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Individual Differences in Attributional Style: The Mediating Influence of Self-Efficacy, Self-Esteem, and Sex Role Identity

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INDIVIDUAL DIFFERENCES IN ATTRIBUTIONAL STYLE: THE MEDIATING INFLUENCE OF SELF-EFFICACY, SELF-ESTEEM, AND SEX ROLE IDENTITY

by

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INDIVIDUAL DIFFERENCES IN ATTRIBUTIONAL STYLE: THE MEDIATING INFLUENCE OF SELF-EFFICACY, SELF-ESTEEM, AND SEX ROLE IDENTITY

Angela J. Hirschy, Ph.D.

Western Michigan University, 1999

Previous research into achievement attributions failed to demonstrate consistent main effects for sex or interaction effects between sex and situational or task variables. The ambiguity of these findings suggests that intervening variables other than sex may be influencing differences in attributions. Based on evidence derived from the theoretical and research literature related to psychological well-being and the reformulated learned helplessness model of depression, self-efficacy, self-esteem, and sex role identity have the potential to influence attributions made in different types of success and failure situations. The purpose of this study was to expand on achievement attribution research by investigating the relationship between individual differences in attributional styles for success and failure and sex, self-efficacy, self-esteem, and sex role identity.

A sample of 163 undergraduate students at a large midwestern university completed a test packet containing the Attributional Style Questionnaire (ASQ), the Self-Efficacy Scale (SES), the Rosenberg Self-Esteem Scale (RSES), and the Bem Sex Role Inventory (BSRI). Their responses were analyzed using multiple correlation and regression analyses, hierarchical regression analyses, and path analyses. Results

from the correlation and regression analyses indicated that masculinity played a key role in attributional style differences for success and failure situations and self-efficacy and self-esteem played a differential role in male and female attributional styles for success and failure. In addition, better prediction occurred for attributional styles for success than attributional styles for failure. The results from the path analyses further indicated that the direct effect of masculinity on male attributional styles for success was greater than the direct effect of masculinity on female attributional styles for success. Also, the direct effect of self-efficacy on male attributional styles for failure was greater than the direct effect of self-efficacy on female attributional styles for failure. The implications of the findings are discussed and recommendations for future research are made.

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DEDICATION

This dissertation is dedicated to my dad, Richard H. Hirschy. Although he's not physically here to share in my success, I know that he's very proud of me and is watching from Heaven with a smile. Thanks for believing in me and teaching me what life is really all about. You were the best Dad I could ever have. I love you and I won't forget.

ACKNOWLEDGMENTS

What can I say that would adequately express my thoughts and feelings about accomplishing a goal of a lifetime. Because that's what this dissertation represents, the fulfillment of a lifelong dream. Some thought it rather fanciful and maybe a little unrealistic, but it's been a dream that I've nurtured and strived towards for a long time; until here I am, at the end of the journey, and the feeling of success is very sweet. Of course, I didn't come to this point on my own. Along the way, several people have provided the motivation, support, and encouragement that I needed to stay focused and determined to reach my goal. It is to those people that I want to express my appreciation and gratitude.

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I also want to thank my dissertation committee members, Dr. Edward Trembley and Dr. Robert Wait. I've really appreciated the empathy and humanity that Dr. Trembley has shown me throughout my doctoral education and am honored to have had the privilege to learn from

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CHAPTER I

INTRODUCTION

Background of the Problem

<u>Controversy About Sex Difference Research</u>

Sex difference research is the focus of an intense debate among psychologists. Some psychologists discourage research comparing the sexes and contend that any reported differences are negligible and primarily the result of societal learning (Baumeister, 1988; Gilbert, 1994; Hyde, 1994; Kahn & Yoder, 1989; McHugh, Koeske, & Frieze, 1986). Others believe that sex difference research is necessary if we are going to gain an understanding of the differences and similarities between men and women (Eagly, 1995; Fagley & Miller, 1990; Scarr, 1988). They argue that all sex comparisons, whether significant or not, need to be included when reporting research findings. Psychologists on both sides of the controversy express strong opinions about comparisons between the sexes and offer convincing arguments for and against this line of research.

The opposition to sex difference research arises primarily from feminist psychologists who, in the 1960's and early 1970's, encouraged sex difference research because they thought that, if conducted properly and fairly, it would produce no evidence of differences and further their political agenda of equality for women. When research efforts resulted in findings varying from no differences to moderate or even large differences between

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the sexes (Eagly, 1995), feminist psychologists criticized the inconsistency of those findings, questioned whether sex differences existed, and advised researchers to pursue a focus on gender and the social context in which differences and similarities are constructed (e.g., Hare-Mustin & Marecek, 1994; Hyde, 1994; Kahn & Yoder, 1989; Marecek, 1995; Unger, 1979). Within the field of psychology, the nature of the feminist response resulted in greater awareness of the scientific and political issues involved in comparing the sexes and also sparked heated debate as to the validity of feminist criticisms and the research implications of a social/contextual approach to understanding sex and gender (Eagly, 1995).

The debate about sex difference research is not resolved, but abandoning this line of research does not seem a wise course of action. Sex differences are well documented and research interest in this area has not diminished (Eagly, 1994; Hyde, 1994). It is also a basic organizing variable that is an important factor in determining behaviors, attitudes, and self-perceptions (Eagly 1994). Sex may not always be the key variable influencing male and female behaviors, but consistent reporting of comparisons between the sexes will enhance rather than hinder a clearer understanding of sex-related behavior and its correlates (Eagly, 1987). At the same time, it seems equally important to heed the directives of feminist psychologists and not make interpretations concerning reported differences without taking into account any contextual factors that may have influenced the results. With careful attention to respectful scientific practices, continued sex difference research should help rather than hinder the feminist agenda because it will provide a better understanding of male and female behavior that can then be used to abolish stereotypes and

indicate ways to create equal opportunities for women (Eagly, 1990, 1994, Rothblum, 1988; Scarr, 1988).

<u>Achievement Attribution Research</u>

The chain of events in the achievement attribution literature reflects the process that has occurred in sex difference research as a whole. In the 1970's, interest in sex differences in achievement attributions was high. The theoretical basis for this research was Weiner's attribution theory of achievement motivation which proposed that men and women are motivated to assign causes to their successes and failures and those causes usually pertain to ability, effort, luck, or task difficulty (Weiner, Frieze, Kukla, Reed, Rest, & Rosenbaum, 1971). Using Weiner's theory, researchers hypothesized that men and women achieved at different levels because the attributions they chose to explain a success or failure had positive or negative consequences on their future achievement strivings (Bar-Tal & Frieze, 1977; Deaux, 1984; Deaux & Emswiller, 1974; Frieze, Whitley, Hanusa, & McHugh, 1982). When research efforts yielded contradictory findings, they exerted tighter controls and investigated specific situational or contextual variables in an effort to gain a clearer picture of what appeared to be a complex relationship between sex and attributions following a success or failure (e.g., Deaux & Emswiller, 1974; Deaux & Farris, 1977; Eccles, Adler, & Meece, 1984; Simon & Feather, 1973). Their efforts only added to the growing complexity of this body of research (Frieze, Sales, & Smith, 1991).

During the 1980's, researchers became frustrated with this state of affairs and warned that investigating sex as a difference variable that

influences attributions for success and failure may not be a fruitful line of research (Deaux, 1984; Frieze et al., 1982; McHugh, Frieze, & Hanusa, 1982; Sohn, 1982). Others protested the underlying theoretical notion that the attributions made by women were somehow flawed or inferior to those made by men, because this notion cast women in an unfavorable light (e.g., Kahn & Yoder, 1989).

In spite of the discouraging trend in research findings, some researchers made suggestions for improving investigations into sex differences in attributions (e.g., McHugh et al, 1982; Deaux, 1984; Wittig, 1985; Harvey & Weary, 1984; Frieze et al., 1991). Their recommendations focused on increasing statistical power and offered direction for expanding the achievement attribution paradigm in order to get a clearer idea of the variables influencing attributions in other settings besides achievement situations. The four recommendations that were the focus of their discussion on improving this research were: (1) dispositional variables, (2) motivational variables, (3) cross-situational attributional tendencies in naturally occurring situations as opposed to situation specific attributions made in laboratory settings, and (4) gender-related roles, norms, and values.

In sum, the research into sex differences in achievement attributions may not have provided a clear indication of sex differences in attributions because variables other than sex were having an influence on attributional responses (Frieze et al., 1982; McHugh et al., 1982). Given the recommendations made by attribution researchers, improving and expanding this research may produce a clearer understanding of the relationship between sex and attributions made following a success or failure.

Improving Attribution Research

There are several person centered variables that may be helpful in efforts to better understand success and failure attributions. Attributions made across situations could be examined by assessing attributional style. In addition, the theoretical and research literature suggests that self-efficacy, self-esteem, and sex role identity may have the greatest potential to influence attributions across situations. A brief discussion of the theoretical foundations and empirical evidence related to these person centered variables will make their relevance to improving attribution research more apparent.

Self-Efficacy

The underlying assumption of self-efficacy theory as proposed by Bandura (1977) is that "psychological procedures, whatever their form, serve as a means of creating and strengthening expectation of personal efficacy" (p. 193). Bandura distinguishes between outcome expectations and efficacy expectations. An outcome expectation is the belief that a behavior will produce a certain outcome, and an efficacy expectation is the belief that one can successfully perform the behavior required to produce a certain outcome. A core hypothesis of Bandura's theory is that efficacy expectations affect the amount of effort expended as well as the degree of motivation and persistence in any given situation. As a result, if a person's self-efficacy expectations are high, there is a greater likelihood that he or she will persist in the face of difficulty or hardship.

Bandura (1977) delineated four sources of self-efficacy expectations: (1) performance accomplishments, (2) vicarious experiences, (3) verbal persuasion, and (4) emotional arousal. Performance accomplishments or successes are most influential because they are based on personal mastery experiences. Thus, repeated successes add to self-efficacy expectations and repeated failures lower personal efficacy expectations. Vicarious experience and verbal persuasion also have positive effects on self-efficacy expectations, but emotional arousal may result in negative or low expectations.

Bandura (1977) also made several hypotheses about the impact of cognitive processes on the level of self-efficacy, but only two of them are relevant to the present discussion. They are: (1) a success attributed to an internal cause will increase self-efficacy but a failure attributed to an internal cause will decrease self-efficacy and (2) a success attributed to an internal and stable cause (e.g., ability) is more likely to have a positive effect on self-efficacy than a success attributed to an internal and unstable cause (e.g., effort). Thus, a success attributed to an internal cause or a failure attributed to an external cause will probably reinforce self-efficacy, but a success attributed to an external cause or a failure attributed to an internal cause will probably decrease self-efficacy. In addition, an internal and stable explanation for a success is more apt to enhance self-efficacy than an internal and unstable explanation, and a failure attributed to an internal and stable cause is more likely to decrease self-efficacy than a failure attributed to an internal and unstable cause.

Based on these hypotheses, it would be reasonable to make some assumptions about the impact that level of self-efficacy might have on a

person's attributions following a success or failure outcome. It is likely that an individual with low self-efficacy may be more apt to attribute failure to internal factors and success to external factors and choose an internal explanation for failure that is immune to change. Conversely, the high self-efficacy person may be more likely to attribute success to an internal cause and failure to an external cause and his internal explanation for success will probably be one that is unlikely to change.

Self-Esteem

Self-esteem is a construct that has been "related to almost every variable at one time or another" (Crandall, 1973, p. 45). Although there is disagreement about the dimensions of self-esteem and their implications for cognition and behavior, there is general agreement that self-esteem is the evaluative component of the self-concept and it is related to a positive or negative assessment of overall self-worth (Blasocovich & Tomaka, 1994). Demo (1985) categorized this global evaluation of self as experienced self-esteem because it involves how an individual feels about or experiences self He also distinguished experienced self-esteem from presented self-esteem which he defined as the level of self-esteem a person communicates to others.

Self-esteem has been correlated with masculine sex role traits. Results from studies involving sex role identity and psychological adjustment indicate a positive relationship between self-esteem and the extent to which one identifies with masculine traits (e.g., Antill & Cunningham, 1977; Kelly & Worell, 1977; Spence, Helmreich, & Stapp, 1975). In a meta-analysis examining the research related to masculinity

and psychological well-being as measured by self-esteem, Whitley (1983) reported that the masculinity model of psychological adjustment (i.e., well-being is a function of how strongly one identifies with a masculine sex role identity) was most supported by research findings. In addition, Orlofsky and O'Heron (1987) and O'Heron and Orlofsky (1990) also reported evidence supporting a positive relationship between masculine sex role traits and level of self-esteem.

Research evidence also indicates a relationship between self-esteem and attributional style. Studies using the reformulated learned helplessness model have shown a correlation between low self-esteem and a depressive attributional style characterized by internal, stable, and global attributions for failure outcomes (Cohen, Bout, Vliet, & Kramer, 1989; Feather, 1983, 1987; Tennen, Herzberger, & Nelson, 1987).

Sex Role Identity

This construct refers to the extent to which traditional societal definitions for sex-appropriate behavior are internalized and used to determine the acceptable behavioral response in any situation (Bem, 1981). Thus, a person who has a masculine or feminine sex role identity is someone who readily engages in behaviors consistent with his or her stereotypical beliefs about sex-appropriate behavior and avoids those that are not.

Traditionally, masculinity and femininity were conceptualized as opposing end points of a single continuum (Constantinople, 1973) which meant that men and women could possess either a masculine or a feminine sex role identity but not both. This situation changed when researchers

introduced the theoretical possibility of androgyny; a sex role that includes both masculine and feminine traits (e.g., Bem, 1974; Spence & Helmreich, 1978). They based their theory on the notion that masculinity and femininity were not mutually exclusive end points on one dimension but rather two independent dimensions that were analogous in nature. This made it theoretically possible that a man or woman could strongly identify with both stereotypically masculine and feminine sex role traits.

Sex role theorists generally define masculinity as those traits involving agency, instrumentality, and dominance and femininity as those traits indicative of a communal, expressive, and empathetic orientation to behavior (Kelly & Worell, 1977). Masculine sex role traits are evidenced in assertive and goal-directed behaviors, and feminine sex role traits are manifested in behaviors related to establishing and maintaining relationships and demonstrating empathy for the welfare of others.

Although the terms masculinity and femininity are used consistently in the sex role identity literature, many researchers disagree about whether it is possible to accurately assess these global constructs (e.g., Spence, 1983). Some hold that most sex role identity instruments simply provide an indication of the extent to which individuals identify with or exhibit instrumental and expressive traits and behaviors rather than a global assessment of masculinity or femininity (Long, 1989; Myers & Gonda, 1982; Spence & Helmreich, 1979, 1981). To avoid confusion and maintain consistency with previous research, this researcher used the terms, masculinity and femininity, when referring to the traits measured by the Bem Sex Role Inventory (BSRI) (Bem, 1981b). However, the use of these terms does not imply any stereotypical assumptions concerning the sex

appropriateness of masculinity or femininity and is not an attempt to suggest that masculine (i.e., instrumental) traits are preferred over feminine (i.e., communal) traits.

Bem (1981a) took sex role identity theory one step further when she reasoned that one's sex role depends on gender schematic processing. She based this notion on the observation that sex is a basic organizing principle in society that causes children to be socialized from an early age to conform to some degree of sex specific cognitions, skills, and characteristics which eventually become the guideline for evaluating self. Bem postulated that the general readiness to process information on the basis of a gender schema depends on the degree to which an individual has accepted and internalized society's stereotypical concepts of masculinity or femininity. The gender schema then provides the organizing structure for behaving in ways that are sex-appropriate and for evaluating self-worth. Thus, a sex-typed individual would be a person who more readily engages in gender schematic processing consistent with the stereotypical expectations of appropriate behavior for his or her sex.

Sex role identity seems a likely variable that could influence individual differences in attributional style. If a person's sex role identity is an indication of his or her inclination to process information and behave in ways consistent with masculine or feminine characteristics (Bem, 1981), then a sex-typed person will probably be more inclined to explain success and failure in terms of his or her beliefs about appropriate masculine or feminine behavior. Welch, Gerrard, and Huston, (1986) found that high scores on masculinity (i.e., instrumental traits) were positively related to egotistical or self-serving performance attributions (e.g., internal

attributions for success and external attributions for failure) and higher levels of efficacy expectations. Basow and Medcalf (1988) also found a positive relationship between masculinity and belief in one's ability to succeed. In contrast, femininity (i.e., expressive/nurturant traits) has been associated with lower self-efficacy expectations and internal, stable attributions for failure (Erkut, 1983). Since masculine personality traits are also positively correlated with self-esteem (Whitley, 1983), sex role identity is probably a key variable influencing individual differences in attributional style.

Assessing Attributions Across Situations

The attributional style construct provides a means of examining cross-situational attribution differences between men and women and avoiding the logistical difficulties involved in assessing naturally occurring attributions across situations. This construct is considered a dispositional trait and is generally used to refer to a person's systematic way of ascribing the causes of good and bad outcomes (Graham, 1991). According to Anderson, Jennings, and Arnoult (1988), the "basic idea is that people differ in their attributional style and that attributional style differences contribute to motivational, performance, and affective reactions to various life experiences" (p. 979).

The relationship between attributional style and depression has been studied extensively in conjunction with the reformulated learned helplessness model which is based on the premise that depression is the result of negative adaptation to an uncontrollable aversive event (Abramson, Seligman, & Teasdale, 1978). In their model, Abramson et al.

(1978) hypothesized that a person prone to depression will tend to attribute bad outcomes to internal, stable, and global causes. Peterson, Semmel, Baeyer, Abramson, Metalsky, and Seligman (1982) developed the Attributional Style Questionnaire (ASQ) to assess the attributional style differences proposed by the reformulated learned helplessness model.

The attributional style construct has been used extensively in research, particularly in studies investigating the correlates and antecedents of depression (Graham, 1991; Tennen & Herzberger, 1985). Although the validity of the attributional style construct has been questioned (Cutrona, Russell, & Jones, 1984), Anderson et al. (1988) addressed the validity issue when they examined previously published and new data related to several attributional style measures. They concluded that the attributional style construct had convergent and discriminant validity when assessed at an intermediate level of specificity. By this, they meant that it is not so situationally specific that it is no longer a meaningful individual difference construct, but neither is it so cross-situationally consistent as some researchers might have originally believed.

Statement of the Problem

Previous findings in achievement attribution research have not produced a clear understanding of individual differences in attributions following a success or failure. Research attempts to find systematic sex differences in attributions only resulted in inconsistent or ambiguous findings (Frieze et al., 1991). A major criticism of this research has been that, in an effort to isolate specific situations in which sex differences may occur, researchers focused too much on manipulating and/or controlling for

task or situational variability (Frieze et al., 1991; Heimovics & Herman, 1988; McHugh et al., 1982). The ambiguity of the research suggests that variables other than sex influenced the results.

A better understanding of individual differences in attributions may be gained by investigating the relationship between attributional style and key dispositional variables; specifically self-efficacy, self-esteem, and sex role identity. It may be that a consistent pattern of findings did not emerge in achievement attribution research because researchers were too focused on trying to identify attribution differences in a specific task or situation before they had a clear overall understanding of attributions across situations and the variables that influence them (McHugh et al., 1982). Self-esteem, self-efficacy, and sex role identity may have the greatest potential to influence attributions because they are inherently involved in any success or failure situation. They will also be most likely to influence which task or contextual factors have a role in the attribution made in a specific situation. Thus, investigating the relationship between attributional style and self-efficacy, self-esteem, and sex role identity seems a logical step in the process of expanding attribution research.

Although it appears important to investigate the relationships between these variables, the purpose of this research is not to provide evidence that substantiates preconceived ideas about gender-related traits and behaviors. Rather, it is an attempt to better understand the influence self-efficacy, self-esteem, and sex role identity may have on the conclusions men and women make about the causes of their successes and failures. Thus, the purpose of this study is descriptive and not causative in nature.

Variables other than sex may be influencing attributions, but comparisons between the sexes remain important. Sex is a basic organizing or categorical variable that has widespread implications for understanding how normative social expectations influence behavior (Eagly, 1994). A person's sex is likely to be a determining factor in the degree to which he or she identifies with masculine and feminine traits and behaviors and the level of self-esteem and self-efficacy associated with those traits and behaviors. Continued efforts to better understand male and female behaviors and their correlates have the potential to foster rather than hinder the political and social change sought by feminist psychologists by drawing attention to the ways that the social norms constrain behavior and suggesting ways to lessen those social constraints (Eagly, 1990, 1994).

Given the widespread interest in explaining sex-related behavior (Hyde, 1994), the relationship between attributional style and sex, self-efficacy, self-esteem, and sex role identity is a pertinent and viable area of research that warrants continued investigation. Further study of the attributional process will provide a better explanation of the consequences that self-perceptions have on attributional response in a variety of situations and suggest intrapersonal changes that may positively impact attributions and ultimately contribute to psychological well-being (Eagly, 1995; Graham, 1991; Weiner, 1986). On a macro level, research comparing the sexes will provide a richer more differentiated picture of male and female behaviors and the contextual factors that characterize the differences and similarities between men and women (Eagly, 1994).

Description of the Study

In an effort to broaden the research into sex differences in attributions for achievement outcomes, this study explored the relationship between attributional style and sex, self-efficacy, self-esteem, and sex role identity. The goal was to provide a clearer description of the influence that self-efficacy, self-esteem and sex role identity may have on the attributional styles of men and women. It was expected that sex alone would not be predictive of attributional style but rather self-efficacy, self-esteem, and sex role identity would significantly predict variability in attributional style. In keeping with the terminology of previous sex role identity research, masculinity and femininity were the terms used to refer to the extent to which men and women identified with instrumental and expressive traits. The use of these terms was not indicative of stereotypical assumptions on the part of the researcher concerning the merit or appropriateness of traits or behaviors for men and women.

To investigate the relationship between attributional style and sex, self-efficacy, self-esteem, and sex role identity, undergraduate students at a large, midwestern university were asked to complete four instruments assessing each of the variables included in the study. Participant responses were analyzed using multiple correlation and regression, hierarchical regression, and path analysis procedures.

Research Questions and Hypotheses

The following are the research questions and hypotheses generated for this investigation:

Q.1. Do sex and individual differences in sex role identity, self-efficacy, and self-esteem significantly predict attributional styles for success outcomes?

Hy.1. For all participants, higher levels of self-efficacy and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated with an adaptive attributional style for success outcomes (i.e., an attributional style characterized by internal, stable, and global attributions) but lower levels of self-efficacy and self-esteem, higher scores on femininity, and lower scores on masculinity will be associated with a maladaptive attributional style for success outcomes (i.e., an attributional style characterized by external, unstable, and specific attributions).

Q.2 Do sex and individual differences in sex role identity, self-efficacy, and self-esteem significantly predict attributional styles for failure outcomes?

Hy.2. For all participants, higher levels of self-efficacy and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated with an adaptive attributional style for failure outcomes (i.e., an attributional style characterized by external, unstable, and specific attributions) but lower levels of self-efficacy and self-esteem, higher scores on femininity, and lower scores on masculinity will be associated with a maladaptive attributional style for failure outcomes (i.e., an attributional style characterized by internal, stable, and global attributions).

Q.3. Do male differences in sex role identity, self-efficacy, and self-esteem significantly predict attributional styles for success outcomes?

Hy.3. For men, higher levels of self-efficacy and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated

with an adaptive attributional style for success outcomes (i.e., an
attributional style characterized by internal, stable, and global
attributions), but lower levels of self-efficacy and self-esteem, higher scores
on femininity, and lower scores on masculinity will be associated with a
maladaptive attributional style for success outcomes (i.e., an attributional
style characterized by external, unstable, and specific attributions).

Q.4. Do male differences in sex role identity, self-efficacy, and self-
esteem significantly predict an adaptive attributional style for failure
outcomes?

Hy.4. For men, higher levels of self-efficacy and self-esteem, higher
scores on masculinity, and lower scores on femininity will be associated
with an adaptive attributional style for failure outcomes (i.e., an
attributional style characterized by external, unstable, and specific
attributions), but lower levels of self-efficacy and self-esteem, higher scores
on femininity, and lower scores on masculinity will be associated with a
maladaptive attributional style for failure outcomes (i.e., an attributional
style characterized by internal, stable, and global attributions).

Q.5. Do female differences in sex role identity, self-efficacy, and self-
esteem significantly predict attributional styles for success outcomes?

Hy.5. For women, higher levels of self-efficacy and self-esteem,
higher scores on masculinity, and lower scores on femininity will be
associated with an adaptive attributional style for success outcomes (i.e.,
an attributional style characterized by internal, stable, and global
attributions) but lower levels of self-efficacy and self-esteem, higher scores
on femininity, and lower scores on masculinity will be associated with a

maladaptive attributional style for success outcomes (i.e., an attributional style characterized by external, unstable, and specific attributions).

Q 6. Do female differences in sex role identity, self-efficacy, and self-esteem significantly predict attributional styles for failure outcomes?

Hy.6. For women, higher levels of self-efficacy and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated with an adaptive attributional style for failure outcomes (i.e., an attributional style characterized by external, unstable, and specific attributions), but lower levels of self-efficacy and self-esteem, higher scores on femininity, and lower scores on masculinity will be associated with a maladaptive attributional style for failure outcomes (i.e., an attributional style characterized by internal, stable, and global attributions).

Q.7. Is masculinity, femininity, self-efficacy, or self-esteem the best unique predictor of attributional styles for success outcomes after controlling for sex?

Hy.7. Masculinity will be the best unique predictor of attributional styles for success outcomes.

Q.8. Is masculinity, femininity, self-efficacy, or self-esteem the best unique predictor of attributional style for failure outcomes after controlling for sex?

Hy.8. Masculinity will be the best unique predictor of attributional styles for failure outcomes.

Q.9. In addition to its direct effect, does masculinity mediate the effects of self-efficacy and self-esteem on male and female attributional styles for success?

Hy.9. Self-efficacy and self-esteem will have an indirect effect on male and female attributional styles for success through the direct effect of masculinity.

Q.10. In addition to its direct effect, does masculinity mediate the effects of self-efficacy and self-esteem on male and female attributional styles for failure?

Hy.10. Self-efficacy and self-esteem will have an indirect effect on male and female attributional styles for failure through the direct effect of masculinity.

Definition of Key Terms

Sex: A marker variable that refers to "any observed differences between men and women without any implications for the causes of the differences" (Eagly, 1994, p. 513). (Note: Some researchers prefer to avoid the use of this term in an effort to deter emphasis on biological causation and promote awareness of equality between men and women. However, the definition of sex used in this study is consistent with a commitment to the laws of scientific inquiry and the pursuit of knowledge concerning male and female thinking and behavior without making pre-determined assumptions about causation).

Gender: "Those nonphysiological components of sex that are culturally regarded as appropriate to males or to females" (Unger, 1979, p. 1086). Thus, this term refers to those socially determined qualities or characteristics typically used to categorize individuals as male or female.

<u>Sex Role Identity:</u> The set of internalized beliefs about appropriate masculine and feminine behavior that guide an individual's behavior and provide an organizing structure for evaluating self and others.

<u>Masculinity:</u> Those traits that are agentic and instrumental in nature and typically associated with problem solving, getting the job done, and taking charge behaviors.

<u>Femininity:</u> Those traits that are expressive and communal in nature and typically manifested in behaviors associated with caretaking and concern for the welfare of others.

<u>Attributional Style:</u> An individual's characteristic pattern of attributions that he or she typically chooses following a success or failure outcome.

<u>Self-Efficacy:</u> The belief that one can successfully perform the behavior required to produce a desired outcome.

<u>Self-Esteem:</u> An individual's positive or negative global assessment of self-worth.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

Comparisons between the sexes may provoke political and scientific debate in the psychological community, but research interest in sex-related behavior remains high and shows little sign of diminishing (Hyde, 1994). Sex differences in achievement attributions were the focus of many studies until the inconsistencies in the research findings brought the same criticism and disfavor directed at sex difference research in general (Frieze et al., 1982; McHugh et al., 1982). Since a person's sex has many implications for determining how he or she responds to any success or failure situation, sex-related attributional behavior deserves further investigation. The pattern of results in achievement attribution research suggests that investigating the relationship between attributional style and sex, self-efficacy, self-esteem, and sex role identity may better explain sex-related attributional behavior. The purpose of this literature review is to elaborate on the history of the sex difference research debate and achievement attribution research and provide empirical support for the predicted relationships between the variables of interest in this study. The first section of the review will pertain to the historical factors that influenced the current investigation. The second section will focus on specific findings related to the following five relationships: (1) sex role identity and self-esteem, (2) self-esteem and attributional style, (3) sex differences and attributional style,

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(4) self-efficacy and masculinity, and (5) self-efficacy and attributional style.

Historical Factors

Sex Difference Research Debate

In their quest to better understand human behavior, psychologists have investigated sex as a possible explanation for observed differences between men and women. Although sex differences have always been a focus of psychological inquiry (see Shields, 1975), interest in sex difference research rose dramatically in the late 1960's and early 1970's, spurred in large part by the influence of the modern feminist movement. Feminist psychologists were scornful of the inequitable research practices and misinterpretation of findings that plagued much of the earlier sex difference research (Crawford & Marecek, 1989; McHugh et al., 1986; Unger, 1983). They called for increased attention to sex differences and careful adherence to fair research practices, because they thought that when sex difference research was conducted properly, any measurable differences would prove trivial or nonexistent and thus, help to further the feminist agenda of equality for women (Adelson, 1985; Eagly, 1995).

Another important factor that helped to renew interest in research comparing the sexes was Maccoby and Jacklin's work (1974). In their review of sex difference research in psychology, they reported some evidence of sex differences in social behaviors (e.g., aggression) and intellectual abilities (e.g., verbal and spatial abilities) but found a lack of evidence in support of stereotypical differences in many other areas of

behaviors, traits, and abilities. Maccoby and Jacklin's findings acted as a catalyst for increased research interest in sex differences (Eagly, 1995) and many feminist psychologists used the reported lack of evidence concerning sex differences to support their position on equality between the sexes (e.g., Unger, 1979).

As research in sex differences increased, it did not produce the results expected. Rather than failing to find evidence of differences, Eagly (1995) notes that research efforts resulted in findings varying from no differences to moderate or even large differences between the sexes. The development of meta-analytic review techniques also shed doubt on the assumption that sex difference research would yield null findings (Eagly & Wood, 1991). Feminist psychologists had been very influential in creating a scientific consensus concerning the triviality of differences and viewed it as essential to their goal of equality for women and a shift to a social constructivist paradigm which proposed that all behavior was context related and socially constructed (Crawford & Marecek, 1989; Eagly, 1995; Kahn & Yoder, 1989; Unger, 1983). Since their research and political goals were closely linked, feminist psychologists were unlikely to quickly relinquish their beliefs about the nature of sex differences and instead began to question the validity of research findings.

In the last two decades, opposition to sex difference research has grown. Psychologists embracing the feminist agenda discount sex difference findings because they believe them to be methodologically flawed, riddled with bias, difficult to replicate, and frequently misinterpreted; they also contend that the small effect size of most findings indicates their lack of importance in explaining male and female behavior (Baumeister, 1988;

Grady, 1981; Hyde, 1994; McHugh et al., 1986). Contextually based research involving gender-related behavior is strongly advocated (e.g., Crawford & Marecek, 1989) and the continued use of sex as a subject variable is considered a futile practice that will only result in more meaningless findings (Hare-Mustin & Marecek, 1994).

In contrast, other psychologists support continued sex difference research (Eagly, 1987; 1990, 1994; Fagley & Miller, 1990; Rothblum, 1988; Scarr, 1988). They believe that it is necessary in order to gain an accurate understanding of men and women, and all sex comparisons, whether significant or not, need to be included when reporting research findings. Their arguments are based on the tenets of scientific inquiry and their desire to see psychology remain true to science.

In response to feminist criticisms, Eagly (1987, 1990, 1994), in particular, points out that avoiding sex difference research because it runs contrary to feminist goals is a poor scientific practice and leaves psychology open to the influence of conclusions made by scientists in other disciplines (e.g., biology) who are actively involved in this line of research. She argues strongly that the feminist agenda can best be served by continued comparisons between the sexes because that is the only way that the differences and similarities between men and women can be identified and the correlates that contribute to those differences will be accurately understood. Eagly also contends that the small effect size of sex difference findings is typical of most differences found in psychological research and should not be used as an argument for avoiding comparisons between the sexes.

The debate about sex difference research is far from over.

Accusations of bias come from feminists and anti-feminists alike and arise from the cultural and political context in which the discipline of psychology is currently situated (Hare-Mustin & Marecek, 1994). Some researchers are accused of sacrificing science for the sake of political agendas and others are challenged on issues such as over-zealous allegiance to a process of scientific inquiry that locates differences within the individual and is based on the notion that men are the standard to which women should be compared. Although the criticisms made by feminist psychologists provide important direction for improving efforts to understand the sexes, abandoning sex difference research altogether has the potential to undermine the pursuit of scientific knowledge about men and women (Eagly, 1994). If researchers stop comparing the sexes, they will be ignoring a basic organizing variable important to the understanding of how normative expectations influence male and female behavior and there will be no means of accurately evaluating feminist claims that men and women are substantially similar (Eagly, 1990, 1994).

Achievement Attribution Research

The chain of events in the achievement attribution literature is reflective of the process that has occurred in sex difference research as a whole. Initial enthusiasm for explaining sex differences in achievement on the basis of attributions for success and failure gradually gave way to criticism when research efforts did not produce expected results. However, this did not mean that a clear understanding of male and female attributions had been obtained. The following discussion will focus on the theoretical basis for achievement attribution research, the nature of sex

difference findings, and ways to improve research efforts and add to the body of knowledge concerning sex-related attributional patterns.

Attribution Theory

Most of the research into sex differences in achievement has been based on Weiner's attribution theory of achievement motivation (Frieze et al. 1982). Weiner (1979) theorized that people are motivated to assign causes to their achievement related successes and failures. He originally suggested that four causes were most responsible for achievement outcomes: (1) ability, (2) effort, (3) task difficulty, and (4) luck. He also specified two causal dimensions: (1) locus, and (2) stability (Weiner et al., 1971). In later research, Weiner (1979) added controllability as a third causal dimension.

According to Weiner's theory (1979), a person usually chose one of the four causes to explain a performance success or failure. The cause attributed to the outcome could then be categorized under three causal dimensions: (1) locus—internal or external; (2) stability—stable or unstable; and (3) controllability—controllable or uncontrollable. Each of the dimensions served as a classification scheme for the cause used to explain the achievement outcome and helped to distinguish the subtle differences in causes ascribed to a success or failure. Weiner used the three causal dimensions to classify and describe each of the four causes a person typically chose to explain a success or failure. Thus, ability was internal, stable and uncontrollable; effort was internal, stable, and controllable; task difficulty was external, stable, and uncontrollable; and luck was external, unstable, and uncontrollable.

Weiner's attribution model of achievement motivation (Weiner et. al.. 1971, Weiner, 1979) generated several useful hypotheses that provided an explanation for sex differences in achievement behavior. His model proposed that the kind of cause a person assigned to a success or failure affected future achievement strivings. The stability of the cause was considered the crucial factor. If a success or failure was attributed to a stable cause, then future successes or failures would be expected with greater certainty. Thus, achievement attribution researchers reasoned that sex differences in achievement could be due to men and women attributing a success or failure to stable causes that enhanced their expectancy of future success or failure.

Sex Difference Findings

Researchers in the area of sex differences in achievement relied heavily on Weiner's theory of achievement (Weiner et al., 1971), but an earlier study by Feather (1969) also provided an impetus for their investigative efforts. Feather (1969) examined sex differences in the relationship between expectancy of success and the attribution made about performance outcomes. Results showed that females were lower in expectancy of success than males and tended to use external attributions (e.g., luck) to explain their success and failure. Feather's study, along with Weiner's achievement attribution theory, helped to generate a great deal of research interest in sex differences in achievement attributions.

Researchers used Weiner's theory to hypothesize that men and women experienced differences in achievement due to the positive or negative effects of their attributions for achievement outcomes (Frieze et

al., 1982; Frieze et al., 1991). Since sex differences in attributions influenced future strivings, this effect could account for the differential achievement levels of men and women. In other words, men and women achieved at different levels because men chose reasons for their success or failure that enhanced their expectation of future success and women chose reasons that decreased their expectation of future success.

Results from early attribution studies suggested the need to consider the effects of task or contextual variables that might interact with sex (Frieze et al., 1991). In response, researchers manipulated a wide variety of specific situational or task variables. Some of the variables investigated included: (a) type of task—sex-typed or nonsex-typed (Deaux & Emswiller, 1974; Deaux & Farris, 1977; Stipek, 1984); (b) expectancy of success (Eccles et al., 1984; Tanenbaum & Furst, 1986); (c) achievement setting— laboratory or actual situation (Simon & Feather, 1973; Sweeney, Moreland, & Gruber, 1982); and (d) outcome of task—success or failure (Deaux & Farris, 1977). But, studies such as these produced many contradictory findings that only added to the already complex relationship between sex and attributions for success and failure in achievement settings.

The problem with the research into sex differences in attributions was that the majority of studies failed to support the predicted differences for sex (Frieze et al., 1991). Instead, when significant results were found, they were often ancillary or contradictory to the hypothesized or predicted sex difference in attribution. For example, Feather (1969) reported that women were more likely to attribute their success or failure to external factors (i.e., good or bad luck). Simon and Feather's (1973) later research seemed to substantiate Feather's findings. They found that women made

more luck and task difficulty attributions (external attributions) than men. Sweeney et al. (1982) drew from Simon and Feather's study and investigated the interaction between sex differences in attributions and performance outcomes. Their results showed that, contrary to prior findings, women did not have a general externality bias in their achievement attributions (i.e., external attributions for success and failure outcomes). Rather, women tended to attribute their successes to internal factors and their failures to external factors. This pattern of contradictory findings is typical of most of the research into sex differences in attributions.

Given the mounting evidence suggesting that sex differences in attribution appeared too complex to be identified with any degree of consistency, many researchers began to loose enthusiasm for this line of research (Frieze et al., 1991). Katz (1982) devoted an entire issue of the journal, Sex Roles, to the topic of sex differences in attributions in an effort to publicize the lack of empirical evidence for systematic sex differences in attributions and deter unfounded conclusions about the attributional patterns of men and women. In that issue, Frieze et al. (1982) did a meta-analysis of 21 sex differences in attribution studies. Except for a slight tendency for women to attribute failure to luck more than men and men to make somewhat stronger informational attributions (i.e., the participant is asked for his or her perception of task difficulty and how much ability, effort, or luck he or she had in the situation) to ability, they found no strongly supported sex differences in attributions. Sohn (1982) also did an effect size analysis of reported male and female differences in attributions and found that the effect of sex was not large enough to account for more than 1% of the variability in any of the studies included in the analysis. In a

review of research using sex as a subject variable, Deaux (1984) concluded that if any significant main effects for sex were found, they were usually weak and qualified by significant interactions.

Suggestions for Improvement

By the early 1980's, achievement attribution researchers began to realize the need to improve experimental designs and expand theoretical constructs. McHugh et al. (1982) recommended greater attention to naturally occurring or real life achievement situations, the interest level involved in doing the task, and dispositional variables such as motivation and gender roles. They also discussed the importance of looking at attributions made in different types of situations in order to gain a clearer picture of the attributional tendencies of men and women (e.g., investigating variables that may influence attributions made in relationship, academic, and employment situations). Deaux (1984) pointed out that using sex as a research variable may be a more productive route for understanding gender if greater research attention is given to gender related behavior in naturally occurring situations rather than the structured environment of laboratory settings. Similarly, Wittig (1985) suggested sex role norms and gender-related attainment values as mediating variables in the relationship between sex and attributions for success and failure. In their review of attribution literature, Harvey and Weary (1984) concluded that the theory was viable but they called for more integration between it and other similar theoretical positions. More recently, Frieze et al. (1991) also urged that the social and self-concept of men and women be considered as additional factors influencing differences in attributions.

Taken together, these recommendations offer direction for expanding and building the knowledge base concerning individual differences in attributions. The recommendations made by achievement attribution researchers tended to focus on the need to investigate naturally occurring success and failure situations, the type of attribution made in different situations, dispositional variables, and gender-related roles, norms, and values. They also focused on using compatible theories to help understand the attribution process. The attributional style construct offers a means of investigating attributions made across situations while avoiding the logistic considerations that would seriously hinder attempts to study naturally occurring attribution situations. The other recommendations primarily involve dispositional or person centered variables that relate to personal beliefs about self-worth, motivation, and sex-appropriate behaviors. These recommendations could be addressed by assessing self-esteem, self-efficacy, and sex role identity.

The purpose of the present study is to investigate the influence of self-esteem, self-efficacy, and sex role identity on men and women's attributional styles for success and failure. This study is unique in that previous efforts to improve and expand attribution research have not included this combination of variables. The goal is not to draw conclusions about causation or substantiate gender stereotypes but to provide a clearer description of the variables that may influence the thinking and behavior of men and women.

The remainder of this review will focus on research evidence concerning the relationships between attributional style, sex, self-esteem, self-efficacy, and sex role identity. The discussion will be divided into five

sections. The areas of research that will be reviewed are as follows: (1) the relationship between a masculine sex role identity and self-esteem, (2) the relationship between self-esteem and attributional style, (3) the evidence concerning sex differences in attributional style, (4) the relationship between self-efficacy and masculinity, and (5) the relationship between self-efficacy and attributional style.

<div align="center">Masculinity and Self-Esteem</div>

There is a large body of research that confirms a positive relationship between a masculine sex role identity and self-esteem. The research evidence concerning this relationship emerged in connection with efforts to substantiate the androgyny model of psychological adjustment. The androgyny model was primarily based on Bem's sex role theory (Bem, 1974) which proposed that an androgynous sex role identity (i.e., a high degree of masculine and feminine sex role traits) was optimal because it maximized psychological adjustment by allowing an individual the behavioral flexibility to respond appropriately in any situation, regardless of his or her sex. This model evolved when sex role research demonstrated that masculinity and femininity were not mutually exclusive opposites of a single dimension, as traditionally believed, but independent constructs that were analogous in nature (e.g., Bem, 1974, 1979; Constantinople, 1973; Spence et al., 1975). Researchers conceptualized androgyny in one of two ways: (1) as an additive construct in which androgyny was the sum of the effects of masculine and feminine sex role traits, or (2) as an interactive construct that produced an effect on psychological adjustment beyond that evidenced by masculinity and femininity (Whitley, 1983). In addition, they

used various indices of personal and social adjustment as indicators of psychological well-being.

Results from research investigating the androgyny model did not support the idea that an androgynous sex role identity was ideal because it maximized psychological adjustment. Instead, research findings provided evidence that the relation between androgyny and psychological adjustment (often measured by level of self-esteem) was primarily the result of the masculinity component in androgyny and the influence of femininity was small or nonexistent (e.g., Antill & Cunningham, 1977, 1980; Bassoff & Glass, 1982; Ickes & Layden, 1978; LaTorre, 1978; Schiff & Koopman, 1978; Spence, Helmreich, & Stapp, 1975). Since self-esteem was frequently used to measure psychological adjustment, the results also provided evidence concerning the relationship between masculinity and self-esteem.

One caveat to the research evidence involving a positive relationship between masculinity and self-esteem relates to construct validity questions surrounding these variables. There is considerable disagreement among self-esteem theorists concerning the definition of self-esteem and whether or not it is a multidimensional or unidimensional construct (Blascovich & Tomaka, 1991;. Crandall, 1973). Researchers have also questioned whether measures of sex role traits are really assessing the construct, sex role identity, or merely the degree to which an individual identifies with instrumental and expressive sex role traits (Locksley & Colten, 1979; Spence & Helmreich, 1981). Whitley (1983) discussed the possibility that the relationship between self-esteem and masculinity may depend on which self-esteem (e.g., global or multi-dimensional) or sex role identity measure is

used to assess these variables. To account for this, some researchers have included multiple measures of self-esteem and sex role traits in their investigative efforts. Rather than use the questions concerning the construct validity of self-esteem and sex role identity to discredit the validity of research findings, it should be kept in mind that both masculinity and self-esteem are latent variables that are not directly observable. Any research findings related to these variables will help to further rather than hinder an accurate understanding of how they should be defined and measured.

The findings related to the relationship between a masculine sex role and self-esteem have been reviewed by Kelly and Worell (1977) and Whitley (1983). These reviews are noteworthy because they focused specifically on results from studies that used self-esteem as the measure of psychological adjustment.

Kelly and Worell (1977) did a narrative review of the research intended to validate the androgyny model of psychological adjustment. They reported that, contrary to the androgyny model, self-esteem did not discriminate consistently between androgyny and masculinity and concluded that high self-esteem was correlated with masculinity and there was little, if any, correlation with femininity. In their discussion, they suggested that masculine sex-typed behaviors may have a greater social value than feminine sex-typed behaviors, because they are more likely to lead to the positive social outcomes and positive self-evaluations that contribute to high self-esteem.

In a later review, Whitley (1983) did a meta-analysis of 35 studies involving the relationship between sex role identity and psychological

adjustment as measured by level of self-esteem. He found the most support for a positive relationship between masculinity and self-esteem. Whitley reported that masculinity accounted for 27% of the variance in self-esteem in the overall sample of studies. The correlation between femininity and self-esteem was about 3% and the interaction between masculinity and femininity only explained 1% of the variance in self-esteem. In addition, he found no differences for sex. Given the small effect size for femininity and the interaction between masculinity and femininity, Whitley concluded that the relationships between femininity and self-esteem and the M x F interaction and self-esteem probably had little practical significance.

In sum, research evidence from studies investigating the adequacy of the androgyny model of psychological adjustment indicates a positive relationship between masculinity and self-esteem. The finding concerning the positive relationship between masculinity and self-esteem (i.e., psychological adjustment) has been identified as a masculine model of psychological adjustment by Whitley (1983). This model proposes that psychological well-being (e.g., self-esteem, lack of depression) is related to the extent to which an individual identifies with masculine sex role traits. Although research evidence has shown a positive relationship between masculinity and self-esteem, it is important to note that masculinity is but one correlate of self-esteem. Other contextual and intrapersonal variables are likely to be correlated with self-esteem, but only the relationship between masculinity and self-esteem will be the focus of this review since it is the one that is relevant to the present research.

In response to the findings indicating a positive relationship between

masculinity and self-esteem, research attention has been given to issues related to the validity and reliability of the masculinity model of psychological adjustment. The research into these issues will be reviewed in the following three sections focusing on (1) the extent to which the masculine model can be generalized to other groups or individuals, (2) the possible mediating influence of social desirability, and (3) the discriminant validity of masculinity and self-esteem.

Generalizability

Since the participants in most of the studies supporting a positive relationship between masculinity and self-esteem (i.e., psychological adjustment) were college students, researchers have studied other samples to determine whether the relationship holds for different groups. Donovan (1981) used a sample of working class adults (men and women aged 20-30 and 40-50) to investigate the relationship between sex role and self-esteem. Her results showed that for both men and women masculinity was correlated with self-esteem. Gauthier and Kjervik (1982) investigated the relationship between sex-role and self-esteem for female nursing students and found that the high masculinity groups had a higher self-esteem than low masculinity groups. Puglisi and Jackson (1980) examined a cross-sectional sample of adults (age 17- 89 years). Their results indicated that the highest levels of masculinity and self-esteem scores occurred in the middle years of adulthood and masculinity was a better predictor of self-esteem than femininity and age. MacDonald, Ebert, and Mason (1987) took a slightly different approach and looked at the relationship between marital status, sex role, and self-esteem. They found that men and women who

were married reported higher scores on self-esteem and masculinity than those who were single or divorced; married women also reported higher scores on femininity. V. O. Long (1989) examined the relationship between sex role, self-esteem, and self-acceptance for a sample of male professionals, college students, and clients. Her results showed that masculinity was correlated with self-esteem for professionals and clients and with self-acceptance for college students. With women as the focus of her study, Long (1991) looked at the relationship between masculinity, femininity, self-esteem, and self-acceptance among female scientists and other female professionals, college students, clients, and victims of domestic violence and found that masculinity correlated with self-esteem for all the groups but the college students. In a similar study, Long (1993) used a male sample of scientists, other professionals, college students, mental health clients and perpetrators of domestic abuse and compared group differences in the relationship between masculinity, femininity, self-esteem, self-acceptance, and locus of control. She again found that masculinity correlated with self-esteem for all groups except the student group.

In all these studies using different samples, masculinity emerged a fairly consistent predictor of self-esteem but the influence of femininity was nonsignificant. Results such as these suggest that, although extraneous variables may sometimes play a mediating role, the relationship between masculinity and self-esteem is most likely consistent or enduring for men and women, but the strength of the relationship may fluctuate over time depending on the person's age, stage of life, and current stressors. MacDonald et al.'s (1987) findings concerning a positive relationship between self-esteem and femininity for married women suggests that

femininity may be differentially related to self-esteem at various life stages. Further longitudinal research in this area would be needed before any definitive conclusions could be made.

Social Desirability

Kelly and Worell (1977) and Whitley (1983) raised the possibility that the masculinity model of psychological adjustment (i.e., the relationship between masculinity and self-esteem) may be mediated by social desirability. Research had already shown that masculine sex role traits generally received higher social desirability ratings than feminine sex role traits (Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972). The reason for investigating the issue of social desirability was the possibility that the relationship between masculinity and self-esteem was simply due to the social desirability inherent in both constructs. Researchers have addressed implications of social desirability and the possibility that it may be a mediating factor in the relationship between masculinity and self-esteem.

Sappenfield and Harris (1975) examined the relationship between masculinity, femininity and self-esteem and predicted that individuals who were high on a socially desirable traits (masculinity for men and femininity for women) would perceive themselves more favorably than those who viewed themselves as low on those traits. The results indicated that their prediction held true for men but not for women and led them to conclude that attitudes have changed and masculinity rather than femininity was becoming a more socially desirable trait for women.

In their cross-sectional study of 2,069 adults, Puglisi and Jackson

(1980) found a strong positive relationship between masculinity and self-esteem. They also suggested that their findings may be reflective of the positive societal value given to a socially defined criteria of self-worth (i.e., masculine sex role traits).

Feather (1985) investigated the relationship between self-reports in depression and degree of masculinity, femininity, and self-esteem. He found that the negative relationship between masculinity and depression disappeared when the effects of self-esteem were statistically controlled. Feather interpreted this finding as an indication that self-esteem is a reflection of positive cultural values concerning instrumental or masculine traits. He suggested that these traits have worth because they reflect the dominant values sanctioned by Western culture and an individual's self-esteem is likely to be dependent on the opportunity to successfully perform these masculine behaviors.

Marsh, Antill, and Cunningham (1987) tackled the issue of social desirability more directly. They investigated the relationship between masculinity, femininity, androgyny, self-esteem, and social desirability. Their results supported earlier research findings that, for men and women, self-esteem is positively related to masculinity. They reported that statistically controlling for the social desirability had little influence on the unique contribution of masculinity to self-esteem. March et al. (1987) concluded that this result was contrary to other research indicating that masculine traits were socially desirable and, thus, would be highly correlated with self-esteem, also a socially desirable trait.

Kleinplatz, McCarrey and Katab (1992) also used social desirability to account for their results. With a sample of college women, they

investigated the relationship between traditional (feminine) or non-traditional (masculine) sex roles and self-esteem, life-style satisfaction, and anxiety. Their results indicated that traditional (feminine) women scored lower on self-esteem and lifestyle satisfaction and higher on anxiety than non-traditional (masculine) women. Kleinplatz et al., (1992) interpreted their results as indicative of the higher social value placed on masculine traits versus feminine traits and the positive feelings of competency (i.e., self-esteem) that arise in women who engage in those behaviors.

In a slightly different approach to investigating social desirability, Burnett, Anderson, and Heppner (1995) looked at the impact of environmental influences on the relationship between masculinity, femininity and self-esteem. Their results showed a stronger press for masculine rather than feminine traits and they concluded that this was probably a result of the higher social demand for masculine traits and the positive social value given to those traits.

In summary, there is some indication that the positive association between masculinity and self-esteem may be largely due to the social desirability associated with each of these constructs, but the research evidence is not conclusive.

<u>Measurement Overlap</u>

Measurement overlap is another factor that has been investigated in connection with efforts to test the adequacy of the masculinity model. Whitley (1983) referred to it as the possibility that the instruments assessing self-esteem and masculinity are essentially measuring the same trait rather than distinct constructs. Thus, the correlation between

masculinity and self-esteem may actually be due to measurement error or overlap. Several studies have examined this issue but do not offer definitive findings.

For example, Lundy & Rosenberg (1987) explored the relationship between sex role and self-esteem using a sample of 194 adults. They examined the main and interactive effects of masculinity and femininity on self-esteem for the entire sample and for each sex. They also correlated the items on the masculinity scale of the BSRI with self-esteem. Their results demonstrated that level of self-esteem was almost entirely a function of scores on the masculinity subscale. Femininity and the interaction of femininity and masculinity contributed only trivially to the variance in self-esteem. These results were virtually identical for both sexes. Interestingly, traditionally "masculine" items on the BSRI (e.g., masculine, analytical, competitive) did not correlate with self-esteem as strongly as those items related to self-image (e.g., self-reliant, individualistic, strong personality). On the basis of their findings, Lundy and Rosenberg (1987) concluded that masculinity and femininity had an additive effect rather than an interactive effect on psychological adjustment (i.e., self-esteem) and suggested that the correlation between self-esteem and masculinity was largely due to the strong self-image component inherent in these constructs.

Payne (1987) reported results similar to Lundy and Rosenberg (1987). He investigated the relationships between masculinity and femininity and measures of adjustment (i.e., global and social self-esteem, anxiety, loneliness, social distrust, and aggression). Like Lundy and Rosenberg (1987), he found no interaction effects for masculinity, femininity, and sex and he also found that the correlation between

instrumental (i.e., masculine) traits and indices of adjustment disappeared when the variance due to self-esteem was statistically removed. His conclusion was that instrumental personality traits may have an indirect effect on psychological adjustment through self-esteem.

In a longitudinal approach to the issue of measurement overlap, Stein, Newcomb and Bentler (1992) studied the changes in the effects of agency (masculinity) and communality (femininity) on self-esteem from adolescence to adulthood. They found that, for males, an agentic sex role orientation in adolescence predicted higher self-esteem in adulthood but, for females, a communal orientation during adolescence predicted higher self-esteem in adulthood. In addition, the subjects' concurrent degree of masculinity, as measured by the Personality Attributes Questionnaire (PAQ) (Spence et al., 1975), was also highly correlated with self-esteem. Given the strong correlation between masculinity and high self-esteem, they concluded that their results may have been indicative of a lack of discriminate validity (i.e., measurement overlap) between the masculinity-femininity (M-F) and self-esteem scales used in their study.

In another recent study, Whitley and Gridley (1993) assessed the relationship between sex role, self-esteem, and depression using confirmatory factor analysis. Their purpose was to expand on Feather's (1985) finding that the negative relationship between masculinity and depression disappeared when the effect of self-esteem was statistically controlled. They also wanted to replicate Whitley's (1988) finding that trait measures of masculinity do not discriminate from measures of self-esteem. Their results provided evidence that masculinity and self-esteem were separate constructs that were related to a single underlying construct

termed Negative Affectivity (NA) by Watson and Clark (1984) and defined as "a mood-dispositional dimension that reflects pervasive individual differences in negative emotionality and self-concept" (Watson & Clark, 1984, p. 465).

In conclusion, research findings indicating that measurement overlap may account for the positive relationship between masculinity and self-esteem suggest that masculinity may not be influencing or contributing to higher self-esteem (i.e., psychological adjustment) (e.g., Stein et al., 1992). Instead, construct similarities between masculinity and self-esteem may be the source of the relationship between these variables, but again, as with the research into the role of social desirability, the results do not offer a clear indication of the extent to which measurement overlap has an influence on the relationship in question.

<div align="center">Self-Esteem and Attributional Style</div>

Evidence concerning the relationship between self-esteem and attributional style can be found in the research literature related to the reformulated learned helplessness model and its predictions concerning the relationship between depression, attributional style, and low self-esteem. The model was reformulated by Abramson et al. (1978) to account for the chronicity and generality of depression as well as the loss of self-esteem often reported by depressives. It predicts that individuals who have an attributional style characterized by internal, stable, and global explanations for bad or failure events will be more prone to depression. Specifically, the model postulates that attributing a failure to an internal cause will lead to the self-esteem deficit typically associated with

depression, attributing a failure to a stable cause will increase the chronicity of the depression, and attributing a failure to a global cause will increase the pervasiveness of the depression. Thus, a depressive attributional style is one characterized by internal, stable, and global attributions for failure outcomes and external, unstable, and specific attributions for success outcomes.

Researchers' attempts to validate the model of depression proposed by the reformulated learned helplessness theory have brought to light some evidence concerning the influence of self-esteem on attributional style. Pillow, West, and Reich (1991) used path analysis to test the model with a sample of non-depressed college students. They found support for the predicted relationships between internal attributions, self-esteem, and depression (i.e., internal attributions for failure lead to depression) but did not find support for the other two predicted relationships. Instead, they found that globality was significantly related to self-esteem and the relationship between stability and depression was non-significant. With the rationale that the causal model of depression in normal subjects may not be the same for depressed subjects, Romney (1994) replicated the Pillow et al. (1991) study using a sample of clinically depressed psychiatric patients. He found the causal model that best fit the data did not coincide with the Pillow et al. (1991) model or the Abramson et al. (1978) model. His model indicated that all of the attributional dimensions (internality, stability, and globality) were indirectly related to depression through the mediating role of self-esteem. Although this research evidence suggests that the reformulated learned helplessness theory of depression may need additional revision, it also demonstrates that self-esteem is an influential factor in

determining an attributional style that may ultimately lead to depression.

Other research into the mediating role of self-esteem in attributional style differences of depressed and non-depressed persons provides clear evidence of the influence of self-esteem on attributional style. Researchers have hypothesized that the link between a depressive or self-effacing attributional bias (i.e., internal, stable, and global attributions for failure outcomes) and depression is level of self-esteem. From their findings comes some important evidence concerning the influence of self-esteem on attributional style. The remainder of this section will focus on the relevant findings related to the relationship between these variables.

Ickes and Layden (1978) did a series of studies investigating the relationship between sex, self-esteem and attributional style. Their findings showed that persons with high self-esteem were more likely to attribute their successes to internal causes and their failures to external causes than persons with low self-esteem. They also found that men tended to exhibit an attributional pattern like that of the high self-esteem person, but women made attributions that resembled the low self-esteem person. Ickes and Layden (1978) linked their findings concerning low self-esteem and a self-blaming attributional style to the etiology of depression.

In two very related studies, Tennen et al. (1987) and Tennen and Herzberger (1987) investigated the relationship between self-esteem and a depressive attributional style. Tennen and Herzberger's (1987) results indicated that level of self-esteem accounted for most of the variation in attributional style and that low self-esteem participants were more likely to display attributional evenhandedness (i.e., make internal attributions for success and failure events). They also reported that self-esteem was the

best unique predictor of attributional style compared to level of depression and anxiety. They found no connection between characterological self-blame and depression and self-esteem. Similarly, Tennen et al.'s (1987) results demonstrated that, for clinical and nonclinical groups, self-esteem was a better predictor of attributional styles for failure events than depression or social desirability. However, they used four different measures of self-esteem and not all of the measures were equally effective at predicting attributional style for clinical and nonclinical populations. Tennen et al. concluded that this may be an indication that self-esteem is differentially associated with attributional style or that the clinical group was less concerned with making attributions for success events.

Although Tennen and Herzberger (1987) and Tennen et al. (1987) claim that they replicated and extended the other 's findings, this seems to be a logistic impossibility since one study had to have been completed before the other. In reality, they both completed essentially the same study; an investigation of the relationship between self-esteem and attributional style and reported the same results; that self-esteem was a better predictor of a depressive attributional style than depression. The difference between the two studies was that Tennen and Herzberger (1987) included anxiety as a predictor variable and attributional evenhandedness (i.e., depressed or low self-esteem individuals will make internal attributions for success and failure) and characterological self-blame as dependent variables and Tennen et al. (1987) used multiple measures of depression and self-esteem, statistically controlled for social desirability, and assessed responses from clinical and nonclinical groups.

Taking a slightly different perspective on investigating the role of

self-esteem in a depressive attributional style, Stoltz and Galassi (1989) proposed that the two types of depression (i.e., with or without low self-esteem) delineated in the reformulated learned helplessness model would have a differential influence on the locus of attributions for failure. As predicted by the model, their results showed that depressed individuals with low self-esteem made more internal attributions for failure than depressed individuals without low self-esteem.

Cohen et al. (1989) also examined the relationship between self-esteem and attributional style, but they proposed that depressed and low self-esteem persons were more likely to demonstrate a counter self-serving attributional style (i.e. internal, stable, and global attributions for failure; external, unstable, and specific attributions for success) than attributional evenhandedness. Results from their study revealed that depression and low self-esteem were associated with internal, stable, and global attributions for failure and external, unstable, and specific attributions for success.

Along similar lines, Feather (1983) focused on identifying correlates of attributional style and found that high self-esteem was associated with internal, stable, and global attributions for success events and external, unstable, and specific attributions for failure events. In a later study, Feather (1987) tested the assumption that nondepressed people who have a high self-esteem and strongly identify with masculine traits are more apt to attribute their successes to internal, stable, and global causes and their failures to external, unstable and specific causes. Results from the study were consistent with predicted outcomes. Individuals who scored high on self-esteem, high on masculinity, or low on depression were more likely to make internal, stable, and global attributions for success events and

external, stable, and specific attributions for failure events. Results also showed that global self-esteem was a consistent predictor of attributions for success and failure events.

Together, these findings from reformulated learned helplessness research provide information about the influence of self-esteem on attributional style. Research evidence strongly indicates that self-esteem is a consistent predictor of attributional style and low self-esteem is typically associated with a depressive attributional style or external, unstable, and specific attributions for success outcomes and internal, stable, and global attributions for failure outcomes. Although the findings concerning self-esteem and attributional style are clear, the assumption can not be made that they are applicable to both men and women since Ickes and Layden (1978) were the only researchers who analyzed their data separately for each sex.

Sex Differences and Attributional Style

Evidence of the relationship between sex and attributional style again comes from the research into the reformulated learned helplessness theory of depression. Researchers in this area have recognized the lack of inquiry into possible sex differences in the relationship between attributional style and depression and criticized the tendency to assume that the relationship between attributional style and depression is the same for men and women (e.g., Handal, Gist, & Weiner, 1987).

Efforts to investigate a possible differential relationship between sex, attributional style, and depression have yielded inconsistent results. In an early study, Berndt, Berndt, & Kaiser (1982) examined the relationship

between sex, attributions for successful and unsuccessful achievement and affiliative outcomes and depression and found evidence that, compared to men, women made more global attributions in successful affiliative outcomes and in unsuccessful achievement situations.

Handal et al. (1987), reported no significant differences between male and female attributional styles but did find that male attributional style scores for negative events were positively correlated with scores on a depression measure. Based on their results, they recommended that researchers should report findings for males and females separately, as well as the entire sample. However, Whitley, Michael, and Tremont (1991) criticized the interpretability of the sex difference findings reported by Handal et al. (1987) due to the heterogeneity of their group means. They replicated the Handal et al. study using more reliable measures and found no sex differences in the relationship between attributional style and depression. Given the level of statistical power in their study, Whitley et al. (1991) concluded that their results strongly suggest there is also no sex difference in the population.

Boggiano and Barrett (1991) conducted essentially the same investigation as Whitley et al. (1991), but they found a sex difference for attributional style and depression. Women reported more depression symptoms and a more maladaptive attributional style (i.e., internal, stable, and global attributions for failure; external, unstable, and specific attributions for success).

Petiprin and Johnson (1991) investigated the influence of sex, attributional style, and item difficulty on subsequent performance. They initially gave men and women an easy or difficult task, assessed their

attributional style, and then gave them a standard criterion measure that contained five moderately difficult items. Their results indicated statistically significant sex and attributional style differences in which men with a self-serving attributional style scored higher on the criterion measure than women with a self-derogatory attributional style.

Johnston and Page (1991) also reported no statistically significant sex differences in their investigation of the relationship between attributional style, age, life event history, social supports, and present adjustment. Compared to males, females showed better adjustment and lower levels of depression with increased age and tended to have a more adaptive attributional style than males (internal, stable, and global attributions for success; external, unstable, and specific attributions for failure). Johnston and Page concluded that making generalized statements about women being more prone to depression due to a depressive attributional style should be avoided because the "real world" situation probably does not support that stance.

In a similar effort to study the relationship between sex differences in attributional style and depression, Johnson (1992) examined the mediating effects of sex and mood on the relationship between attributional style, daily life events (i.e., hassles) and hopelessness depression. His results showed that the interaction of attributional style (i.e., composite score on globality and stability) and daily life events predicted change in hopelessness scores for women. Since Johnson did not give the beta weights associated with the hierarchical regression analysis for each sex, it is not possible to state the direction of the relationship predicted by the interaction of attributional style and daily life events for women.

In conclusion, the pattern of findings in the research into the reformulated learned helplessness model of depression suggests that sex differences in attributional style are questionable. If they do exist, they are probably nonsignificant. In addition, the inconsistencies in the empirical evidence concerning sex differences in attributional style indicates that other intervening variables (e.g., dispositional variables) not assessed by the researchers were probably having a greater influence on attributional style.

Self-Efficacy and Masculinity

Information about the relationship between masculinity and self-efficacy has been reported in the sex role and psychological adjustment research literature. A few researchers have directly addressed the relationship between self-efficacy and attributions and some have just offered hypotheses about the role of self-efficacy in attributional responses to success and failure.

Adams and Sherer (1985) tested the hypothesis that masculine and androgynous persons would be equally well adjusted. They found that masculine men and women were more psychologically adjusted than those classified as androgynous, feminine or undifferentiated and that the masculinity scale on the Bem Sex Role Inventory (Bem, 1974) was correlated with assertiveness and self-efficacy.

B. C. Long (1989) used a slightly different approach but still investigated the same issue as Adams and Sherer (1985). She studied the relationship between sex role, coping strategies, self-efficacy, and stress for women in male-dominated (masculine) and female-dominated (feminine)

occupations. Her results demonstrated that the variation in stress explained by masculinity (i.e., traditionally masculine traits) disappeared when she statistically partialled out the effects of self-efficacy.

Whitley (1984) has hypothesized about the role of self-efficacy in the positive relationship between masculinity and self-esteem. Based on his meta-analytic finding that the masculinity model was most supported by the research, he suggested that the positive relationship between a masculine sex role and psychological well-being may be a reflection of the masculine person's strong personal self-efficacy belief.

In addition to the studies in the sex role and psychological adjustment literature, the research into career decision making has also produced some evidence of the relationship between masculinity and self-efficacy. Arnold and Bye (1989) investigated the relationship between sex role and career decision making self-efficacy and found a strong positive relationship between masculinity and career decision making self-efficacy, but the relationship between femininity and career decision making self-efficacy was weak.

Another source of information about the relationship between masculinity and self-efficacy is the achievement attribution research. Welch et al. (1986) investigated the mediating role of self-esteem, perceived ability, expectancy of success and attainment value in the relationship between masculinity and achievement attributions. They found that women high in masculinity attributed success to internal factors and failures to external factors and had higher scores on perceived ability, self-esteem, and self-efficacy expectations. On a similar note, Basow and Medcalf (1988) examined the influence of sex, sex role, and task outcome on

attributions for an academic achievement. Among other findings, their results indicated that masculinity was positively associated with beliefs in one's ability to succeed.

In sum, the information gleaned from sex role and psychological adjustment, career decision making, and achievement attribution research indicates that high self-efficacy is likely to be related to higher levels of masculinity.

Self-Efficacy and Attributional Style

Little research has been done investigating the relationship between these two variables. A literature search revealed only one study that focused specifically on attributional style and self-efficacy. Houston (1995) investigated the mediating role of self-efficacy in the relationship between attributional style and mood response following failure feedback. She found that low self-efficacy and an attributional style characterized by stable and global attributions predicted depression following failure feedback. This finding suggests that low self-efficacy may be likely to predict an attributional style characterized by stable and global attributions for failure, but the results reported by Houston should be confirmed before making any final conclusions about this relationship.

Summary

The previous review of the debate concerning sex difference research, the course of achievement attribution research, and the empirical evidence related to the predicted outcomes in this study contains four points that are worth noting. First, although the sex difference research debate has made a

scientific and political impact on the field of psychology, sex is a basic categorization variable that has implications for gender-related behavior. Researchers should continue to use sex as an independent variable in order to gain an accurate understanding of gender-related behavior and its correlates (Eagly, 1994). Second, the ambiguous results from the achievement attribution literature indicated that sex is probably not the variable exerting the most influence on individual differences in attributional style (McHugh et al., 1982). Third, research evidence demonstrates a positive relationship between masculinity and self-esteem, virtually no relationship between femininity and self-esteem (Whitley, 1983), and a negative relationship between self-esteem and a depressive attributional style (Cohen et al., 1989; Feather, 1983, 1987; Tennen et al., 1982). It also provides some indication of a positive relationship between self-efficacy and masculinity (Adams & Sherer, 1985; Long, 1989a) and self-efficacy and attributional style (Houston, 1995). Finally, in the research related to the variables of interest in this study, sex differences and interaction effects were generally insignificant or weak. If they were found, the results were usually not replicated in other studies. In addition, in many instances, researchers did not include sex as an independent variable; making it difficult to determine if the reported findings were applicable to both men and women.

In conclusion, the research evidence does provide information about relationships between the variables of interest in this study, but that information must be kept in context. Masculinity, self-efficacy, and self-esteem are probably only a few of the variables that may influence attributional style. However, given the research evidence concerning

relationships between these variables and the societal value placed on masculine sex role traits and behaviors (Burnett et al., 1995; Feather, 1985; Keinplatz et al., 1992; Puglisi & Jackson, 1980), masculinity, self-efficacy, and self-esteem are likely to have a strong influence on individual differences in attributional style. Thus, it would be helpful to gain a better understanding of the nature of the relationships between these variables.

CHAPTER III

METHODOLOGY

Participants

The initial pool of participants in this study included 231 undergraduate students (79 males and 152 females) from a large midwestern university with an enrollment of approximately 26,000. Test packets received from 68 individuals (25 men and 43 women) were not used in the data analyses due to improper or incomplete responses on one or more of the instruments in the test packet. For both men and women, the instrument most often left incomplete was the Attributional Style Questionnaire (ASQ) followed by the Bem Sex Role Inventory (BSRI), the Self-Efficacy Scale (SES), and the Rosenberg Self-Esteem Scale (RSES).

The final sample included 163 participants (54 men and 109 women). Age ranges of the participants were: (a) 18-20 years, n=120 (33 men and 87 women); (b) 21-24 years, n=35 (18 men and 17 women); (c) 25-29 years, n=2 (1 man and 1 woman); (d) 35-40 years, n=3 (1 man and 2 women); (e) 40+ years, n=3 (1 man and 2 women). Most of the participants identified themselves as Caucasians (90%), followed by African American (5%), Multiracial (2%), American Indian (1%), Hispanic (1%), Asian American (1%), and Italian American (1%). In the final sample, there were greater numbers of freshman (36%) compared to sophomores (31%), juniors (18%), and seniors (13%).

Procedure

Following approval from the Human Subjects Institutional Review Board (see Appendix A), the researcher contacted fourteen undergraduate instructors of introductory courses with typically large enrollments and requested permission to collect data in their classrooms. Five instructors who were in charge of a total of nine classrooms gave their permission for data collection. Collection efforts began on March 23, 1998 and ended April 8, 1998.

Prior to participation, students received a statement of information about the purpose of the study, expectations of participants, participant rights, and the anonymity of participant responses (see Appendix B). The researcher read the statement to the students prior to data collection. Those individuals who chose to participate completed a test packet which contained a demographic form requesting information about their sex, race, age, and educational level and four research instruments assessing attributional style, self-efficacy, self-esteem, and sex role identity. Their completion of the test packet indicated their consent to voluntarily participate in the study. The students who chose not to participate were asked to turn in their blank test packets and either remain quietly in their seats or exit the classroom. The demographic information form was always the first instrument in each test packet, but the sequence of the research instruments was randomly varied to avoid order effects. All responses were anonymous. Participants were asked to carefully read the directions before completing each instrument. No other verbal directions were given, but questions related to the directions for a specific instrument were answered

when they arose. All participants completed the test packet in one sitting. Completion time was 30 to 45 minutes.

Statistical Design

Using a non-experimental correlational design, this study investigated the relationship between attributional style for success and failure outcomes and sex, self-efficacy, self-esteem, and sex role identity. The predictor variables were sex, self-efficacy, self-esteem, and sex role identity. The criterion variable was attributional style for success and failure outcomes. Self-efficacy, self-esteem, and sex role identity were assessed using the Self-Efficacy Scale (SES) (Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, & Roger, 1982), the Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965), and the Bem Sex Role Inventory (BSRI) (Bem, 1974, 1981b). Attributional style was assessed using the Attributional Style Questionnaire (ASQ) (Peterson et al., 1982).

Instruments

Attributional Style Questionnaire

Peterson, et al. (1982) developed the Attributional Style Questionnaire (ASQ) to measure individual differences in attributional style. Appendix C contains a letter of consent granting permission to use this instrument. The ASQ was developed to assess the assumptions of Abramson et al.'s (1978) reformulated learned helplessness model of depression. The model suggests that individuals have systematic ways of explaining events and the reasons a person chooses to explain

uncontrollable bad (i.e., failure) events may make him or her more susceptible to depression. Thus, an attributional style characterized by internal, stable, and global attributions for bad (i.e., failure) events is more likely to produce the loss of self-esteem and chronic, pervasive adaptational deficits that typically result in depression.

The ASQ contains 12 hypothetical situations which depict 6 good events (e.g., you meet a friend who compliments you on your appearance, you become very rich) and 6 bad events (e.g., a friend comes to you with a problem and you don't try to help him/her, you can't get all the work done that others expect of you). Respondents vividly imagine that each event has happened to them and then write down one cause for that event. After writing a cause, they rate that cause on three 7-point likert scales anchored to correspond to the causal dimensions of locus (external/internal), stability (unstable/stable), and globality (specific/global). Thus, for either good or bad events, higher scores on the ASQ are associated with internal, stable, and global attributions and lower scores reflect external, unstable, and specific attributions. Dimension scores for locus, stability, and globality are derived by averaging responses within dimensions and across events. A composite attributional style score for good and bad events (CoPos and CoNeg) is obtained by averaging across dimensions and across events. An overall composite score (CPCN) can also be obtained by subtracting the CoNeg score from the CoPos score. A higher CoPos or CPCN score and a lower CoNeg score are considered more adaptive and self-affirming, because this scoring configuration indicates an attributional style characterized by external, unstable, and specific attributions for bad events and internal,

stable, and global attributions for good events. Since the purpose of this study was to examine variation in attributional style for success and failure situations, only the CoPos and CoNeg scores were used in the data analysis. CoPos and CoNeg scores may range from 3 to 21.

Peterson et al. (1982) reported internal consistency reliabilities for the ASQ ranging from .44 to .69 for each of the subscales (internality, stability, and globality) and reliability coefficients of .75 and .72 for the composite attributional style for good and bad events. Test-retest reliabilities for each of the attributional dimensions and the composite attributional style for success and failure events ranged from .58 to .70. The ASQ has been used extensively as a research tool; construct and criterion validity are well supported in the literature (Tennen & Herzberger, 1985).

Self-Efficacy Scale

The Self-Efficacy Scale (SES) was developed by Sherer et al. (1982) to assess individual differences in generalized self-efficacy expectations. Appendix D contains the appropriate written permission to use this instrument. It is based on Bandura's (1977) proposition that self-efficacy expectations have a powerful influence on behavior because they determine whether an individual will decide to perform the behavior, the amount of effort that will be expended, and the degree of persistence in response to hardship or difficulty. From this proposition, Bandura hypothesized that an individual's past experiences with success and failure in a variety of situations result in a general set of self-efficacy expectations that are

carried into new situations and will influence his or her behavior in those situations. Thus, Sherer et al. (1982) designed the SES to measure self-efficacy that is unrelated to a specific situation.

The SES is divided into two subscales labeled general self-efficacy and social self-efficacy. The instrument contains a total of 30 items: 17 items pertaining to the general self-efficacy scale, 6 items pertaining to the social self-efficacy subscale, and 7 filler items. Subjects rate each item on a 5 point likert scale ranging from strongly disagree to strongly agree. Scores are obtained by adding the number that corresponds with each response. Higher scores indicate higher self-efficacy expectations. Only the general self-efficacy subscale scores were used in this study. Scores may range from 17 to 85. Higher scores indicate higher self-efficacy.

Cronbach alpha reliability coefficients for the SES were reported at .86 for the general self-efficacy subscale and .71 for the social self-efficacy subscale (Sherer et al., 1982). Construct validity has been demonstrated by statistically significant correlations with internal locus of control, interpersonal competency, ego strength, and self-esteem (Sherer et al., 1982) and with higher levels of assertiveness, masculine personality characteristics, and emotional adjustment (Sherer & Adams, 1983).

Rosenberg Self-Esteem Scale

The Rosenberg Self-Esteem Scale (RSES) is designed to be a unidimensional measure of global self-esteem based on the Guttman model (Rosenberg, 1965). Appendix E contains the appropriate permission to use this instrument. The RSES is easy to administer and has high face

validity. Global self-esteem is defined by Rosenberg (1965) as an individual's overall positive or negative evaluation of his or her self-worth. According to Rosenberg's definition, positive self-esteem does not imply a belief that one is superior to others but rather a self-acceptance that includes awareness of one's strengths and limitations.

The RSES consists of 10 items that are clearly worded as positive or negative statements about self-worth (e.g., "At times I think I am no good at all" and "I feel that I have a number of good qualities)." Although originally designed as a Guttman scale, the RSES is typically scored as a four point likert scale using the following response options: strongly agree, agree, disagree, and strongly disagree. Scoring is done by adding the numerical weight associated with the response option endorsed for each item. The scoring on five of the items is reversed so that responses on each item range from less to more self-esteem. Thus, scores may range from 10 to 40 with higher scores indicating higher self-esteem.

The reliability of the RSES has been demonstrated in many studies. For example, Fleming and Courtney (1984) reported a .82 test-retest reliability (n=39) and Silber and Tippert (1965) obtained a .85 for a sample of college students (n=28). Also, Fleming and Courtney (1984) reported a coefficient alpha of .88.

The validity of the RSES has been shown in correlational studies reporting relationships between scores on the RSES and many self-esteem related constructs. Scale scores have been negatively correlated with: depression, anxiety, psychosomatic symptoms, interpersonal insecurity, and parental disinterest (Rosenberg, 1965). Silber and Tippert (1965) found

correlations between RSES scores and several related measures of self-esteem including interviewer ratings (correlations ranged from .56 to .83). Correlations with the Coopersmith Self-Esteem Inventory have been reported at .60 (Crandall, 1973) and .55 (Demo, 1985). In addition, Fleming and Courtney (1984) found no significant correlations between the RSES and sex, age, work experience, marital status, birth order, grade point average, or vocabulary. Bridle (1984) also found generally low correlations between RSES scores and scores on the Tennessee Self-Concept Scale. Self-concept is considered a global construct that includes self-esteem.

There is some disagreement about the dimensionality of the RSES because factor analytic studies have yielded evidence that it is a multidimensional instrument (O'Brien, 1985). Support has been found for two separate factors based on certain combinations of the positively and negatively worded items, but researchers do not agree on which items significantly load on the two factors and give contrasting explanations for the results of their factor analyses (e.g., Carmines & Zellar, 1974, 1979; Hensley & Roberts, 1976; Kaplan & Pokorney, 1969). Rosenberg (1979) responded to the question of dimensionality by arguing that the factors are measuring the same construct (i.e., global self-esteem) given that they have almost identical correlations with other similar self-esteem measures. On a related note, Goldsmith (1986) reported findings supporting the multidimensionality of the RSES with populations in which age varies substantially but found that the second factor was not totally independent of the first factor. Also, Harborg (1993) found that the two factors typically identified from adolescent scores (labeled positive and negative self-esteem)

were strongly correlated to the global self-esteem subscale of a multidimensional self-esteem instrument. In addition, there are many factor analytic studies that support the unidimensionality of the RSES (e.g., Goldsmith, 1986; Harborg, 1996; O'Brien, 1985; Shevlin, Bunting, & Lewis, 1995).

Although the issue of dimensionality is not resolved, the RSES is regarded as an excellent measure of self-regard given the considerable evidence of its reliability and validity. It is highly recommended for use in studies requiring a brief, straightforward assessment of self-esteem (Chiu, 1988; Simmons, 1987; Wylie, 1974). Item wording may prompt socially desirable responses, but this is a phenomenon found in many self-esteem scales and it has not dampened support for the use of the RSES in research studies (Blascovich & Tomaka, 1984).

Bem Sex Role Inventory

The Bem Sex Role Inventory (BSRI) was developed in order to measure masculinity and femininity as two independent dimensions rather than bipolar points on one continuum (Bem, 1974, 1981b). This conceptualization of sex role allows for the measurement of androgyny. An androgynous individual is one who, depending on the situation, might utilize masculine or feminine thinking and behavior (Bem, 1974, 1981b).

The BSRI contains a total of 60 adjectives or personality characteristics. Included are 20 adjectives stereotypically believed to be more descriptive of men, 20 adjectives stereotypically believed to be more descriptive of women, and 20 adjectives used as filler items. Subjects

indicate on a 7 point likert scale ranging from 1 (never or almost never true to 7 (always or almost always true) how well each characteristic describes themselves.

Responses on the BSRI provide raw scores for masculinity and femininity. The raw scores are the averages of an individual's ratings for each masculine and feminine adjective. These scores may be used to classify an individual as having a masculine, feminine, androgynous, or undifferentiated sex role orientation depending on whether his or her scores fall above or below the normative sample's median splits on masculine and feminine raw scores. Since research findings provide evidence that masculinity correlates most strongly with psychological well-being (i.e., high self-esteem) and the influence of femininity is negligible (Whitley, 1983), only the raw scores for masculinity and femininity were used in this study because these scores were best suited to the research questions under investigation.

The BSRI's internal reliability is reported by Lippa (1985) as .75 for the femininity scale and .87 for the masculinity scale when using female responses and .78 for the femininity scale and .87 for the masculinity scale when using male responses. Bieger (1985) reported the BSRI's test-retest reliability as .76 for males and .94 for females. Both Lippa (1985) and Bieger (1985) agreed that the BSRI is a well researched instrument and concluded that it offered a sound assessment of sex role orientation. Since Bieger (1985) considered the BSRI to be a valuable tool for investigating the relationship between sex role and other areas of personality and behavior, it was well suited to the purposes of this study.

Statistical Analysis

The statistical procedures used in the data analyses were multiple correlation and regression, hierarchical regression, and path analysis. The five predictor variable scores used in the statistical analyses were as follows: (1) self-efficacy as measured by the SES (higher scores indicate higher levels of self-efficacy), (2) self-esteem as measured by the RSES (higher scores indicate higher self-esteem), (3) masculinity (raw score from the BSRI) (4) femininity (raw score from the BSRI), and (5) sex (male and female). All of the scores derived for the predictors were analyzed as continuous variables. The criterion variable was the composite attributional style score for good and bad events as measured by the ASQ (i.e., CoPos, CoNeg). An adaptive attributional style is characterized by external, unstable, and specific attributions for failure events and internal, stable, and global attributions for success events or a low CoPos score and a high CoNeg score. The CoPos and CoNeg scores derived from the ASQ were analyzed as continuous variables.

Multiple correlation analyses were used to assess multicollinearity between the variables. Simultaneous multiple regression procedures were used to determine the variability in attributional style composite scores for good and bad events (CoPos and CoNeg) predicted by sex, self-efficacy, self-esteem, masculinity, and femininity. Simultaneous multiple regression was also used to determine the variability in male and female CoPos and CoNeg scores predicted by self-efficacy, self-esteem, masculinity, and femininity.

A set of four hierarchical regressions were used to determine whether self-efficacy, self-esteem, masculinity, or femininity were stronger unique

predictors of CoPos and CoNeg scores for men and women. Sex was entered in the first step of each of the four hierarchical regressions. The order of entry for masculinity, femininity, self-efficacy, and self-esteem was systematically varied to determine the best unique predictor of CoPos and CoNeg scores. In the first hierarchical regression, the order of entry for the other predictor variables was masculinity, femininity, self-efficacy, and self-esteem. For the second hierarchical regression, the order was femininity, self-efficacy, self-esteem, and masculinity. The order of entry for the third hierarchical regression was self-efficacy, self-esteem, masculinity and femininity. And, in the fourth and last hierarchical regression the order of entry was self-esteem, masculinity, femininity, and self-efficacy. These regressions were done using CoPos and CoNeg as the criterion variables.

Lastly, path analysis was used to further investigate the direct and indirect effects of self-efficacy, self-esteem, and masculinity on attributional styles for success and failure. Results were analyzed separately for men and women. For all statistical analyses, the significance level for rejection of the null hypothesis was set at $p \leq 05$.

CHAPTER IV

RESULTS

This study addressed individual differences in attributional style by investigating the relationship between attributional style for success and failure situations and sex, self-efficacy, self-esteem, masculinity, and femininity. The predictor variables were self-efficacy, self-esteem, and sex role identity (i.e., the raw scores for masculinity and femininity from the BSRI). The criterion variables were attributional style for positive (i.e., CoPos scores) and negative (i.e., CoNeg scores) events. Participants completed a packet containing four instruments assessing attributional style, sex role identity (i.e., masculinity and femininity), self-efficacy and self-esteem. Responses from 163 participants (54 men and 109 women) were used in the data analyses. A total of ten hypotheses were tested. A preliminary analysis was done to test for significant sex differences and to check for multicollinearity. The statistical program used for all data analyses was SPSS. The remainder of the chapter will focus on the results from the preliminary analyses followed by the results of the statistical analysis for each hypothesis.

Preliminary Analyses

The means, standard deviations, and correlations for all variables by sex are presented in Table 1 and 2. One way ANOVA's were done to test for sex differences on any of the measures. Significant differences were found

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for scores on masculinity, $\underline{F}$ (1, 161) = 29.594, $\underline{p}$ = .000 and femininity, $\underline{F}$ (1, 161) = 16.314, $\underline{p}$ = .000. As expected, men scored higher on masculinity than women, and women scored higher on femininity than men. Although no other sex differences were statistically significant, an examination of the means indicates that the men reported higher levels of self-efficacy and self-esteem and had a slightly greater tendency to make more internal, stable, and global attributions for both positive and negative events compared to women.

Table 1

Means, Standard Deviations, and Intercorrelations For
Male Scores on the ASQ, SES, RSES, and BSRI

Variable	M	SD	1	2	3	4	5	6
1. CoPos	16.04	1.81	———	.11	.15	.28*	.11	.50**
2. CoNeg	12.59	2.25		———	-.32*	-.26	.19	.06
3. Eff	66.06	9.58			———	.40**	-.31*	.35**
4. Est	34.17	4.53				———	-.17	.29*
5. Fem	4.72	.72					———	-.02
6. Masc	5.40	.75						———

Note. CoPos = composite attributional style for positive events, CoNeg = composite attributional style for negative events, Eff = Self-Efficacy, Est = Self-Esteem, Fem = Femininity, Masc = Masculinity. * p ≤ .05, ** p ≤ .01

The correlation matrix for male scores suggests that self-esteem and masculinity were positively correlated with CoPos while self-efficacy was negatively correlated with CoNeg. Similarly, the correlation matrix for

Table 2

Means, Standard Deviations, and Intercorrelations For
Female Scores on the ASQ, SES, RSES, and BSRI

Variable	M	SD	1	2	3	4	5	6
1. CoPos	15.86	1.81	———	-.01	.29**	.36**	.10	.37**
2. CoNeg	12.60	1.86		———	-.01	-.006	-.05	.12
3. Eff	65.99	8.84			———	.61**	.04	.45**
4. Est	33.17	4.57				———	.03	.42**
5. Fem	5.24	.49					———	.08
6. Masc	4.93	.67						———

Note. CoPos = composite attributional style for positive events,
CoNeg = composite attributional style for negative events, Eff = Self-
Efficacy, Est = Self-Esteem, Fem = Femininity, Masc = Masculinity.
* $p \le .05$, ** $p \le .01$

female scores indicates a positive relationship between CoPos and self-
efficacy, self-esteem, and masculinity. These correlations lend partial
support for hypotheses in this study regarding the predicted relationships
between CoPos and CoNeg scores and self-efficacy, self-esteem, and
masculinity.

Overlap between predictors is evident in the correlation matrixes.
For males, self-efficacy is positively correlated with self-esteem and
masculinity and negatively correlated with femininity. In addition, there is
a positive relationship between self-esteem and masculinity. For females,
self-efficacy is positively associated with self-esteem and masculinity and
self-esteem is also positively related to masculinity. Multicollinearity was a

concern in this study especially given the conceptual similarities between masculinity, self-esteem, and self-efficacy. The overlap between predictors shown in the correlation matrixes was further investigated in later analyses.

Results of the Statistical Analyses for Each Hypothesis

Hypothesis 1

For all participants, higher levels of self-efficacy, and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated with an adaptive attributional style for success outcomes (i.e., an attributional style characterized by internal, stable, and global attributions) but lower levels of self-efficacy and self-esteem, higher scores on femininity and lower scores on masculinity will be associated with a maladaptive attributional style for success outcomes (i.e., an attributional style characterized by external, unstable, and specific attributions).

A multiple regression analysis was conducted to test this hypothesis. The beta weights from this analysis are shown in Table 3. The regression model was statistically significant, F (5, 150) = 9.56, p = .000 and accounted for 22% of the variance in CoPos (R^2 = .22). Thus, sex, self-efficacy, self-esteem, masculinity, and femininity explained 22% of the variability in attributional style for success outcomes. As expected, the linear combination of sex, self-efficacy, self-esteem, masculinity, and femininity significantly predicted attributional styles for success outcomes. However, only self-esteem and masculinity made a statistically significant independent contribution to the prediction of attributional styles for success

situations. Thus, higher levels of self-esteem and higher scores on masculinity were related to adaptive attributional styles for success situations (i.e., more internal, stable, and global attributions for successes).

Table 3

Regression Analysis Predicting Success and Failure Attributional Styles for All Participants From Sex, Self-Efficacy, Self-Esteem, Masculinity, and Femininity

Source	CoPos		CoNeg	
	ß	t	ß	t
Sex	.04	.46	.04	.43
Eff	.00	.02	-1.61	-1.66
Est	.21	2.49*	-.08	-.86
Masc	.35	4.25**	.20	2.16*
Fem	.11	1.41	.04	.44

Note: Eff = Self-Efficacy, Est = Self-Esteem, Masc = Masculinity, Fem = Femininity. * p ≤ .05, ** p ≤ .01

Hypothesis 2

For all participants, higher levels of self-efficacy and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated with an adaptive attributional style for failure outcomes (i.e., an attributional style characterized by external, unstable, and specific attributions) but lower levels of self-efficacy and self-esteem, higher scores on femininity, and lower scores on masculinity will be associated with a maladaptive attributional style for failure outcomes (i.e., an attributional

style characterized by internal stable, and global attributions).

This hypothesis was tested by multiple regression analysis. The beta weights associated with the regression model are presented in Table 3. The model was not statistically significant, F (5, 157) = 1.62, p = .159 and accounted for only 5% of the variation in attributional style scores for failure outcomes. The linear combination of sex, self-efficacy, self-esteem, masculinity, and femininity did not significantly predict attributional styles for failure outcomes. Masculinity did make a statistically significant independent contribution to the prediction of attributional styles for failure events, but this finding was not interpreted since the overall R was not statistically significant.

Hypothesis 3

For men, higher levels of self-efficacy and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated with an adaptive attributional style for success outcomes (i.e., an attributional style characterized by internal, stable, and global attributions), but lower levels of self-efficacy and self-esteem, higher scores on femininity and lower scores on masculinity will be associated with a maladaptive attributional style for success outcomes (i.e., an attributional style characterized by external, unstable, and specific attributions).

This hypothesis was tested by multiple regression analysis. The beta weights derived from the analysis are contained in Table 4. The regression model was statistically significant, F (4 , 59) = 5.17, p = .001, and accounted for 30% of the variance in male attributional styles for success events (R^2 = .30). Thus, one third of the variability in male attributional

style scores for success outcomes was explained by the predictor variables. As expected, the linear combination of self-efficacy, self-esteem, masculinity, and femininity significantly predicted male attributional styles for success events, but only masculinity made a statistically significant independent contribution to the prediction of the criterion. Masculinity scores were positively related to more adaptive male attributional style scores (i.e., more internal, stable, and global attributions) for success outcomes.

Table 4

Regression Analysis Predicting Male Attributional Styles for Success and Failure From Self-Efficacy, Self-Esteem, Masculinity, and Femininity

	CoPos		CoNeg	
Source	ß	t	ß	t
Eff	-.04	-.30	-.29	-1.91
Est	.19	1.42	-.19	-1.33
Masc	.45	3.57**	.22	1.53
Fem	.14	1.10	.07	.50

Note: Eff = Self-Efficacy, Est = Self-Esteem, Masc = Masculinity, Fem = Femininity. * $p \leq .05$, ** $p \leq .01$

Hypothesis 4

For men, higher levels of self-efficacy and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated with an adaptive attributional style for failure outcomes (i.e., an attributional style

characterized by external, unstable, and specific attributions), but lower scores on masculinity will be associated with a maladaptive attributional style for failure outcomes (i.e., an attributional style characterized by internal, stable, and global attributions).

This hypothesis was tested with multiple regression analysis. The beta weights associated with the regression model are presented in Table 4. The regression model was statistically significant, F (4, 49) = 2.50, p = .05 and the linear combination of self-efficacy, self-esteem, masculinity, and femininity explained 17% of the variability in male attributional style scores for failure outcomes (R^2 = .17). Although the relationship between the predictor variables and male attributional styles for failure outcomes was statistically significant, none of the beta weights were statistically significant, indicating that none of the predictor variables made a statistically significant contribution to the prediction of attributional styles for failures.

Hypothesis 5

For women, higher levels of self-efficacy and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated with an adaptive attributional style for success outcomes (i.e., an attributional style characterized by internal, stable, and global attributions) but lower levels of self-efficacy and self-esteem, higher scores on femininity, and lower scores on masculinity will be associated with a maladaptive attributional style for success outcomes (i.e., an attributional style characterized by external, unstable, and specific attributions).

Multiple regression analysis was used to test this hypothesis. The

resulting beta weights are reported in Table 5. The regression model was statistically significant, $F_{(4, 104)}$ = 6.23, p = .000, and accounted for 19% of the variance in female attributional styles for success situations (R^2 = .19). Thus, the linear combination of self-efficacy, self-esteem, masculinity, and femininity accounted for 19% of the variance in the criterion. This analysis confirmed the expectation that the linear combination of these variables would be a statistically significant predictor of female attributional styles for success outcomes. However, only masculinity and self-esteem made a statistically significant independent contribution to the variation in female attributional styles for success. As expected, higher scores on masculinity and higher levels of self-esteem were related to a more adaptive attributional style (i.e., more internal, stable, and global attributions for success).

Table 5

Regression Analysis Predicting Female Attributional Styles for Success and Failure From Self-Efficacy, Self-Esteem, Masculinity, and Femininity

	CoPos		CoNeg	
Source	ß	t	ß	t
Eff	.04	.31	-.06	-.47
Est	.23	1.20*	-.04	-.29
Masc	.26	2.55*	.16	1.48
Fem	.07	.76	-.06	-.57

Note: Eff = Self-Efficacy, Est = Self-Esteem, Masc = Masculinity, Fem = Femininity. * p ≤ .05, ** p ≤ .01

Hypothesis 6

For women, higher levels of self-efficacy and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated with an adaptive attributional style for failure outcomes (i.e., an attributional style characterized by external, unstable, and specific attributions), but lower levels of self-efficacy and self-esteem, higher scores on femininity, and lower scores on masculinity will be associated with a maladaptive attributional style for failure outcomes (i.e., an attributional style characterized by internal, stable, and global attributions).

Multiple regression analysis was done to test this hypothesis. The beta weights from the regression analysis are depicted in Table 5. The regression model was not statistically significant, F (4, 104) = .60, p = .66, and only accounted for 2% of the variance in female attributional styles for failure situations. Contrary to expectations, the linear combination of self-efficacy, self-esteem, masculinity, and femininity did not predict female attributional style scores for failure outcomes.

Hypothesis 7

Masculinity will be the best unique predictor of attributional styles for success outcomes.

Hierarchical regression was done to test this hypothesis and the following one. Since both of these hypotheses involved the unique contributions of self-efficacy, self-esteem, masculinity, and femininity, two sets of four hierarchical regressions were conducted. For all regressions, sex was entered first to control for this variable. The other predictors were

entered in a rotating order so that each one was eventually the final step in a regression. The criterion variables were attributional styles for success and failure events. Rounding error resulted in the change in R^2 not always being exactly equal to the actual difference in R^2. Table 6 depicts the results from the four hierarchical regressions using attributional style for success events as the criterion.

Table 6

Hierarchical Multiple Regression Analyses Predicting Attributional Styles for Success From Self-Efficacy, Self-Esteem, Masculinity, and Femininity

Step and Variable	R^2	Adj R^2	Change R2	F Change	ß
1. Sex	.002	-.004	.002	.37	-.05
2. Masc	.177	.167	.174	33.92**	.44**
3. Fem	.184	.169	.077	1.49	.09
4. Eff	.192	.172	.008	1.62	.10
5. Est	.223	.198	.031	6.20*	.21*
2. Fem	.012	.000	.010	1.64	.11
3. Eff	.078	.060	.065	11.29**	.26**
4. Est	.134	.112	.056	10.24**	.28**
5. Masc	.223	.198	.089	18.02**	.35**
2. Eff	.061	.050	.059	10.07**	.24**
3. Est	.118	.102	.057	10.25**	.28**

Table 6-Continued

Step and Variable	R^2	Adj R^2	Change R2	F Change	ß
4. Masc	.213	.193	.095	19.12**	.36**
5. Fem	.223	.198	.010	1.98	.11
2. Est	.112	.101	.110	19.84**	.33**
3. Masc	.213	.198	.101	20.40**	.36**
4. Fem	.223	.204	.010	2.01	.11
5. Eff	.223	.198	.000	.00	.00

Note: Eff = Self-Efficacy, Est = Self-Esteem, Masc = Masculinity, Fem = Femininity. * p ≤ .05, ** p ≤ .01

The change in R^2 associated with the last step in each analysis indicates the unique variance explained by the predictor entered at that step. In step 5 of the first analysis, self-esteem accounted for 3% of the unique variance in attributional style for success events. In each successive step 5, masculinity, femininity and self-efficacy accounted for 9%, 1%, and 0% respectively of the unique variance. Thus, masculinity was the best unique predictor of attributional style for success events followed by self-esteem, femininity, and then self-efficacy. Together, masculinity, self-efficacy, self-esteem, and femininity explained 22% of the variance in attributional styles. However, only masculinity and self-esteem made a statistically significant unique contribution to the variation in the criterion.

<u>Hypothesis 8</u>

Masculinity will be the best unique predictor of attributional styles for failure outcomes.

Table 7 contains the results from the hierarchical regression analyses conducted to address this hypothesis. The change in R^2 associated with the last step in each analysis indicates the unique variance explained by the predictor entered at that step. Looking at the fifth step in each hierarchical analysis, femininity accounted for only .1% of the unique variance in the criterion followed by self-efficacy with .2%, self-esteem with .5% and masculinity with 3%. Again, masculinity was the best unique predictor of attributional styles for failure events, but taken together, all the predictor variables only accounted for 5% of the total variance in attributional styles for failure events. In addition, only the unique variance attributed to masculinity was statistically significant.

Table 7

Hierarchical Multiple Regression Analyses Predicting Attributional
Styles for Failure From Self-Efficacy, Self-Esteem,
Masculinity, and Femininity

Step and Variable	R^2	Adj R^2	Change R^2	F Change	ß
1. Sex	.000	-.006	.000	.00	.003
2. Masc	.009	-.004	.009	1.42	.10
3. Fem	.012	-.006	.004	.58	.07
4. Eff	.044	.202	.032	5.30*	-.20*

Table 7-Continued

Step and Variable	R^2	Adj R^2	Change R^2	F Change	ß
5. Est	.049	.019	.005	.744	-.08
2. Fem	.004	-.008	.004	.64	.07
3. Eff	.019	.001	.015	2.51	-.13
4. Est	.021	-.004	.001	.20	-.04
5. Masc	.049	.019	.028	4.66*	.20*
2. Eff	.017	.005	.017	2.78	-.13
3. Est	.018	.000	.001	.20	-.04
4. Masc	.048	.024	.029	4.89*	.20*
5. Fem	.049	.019	.001	.20	.04
2. Est	.010	-.002	.010	1.61	-.10
3. Masc	.030	.011	.020	3.23	.16
4. Fem	.032	.008	.003	.41	.06
5. Eff	.049	.019	.017	2.76	-.16

Note: Eff = Self-Efficacy, Est = Self-Esteem, Masc = Masculinity, Fem = Femininity. * $p \leq .05$, ** $p \leq .01$

Hypothesis 9

Self-efficacy and self-esteem will have an indirect effect on male and female attributional styles for success through the direct effect of masculinity.

Earlier analyses confirmed intercorrelations between the predictors. Since multicollinearity obscures the unique effects of the independent variables on the criterion, path analysis was conducted for this and the following hypothesis to obtain a clearer understanding of the direct and indirect effects of masculinity, self-esteem and self-efficacy on attributional style. The question underlying both models is: How much of the variance in attributional style is due to the direct effect of masculinity or to the indirect effects of self-efficacy and self-esteem through masculinity? Results from the previous regression analyses indicated that masculinity was a consistent predictor of attributional styles for success, but the influence of self-efficacy and self-esteem on success and failure attributional styles was not as clear. Path analysis was done in order to clarify whether self-efficacy and self-esteem influenced attributional styles for success and failure directly or indirectly through masculinity. Femininity was not included in the path model for this and the following hypothesis because earlier regression analyses showed that the relationship between attributional styles for success and failure outcomes and femininity was minimal.

Table 8 contains the results from the path analysis involving the direct and indirect effects of masculinity, self-esteem, and self-efficacy on male and female attributional styles for success events. The path models for CoPos scores and regression coefficients are shown in Figure 1 and 2, respectively. The path analysis for women indicates a statistically significant direct effect for masculinity and self-esteem. For men, only masculinity had a statistically significant direct effect on the prediction of CoPos scores.

Table 8

Partitioning of Total Effects in Path Models of the Relationship
Between Male and Female Attributional Styles for Success
and Self-Efficacy, Self-Esteem, and Masculinity

Causal Variable	Criterion Variable	Direct Effect	Indirect Effect Via			Total Effect
			Est	Eff	Masc	
Women						
Est	CoPos	.23*	——	——	.06*	.29
Eff	CoPos	.04	——	——	.08*	.12
Masc	CoPos	.26**	——	——	——	.26
Men						
Est	CoPos	.18	——	——	.07	.25
Eff	CoPos	-.09	——	——	.13*	.04
Masc	CoPos	.48**	——	——	——	.48

Note: Eff = Self-Efficacy, Est = Self-Esteem, Masc = Masculinity,
Fem = Femininity, CoPos = Composite attributional style score for positive
events. * p ≤ .05, ** p ≤ .01

In addition to the direct effects of masculinity, support was also

found for the indirect effects of self-esteem and self-efficacy. For women,

self-esteem and self-efficacy had statistically significant indirect effects on

CoPos scores that were mediated by masculinity. For men, only self-

efficacy had a statistically significant indirect effect on CoPos scores

through masculinity. The regression equation predicting female CoPos

scores from self-efficacy, self-esteem, and masculinity accounted for 19% of

the variability. The regression equation predicting male CoPos scores from self-efficacy, self-esteem, and masculinity accounted for 28% of the variability.
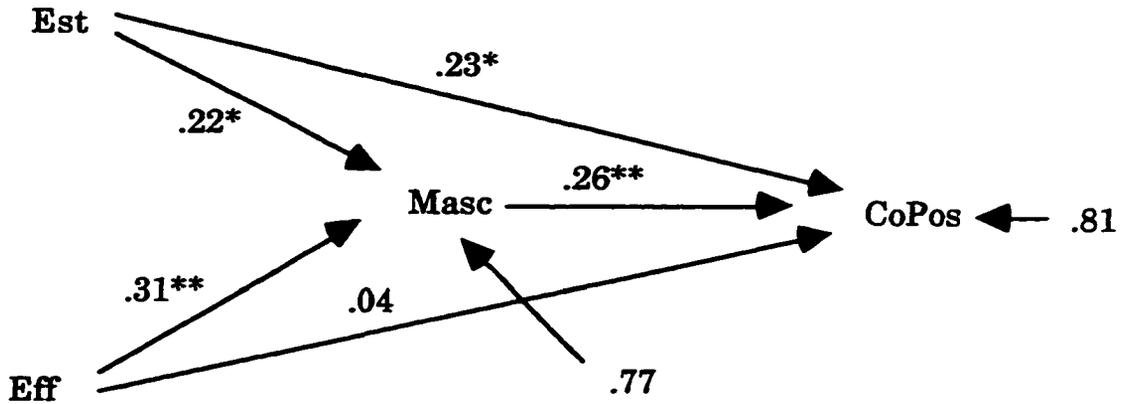

Figure 1.   Path Model and Regression Coefficients for the Effects of Self-Efficacy, Self-Esteem, and Masculinity on Success Attributional Styles for Female Participants.
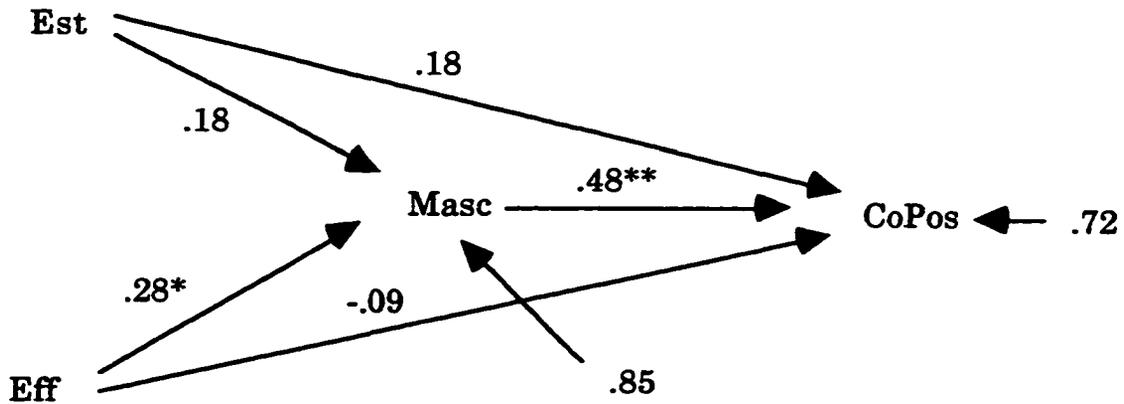

Figure 2.   Path Model and Regression Coefficients for the Effects of Self-Efficacy, Self-Esteem, and Masculinity on Success Attributional Styles for Male Participants.

Hypothesis 10

Self-efficacy and self-esteem will have an indirect effect on male and female attributional styles for failure through the direct effect of masculinity.

Table 9 shows the path analysis results for this hypothesis. Path analysis was done for failure attributional style scores because previous

Table 9

Partitioning of Total Effects in Path Models of the Relationship Between Male and Female Attributional Styles for Failure and Self-Efficacy, Self-Esteem, and Masculinity

Causal Variable	Criterion Variable	Direct Effect	Indirect Effect Via			Total Effect
			Est	Eff	Masc	
Women						
Est	CoNeg	-.04	——	——	.04	.00
Eff	CoNeg	-.06	——	——	.05	-.01
Masc	CoNeg	.16	——	——	——	.16
Men						
Est	CoNeg	-.20	——	——	.04	-.16
Eff	CoNeg	-.32*	——	——	.06	-.26
Masc	CoNeg	.22	——	——	——	.22

Note: Eff = Self-Efficacy, Est = Self-Esteem, Masc = Masculinity, Fem = Femininity, CoNeg = Composite attributional style score for negative events. * p ≤ .05, ** p ≤ .01

regression analysis yielded a statistically significant regression equation for male attributional styles. The path models associated with the analysis are shown in Figure 3 and 4.

The results for women show that in the prediction of CoNeg scores there were no statistically significant direct or indirect effects for masculinity, self-esteem, or self-efficacy. The regression equation predicting CoNeg scores for women from the direct and indirect effects of self-efficacy, self-esteem, and masculinity only accounted for 2% of the variability. Results were slightly different for men. In the prediction of CoNeg scores for men, only self-efficacy had a statistically significant direct effect. The regression equation predicting CoNeg scores for men from the direct and indirect effects of self-efficacy, self-esteem, and masculinity accounted for 17% of the variability in attributional styles for failure events.
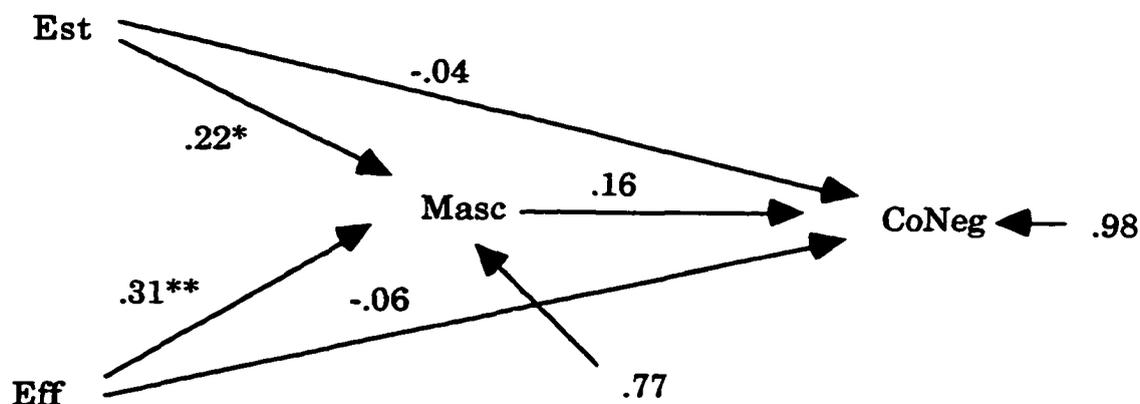
Figure 3. Path Model and Regression Coefficients for the Effects of Self-Efficacy, Self-Esteem, and Masculinity on Failure Attributional Styles for Female Participants.
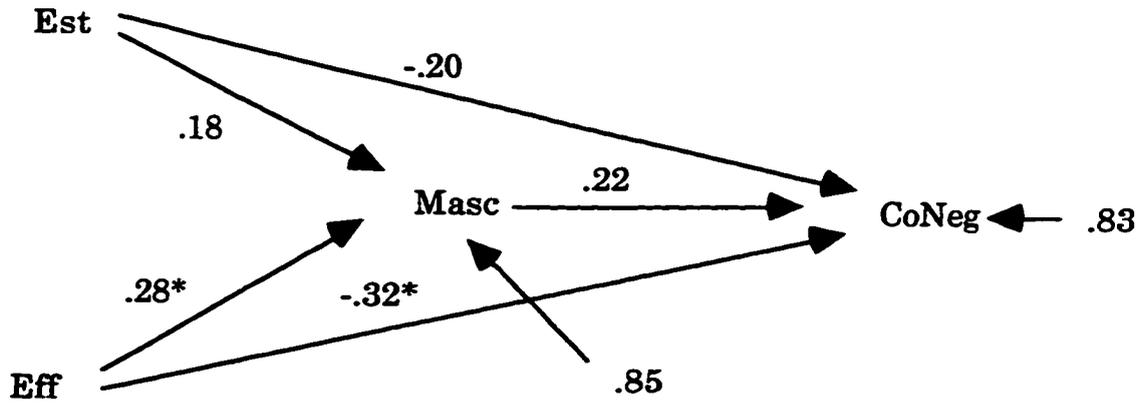
Figure 4. Path Model and Regression Coefficients for the Effects of Self-Efficacy, Self-Esteem, and Masculinity on Failure Attributional Styles for Male Participants.

CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of this chapter is to discuss and summarize the present study. The focus will be on briefly summarizing the content of the previous four chapters and then discussing the conclusions and implications that can be drawn from the research findings.

Summary of the Study

Description

This research examined the relationship between attributional style for success and failure situations and sex, self-efficacy, self-esteem, and sex role identity (i.e., masculinity and femininity). The purpose of this investigation was to expand on previous achievement attribution research findings which suggested that sex did not have much of an influence on attributions following a success or failure and failed to find any consistent interaction effects between sex and situation or task variables. The variables under investigation in the present study were chosen on the basis of recommendations made for improving the attribution research paradigm. Those recommendations focused primarily on the need to include dispositional variables, especially those pertaining to gender norms and values, self-perceptions, and attributions across situations. Although sex was not expected to account for a statistically significant proportion of the

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variability in attributional style, it was included in the study because it is a basic organizing variable that usually has important implications for how strongly a person adheres to normative social expectations concerning appropriate behavior. Results were expected to provide a clearer understanding of male and female cognitive processing and suggest intrapersonal changes that will foster rather than hinder positive responses to success and failure.

Relevant Research

The review of the literature focused primarily on findings from the research into androgyny and psychological adjustment and the reformulated learned helplessness model of depression. The main purpose of the review was to provide empirical evidence supporting the predicted outcomes in the study. Most of the discussion dealt with empirical evidence concerning relationships between the following variables: masculinity and self-esteem, self-esteem and attributional style, sex and attributional style, self-efficacy and masculinity, and self-efficacy and attributional style.

The research findings provided important information about the variables under investigation in this study. First, the evidence demonstrates a positive correlation between masculinity and self-esteem, and a negative correlation between self-esteem and a depressive attributional style (i.e., internal, stable and global attributions for failure outcomes). Second, the findings for sex differences and attributional style are inconsistent since some researchers report statistically significant sex differences in attributional style and others do not. Third, the findings

concerning masculinity and self-efficacy suggest that there is a positive relationship between the two variables. Fourth, the relationship between self-efficacy and attributional style has not been well researched, but there is evidence that suggests high self-efficacy is related to an adaptive attributional style (i.e., internal, stable, and global attributions for success outcomes). Finally, in the studies reviewed, sex differences in self-esteem and self-efficacy or interaction effects between sex and masculinity and femininity were generally not statistically significant.

Methodology

The final sample of participants in the present study consisted of 163 undergraduate students (54 men and 109 women) enrolled at a large midwestern university. Ages ranged from 18 - 40 plus years with the majority of the participants falling in the 18 - 20 year range (n=120). Racial and ethnic groups represented in the sample were as follows: Caucasian (90%), African American (5%), Multiracial (2%), American Indian (1%), Hispanic (1%), Asian American (1%), and Italian American (1%).

All participants completed a test packet containing five instruments: (1) a demographic form, (2) the BSRI, (3) the SES, (4) the RSES, and (5) the ASQ. In accordance with ethical guidelines, individuals were informed that participation in the study was completely voluntary and all responses were anonymous.

The predictor variables in the study were self-efficacy as measured by the SES, self-esteem as measured by the RSES, and the raw scores for

masculinity and femininity as measured by the BSRI. The criterion variables were the composite attributional style scores for positive and negative outcomes on the ASQ (CoPos and CoNeg scores).

Statistical Analyses

The statistical procedures used to analyze the data were multiple correlation, multiple regression, hierarchical regression, and path analysis. Multiple correlation analysis was used to assess the shared variance between the predictors. Multiple regression analysis was used to determine whether self-efficacy, self-esteem, masculinity, and femininity significantly predicted attributional styles of all participants as well as men and women separately. Hierarchical regression was used to determine which independent variable was the best unique predictor of attributional style scores. Lastly, multiple regression was used to obtain the necessary partial regression coefficients for path analysis.

Summary of the Findings

Preliminary Analyses

Results from these analyses indicated significant sex differences for masculine and feminine scores. Thus, as expected, men scored higher on masculinity and women scored higher on femininity. Pearson correlations between the variables revealed statistically significant positive relationships between the predictors and the criterion. The correlations for male participants showed that self-esteem and masculinity were positively related to CoPos scores and self-efficacy was negatively related to CoNeg

scores. The analysis using female scores also showed a positive relationship between self-esteem, self-efficacy, masculinity, and CoPos scores but there were no statistically significant relationships between the predictors and CoNeg scores. Intercorrelations between the predictors were another factor addressed in the preliminary analysis. For both men and women, there was a positive correlation between self-efficacy and masculinity, self-efficacy and self-esteem, and masculinity and self-esteem. For men only, there was a negative relationship between self-efficacy and femininity.

<u>Hypothesis 1</u>

For all participants, higher levels of self-efficacy and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated with an adaptive attributional style for success outcomes (i.e., an attributional style characterized by internal, stable, and global attributions), but lower levels of self-efficacy and self-esteem, lower scores on masculinity, and higher scores on femininity will be associated with a maladaptive attributional style for success outcomes (i.e., an attributional style characterized by external, unstable, and specific attributions).

Statistical analysis revealed that the linear combination of sex, self-efficacy, self-esteem, masculinity and femininity significantly predicted attributional style scores for success outcomes. These predictors accounted for 22% of the variation in attributional style scores for successes. However, only masculinity and self-esteem made statistically significant independent contributions to the variation in attributional style.

As expected, higher scores on self-esteem and masculinity were associated with higher scores on the criterion. Analysis of the data partially supported this hypothesis since only masculinity and self-esteem made a statistically significant independent contribution to the variation in attributional style.

Hypothesis 2

For all participants, higher levels of self-efficacy and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated with an adaptive attributional style for failure outcomes (i.e., an attributional style characterized by external, unstable, and specific attributions), but lower levels of self-efficacy and self-esteem, higher scores on femininity, and lower scores on masculinity will be associated with a maladaptive attributional style for failure outcomes (i.e., an attributional style characterized by internal stable, and global attributions).

Multiple regression results did not support this hypothesis. The linear combination of these predictor variables did not explain a statistically significant proportion of the variability in attributional style for failure situations.

Hypothesis 3

For men, higher levels of self-efficacy and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated with an adaptive attributional style for success outcomes (i.e., an attributional style characterized by internal, stable, and global attributions), but lower levels of self-efficacy and self-esteem, higher scores on femininity, and lower

scores on masculinity will be associated with a maladaptive attributions style for success outcomes (i.e., an attributional style characterized by external, unstable, and specific attributions).

Statistical analysis revealed that the linear combination of self-efficacy, self-esteem, masculinity, and femininity significantly predicted male attributional styles for success outcomes. However, only masculinity made a statistically significant independent contribution to the prediction of success attributional styles. Higher masculine scores were associated with a more adaptive attributional style for success (i.e., higher CoPos scores). Thus, the statistical analysis partially supported this hypothesis by indicating that only masculinity made a statistically significant independent contribution to male attributional style differences for success outcomes.

Hypothesis 4

For men, higher levels of self-efficacy and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated with an adaptive attributional style for failure outcomes (i.e., an attributional style characterized by external, unstable, and specific attributions), but lower levels of self-efficacy and self-esteem, higher scores on femininity, and lower scores on masculinity will be associated with a maladaptive attributional style for failure outcomes (i.e., an attributional style characterized by internal, stable, and global attributions).

Results showed that the linear combination of self-efficacy, self-esteem, masculinity, and femininity explained a statistically significant

outcomes. However, none of these variables made a statistically significant independent contribution to the prediction of attributional styles for failure. The statistical analysis did not support this hypothesis.

Hypothesis 5

For women, higher levels of self-efficacy and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated with an adaptive attributional style for success outcomes (i.e., an attributional style characterized by internal, stable, and global attributions), but lower levels of self-efficacy and self-esteem, higher scores on femininity, and lower scores on masculinity will be associated with a maladaptive attributional style for success outcomes (i.e., an attributional style characterized by external, unstable, and specific attributions).

The analysis for this hypothesis demonstrated that the linear combination of self-efficacy, self-esteem, masculinity, and femininity accounted for a statistically significant proportion of the variability in female attributional style scores for success outcomes. However, only self-esteem and masculinity significantly added to the prediction of the criterion. Higher self-esteem and masculinity was associated with a more adaptive attributional style for success outcomes (i.e., higher CoPos scores). The analysis partially supported this hypothesis in that self-esteem and masculinity made a statistically significant contribution to the variation in attributional style differences for success outcomes.

Hypothesis 6

For women, higher levels of self-efficacy and self-esteem, higher scores on masculinity, and lower scores on femininity will be associated with an adaptive attributional style for failure outcomes (i.e., an attributional style characterized by external, unstable, and specific attributions), but lower levels of self-efficacy and self-esteem, higher scores on femininity, and lower scores on masculinity will be associated with a maladaptive attributional style for failure outcomes (i.e., an attributional style characterized by internal, stable, and global attributions).

Multiple regression analysis revealed that the predictor variables did not account for a statistically significant proportion of the variability in attribution style scores for failure events. The results did not support this hypothesis.

Hypothesis 7

Masculinity will be the best unique predictor of attributional styles for success outcomes.

Based on the change in R^2 for the last step in a series of four hierarchical regressions, masculinity was the best unique predictor of attributional style for success outcomes followed by self-esteem, femininity, and self-efficacy. Together, all of the predictors accounted for 22% of the variability in the criterion, but only the unique variance explained by masculinity and self-esteem was statistically significant. The results from this analysis supported the hypothesis in that masculinity was the best unique predictor of attributional styles for success outcomes.

Hypothesis 8

Masculinity will be the best unique predictor of attributional style for failure outcomes.

The R^2 change from a series of four hierarchical regressions indicated that masculinity was the best unique predictor of the criterion followed by self-esteem, self-efficacy, and femininity. Unlike the findings for the previous hypothesis, only 5% of the variance in the criterion was accounted for by the predictors and only the unique variance explained by masculinity was statistically significant. The statistical analysis supported the hypothesis in that masculinity was the best unique predictor of attributional styles for failure outcomes.

Hypothesis 9

Self-efficacy and self-esteem will have an indirect effect on male and female attributional styles for success through the direct effect of masculinity.

Path analysis revealed that masculinity had a statistically significant direct effect on attributional styles for men and women and self-esteem had a statistically significant direct effect on attributional styles for women. It also revealed that self-esteem and self-efficacy had statistically significant indirect effects on attributional styles for women that were mediated by masculinity. In addition, self-efficacy had a significant indirect effect on attributional styles for men that was also mediated by masculinity. Path analysis supported the hypothesis with respect to women in that both self-efficacy and self-esteem had an indirect effect on

attributional styles for success that was mediated by masculinity. Path analysis provided partial support for the hypothesis with respect to men in that only self-efficacy had an indirect effect on attributional styles for success that was mediated by masculinity.

Hypothesis 10

Self-efficacy and self-esteem will have an indirect effect on male and female attributional styles for failure through the direct effect of masculinity.

Results from the path analysis for men and women demonstrated that the direct effect for masculinity on the prediction of attributional styles for failure events was not statistically significant. For women, the small indirect effects for self-esteem and self-efficacy through masculinity were also not statistically significant. For men, there was also a small indirect effect for self-esteem, but it was not statistically significant. Contrary to expectations, self-efficacy had a direct effect on the failure attributional styles of men. Path analysis did not support the hypothesis concerning the direct and indirect effects of masculinity, self-efficacy, and self-esteem on attributional styles for failure.

Discussion of the Findings

The results from the analyses provided at least partial support for most of the research hypotheses concerning the relationships between attributional styles for success and failure and sex, masculinity, femininity, self-efficacy, and self-esteem. Sex and femininity did not significantly add to

the prediction of individual differences in attributional styles for success or failure. However, self-esteem and masculinity made a contribution to the prediction of success attributional styles for women, and masculinity was important in the prediction of success attributional styles for men. Contrary to expectations, self-efficacy did not significantly add to the prediction of male or female attributional styles for success or failure. The results for masculinity and self-esteem support previous research indicating a positive relationship between masculinity, self-esteem, and an adaptive attributional style for success (e.g., Feather, 1987; Stoltz & Galassi, 1989). However, the finding concerning self-efficacy was inconsistent with Houston (1995) who reported that low self-efficacy was more apt to lead to a negative attributional style associated with vulnerability to depression. It may have been that intercorrelations between self-efficacy, self-esteem, and masculinity obscured the role that self-efficacy played in individual differences in attributional styles. This possibility is explored further in the discussion concerning the path analyses.

Interestingly, none of the predictors made a significant contribution to the variation in attributional styles for failure outcomes. Thus, better prediction occurred for success attributional styles as compared to failure attributional styles. Variables other than femininity, masculinity, self-efficacy, and self-esteem probably influenced attributional style differences for failure situations. The hypothetical failure events on the ASQ may also have been less relevant to the participants and therefore, not as ego-involving as the hypothetical success events. The statistical significance of

the regression model for male attributional styles for failure events was probably due to other variables causally linked to the predictors but not included in the study, since none of the partial regression coefficients for that analysis were statistically significant.

Another trend that emerged in the regression analyses was that self-efficacy, self-esteem, femininity, and masculinity accounted for a greater proportion of the variability in success attributional styles for men as compared to women (R^2 = .30 and R^2 = .19, respectively). Some of this difference may be due to the stronger gender-related, positive reinforcement that men receive for assuming traits and behaviors that are consistent with social expectations concerning normative behavior for males (Burnett et al., 1995; Feather, 1985; Kleinplatz et al., 1992; Puglisi & Jackson, 1980). Another factor may involve the female emphasis on relating and connecting as a source of well-being and self-worth. Previous research has shown that masculinity or agentic, take charge behavior, is most strongly associated with global self-esteem, the type of self-esteem assessed in this study (Whitley, 1983). However, Payne (1987) reported that femininity tended to be correlated with fewer problems related to interpersonal functioning (e.g., social distrust, avoidance, and distress). Perhaps if social self-esteem rather than global self-esteem had been used as a predictor, the results for male and female attributional styles for success situations would be reversed (i.e., the predictors would account for a greater proportion of the variability in female attributional styles for success events as compared to males).

As expected, the results supported the hypotheses concerning the

best unique predictor. When the variation due to sex was statistically controlled for in the regression model, masculinity was the best unique predictor of attributional style for success and failure situations. This finding makes a unique contribution to the literature concerning the role of masculinity in attributional styles because previous research never directly examined the differing influences of self-esteem, self-efficacy, masculinity, femininity, and sex on attributional style differences for success and failure. Given the intercorrelations between the predictors, it is helpful to know that masculinity was the best unique predictor, because this indicates that identification with masculine sex role traits has a positive influence on attributional styles for success and failure that is not related to self-efficacy, self-esteem, or femininity.

As noted earlier, the issue of multicollinearity among the predictors was addressed through path analysis. Path analysis adds to an understanding of the possible causal relationships between the predictors and attributional styles for success and failure. By definition, it allows for causal inferences about the direct and indirect effects of the predictors, because it assesses the shared and unique variance in the regression model. One caveat concerning the path analyses is that the causal inferences made about the direct and indirect effects of the predictor variables are contingent upon the model being correct. The model used in the analyses assumed that self-esteem and self-efficacy led to or contributed to masculinity.

The hypothesis concerning the direct and indirect effects of self-efficacy, self-esteem, and masculinity on male and female attributional

styles for success was partially supported by the path analysis. For men and women, the degree to which they identified with traditionally masculine sex role traits had a direct effect on their attributional styles for success situations. For women, self-esteem and self-efficacy indirectly influenced their attributional styles for success situations through masculinity. For men, only self-efficacy had an indirect influence on their attributional styles for success.

The hypothesis concerning the direct and indirect effects of self-efficacy, self-esteem, and masculinity on female and male attributional styles for failure situations was not supported by the path analysis. There were no direct effects for masculinity and no indirect effects for self-esteem or self-efficacy, but contrary to predicted outcomes, self-efficacy had a statistically significant direct effect on male attributional styles for failure. For men, low self-efficacy may contribute to a maladaptive attributional style for failure. This result suggests that self-efficacy may be an important determinant of a maladaptive male attributional response to failure outcomes, but further research is needed before any substantive conclusions can be made. The evidence of the direct effect of self-efficacy on male attributional styles for failure does not contradict the results from the multiple regression analyses in which self-efficacy did not have an influence on male attributional styles for failure, but it is indicative of model specification differences. Multiple regression analysis does not allow for assessment of how intercorrelations between the predictors may have influenced the partial regression coefficients. Since path analysis assesses both the direct and indirect effects of a predictor, it gives a more complete

picture of the relationship between self-efficacy and attributional style for failure. Thus, the path analysis results for self-efficacy give a clearer indication of how self-efficacy impacted male attributional styles for failure than that provided by the results from the regression analysis.

Several differences in the path analyses results for men and women bear further discussion. One noticeable difference is that the direct effect of masculinity on attributional styles for success outcomes was greater for men compared to women. This difference suggests that since men are more likely to follow normative social expectations concerning appropriate masculine traits, they will also be more likely to choose an attributional response to success that is self-affirming and adaptive (i.e., an attributional style characterized by internal, stable, and global attributions for success) and consistent with the positive self-image associated with masculine sex role traits.

The path analyses results also indicate sex differences in the direct effects of self-efficacy on attributional styles for failure. For women, the direct effect of self-efficacy on attributional styles for failure was negligible but the direct effect of self-efficacy was appreciably larger for men. This difference indicates that self-efficacy is probably more important in the prediction of male attributional styles for failure events than female attributional styles for failure events. Thus, low self-efficacy is probably more likely to contribute to maladaptive male attributional styles for failure (attributional style characterized by internal, stable, and global attributions for failure).

Conclusions and Implications

The purpose of this study was to expand the knowledge base concerning individual differences in attributional responses to success and failure. The results have demonstrated some important relationships between attributional styles for success and failure and self-efficacy, self-esteem, masculinity, and femininity. Specifically, the degree to which men and women identify with masculine sex role traits is likely to have a strong influence on their attributional responses to success. In addition, self-efficacy and self-esteem appear to have a differing role in the success and failure attributional styles of men and women. For women, self-esteem is likely to have an influence on their attributional styles for success. But, for men, self-efficacy is more likely to influence their attributional styles for failure. As with all research, it is important to keep in mind the context in which this study was conducted. The results indicating the importance of masculine traits and behaviors, self-esteem, and self-efficacy are most likely a reflection of the high societal value associated with instrumental, take charge behaviors and the positive reinforcement given to people who engage in those behaviors.

The information gained from this study has significant implications for application in clinical settings. For example, psychologists may find it useful to keep in mind the impact of masculine sex role traits on attributional responses to success. Male clients in particular, may benefit from an emphasis on fostering masculine traits given the results from the study indicating the greater influence that masculinity had on male attributional style scores for success events. Encouraging clients to adopt

masculine or agentic, take charge, traits and behaviors may have a positive impact on their attributional responses that will probably help to lift their mood and improve their self-image.

Psychologists may also find it helpful to structure their attributional change interventions differently depending on the sex of their client. With male clients, attributional changes, especially in response to failure, may be more apt to occur if interventions are designed to increase their self-efficacy. For example, interventions with male clients might be more didactic in nature and focus on changing self-destructive behaviors and using positive reinforcement as a means of increasing self-efficacy and improving attributional responses to failure. In contrast, when working with female clients, interventions designed to increase their self-esteem may be more apt to result in positive changes in their attributions for success. Interventions of this nature might focus on changing self-defeating behaviors in success situations and emphasize listening, discussion, and feedback as well as opportunities for processing self-perceptions both before and after attempts at behavioral change.

These guidelines may also be applied in other settings such as teaching, consultation, or supervision where psychologists want to intervene with their student, consultee, or supervisee in a way that will more effectively promote a positive or self-affirming attributional response to a success or failure outcome. For example, in a teaching situation, professors may want to structure their feedback about an exam differently depending on the sex of the student. With women, it may be more helpful to make statements that foster their self-esteem, but with men, feedback

that emphasizes their self-efficacy may prove beneficial. In consulting situations, female consultees may respond better if the consultant gives ample opportunity for dialogue and involvement in the change process and provides feedback and support designed to encourage and shape positive behaviors. In contrast, the consultant may want to take an approach to working with male consultees that focuses on what changes need to be made and how to make those changes a reality in their organization and then providing a feedback session after the change process has been instigated. Lastly, in supervision situations where the primary goal is to promote a positive self-identity as a therapist, a female supervisee may benefit more from dialogue and feedback that allows for processing her experience as a therapist, while a male supervisee may find it helpful to be given direct feedback about his performance and appropriate reinforcement or support for future successes. In sum, it would be important to remember that structuring dialogue and interventions to foster self-esteem in women and self-efficacy in men might best be used as a heuristic guideline for generating positive attributions that should be shaped to fit each individual situation with a client, student, consultee, or supervisee

Given the impact that attributional style has on emotional well-being, intervention programs could be developed for the purpose of increasing self-esteem, self-efficacy, and masculine or instrumental sex role behaviors. Intervention programs such as these are both timely and prudent given the sometimes severe restrictions that managed care providers place on therapeutic contacts. The programs could be designed to offset the normative expectations associated with being male or female in

today's society. Although the feminist movement has raised awareness concerning gender equality, social norms still perpetuate stronger reinforcement of masculinity in men than women. Thus, women may benefit from an intervention program designed to reinforce a positive self-esteem and foster instrumental, assertive traits and behaviors. Conversely, an intervention program could also be related to men and designed to promote evaluations of self that include an awareness of the need to know how to appropriately use masculine traits to assert themselves and an emphasis on belief in one's ability to successfully attain personal goals. Both intervention programs would be more likely to be effective if the programs for women included opportunities for relationship building, dialogue, support, and feedback and the programs for men focused more on direct instruction, structured behavioral assignments to try at home, and positive reinforcement of successful behavioral change experiences. Although it is likely that the program would have a positive impact on attributions for failure, the goal of these programs would be to help men and women respond better to successes by promoting a positive self-perception and assertive behaviors that will contribute to a self-affirming attributional response following a success outcome. The programs could be targeted towards groups of same sex clients who are desiring to become more self-confident and improve their attributional response to success or failure experiences. Intervention programs could also be developed for minority men and women as well as other groups such as the handicapped and elderly. These programs would need to incorporate personal and unique group experiences into the dialogue and hands on

exercises designed to enhance self-esteem and self-efficacy.

Limitations of the Study

Several limitations may have influenced the results from this study and should be taken into consideration when making interpretations about the findings. One important limitation is that self-report was the only method of data collection. As a result, it is difficult to assess the extent to which participants may have been biased to present themselves in the best possible light. Other methods of data collection such as peer review may have provided a richer picture of the relationships between the variables under investigation.

Another factor that could have influenced results was that attributional style was assessed on the basis of participant responses to hypothetical success and failure situations. Logistic considerations may make assessment of attributional tendencies following actual successes and failures a difficult endeavor, but to do so would increase the generalizability of the results.

Measurement issues may also have confounded the results. For example, research findings suggest that masculinity, self-esteem, and self-efficacy may be different manifestations of a single underlying construct (e.g., Myers & Stark-Adamec, 1987; Payne, 1987; Watson & Clark, 1984; Whitley & Gridley, 1993). Yet, they do not give a clear indication of the extent to which these variables overlap. In addition, self-esteem researchers question the construct validity of global self-esteem (Simmons, 1987) and others believe there should be a conceptual distinction made

between presented self-esteem and experienced self-esteem (Demo, 1985). Conceptual problems such as these along with the possibility that masculinity and global self-esteem are essentially the same constructs may have obscured the true nature of the relationships between the predictor variables and attributional style.

Lastly, the demographics of the sample limit the extent to which the results may be generalized to other groups. The age range of the sample was fairly restricted (primarily 18-22 years) and there were few persons of color among the participants. Although the results do offer a clearer indication of the influence of masculinity, femininity, self-esteem, and self-efficacy on attributional style, it is not possible to generalize the results from this study to other age groups or racial groups.

<div align="center">Recommendations for Future Research</div>

Nine recommendations for expanding the present research and increasing the generalizability of research findings arise from the previous discussion. Those are:

1. Attributional style needs to be assessed on the basis of real life success and failure situations. Although the hypothetical situations used in the ASQ provide an approximation of the type of affiliative and achievement events that most people might experience, assessing attributional style in relation to different types of actual success and failure events might be more ego involving. If the event is more ego-involving, then the participant's ratings of the globality, locus, and stability of the event outcomes may be a more accurate assessment of the person's attributional

response to the outcome. Also, assessing attributional style based on real life situations will provide information about the extent to which the findings in this study can be generalized to real life situations.

2. A longitudinal study would be helpful in clarifying the relationships between the variables. This type of research would indicate whether the results could be generalized across time by providing information about how the relationships among the variables may change during a lifetime.

3. The study needs to be replicated using different populations (e.g., older adults, persons of color, and individuals from varying socio-economic groups). Research of this nature would provide information about whether the findings from this study vary depending on the population being assessed.

4. The present study could also be replicated using a larger sample size. Given the correlational nature of the experimental design, this would increase the power and the extent to which the results could be generalized.

5. Replication using multiple instruments to assess self-efficacy, self-esteem, and sex role identity could be done. This approach would be more labor intensive, but it would provide a more accurate measure of the constructs and decrease the likelihood of measurement error.

6. Both trait and behavioral measures of sex roles could be used in future analyses. Masculinity as assessed by behavioral measures has been shown to have a lower correlation with self-esteem and a higher discriminant validity as compared to masculinity assessed by trait measures (Whitley, 1988).

7. In future research, susceptibility to social desirability needs to be

assessed in order to statistically control for socially desirable responses. Social desirability could be statistically controlled by using scores on a social desirability instrument as the first variable entered into hierarchical regression analyses. Multiple measures of social desirability (including measures other than self-report) should be used since research has shown that with self-report measures it is difficult to determine how much of a person's response is related to valid self-perceptions related to social desirability and how much is due to self-report response bias (Marsh et al., 1987).

8. Other measures of self-esteem (e.g., social self-esteem) could also be included in future research. It may be that the results of the present study will vary depending on the type of self-esteem instrument used.

9. The current study could be replicated using a revised version of the ASQ. Researchers have recently developed a revised version of the ASQ that attempts to increase the reliability of each dimension subscale (e.g., Feather, 1987; Pillow et al., 1991). This revised version contains 16 negative or failure events. Reliabilities for each of the dimension subscales have been reported at .80, .84, .88, .89 for the internality, stability, globality, and composite score (Pillow et al., 1991). In the present research, little evidence was found for a relationship between the predictors and attributional styles for failure outcomes. It may be that different results would be obtained for failure outcomes if the revised version of the ASQ was used.

Appendix A

Protocol Clearance From the Human Subjects Institutional Review Board
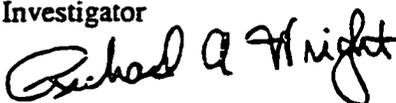
WESTERN MICHIGAN UNIVERSITY

Date: 19 March 1998

To: Jospeh Morris, Principal Investigator
        Angela Hirschy, Student Investigator

From: Richard Wright, Chair

Re: HSIRB Project Number 98-02-20

This letter will serve as confirmation that your research project entitled "Sex Differences and Attributional Style: The Mediating Influence of Gender-Role Identity, Self-Efficacy, and Self-Esteem" has been **approved** under the **exempt** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: 13 March 1999

Appendix B

Statement of Informed Consent

College of Education
Counselor Education and Counseling Psychology
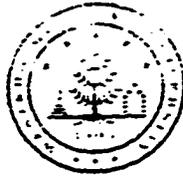
Kalamazoo, Michigan 49008-5195
616 387-5100

WESTERN MICHIGAN UNIVERSITY

You are invited to participate in a research project designed to analyze the relationship between the reasons men and women choose to explain their successes and failures and the person centered variables that may influence their choices. This research project is being conducted by Dr. Joseph R. Morris and Angela J. Hirschy. Participation involves completion of a test packet containing a general demographic form and four questionnaires. One of the questionnaires is comprised of questions about hypothetical success and failure situations and the other three contain questions about your self-perceptions. Participation will take approximately 30 minutes. Your responses will be completely anonymous, so do not put your name anywhere on the test packet. You may choose to not answer any question and simply leave it blank. If you decide not to participate in this study, please return the blank test packet and either remain quietly in your seat or exit the classroom for the next 30 minutes. Your completion of the test packet will indicate your consent to voluntarily participate in the study. For those choosing to participate, please keep your completed test packet until all participants are finished and then pass it to the front of the class.

If you have any questions about this research project, you may contact Dr. Joseph Morris at 387-5100, Angela Hirschy at 383-4364, the Human Subjects Institutional Review Board at 387-8293, or the Vice President for Research at 387-8298.

WESTERN MICHIGAN UNIVERSITY
Approved for use for one year from this date:
H. S. I. R. B.

MAR 1 3 1998

X _____
For R. Weight
HSIRB Chair

Appendix C

Permission to Use Attributional Style Questionnaire

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# UNIVERSITY of PENNSYLVANIA

School of Arts and Sciences

Department of Psychology
3815 Walnut Street
Philadelphia, PA 19104-6196
Martin E.P. Seligman
Kogod Term Professor

Tel.: 215-898-7173
Fax : 215-573-2188
email: seligman@cattell.psych.upenn.edu

PERMISSION TO USE THE ATTRIBUTIONAL STYLE QUESTIONNAIRE

The Attributional Style Questionnaire (ASQ) is copyrighted
material and may only be used with the written permission of the
author, Dr. Martin E.P. Seligman. This letter grants you
permission to use the ASQ, so please keep it on file. The
questionnaire may be used only for academic research or by a
clinical psychologist for the diagnosis or treatment of patients.
It may not be used for profit or for any corporate-related
activities.

Sincerely,
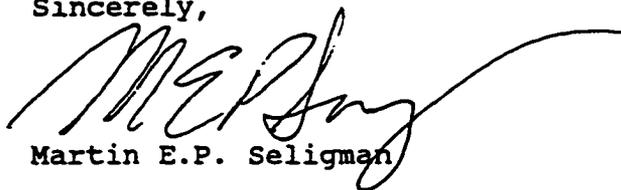
Martin E.P. Seligman

Appendix D

Permission to Use Self-Efficacy Scale

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PSYCHOLOGICAL REPORTS   PERCEPTUAL AND MOTOR SKILLS

June 26, 1996

Ms. Angela J. Hirschy
803 West Lovell Street,
 Apartment 3
Kalamazoo, MI 49007

Dear Ms. Hirschy:

Under the following conditions, we are pleased to grant permission to reproduce Table 1 on page 666 of the following article in your doctoral dissertation research. The citation must appear at the top of each copy reproduced for research and must read:

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Sincerely,

S. A. Isbell, Ph.D.
Assistant Editor

SAI/srh
Enclosure

The Institute for Rehabilitation and Research (TIRR)

1333 Moursund, Houston, Texas 77030-3405
In the Texas Medical Center
Telephone (713) 799-5000, 797-5790 (TDD)
Fax (713) 799-7095

tiRR
Systems

April 25, 1996

Angela Hirschy
803 W. Lovell St.
Apt. 3
Kalamazoo, MI 49007

Dear Ms. Hirschy:

I am writing to give you formal permission to use the Self-efficacy Scale
in your thesis. I have enclosed two copies of the scale. One copy is
marked with scoring instructions, the other may be reproduced for use
in your research.

Thank you for your interest. I hope these materials are helpful to you.

Sincerely,

Mark Sherer, Ph.D., ABPP
Director of Neuropsychology

MS/tbg

Enclosures

Appendix E

Permission to Use Rosenberg Self-Esteem Scale

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January 22, 1998

Angela J. Hirschy
709 W. Kalamazoo Ave.
Apt. 1
Kalamazoo, MI 49007

Permissions
41 Williams St.
Princeton, N.J. 08540
FAX: 609-258-1335

To Whom It May Concern:

I am a doctoral student in Counseling Psychology and am working on my dissertation. I am interested in gaining permission to use the Self-Esteem Scale developed by Dr. Morris Rosenberg (published in: Rosenberg, M. (1965). Society and the Adolescent Self-Image. Princeton, N.J: Princeton University Press). Please send the appropriate permission request form to my address which is listed above.

Thank you for your prompt attention to my request.

Sincerely,
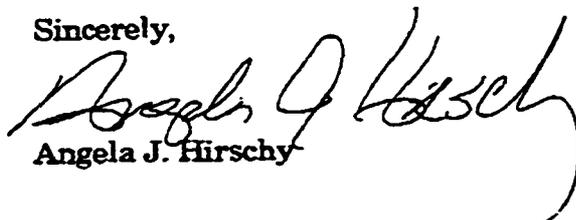
Angela J. Hirschy

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Appendix F

Permission to Use Bem Sex Role Inventory

123

Bem Inventory

Test Booklet (Short and Original)

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by Sandra Lipsitz Bem

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IMAGE EVALUATION
TEST TARGET (QA-3)

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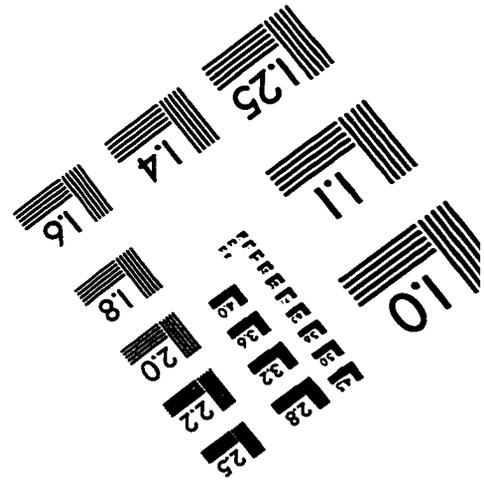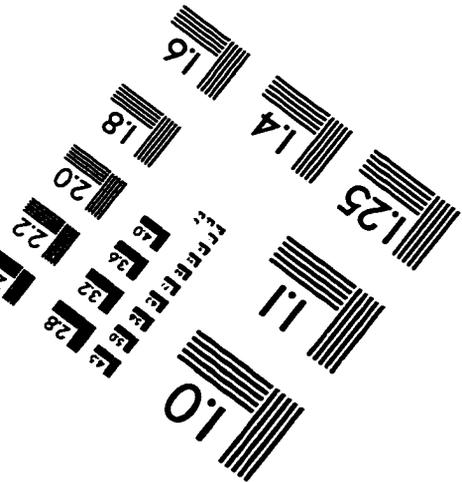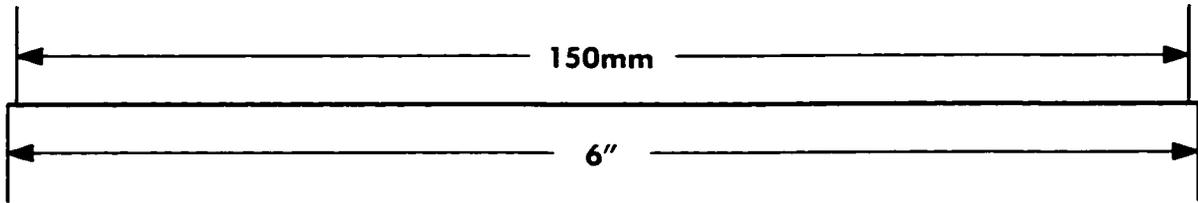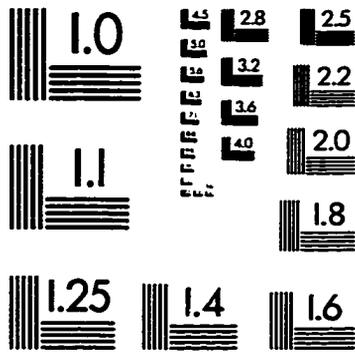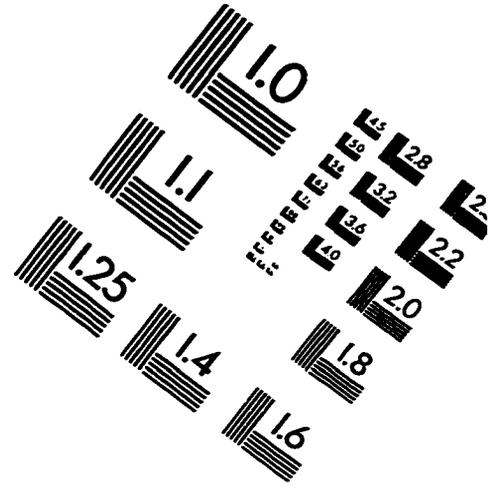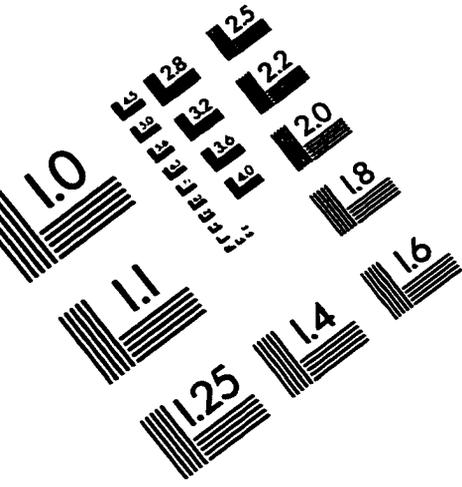
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