

Figure 2 Two-way Interaction between Clarity of Information and Rater IPT on Competence ratings

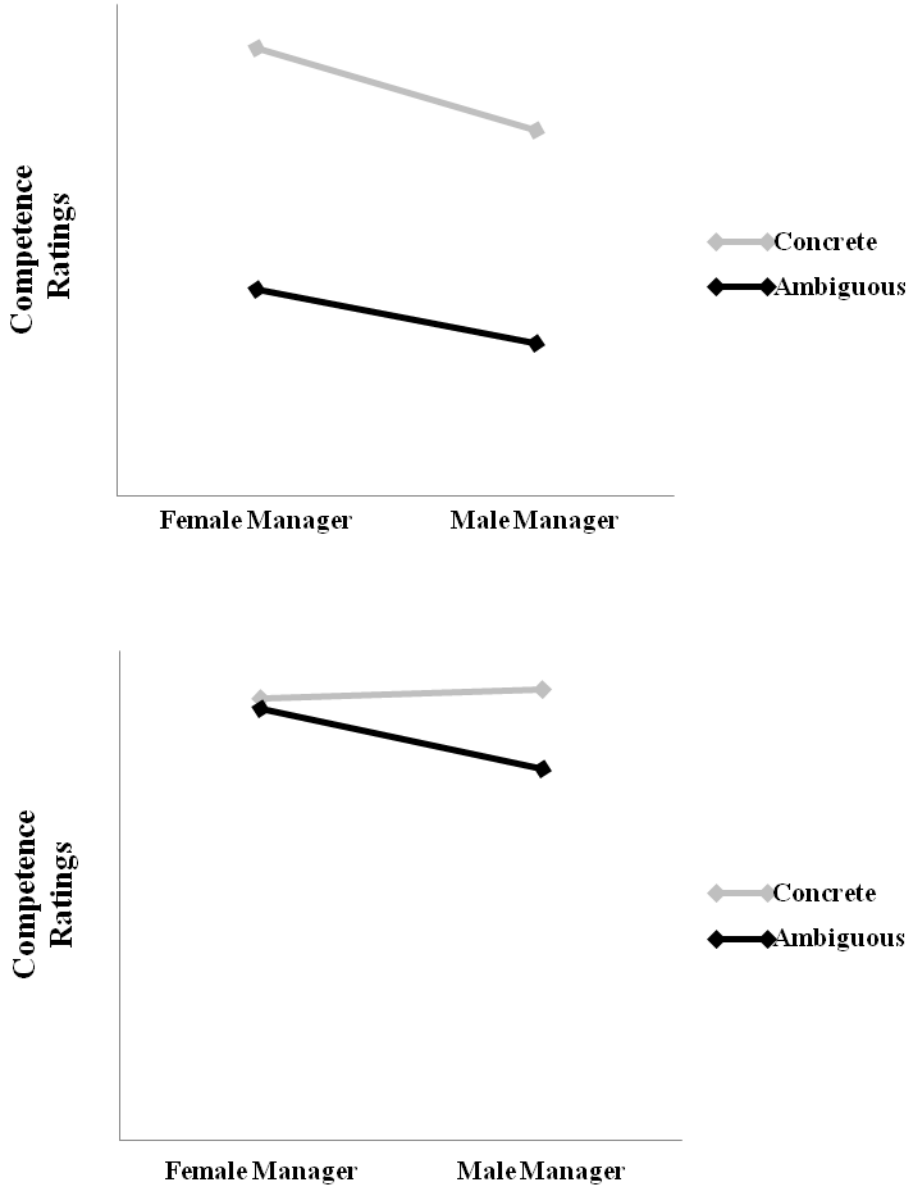

Figure 3 Three-way Interaction between Manager Gender, Clarity of Information, and Participant Gender on Competence ratings

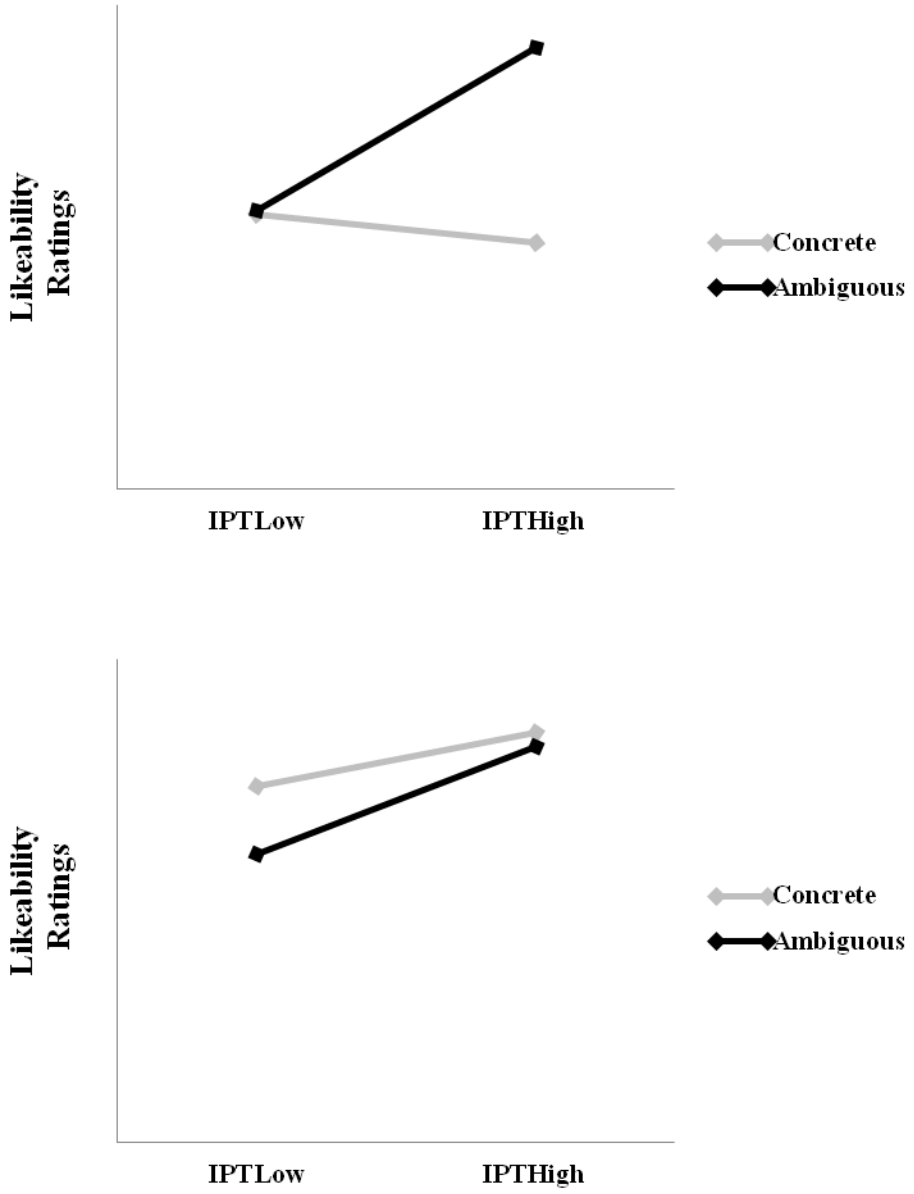

Figure 4 Three-way Interaction between Clarity of Information, Rater IPT, and Participant Gender on Likeability ratings

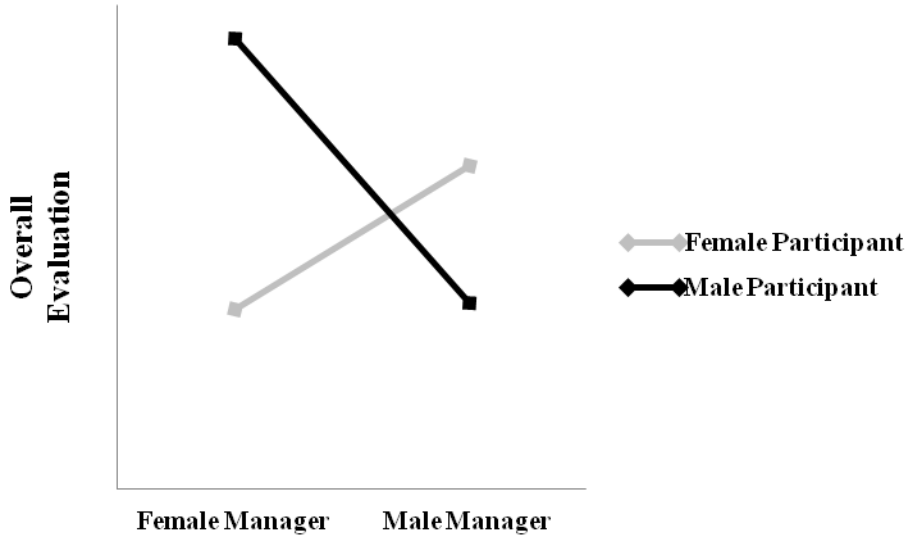

Figure 5 Two-way Interaction between Participant Gender and Manager Gender on Overall Evaluation ratings

APPENDICES

Appendix A. Task Materials

Cover Story

This research is concerned with the process of forming first-impressions of people in the workplace. As you might imagine, such impressions are of great importance when any kind of personnel decision has to be made in an organization. Impressions also come into play when people select co-workers for teams or projects.

It is a common assumption that the types of jobs people hold as well as their success at these jobs affect the impressions others form of them. However, other types of information also may impact how people are regarded. In this particular study, we are interested in first impressions formed on the basis of very minimal, but specific, information.

What follows are brief descriptions of the personal and work history of an individual who holds the position of Assistant Vice President (AVP) for Sales, in Franklin-Hughes Aircraft Co., a large nationally renowned company that manufactures airplane parts and engines. Included is a job description of the AVP for Sales position, so you can get some idea of the actual work an AVP does.

After reviewing the information provided about the individual, please answer the questionnaires that follow. Please answer every question even if you feel you do not have enough information to respond. Remember, this study is about first impressions, so it is your immediate reaction to these individuals that is of interest to us.

Job Description Summary

Franklin-Hughes Aircraft Co.

Position: Assistant Vice President for Sales

Major Job Responsibilities

- Coordinates sales distribution of aircraft engines, fuel tanks and other aircraft equipment and parts by establishing sales territories, quotas, and goals and establish training programs for sales representatives.
- Generates new client accounts.
- Reviews operational records and reports to project sales and determines profitability.
- Monitors customer preferences to determine focus of sales efforts.
- Prepares budgets and approves budget expenditures.
- Plans and directs staffing, training, and performance evaluations to develop and control sales and service programs.
- Analyzes sales statistics gathered by staff to determine sales potential and inventory requirements and monitor the preferences of customers.
- Keeps abreast of market trends using the knowledge of the financial markets, banking, and economic and accounting principles and practices.

Selection of Name of Manager to be Reviewed by Participant

Franklin-Hughes Aircraft Co.

Position: Assistant Vice President for Sales

Given below are the names of the 10 Assistant Vice Presidents for Sales in Franklin-Hughes Aircraft Co. You will rate only one of them – specifically, that person whose name is marked with an "X." You will then be given more information about the Assistant Vice President who has been check marked to be rated by you.

Jerome Wallace

Douglas Ross

Paul Woods

Melanie Hewitt

Mike Whitehead

Gary Parks

Andrea Martin

Scott Hoyle

X James Bookman

Eric Steele

Selection of Name of Manager to be Reviewed by Participant

Franklin-Hughes Aircraft Co.

Position: Assistant Vice President for Sales

Given below are the names of the 10 Assistant Vice Presidents for Sales in Franklin-Hughes Aircraft Co. You will rate only one of them – specifically, that person whose name is marked with an "X." You will then be given more information about the Assistant Vice President who has been check marked to be rated by you.

Jerome Wallace

Douglas Ross

Paul Woods

Melanie Hewitt

Mike Whitehead

Gary Parks

James Bookman

Scott Hoyle

X Andrea Martin

Eric Steele

Background Information of Male Manager in Concrete Information Condition

Franklin-Hughes Aircraft Co.

Position: Assistant Vice President for Sales

JAMES BOOKMAN

Background:

James Bookman grew up in a suburb outside of St. Louis. He attended Arizona State University and majored in government. He graduated in the top quarter of his class. James came to the company eight years ago, in 2001, and has been working here ever since. He recently completed the company's six-month management training program and, soon after, was promoted to his current position. He is in charge of sales for the entire Mid-West and Northern regions. James enjoys reading and playing tennis in his spare time. He also loves to travel.

Current Status:

James has recently undergone the company-wide annual performance review and he received consistently outstanding evaluations. He has been designated as a "stellar performer" based on the three major evaluative criteria used: sales volumes, number of new client accounts, and actual dollars earned. He has been identified as one of a small group of rising stars. His performance is in the top 5% of all company AVPs. He has received consistently high evaluations by all reviewers.

Background Information of Female Manager in Concrete Information Condition

Franklin-Hughes Aircraft Co.

Position: Assistant Vice President for Sales

ANDREA MARTIN

Background:

Andrea Martin grew up in a suburb outside of St. Louis. She attended Arizona State University and majored in government. She graduated in the top quarter of her class. Andrea came to the company eight years ago, in 2001, and has been working here ever since. She recently completed the company's six-month management training program and, soon after, was promoted to her current position. She is in charge of sales for the entire Mid-West and Northern regions. Andrea enjoys reading and playing tennis in her spare time. She also loves to travel.

Current Status:

Andrea has recently undergone the company-wide annual performance review and she received consistently outstanding evaluations. She has been designated as a "stellar performer" based on the three major evaluative criteria used: sales volumes, number of new client accounts, and actual dollars earned. She has been identified as one of a small group of rising stars. Her performance is in the top 5% of all company AVPs. She has received consistently high evaluations by all reviewers.

Background Information of Male Manager in Ambiguous Information Condition

Franklin-Hughes Aircraft Co.

Position: Assistant Vice President for Sales

JAMES BOOKMAN

Background:

James Bookman grew up in a suburb outside of St. Louis. He attended Arizona State University and majored in government. He graduated in the top quarter of his class. James came to the company eight years ago, in 2001, and has been working here ever since. He recently completed the company's six-month management training program and, soon after, was promoted to his current position. He is in charge of sales for the entire Mid-West and Northern regions. James enjoys reading and playing tennis in his spare time. He also loves to travel.

Current Status:

James is about to undergo his annual performance review. His evaluation will be based on sales volume, number of new client accounts, and actual dollars earned.*

*In the ambiguous condition, information about the actual performance of the target manager is not provided.

Background Information of Female Manager in Ambiguous Information Condition

Franklin-Hughes Aircraft Co.

Position: Assistant Vice President for Sales

ANDREA MARTIN

Background:

Andrea Martin grew up in a suburb outside of St. Louis. She attended Arizona State University and majored in government. She graduated in the top quarter of her class. Andrea came to the company eight years ago, in 2001, and has been working here ever since. She recently completed the company's six-month management training program and, soon after, was promoted to her current position. She is in charge of sales for the entire Mid-West and Northern regions. Andrea enjoys reading and playing tennis in her spare time. She also loves to travel.

Current Status:

Andrea is about to undergo her annual performance review. Her evaluation will be based on sales volume, number of new client accounts, and actual dollars earned.*

*In the ambiguous condition, information about the actual performance of the target manager is not provided.

Appendix B. Measures

Competence, Likeability, Overall Evaluation, Manipulation Check, and Demographic Items

1. To what extent do you think this individual is:

	Not at All								**Very Much**
Competent	1	2	3	4	5	6	7	8	9
Likeable	1	2	3	4	5	6	7	8	9
Effective	1	2	3	4	5	6	7	8	9
Strong	1	2	3	4	5	6	7	8	9
Productive	1	2	3	4	5	6	7	8	9
Weak	1	2	3	4	5	6	7	8	9
Abrasive	1	2	3	4	5	6	7	8	9
Manipulative	1	2	3	4	5	6	7	8	9
Active	1	2	3	4	5	6	7	8	9
Selfish	1	2	3	4	5	6	7	8	9
Passive	1	2	3	4	5	6	7	8	9
Pushover	1	2	3	4	5	6	7	8	9
Kind	1	2	3	4	5	6	7	8	9
Tough	1	2	3	4	5	6	7	8	9
Conniving	1	2	3	4	5	6	7	8	9
Ambitious	1	2	3	4	5	6	7	8	9
Decisive	1	2	3	4	5	6	7	8	9
Timid	1	2	3	4	5	6	7	8	9
Bold	1	2	3	4	5	6	7	8	9
Trustworthy	1	2	3	4	5	6	7	8	9
Pushy	1	2	3	4	5	6	7	8	9

2. How much do you think you would like this individual?

Very Much								**Not at All**
1	2	3	4	5	6	7	8	9

3. Overall, how much do you think this person would be a good executive?

Very Much								**Not at All**
1	2	3	4	5	6	7	8	9

4. All in all, how much do you think you would want this individual to be your boss?

Very Much								**Not at All**
1	2	3	4	5	6	7	8	9

5. What was the job of the person you have just reviewed?

_____

6. How surprised were you to find this individual in this job?

Very Much Surprised								**Not at All Surprised**
1	2	3	4	5	6	7	8	9

7. Do you think the people in this job are (check one):

☐ Mostly men (more than 60 % men)

☐ Mostly women (more than 60 % women)

☐ About equal numbers of men and women

8. Please provide some information about yourself:
    a. Sex _____
    b. Age_____
    c. Major_____
    d. Work Experience Yes/No.

       If yes, for how long? _____Years _____ Months
    e. Have you ever worked as manager Yes/No

       If yes, for how long? _____Years _____ Months

Implicit Person Theory Measure

This questionnaire is related to a different study that is being conducted by another researcher to study the views of people regarding behavior and is a part of a series of questionnaires. For now, however, you will only answer this one questionnaire.

Please rate how strongly you agree or disagree with each of the following statements by selecting the appropriate response.

1 = Strongly Disagree

2 = Disagree

3 = Somewhat Disagree

4 = Somewhat Agree

5 = Agree

6 = Strongly Agree

1. The kind of person someone is, is something basic about that person, and it can't be changed very much.

   1 2 3 4 5 6

2. People can change even their most basic qualities.

   1 2 3 4 5 6

3. As I much as I hate to admit it, you can't teach an old dog new tricks. People can't really change their deepest attributes.

   1 2 3 4 5 6

4. People can do things differently, but the important parts of who they are can't really be changed.

   1 2 3 4 5 6

5. Everyone is a certain kind of person, and there is not much that the person can do to really change that.

1 2 3 4 5 6

6. People can substantially change the kind of person they are.

1 2 3 4 5 6

7. No matter what kind of a person someone is, the person can always change very much.

1 2 3 4 5 6

8. Everyone, no matter who they are, can significantly change their basic characteristics.

1 2 3 4 5 6

Appendix C. Proposal Introduction

Introduction

Although women make up about 47% of the workforce, there are few women in executive level positions in organizations and only 15 female CEOs in the Fortune 500 companies. Although this number has been slowly increasing over the past decade, currently, only 3% of the total number of CEOs is women (Catalyst, 2009). This underrepresentation of women in the senior ranks of the management has been attributed to the many obstacles that women face in the course of their careers. Obstacles can be both *internal* such as, personality factors (Kaufman, Isaken, & Lauer, 1996) and stereotype threat (Bergeron, Block, & Echtenkamp, 2006), and *external*, such as, denial of access to developmental opportunities and challenging assignments, lack of support from colleagues, supervisors and management (Ohlott, Ruderman, & McCauley, 1994) and difficulty in forming mentoring relationships (Noe, 1988). The effects of these barriers have been found to be more profound when the jobs are managerial in nature or leadership based (Ohlott et al., 1994). These hindrances might prevent women from obtaining the required line management experience that is so essential for advancing through the ranks in an organization, further contributing to the disproportionate number of women in executive level positions (Lyness & Heilman, 2006; Wellington, Kropf, & Gerkovich, 2003). Gender bias has been found to be prevalent in most areas of organizations, since the time that women have entered the workforce. Particularly, the discrimination based on gender that exists in performance evaluations makes it particularly difficult for women to occupy senior positions, and therefore quite salient, and was the focus of this study.

Although there has been a considerable amount of research done in this area (e.g., Bauer & Baltes, 2002; Bowen, Swim, & Jacobs, 2000), the current study aims to contribute to this literature by examining whether individual differences of raters can explain the reason for differential performance evaluations of male and female managers, despite them both performing equally. For this purpose, the methodology of Heilman,

Wallen, Fuchs, & Tamkin's (2004) study was replicated while introducing a moderator variable, the rater's Implicit Person Theory (IPT), in order to determine whether the results obtained by Heilman and colleagues could be explained by the influence of the moderator variable. Specifically, they found that factors other than performance, like amount of information provided to raters, influenced competence and likeability ratings and the overall evaluations of the male and female managers. This study incorporates the framework of the IPT to examine whether people evaluate the target differently based on the kind of IPT they hold, given the same amount of information about a target person. The IPT classifies people into entity and incremental theorists and describes the way in which holding one theory over the other impacts how individuals perceive behavior, as well as how they make assumptions about themselves and others behavior (Chiu, Hong, & Dweck, 1997; Dweck, Chiu, & Hong, 1995; Plaks, Stroessner, Dweck, & Sherman, 2001). The fundamental difference between the two is that entity theorists believe that traits are fixed and non-malleable while incremental theorists believe that traits are malleable and can be changed and developed over time (Chiu et al., 1997; Dweck et al., 1995; Levy et al., 1998; Plaks et al., 2001). And although, the IPT has been previously studied by researchers in the domain of stereotype formation and endorsement (e.g., Levy et al., 1998; Plaks et al., 2001), it has not been used as such to explain the occurrence of discrimination based on gender stereotypes in the workplace.

2.1 Previous Research

Stereotypes

Stereotypes are a kind of schemata that consist of categories and their associated prototypes (Feldman, 1981) and are formed from a set of characteristics related to personal attributes, such as gender, race and age (Kaufmann et al., 1996; Krzystofiak, Cardy, & Newman, 1988). They may develop in individuals due to cultural and situational factors as well as due to individual differences (Feldman, 1981; Hilton & von

Hippel, 1996). For example, people may hold perceptions of stereotypes based on gender (e.g., men are aggressive while women are nurturing) or race (e.g. African-Americans are athletic). These factors determine which of the elements of the incoming information are considered salient and attention worthy by the perceiver, and will be subsequently used in categorization of new incoming information.

It is very likely that raters, are no exception to using stereotypes to operationalize schemas for the easy understanding and processing of information. And while stereotypes may aid in the processing of large amounts of information through the process of categorization, they can also lead to negative outcomes, such as biases in evaluations (Feldman, 1981). Stereotypes are often used to make assumptions based on the existing categories and characteristics associated with them. For instance, people often associate the term "secretaries" (category/prototype) with women and expect them to possess a certain set of characteristics (related attributes) that are typically associated with women. Subsequently, if a perceiver who possesses these stereotypes were to meet a new secretary he or she would immediately attribute characteristics of the existing category to the new person. In such a case, individual information about the person is over-ridden by that of the existing category and any subsequent processing of information is then made based on the characteristics of the category and not that of the individual person (Feldman, 1981).

Gender and Role Stereotypes

Of particular relevance to the current study are gender and role stereotypes, and the way in which they influence performance evaluations at the workplace. The commonly held stereotypes about men and women in general, as well as about managers in particular, contribute to this stereotype-based bias that affects performance ratings.

Gender Stereotypes

Historically, the way men and women function has varied. Men have typically been the "providers" exhibiting *agentic* or masculine characteristics of toughness, forcefulness and achievement orientation (Heilman, 2001; Lyness & Heilman, 2006). In addition, men have been attracted to objects, as women have been to people (Cejka & Eagly, 1999). Men tend to have occupations that enhance group-based inequality and hence are more competitive whereas women have occupations that tend to promote group-based equality. Women have been typically caregivers – kind, nurturing and relationship oriented and are said to possess *communal* characteristics (Heilman, 2001; Lyness & Heilman, 2006). These behaviors have helped to reinforce the stereotypes typically associated with each gender, and these stereotypes have proven to be very consistent and uniformly held across both genders (Heilman, 2001).

Researchers have also identified that gender stereotypes have descriptive and prescriptive aspects (Heilman, 2001; Rudman & Glick, 2001). Essentially, descriptive aspects describe the *typical* characteristics of a woman or a man. Specifically women are said to typically possess communal characteristics and men are known to have agentic characteristics. Prescriptive stereotypes, on the other hand, indicate how a man or woman *ought* to be. People hold both types of stereotypes – if asked, they describe how each gender typically behaves, but they also hold expectations about how each gender *should* behave. Based on the prescriptive components of stereotypes, women and men are assigned certain social roles, and are expected to possess and display the attributes associated with the assigned role. Women are expected to be selfless and caring and occupy nurturing roles, such as that of a caregiver or homemaker, and men owing to their agentic nature occupy positions of higher status and authority and generally comprise the workforce (Eagly & Steffen, 1984). Displaying behavior that is deviant from the expectations of the assigned roles is, more often than not, met with disapproval. The distinction between the descriptive and prescriptive stereotypes that are commonly held by people is important when understanding bias in the workplace, because of the ways in which gender stereotypes can conflict role stereotypes.

Role Stereotypes

Research also suggests that people develop stereotypes for specific roles held by individuals. For instance, when considering the role of a manager, most individuals report images of an authoritative, directive, and in-control person; in other words, characteristics that are closely associated with men or *agentic* characteristics (Lyness & Heilman, 2006). The considerable overlap between attributes associated with men and those required of successful managers has led to the "think manager-think male" phenomenon (Schein, 1973, 1975; Schein, Mueller, Lituchy, & Liu, 1996). Thus, the managerial role (as well as the leadership role) has been "sex-typed" as a masculine job. On the other hand, roles, such as that of a nurse or a teacher, that have been typically occupied by women have been sex-typed as feminine jobs, and are thought to require *communal* characteristics, like kindness, gentleness and a nurturing nature – traits that are typically associated with women (Lyness & Heilman, 2006). As with gender stereotypes, role stereotypes also have descriptive and prescriptive components that guide expectations about future behavior and may influence evaluations of current behavior.

The sex differences between men and women contribute to the sex typing of roles and jobs and serve to preserve the traditional division of labor. People derive their images of men and women from observing their sex-typical work, either through direct or indirect means. That is, ideas about gender are shaped by what people observe around them in their daily lives (Social Roles theory; Eagly, 1987). Interestingly, Cann and Garnett (1984) observed that these stereotypic expectations are seen in children as young as 67 months and are a function of the socially prevalent gender dichotomy. The results of the authors suggested that children rated women to be more competent in female sex-typed jobs and men in male sex-typed jobs; although women were not viewed as incompetent in the male sex-typed jobs, they were considered less competent than men. This trend seems to continue into adulthood as well.

The Backlash Effect

Because of these stereotypes and sex typing of specific jobs, there exists a role incongruity between the characteristics typically associated with managers and those associated with women (Eagly & Koenig, 2008). Researchers suggest that typically women may not be considered suitable in the role of a manager, which is considered a male sex-typed job, because women are expected to behave in communal ways. This perceived lack of fit between the attributes ascribed to women and the attributes ascribed to men, which are presumed to be essential to being successful in a masculine sex-typed job results in expectations that women cannot perform as well as men on such jobs due to the supposed incongruence between the person and the job (i.e., the Lack of Fit Model; Heilman, 1983, 2001).

On the other hand, if a woman were to adopt masculine characteristics when working in a masculine sex-typed job in order to mitigate or soften the negative effects of communal expectations and to fit into the role of a manager, then she will be seen as displaying *agentic* characteristics (i.e., those characteristics typically associated with men like aggression, dominance, competitiveness, etc.). This would not only be a direct violation of the prescriptive gender stereotype but also of the descriptive stereotype of the typical communal woman. This is perceived to be a bad fit between what the agentic woman is like and what a women should actually be like even though there is congruence between the characteristics the woman possesses and those required to be successful in the particular masculine sex-typed job (Heilman, 2001). This differential treatment of agentic women could be a potential explanation for why women who are as competent as their male counterparts, are not awarded due credit for their performance and their success is either discounted or debunked (Heilman, 2001). Although the quality of their performance may be regarded as equivalent to that of men, they are rated as having less social skills than an identical man, and though they are respected to the extent that they prove themselves competent, they are not liked because they are not sufficiently feminine. Subsequently, it is no surprise then that women do not experience a similar kind of success in their careers as men, despite being equally, if not more, competent than their male counterparts. This has been termed as the *backlash effect* (Rudman & Glick,

2001) and this occurs not so much due to the obvious competence and skill of women as much as it does due to the threat of dominance that agentic women pose to men in an otherwise traditionally hierarchical work setting (Rudman & Glick, 2001). This threat of dominance violates the "prescriptive" stereotype of women (Heilman, 2001). This lack of conformity to societal ideals or a standard referent results in economic and social sanctions and ultimately proves to be detrimental to a woman's career (Heilman, 2001; Rudman & Fairchild, 2004).

For instance, Stroh, Brett, and Reilly (1992) found that despite following the traditional model of male career advancement, and possessing equivalent qualifications and experience as their male counterparts, female managers reported slower career growth and salary progression as compared to male managers. Lyness and Heilman (2006) compared male and female managers in staff and line positions, under the assumption that line positions are more male gender-typed than staff positions. They found that female managers in line positions were evaluated more negatively than male managers in line positions and more negatively than both male and female managers in staff positions. Performance ratings of women in line positions were more closely tied to their performance as compared to the ratings of male managers. That is, female managers who performed poorly received lower ratings than male managers who performed in a similar way. As a result of this, women have to try harder and face stricter evaluation standards in male sex-typed jobs, as compared to men (Lyness & Heilman, 2006).

To summarize, stereotypes are the foundation of gender bias in organizations and the basis for discrimination against women (Heilman & Okimoto, 2007; Heilman et al., 2004), which considerably restricts their upward mobility through the ranks. Gender stereotypes create negative expectations about women's performance in male sex-typed roles which results in unfavorable evaluations (Heilman, 2001). Because of this, failure is considered an expected outcome for women, owing to the "lower" status they occupy in society (Foschi, 1996; Nivea & Gutek, 1980). The current study will examine how these stereotypes influence the way women and men are perceived and how their performance is evaluated.

Bias in the Performance Appraisal Process

Performance evaluations serve many functions in organizations and are an integral part of the performance appraisal process. Among other things, performance ratings are used as an input or basis for personnel decisions such as selection and/or promotion (Farr & Levy, 2007). And while the goal of organizations is to develop appraisal systems that result in fair and unbiased ratings, it is likely that the factors which influence perceptions described previously also have an equally strong impact on the performance appraisal rating process alongside actual performance itself.

Since performance evaluations are mostly judgmental processes, there is a considerable amount of subjectivity involved in them (Feldman, 1981; Heilman & Haynes, 2008). Often raters do not have concrete information on which to make evaluations. This is especially true in managerial- and executive-level positions where the nature of the work does not lend itself easily to objective measures of performance (Heilman, 2001). In the absence of definite information and increased ambiguity, there is a greater chance for cognitive distortion to occur resulting in biases and rater errors (Feldman, 1981; Nieva & Gutek, 1980). However, it is not the subjectivity alone that leads to distortions in ratings. In the case of evaluating men and women in managerial positions, researchers suggest that gender stereotypes may serve as the link that converts the subjectivity to discrimination (Cardy & Dobbins, 1986; Heilman & Haynes, 2008). Thus, performance evaluations may not be solely based on the performance of the ratee. Rather, researchers suggest that, evaluations are also influenced by inferences drawn from personality traits, observed behaviors as well as non performance cues (such as sex, race etc.) (Krzystofiak et al., 1988; Nivea & Gutek, 1980).

For instance, Krzystofiak et al. (1988), reported that in the absence of concrete or specific information, as is most often the case, raters tend to rely on gender and associated stereotypes, which is judgment irrelevant information, as a basis for evaluation (Nivea & Gutek, 1980). Thus, a rater's schema for the evaluation of a ratee includes both performance-relevant as well as performance-irrelevant information (including non-performance cues and trait information) (Krzystofiak et al., 1988). Even in the absence of the latter kind of information, raters tend to make inferences from observed behaviors,

which in turn affect the evaluations. For instance, in the context of the current study, this means that though women may exhibit sufficient competence on the job, the overall evaluation will be a function of their sex, behaviors exhibited on the job (communal or agentic in nature), amount of information available about the performance, along with the actual performance itself.

In a series of studies, Heilman and colleagues (e.g., Heilman & Haynes, 2005; Heilman & Okimoto, 2007; Heilman et al., 2004) have examined factors, other than actual performance, that influence performance evaluations of women in male-typed jobs. One factor that is particularly relevant to the present study is how the type of information provided to raters impacts performance and likability ratings. Heilman et al. (2004) manipulated gender and clarity of information regarding performance outcome associated with a task on a male gender-typed job and examined the effects on ratings. They found that when information about the outcome was ambiguous, women were rated as less competent and less achievement oriented as compared to men but also less interpersonally hostile. There was no significant difference in likeability. However, when information about the outcome was clear (performance was clearly high), women were rated as competent and achievement oriented but at the same time they were also rated as less likeable and more interpersonally hostile. The differences in ratings were also found to be related to the gender type of the job. Specifically, female employees in male gender-typed jobs were found to be less likable and more interpersonally hostile than those in female gender-typed or neutral jobs. This negative impression was also found to affect career outcomes in the form of recommendations for salary and special opportunities as well as for preference as a boss.

In a related study, Heilman and Haynes (2005) examined how gender and the type of task feedback (shared or individual) given to complete a task impacted ratings. In this scenario, the researchers assumed that, if an individual were the sole person who had the task information to perform a particular task, the outcome is more related to his or her performance. However, when task information was shared, the impact of the individual's contribution was more ambiguous. The differences in ratings of men and women on competence, influence and leadership behavior were found to be more pronounced in the

group feedback condition (when information about individual contribution was ambiguous) than in the individual feedback condition. Similarly, Heilman and Haynes (2005) found that these differences disappeared when the source of the task-related information was unique to each individual, as compared to when members of the dyad had shared or overlapping task-related information. In addition, in the absence of any task-related information, women were rated as less competent than men and lower than women in the unique information condition. Heilman and Haynes (2005), therefore, concluded that the attribution of responsibility for the women's success was contingent firstly, on the presence and absence of information, as well as on the nature or type of information provided to raters.

Finally, Heilman and Okimoto (2007) found that women were evaluated favorably in male gender-typed jobs only when information about their communality was also provided to the raters. Specifically, when raters received information about both performance and communal behavior, they were rated as more likeable and less interpersonally hostile than men were. However, when communal information was not provided or information about non-communal behavior was provided, women were rated lower on likability and higher on interpersonal hostility. This not only indicates that the type of information provided affects ratings but also that negativity was not directed towards women when communality was evident in their behavior. Interestingly, when women behaved in accordance with the female stereotype, the negativity evidenced in previous work was not found. This also shows that although the women about whom communal information was not provided (i.e., those who behaved in a more agentic fashion) were as equally successful as men, they were evaluated negatively overall, and were less desirable as bosses.

These studies suggest that in situations when information about competence, quality of performance, and individual contribution to the outcome (in the case of dyads or teams) is ambiguous and not clearly specified, women's performance will be rated lower than that of equally performing men. Previous research has found that in the absence of concrete information, there is a greater possibility of inconsistent information (e.g., success of a woman on a male gender-typed job) to be debunked or discounted

(Feldman, 1981) and the associated negative expectations can lead to cognitive distortions and lowered ratings. However, where clear-cut information is available and there is no doubting the competence and success of a woman on a male gender-typed job, she still faces problems that are not experienced by her male counterparts. The information about a woman's success also indicates to the rater that the woman possesses agentic characteristics. These successful women, then, may be rated as competent but would not be liked, since their behavior is in violation of the prescriptive gender stereotype.

As evidenced above, it appears that evaluations are not based solely on performance. Instead, the observed behavior of the individual on the job and the inferences made from it play an important role in the overall evaluation. Even in the case when competence is "established," likeability of the target individual still tends to affect important personnel decisions. Cardy and Dobbins (1986) report that liking is an integral part of the performance evaluations and it is difficult to separate it from the performance dimension. While this holds true for all employees, both male and female, this co-relation is of more salience to women due to the existence of the backlash effect, and more so in male gender typed jobs, since liking, or rather disliking, seems to bias evaluations of women. In the context of the present study, the agentic behavior of a woman on a male sex-typed job would then result in an unfavorable evaluation and social disapproval/dislike due to the violation of either stereotypes of gender or of role.

The Social Context of the Performance Appraisal Process

Over the past two decades, researchers have shifted their focus to the social context of the performance appraisal process as reported by Levy and Williams (2004) who identified a number of distal and proximal variables in the environment and organization that affect rater and ratee behaviors, and ultimately influence the appraisal process. Similarly, Murphy (2008) proposed a multi-factor model, in which he stated that among other factors, individual characteristics of the rater play an important role in performance ratings and evaluation. Based on the models formulated by Levy and

Williams (2004) and Murphy (2008), this study proposed that an individual difference variable of the rater, the Implicit Person Theory (IPT) has an influence on the ratings of behavior and performance of ratees. The IPT is a plausible theoretical approach to examine in the current study because researchers have suggested that it may influence how individuals hold and endorse stereotypes (Levy et al., 1998; Plaks et al., 2001). This is because it serves as a framework through which the same information can be viewed and perceived differently by the perceivers depending on the IPT they hold. Recently, Heslin, Latham, & VandeWalle (2005) have also proposed that the IPT may affect bias in performance evaluations but they did not specifically look for gender differences in their study. This research, then, is meant to converge the work of Heilman and colleagues and the findings of Heslin et al. (2005) and others who have theorized about the role of the IPT in endorsing differential treatment of people based on stereotypes such as gender, in this case and to examine if indeed, the IPT plays a moderating role.

Implicit Person Theory

An IPT is an individual difference variable that describes how perceivers might hold different views about behavior. The IPT that the individual holds might influence the way this person perceives behavior, and makes assumptions about his or her behaviors as well as about the behavior of others (Chiu et al., 1997; Dweck et al., 1995; Plaks et al., 2001). The IPT identifies people as either *entity* or *incremental* theorists. The fundamental difference between the two is that entity theorists believe that traits are fixed and non-malleable while incremental theorists believe that traits are malleable and can be changed and developed over time (Chiu et al., 1997; Dweck et al., 1995; Levy et al., 1998; Plaks et al., 2001).

Researchers report a number of basic differences between entity and incremental theorists. Entity theorists consider traits as the basic unit of analysis to understand human behavior, actions, and outcomes. These individuals focus on traits with which to make causal inferences about behavior, believe that trait relevant behavior is relatively stable over time and across situations, and use knowledge of trait information to confidently

make predictions about other traits relevant to the current behavior, and make predictions about future behavior as well. They base their judgments on a relatively small sample of behavior, because they believe that traits initially displayed will continue to be displayed in the near and distant future and they expect relatively little variability in behavior over time (Chiu et al., 1997; Dweck et al., 1995; Levy et al., 1998; Plaks et al., 2001).

Incremental theorists, on the other hand use process analysis to find causal explanations for behavior and focus more on the psychological and behavioral mediating factors rather than traits (Chiu et al., 1997; Dweck et al., 1995; Levy et al., 1998; Plaks et al., 2001). They do not believe in the finality of reality because according to them, an opportunity for change always exists. They anticipate that effort can lead to improvements in behavior. They do not make judgments based on traits, but rather give credence to situational factors that may have also affected behavior. This is to say that they do not believe that the present behavior that is displayed is necessarily indicative of future behavior.

Therefore, the IPT that perceivers hold provides a framework by which they interpret and judge their own and others' behavior. Although, the perceivers' implicit theories do not rigidly determine their own behavior, there is evidence that these theories do influence how perceivers view incoming information about others.

Researchers have studied the influence of the IPT in the context of various human attributes. In the past, the IPT has been used as a theoretical framework to account for differences in judgments of others' behaviors (e.g., Erdley & Dweck, 1993), social identities (e.g., Hong, Chan, Chiu, Wong, Hansen, Lee, Tong, & Fu, 2003), and attributions about intelligence, ability and effort (Hong, Chiu, Dweck, Lin, & Wan, 1999) and so forth. In the organizational context, Heslin and colleagues have done a considerable amount of research on the effect of the rater/manager's IPT on various aspects of the organization, namely, performance improvement, coaching behaviors, procedural justice, and goal orientation. Particularly, they found that the incrementalism of managers was positively related to the extent to which they coached their employees (Heslin, VandeWalle, & Latham, 2006), to employees' perceptions of managers having provided a procedurally fair appraisal process (Heslin & VandeWalle, 2009), and a

manager's ability to recognize a change or improvement in performance (Heslin, Latham, & VandeWalle, 2005).

Implicit Person Theory and Stereotypes

The differential processing of incoming information by entity and incremental theorists could be a possible explanation for the endorsement and persistence of stereotypes (Levy et al., 1998). This is evident in the emphasis on traits vs. process analyses that leads entity and incremental theorists to differentiate between what elements of the incoming information they consider worthy of their attention. In separate studies, Levy et al. (1998) and Plaks et al. (2001) found distinct differences in the way entity and incremental theorists process incoming information. For instance, entity theorists evaluate incoming information with either a positive or a negative evaluative tag. This categorizing helps them in coding information to interpret other behaviors later on. Entity theorists focus on inferring traits leading them to pay attention to consistent information rather than inconsistent information or irrelevant information. Their trait expectancy makes them more receptive to expectancy-confirming information rather than expectancy-disconfirming information. This indicates that they are also less likely to adjust their expectancy when faced with disconfirming information. For example, if people hold a certain set of beliefs regarding a person of a particular race, they will only pay attention to behaviors or characteristics of the target person that are consistent with the stereotypical expectations associated with that particular race, and ignore those attributes that disconfirm the stereotype. This leads them to endorse and agree with existing stereotypes and hold onto those beliefs more rigidly. Inconsistent information proves a challenge to their existing beliefs. Therefore, they may show an avoidance tendency towards inconsistent information and may ignore it by selectively paying attention to consistent information. If information cannot be ignored, they are more likely to debunk or discount it. They consider inconsistent information as random "noise" and therefore uninformative, as it disconfirms their existing beliefs and suggests that their basic beliefs about people and personalities are incorrect.

On the other hand, incremental theorists pay equal if not more attention to both inconsistent and consistent information (Plaks et al., 2001). A mix of both does not violate but instead supports their belief about the changeability of behavior. They may even seek out disconfirming information and because they regard it as attention worthy. They view stereotypes as not entirely true and attribute the target's behavior to the influence of social factors. They, therefore, do not evaluate, encode, and categorize incoming information based on traits but do so based on psychological and behavioral mediators such as "motivation, emotional state, construal of the situation" (Plaks et al., 2007, p. 878). For example, when entity theorists observe a female manager helping a coworker, they may attribute this behavior to the communal trait of being "nice" that is typically associated with women. Incremental theorists, on the other hand, would look at situational factors and/or the psychological state of the manager before making a causal inference for the behavior. They may assume that the co-worker needed help (contextual mediator) or the manager was motivated to help employees, rather than making stereotypical attributions.

Levy et al. (1998) conducted five experiments to examine the role of the IPT on stereotype formation and endorsement. They found that entity theorists endorsed positive and negative ethnic stereotypes more strongly than incremental theorists did and their levels of beliefs about the extent to which stereotypes reflect real group differences varied considerably (Experiment 1). In a second study, entity theorists made stronger judgments based on these stereotypes and more strongly endorsed their innateness while incremental theorists believed in the influence of social factors. Experiment 3 examined whether entity theorists, compared to incremental theorists, would form stereotypes of a seemingly novel group whose members were shown to display positive and negative behaviors. It was found that entity theorists, compared to incremental theorists, tended to make more extreme judgments based on limited information, and this was done only for those traits for which behavior information was given. By temporarily manipulating participants' implicit theories in Experiment 4, it was determined whether the IPT had a causal influence on the formation of stereotypes . It was found that those in the induced entity condition endorsed positive and negative traits related to societal and occupational

stereotypes more strongly than those in the incremental condition. In the final experiment, Levy et al. (1998) concluded that implicit theories were not redundant with individual differences in predicting the formation of stereotypes (Experiment 5). That is, the implicit theories accounted for unique variance in predicting stereotype endorsement, above and beyond other variables like right wing authoritarianism, personal need for structure, and attributional complexity.

The disparity in the assumptions of entity and incremental theorists determines the criteria by which the perceiver decides which information is worthy of his/her attention and which is not. Subsequently, the theory determines whether attention is directed towards information that is consistent or inconsistent with expectancies and existing beliefs (Plaks et al., 2001). Entity theorists find greater value in expectancy-confirming information because it reinforces their beliefs. Incremental theorists, however, do not hold the same assumptions and may even seek out disconfirming information because it is consistent with their beliefs that behavior varies over time and across situations. Therefore, if an entity theorist observes a female manager listening empathetically to a coworker, they are bound to pay attention, since this expectancy confirming information is consistent with the communal female stereotype and is therefore worthy of attention. On the other hand, if they find the female manager acting aggressively toward a subordinate, this information is not considered attention worthy since it disconfirms existing beliefs and is subsequently ignored. Therefore, more attention is given to consistent rather than inconsistent information. Incremental theorists would, instead of labeling the woman as communal and being true to the stereotype of her gender, attribute this behavior to situational and psychological influences. They would assume that, in the first case, the coworker needed help and in the second case, the subordinate needed to be chastised, thus making a causal inference for the manager's behavior from situational factors.

Plaks et al. (2001) conducted five experiments to study how entity and incremental theorists respond to information that confirms and disconfirms their existing beliefs and stereotypes. In Experiment 1, participants were asked to read a total of 30 consistent, inconsistent and irrelevant statements about the target and these statements

appeared in a serial order. They were also asked to respond to a tone that was emitted along with 3 of the consistent, 3 of the inconsistent and 3 of the irrelevant statements to test for engagement with the stimulus. Cognitive load was also manipulated by asking participants in the high cognitive load condition to count aloud backwards by sevens starting from 938 as they read the statements. The results indicated that entity theorists responded more slowly to the tone while processing consistent information and more quickly while processing inconsistent information than irrelevant information. Incremental theorists were found to respond more slowly during the processing of inconsistent than consistent or irrelevant information. Therefore, entity theorists allocated more attention to consistent than inconsistent information, whereas incremental theorists allocated more attention to inconsistent rather than consistent information. This was seen only when the cognitive load was high.

In Experiment 2, a similar procedure was followed except that the 30 statements were presented in 15 pairs simultaneously and in a random order. Cognitive load was also manipulated. The participants were later administered a recognition test. The results indicated that entity theorists showed greater recognition for consistent than inconsistent or irrelevant information. They exhibited this in both the high and low cognitive load conditions. Incremental theorists, however, showed equal sensitivity for both consistent and inconsistent information, and higher sensitivity for both rather than for irrelevant information. In Experiment 3, a similar procedure as that followed in Experiment 4 by Levy et al. (1998) (see above) was done where participants' implicit theories were temporarily manipulated to determine if their IPTs had a causal role in the allocation of attention. In addition, a novel target group was used rather than an individual person. It was found that those who were inducted into the entity condition were more sensitive to consistent than to inconsistent or irrelevant information. Incremental theorists showed greater sensitivity to inconsistent and irrelevant than to consistent information. Experiment 4 consisted of a dichotic listening paradigm to examine the attention allocation of entity and incremental theorists when simultaneously faced with both expectancy-confirming and expectancy-disconfirming information. In addition, the amount of inconsistent information was manipulated. Prior to the task, the target was

portrayed in the background information as either belonging to a low expectancy (expected to face difficulty in completing the task) or a neutral expectancy group (expected to perform moderately well on the task). Those in Entity theorists were found to pay lesser attention to the target as his performance became increasingly counter-expectant, while incremental theorists' attention remained the same. Entity theorists also did not exhibit a linear trend across the performance conditions of good, moderate, and outstanding as performance increased, unlike incremental theorists. The entity theorists held onto their initial expectancies for longer than incremental theorists. The entity theorists did eventually revise their expectancies, however, but only when faced with an overwhelming amount of inconsistent information. In all the studies, entity theorists used the strategy of selectively ignoring inconsistent information but did not use the incrementalists' strategy of debunking.

In sum, the differences that exist between entity and incremental theorists result in the differential processing of incoming information by perceivers and in the adoption of various strategies for processing this information. There are three strategies that are followed by perceivers during information processing of discrepant information: a) ignore or overlook the inconsistent information, b) debunk or discount it, or c) recategorize sufficiently inconsistent information. The option the perceiver chooses depends not only on individual differences but also on cultural and societal norms. These differences and norms determine which characteristics will be used in categorization, all other things being equal (Feldman, 1981). Comparing the findings of Levy et al. (1998) and Plaks et al. (2001) regarding the differential processing of information by entity and incremental theorists with the consequences of the backlash effect as outlined by Heilman (2001), a parallelism can be drawn between the way entity theorists process inconsistent information and the way the occurrence of backlash takes place. Heilman (2001) proposed that consequences of the backlash effect include (a) devaluing success and denying credit for the success, which is the same as ignoring or debunking and discounting the successful performance (inconsistent information) by entity theorists, or, (b) acknowledging competence but at the same time disapproving the behavior, which is similar to the recategorization of inconsistent information by the rater to acknowledge

competence. Therefore, there exists a parallelism between the methods of processing of information by entity and incremental theorists (as reported by Levy et al., 1998; Plaks et al., 2001) and the outcomes of this kind of processing (Heilman, 2001; Feldman, 1981). The findings of these various studies have many implications for understanding the effects of gender stereotyping in the performance appraisal process, which is the focus of the present study.

In order to be considered competent, women are required to display agentic characteristics, that is, exhibit certain traits and behave in a way that is inconsistent with the communal stereotype of a woman. However, if the rater of the female managers' performance (which is on par with that of an agentic man) were to hold an entity theory, less than overwhelming amounts of information about the inconsistent behavior would either simply be overlooked or discounted/debunked and attributed to external causes. This would result in lower ratings of performance but higher likability ratings (Heilman et al. (2004). In the event that this inconsistent information is so overwhelming that it cannot be ignored, the female manager would be rated as competent but would not be liked because she violated the communal stereotype of a woman by behaving in an agentic way and would be subsequently evaluated unfavorably. However, if raters held an incremental theory, it was predicted that their ratings would be more reflective of the actual performance, regardless of whether the female managers behave agentically or communally, and of whether the information provided is ambiguous or concrete.

2.2 Current Study and Hypotheses

While making job performance evaluations, raters recall two types of information, performance relevant and performance irrelevant information, both of which are determined by the stereotype that represents the category to which the stimulus belongs, and which stereotype is readily available for recall. In the absence of concrete information, people make use of trait information to make inferences about behavior (Krzystofiak et al., 1988). These inferences are made on the basis of "job related" behavior and also on the basis of other traits and general behavior. That is, inferences are

made about behaviors from performance-relevant as well as performance-irrelevant information. These inferences, in turn, influence the categorization and prototype matching that takes place and determines the direction of attention, organization, and subsequent recall of information. Stereotypes are frequently employed in processing information, since they are convenient to use and reduce demands on the perceiver and help manage large amounts of information (Feldman, 1981; Powell, Butterfield, & Parent, 2002). As Feldman (1981) observed, the information that supervisors have about their subordinates' performance is often not concrete and at best "fragmentary." Therefore, the absence or ambiguity of the given information about the performance of the ratee increases will influence the extent to which the evaluation is based on true performance, and the extent to which it is based on other dimensions, non performance or otherwise.

In the context of the current study, it was predicted that a rater's IPT would determine the role that gender stereotypes play in the information processing stage while making evaluations. In addition, it was anticipated that the amount of information given would also bring out differences in the way entity and incremental theorists evaluate agentic and communal men and women. As stated previously, using the methodology used by Heilman et al. (2004) with slight modifications, the present study examined how entity and incremental theorists rate target persons (male and female managers) on their competence, likeability and overall impression of their ability as a manager. Performance was kept constant across experimental conditions. However, the amount of information provided about the quality of the performance of the male and female managers was manipulated in the different conditions. Based on the literature and the theory, it is assumed that the IPT of the raters as well as the amount of information provided about the performance of the target person will moderate the backlash effect and that this effect will be stronger for entity theorists than incremental theorists. Therefore, it is hypothesized that,

H1: Male managers will be rated as competent, likeable and will be rated favorably overall by both entity and incremental theorists, in cases when information about their performance is concrete and ambiguous.

H2: Female managers will be rated high on competence when the information about performance is concrete and high on likeability when information provided about performance is ambiguous by entity theorists. They will also be rated unfavorably overall by entity theorists.