THE EFFECTS OF RATER AND LEADER GENDER ON RATINGS OF LEADER EFFECTIVENESS AND ATTRIBUTES IN A BUSINESS ENVIRONMENT

A Dissertation

Presented to

The Graduate Faculty of the University of Akron

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

Geraldine M. Hura

December, 2005

THE EFFECTS OF RATER AND LEADER GENDER ON RATINGS OF LEADER EFFECTIVENESS AND ATTRIBUTES IN A BUSINESS ENVIRONMENT

Geraldine M. Hura

Dissertation

Approved:

Advisor
Qetler Jensrud, Ph.D.

Committee Member
Sandra C. Coyner, Ed.D.

Committee Member
Xin Liang, Ph.D.

Committee Member
Susan J. Olson, Ph.D.

Committee Member
Linda M. Subich, Ph.D.

Accepted:

Department Chair
Evonn N. Welton, Ph.D.

Dean of the College
Patricia A. Nelson, Ph.D.

Dean of the Graduate School
George R. Newkome, Ph.D.

Date

ABSTRACT

Male leaders are viewed as more effective than female leaders as reported in the vast majority of research studies (Eagly & Johnson, 1990; Thompson, 2000; Vecchio, 2002). Research also supports the concept that supervisors of male and female leaders, if all else is equal, rate them equally effective (Eagly & Johnson, 1990; Powell, Butterfield, & Parent, 2002). With over 800 million (Schneider, 2001) spent on leadership development, training, and education in colleges, universities, and corporations the need and importance of quality and gender neutral curricula is increasingly important. The dollars spent on education and the disparity of perceptions of leader effectiveness precipitates the need to continue to examine the bases of these perceptions. The results of these examinations assist in the development of targeted leadership training and development.

This study looked at both leader effectiveness and leader attributes of male and female leaders as perceived by male and female observers (peers and direct reports) and male and female supervisors. Using the Leader Effectiveness Index (LEI) and the Leader Attributes Inventory (LAI), this study examined the effectiveness and attributes of leaders in business and industry. Each leader in this study had a matching pair of male and female observers who provided their perceptions of leader effectiveness and attributes to determine the presence of gender bias.

The study found that female leaders were viewed as more effective leaders than male leaders by both male and female observers while male and female supervisors found male and female leaders equally effective. Female leaders were perceived at having higher ratings on 17 out of 37 attributes and female observers and female supervisors rated both male and female leaders higher on selected attributes. Finally this study found that except for nine attributers where female leaders were rated higher, male and female supervisors rated male and female leaders equally on the remaining 28 attributes.

The results of this study indicate that there may be a shifting of perceptions of effectiveness of male and female leaders. Leadership development programs and educational initiatives need to align the content of the curricula to foster gender-neutral perceptions of leadership effectiveness.

ACKNOWLEDGMENTS

This document is the culmination of an interesting and wonderful journey. There are many people to thank for their help along the way. My office staff and friends Lorrie Beatty, Mary Jean Milanko, and Pat Ray are three incredible individuals who put up with a lot during the three years of this process – their support and tolerance will always be remembered.

My guide was Margie Martyn, who by going through the same process several months ahead of my own process provided me with a compassionate guidebook of what to expect. My friends: Kathy and John, Mark, Marlene, Liese, Ellen, Rebecca, Susan, Kathleen, Mary, Param, Michelle and Rick, and so many others, many of whom I ignored during the past years, put up with my absence by always calling me, inviting me, coercing me to leave the world of academics for a breather to re-energize me for the work ahead. Jake was my loving and true friend who provided me with the distractions that helped keep me grounded and sane. Barb Zorc gave me constancy – a friend that I could share with, laugh with, and cry with when times got tough.

I had a wonderful team of faculty as part of my doctorate process: Sandy Coyner, Susan Olson, and Linda Subich whose guidance, support, counsel, and encouragement helped me tremendously along the way. Xin Liang was always there for me – day, night, and weekends. Her guidance led me though the maze of statistics as well as her encouragement will always be cherished and remembered. My advisor, Qetler Jensrud,

provided me with the vision that I could do it, even when at times I did not believe it. She kept me on target, focused, and always with the goal of excellence. This group of five women made some of the most difficult components of the process truly enjoyable.

Finally I want to thank my family. My brother, Steve, has been a silent partner in this process. Steve has always been at my side through some of the most difficult years in our lives. Together we were able to survive. My dad, whose illness and death during the last year brought me back to the reality of what really is important. He was my best friend and inspiration to be the best I could become. And finally my mother, she has been my rock. She has weathered illness and sadness, change, and more change with a strength I never could have imagined. She made my accomplishments possible.

TABLE OF CONTENTS

Page

LIST OF TABLES……... xiii

LIST OF FIGURES……. xv

CHAPTER

I. THE PROBLEM……. 1

Introduction……... 1

Focus of This Study…….. 4

Earlier Research…… 4

Significance of This Study…… 5

General Research Hypotheses……... 7

Research Questions…….……. 7

Definition of Terms……... 8

Summary…… 10

II. REVIEW OF THE LITERATURE……. 12

Introduction……... 12

Historical Perspective of Leadership……. 13

Definition of Leadership…… 15

Summary……... 19

Leadership Theories and Models……... 19

Overview of Leadership Theories and Gender……..…… 19

Universal Theories…….……..…. 22

Universal Trait Theory……...……... 22

Universal Style Theories…….…... 24

Ohio State Study……. 24

Michigan State Study…….. 25

Leadership Grid Theory…….. 26

Participatory Leadership Theory……..…….…. 27

Universal Styles Applied to Genders…….……..…. 28

Situational Theories……. 30

Contingency Trait Theory…….……. 30

Path-Goal Theory……... 31

Life Cycle or Situational Leadership Model…….…. 32

Situational Theories Applied to Gender…….… 33

Transformational and Transactional Leadership…….…. 34

Transactional and Transformational Theories Applied to Gender…..… 36

Charismatic Leadership…….…... 38

Servant Leadership…….…….. 39

Summary…….…….. 39

Leader Attributes……... 40

Early Studies of Attributes…….…….. 40

Leadership Attributes and Followers…….….. 42

Contemporary Concepts Regarding Leadership Attributes……. 44

Summary……. 46

Research Findings of Leadership and Gender……... 47

Major Studies of Leadership and Gender……. 47

Summary……... 53

Leadership and Gender in the Workplace……. 54

Stereotypes and Biases of Women in the Workplace……. 55

Traits of Leadership in the Workplace……. 58

Gender Differences in the Workplace……. 59

Past Studies of Leadership and Gender Differences……... 61

Summary…….. 62

Followers and Leadership…….. 63

Summary…….. 65

Gender and Rater Bias……... 65

Summary…….. 66

Leadership Assessment Instruments…….. 67

Leader Behavior Description Questionnaire – LBDQ……. 70

Multifactor Leadership Questionnaire – MLQ……. 71

Leadership Practices Inventory – LPI…….. 72

Leader Attributes Inventory and Leader Effectiveness Index……..… 74

Summary…….. 78

III. METHODOLOGY…….. 81

Introduction……... 81

Purpose…….. 81

Research Hypotheses……. 82

Leader Effectiveness – Hypotheses…….……. 83

Leader Attributes – Hypotheses…….…….. 83

Null Hypotheses…… 83

Variables…… 84

Participants…… 85

Research Sites…….. 89

Sample Demographics……. 91

Instrumentation…….. 96

Methodology of This Study……... 98

The Assessment Instruments……. 99

The Leader Effectiveness Index (LEI)…… 100

Reliability and Validity of the Leader Effectiveness Index – LEI…… 101

Reliability…… 101

Validity…… 101

Leader Attributes Inventory (LAI)…….. 102

Reliability and Validity of the Leader Attributes Inventory – LAI…... 103

Reliability…… 103

Validity…… 104

Web Survey Process Versus Paper and Pencil…… 106

Data Collection Process……..……. 107

Data Analysis……. 110

Threats to the Study's Internal and External Validity and Reliability…….. 111

Summary…… 114

IV. RESULTS…… 115

Introduction……... 115

Leader Effectiveness – Hypotheses…….……. 115

Leader Attributes – Hypotheses…….…….. 115

Descriptive Statistics……. 116

Rational and Assumptions of the Statistical Tests…….…….. 120

Leader Effectiveness……. 121

Hypothesis #1: Leader Effectiveness as Rated by Observers…….……. 122

Hypothesis #2: Leader Effectiveness as Rated by Supervisors…….……... 124

Leader Attributes……... 126

Hypothesis #3: Observers Rating Leaders on Leader Attributes…….…… 126

Main Effect of Observer Gender for Hypothesis #3…….…. 128

Main Effect of Leader Gender on Hypothesis #3…….…….. 130

Hypothesis #4: Supervisors and Leader Attributes…….……. 135

Summary…… 138

V. CONCLUSIONS……. 139

Introduction……... 139

Major Findings…….. 141

Hypothesis #1: Males Are Rated as More Effective Leaders……..…….. 143

Hypothesis #2: Supervisors Rate Leaders as Equally Effective……..…….. 146

Hypothesis #3:Observers Rate Male Leaders Higher on Leadership Attributes……..…….. 147

Hypothesis #4:Supervisors Rate Leaders Equally on Leadership Attributes…….…… 149

Summary of Major Findings…….……... 150

Limitations of the Study…… 153

Recommendations for Future Research…… 155

Overall Summary…….. 157

REFERENCES……. 159

APPENDICES…….. 175

APPENDIX A. LEADER ATTRIBUTES INVENTORY…….. 176

APPENDIX B. LEADER EFFECTIVENESS INDEX……... 178

APPENDIX C. INFORMED CONSENT FORMS……. 179

APPENDIX D. SAMPLE ORGANIZATIONAL CONSENT LETTER…… 183

APPENDIX E. INSTITUTIONAL REVIEW BOARD LETTER…….. 184

APPENDIX F. PERSONAL FEEDBACK REPORTS…….. 185

APPENDIX G. PERSONAL DEVELOPMENT PLAN……. 191

APPENDIX H. LEADER AND RATER INSTRUCTIONS…….. 195

APPENDIX I. MANOVA FOR MAIN EFFECT OF OBSERVER – LAI…… 199

APPENDIX J. MANOVA FOR MAIN EFFECT OF LEADER – LAI……. 200

APPENDIX K. MANOVA FOR MAIN EFFECT OF SUPERVISOR – LAI... 201

LIST OF TABLES

Table		Page
2.1	LAI Attributes in Five Sub-Scales……	77
3.1	Table of Independent and Dependent Variables in Study…….	85
3.2	Breakdown by Gender of Leaders in Sample of Study…….	87
3.3	Management Levels of Leaders in Sample……	92
3.4	Gender of Leaders and Raters by Industry Groups……...	92
3.5	Ethnic Breakdown of Leaders by Industry……	93
3.6	Years in Leadership Position for Leaders by Industry……..	94
3.7	Years in Leadership Position by Gender……...	94
3.8	Age Range of Leaders by Industry……	95
3.9	Education Level of Leaders by Industry……	95
3.10	Education Levels of Leaders by Gender……	96
3.11	LAI Attributes……	106
3.12	Distribution of Raters for Each Leader in Sample…….	109
4.1	Two-Way ANOVA for Observers and Leaders on LEI Overall Score…….	123
4.2	Mean Table of Leader Gender for LEI Overall Score……...	124
4.3	Two-Way ANOVA of Leaders Rated by Supervisors on LEI……..	125
4.4	Wilks' Lambda Results for LAI Attributes……...	128
4.5	MANOVA Results for the Main Effect of Observer Gender……	129

Table Page

4.6 Descriptive Statistics for Observers and LAI Attributes……... 129

4.7 LAI Attributes Affected by Main Effect of Observer Gender……... 130

4.8 Two-Way MANOVA Test for LAI Attributes for Main Effect of Leader…… 131

4.9 Descriptive Statistics for Leaders on LAI Attributes…… 132

4.9 Descriptive Statistics for Leaders on LAI Attributes – Continued…… 133

4.10 Leader Attributes of the LAI for Main Effect of Female Leader Gender……. 134

4.11 Wilks' Lambda for Supervisors Rating Leaders on LAI Attributes……. 135

4.12 Two-Way MANOVA Results for Supervisor Rating Leaders on LAI……. 136

4.13 Descriptive Statistics for Main Effect of Supervisors on LAI…….. 137

5.1 LAI Attributes for Female Leaders Between Jensrud and Current Study……. 142

LIST OF FIGURES

Figure		Page
2.1	Jago's Typology of Leadership Perspectives……	21
3.1	Subject Set for Study…….	87
4.1	Distribution of Overall LEI Score of Female Observers of Female Leaders…	117
4.2	Distribution of Overall LEI Score of Male Observers of Female Leaders……	117
4.3	Distribution of LEI Scores of Female Observers of Male Leaders……...	118
4.4	Distribution of LEI Overall Scores of Male Observers of Male Leaders……..	119
4.5.	Distribution of LEI Overall Scores of Supervisors Rating Female Leaders….	119
4.6	Distribution of LEI Overall Scores of Supervisors Rating Male Leaders…….	120

CHAPTER I

THE PROBLEM

Introduction

In December 2003, a Catalyst (an organization that researches and advises women in business) survey found that over 50% of those in professional and managerial positions are women, but only 5.6% of the top five executives in an organization are women (K. R. Lewis, 2004). In February 2005, seven of the chief executive officers of Fortune 500 companies were women, 1.4% (Philipkoski, 2005). While women have made significant strides in reaching leadership positions within organizations, there are still barriers. In 1992, the U.S. Government initiated the Glass Ceiling Commission to look at the barriers that women and people of color face in business and industry (J. C. Jackson, 2001). This Commission found that there are negative assumptions or perceptions made about women including their abilities and commitment to careers, beliefs that there are no qualified women out there, and finally, the fear of changes in the workplace that may occur as a result of introducing women in senior managerial positions (U.S. Department of Labor, 1995).

A number of these perceptions are based on basic stereotypes that women are not viewed as effective as leaders as their male counterparts are viewed. US companies are spending over 800 million annually (Schneider, 2001) for leadership development programs. If gender bias towards leaders is present, do these educational programs

attempt to mitigate these perceptions of bias by developing specific learning interventions, leader selection processes, faculty selection, and program administration? The value to determine the existence of bias and, if present, deal with bias issues is necessary as the number of women in management and professional positions continue to grow.

Many current studies on leadership agree that there is little difference in leader abilities between men and women, especially if they have the same roles (Eagly & Johnson, 1990; Hare, Koenigs, & Hare, 1997; Powell, Butterfield, & Parent, 2002; Thompson, 2000; Valentine & Godkin, 2000). These studies found far more similarities than differences, however men were consistently viewed as being more effective or masculine characteristics were viewed as the more effective attributes (Eagly & Johnson, 1990; Hare et al., 1997; Powell et al., 2002; Thompson, 2000; Vecchio, 2002). In another study, when women used traditional, feminine managerial styles they were viewed as ineffective (Klenke, 1996). Yoder, Schleicher, and McDonald (1998) found that even when a woman held the position of a leader and was considered competent, she might not be viewed as a legitimate leader. In the past, organizations embraced "a 'male-oriented' management style, where direct and aggressive behavior is the norm. However, in the past, when women embrace this style they were labeled as 'bossy' and 'pushy' whereas men using the same behaviors were labeled 'leaders'" (Davidson & Cooper, 1992, p. 32).

From the perspective of the follower or observer, the role of gender does have an impact on perceptions of leader effectiveness. The study of leadership needs to be explored through the eyes of the follower. Leadership does not exist in a vacuum of the

perceptions of the follower (Andrews & Field, 1998). "It has been argued that follower perceptions are critical because only those perceived as leaders are allowed the discretion and influence to lead effectively" (Andrews & Field, 1998, p. 129).

The concept of leadership and how it applies to males and females is a concept that has been studied and discussed by business, education, psychology, anthropology, and sociology during the past 60 plus years. The perceptions have ranged from views of "think manager, think male" (Schein, 1976, p. 21), to early descriptions of women leaders where they are described as fashion leaders and trend setters (Bass, 1990), or even the description of women as the queen bee (Davidson & Cooper, 1992). With the growth of women in leadership roles in business and education (Klenke, 1996), more data are needed to see if stereotypes still prevail and if they still exist, what educational interventions can be used to mitigate these stereotypes and biases. The source or cause of the biases or stereotypes is difficult to identify. Martell (1996) found that gender stereotypes may be the cause of raters attributing effective work behaviors to men rather than women. This attribution may be a result of a "systematic response bias, rather than selective memory" (Bauer & Baltes, 2002, p. 466). The systematic response bias occurs when an individual, in this case the rater, relies on a stereotype of the performance rather than thinking back and reflecting on the actual performance (Bauer & Baltes, 2002). The phenomena of gender bias or attributing specific behaviors to males or females is a well developed, social-cognitive theory (Bauer & Baltes, 2002). Female leaders have historically been expected to perform at a lower positional level than men due to the fact that they did not fit into the traditional image of the leadership stereotype (Maher, 1997).

Focus of This Study

The focus of this study was to examine leader effectiveness and attributes of effective male and female leaders as rated by male and female followers or observers. The study investigates male and female rater perceptions of leadership attributes and the perceptions of effectiveness of male and female business leaders using two 360° feedback assessments. The assumption of this study was that gender is a factor that influences the perceptions of leader attributes and effectiveness based on the gender of the rater and gender of the leader.

This study examined perceptions of leader attributes and effectiveness from the perspective of the observers (direct reports and peers) and the supervisor of the leader. "While perceptions may not be reality, they are used by perceivers to evaluate and subsequently distinguish leaders from nonleaders" (Lord & Maher, 1993, p. 98). Many studies have looked at perceptions of leadership characteristics, however fewer studies have examined the characteristics that the various constituents view as effective leader attributes (Hooijberg & Choi, 2000). Based on a review of the literature, little research has occurred looking at leader attributes and effectiveness within a business setting utilizing a 360° assessment (self, direct report, peer, and supervisor) as the instrumentation and the analysis by both a male and female rater assessing each leader. This study looked at perceptions of effective leaders based on this multi-source feedback.

Earlier Research

In 1995, a research project was completed to determine the differences of male and female raters' perceptions of leadership attributes and leader effectiveness of

vocational department heads in an educational environment (Jensrud, 1995). In contrast, this current study adds to the data regarding gender perception of leadership effectiveness within a business population using the same 360º assessments.

The current study makes comparisons for direct reports and peers (observers) and the leader, and the leader's supervisor as well as with the genders within each of the groups (leader, supervisor, and observers). The data derived from this study provides information to better target training and development interventions.

This study measures the male and female rater perceptions of leadership effectiveness and attributes without investigating the causes of these perceptions. In addition, this study adds to the statistical norms of a leader attribute instrument and a leader effectiveness instrument.

Significance of This Study

The impact of gender bias from the perspective of the rater is still a challenge in today's business environment. As educational processes in colleges, universities, and business strive to enhance, assess, and value skills and abilities of men and women equally, the need to understand the relationship between gender and leadership is necessary (Klein, Astrachan, & Kossek, 1996). The more educational practitioners understand the core attributes and behaviors of effective leadership, the better curricula can be defined and implemented to support leadership training, development, and education (Barker, 1997). Colleges and universities have been cited for not preparing students to assume corporate leadership roles. In addition, emphasis toward preparatory leadership development needs to be considered in the academic areas, especially for

positions in the post-secondary environment (Filan & Seagren, 2003). Work has changed, but schools are not responding to these changes by preparing future leaders for their new roles and responsibilities (M. Schatz, 1997).

The results of this study could ultimately influence employee hiring, retention, succession planning programs, training and development in business, and academic programs and curricula in colleges and universities. The more organizations are aware that bias might exist, the easier it is to mitigate the impact of these biases through organizational and individual interventions including training and development (Operario & Fiske, 2001). Corporate leadership development programs as well as undergraduate and graduate business programs will also find the results relevant as they attempt to augment learning to increase individual and organizational effectiveness. Leadership attributes and effectiveness have been difficult to consistently measure. Finding assessment tools that can achieve this goal will provide the foundation for specific and quantifiable development programs and curriculum including training, development, and career planning (Edwards, 1992).

United States projections show an increase of 16.4% in executive, administrative, and managerial occupations between 1998 and 2008 nationally (E. E. Jacobs, 2001). This increase supports the growth of management development and leadership programs offered with expenditures in the corporate environment for training and development at over $800 million (Schneider, 2001). This expenditure does not include the millions of dollars spent every year in academic institutions on management and leadership development programs and courses. The issue with expenditures this high lies in

answering the question of what should be taught in these management and leadership programs. In addition, not only should there be a concern for the content, but also how transferable is the knowledge in the improvement of leadership effectiveness. The more educators and trainers have specific, data based information on the attributes of effective leaders, the more these programs can affect the growth and development of current and future leaders.

General Research Hypotheses

The assumption of this study is that there are significant differences on rater perceptions of leader attributes and leader effectiveness by raters of male and female leaders. One of the bases for this assumption is that prototypes of effective leaders are often described in masculine terms (Rodler, Kirchler, & Holsl, 2001) and therefore perceptions of leadership attributes and effectiveness are attributed to male leaders.

Research Questions

The investigation of rater bias on leadership attributes and leader effectiveness was studied using business leaders as the sample. To accomplish this investigation, the use of two leadership assessment tools developed by J. Moss and associates were used: the Leader Attributes Inventory (LAI) and Leader Effectiveness Index (LEI) (Moss, Jensrud, Johansen, & Preskill, 1989, 1993). The purpose of this study was to compare the perceptions of male and female leaders as rated by male and female observers and supervisors in relation to effectiveness and leader attributes in a business environment. The results of this study answer the following research questions:

1. Are male leaders perceived as more effective leaders than female leaders by male and female observers?
2. Are male leaders rated higher on leadership attributes than female leaders by their male and female observers?
3. Do supervisors of male and female leaders perceive these leaders to be equally effective?
4. Do supervisors of male and female leaders perceive them to have different leadership attributes?

Definition of Terms

While most of the concepts and terms examined in this study are well known concepts, the following operational definitions are provided to insure consistency in understanding and interpretation. Defined terms are: 360º feedback instrument, attribute, effectiveness, gender, gender bias, leadership, and vocational administrator.

360° feedback instruments or multi-rater instruments. The 360° feedback or multi-rater feedback process provides systematic feedback from several constituencies: typically self, others (peers and/or direct reports), and a supervisor. In some 360° surveys, vendors, customers and clients are included in the assessment. In this process raters are anonymous (with the exception of the supervisor's assessment) and respond to questions (Bracken, Timmreck, Fleenor, & Summers, 2001).

Attribute. The word, although easily defined by *Webster's College Dictionary* as: "a quality, character, characteristic, or property attributed as belong to a person, thing, group" (1997, p. 86), when used with leadership has many synonyms. Words that are

commonly used to describe the concept of attributes are attitudes, traits, behaviors, characteristics, skills, dimensions, etc. While these concepts all mean different things, the qualities described are often interchangeable. The leadership attributes used in this study, included all of these concepts. The tool used to analyze these concepts was the Leader Attributes Inventory (LAI), which provided a listing of 37 leadership attributes. A listing of these attributes appears on the LAI that is found in Appendix A.

Effectiveness. For the purposes of this study, the concept of effectiveness is determined by a rating each leader receives on one of the research's assessment tools, the Leader Effectiveness Index (LEI) (see Appendix B). Using a six point scale, those leaders who receive a 3.5 rating or above which is determined to be "somewhat effective" to "extremely effective" will be included in this study as effective leaders. This definition replicates the construct for the 1995 study by Jensrud.

Gender. Traditional definitions of gender refer to cultural norms (masculine or feminine cultural and social traits) and sex which is based on a biological state (male or female) (Berdahl, 1996; Vinnicombe & Singh, 2002). This study looks at gender to examine if males and females perceive leadership attributes and effectiveness from a perspective of gender. This perspective is from a viewpoint of cultural norms which include vocational choices and academic achievement, family roles, levels of power, and values (Basow, 1992).

Gender Bias. The Virginia Gender Bias Task Force (*Knowledge and information services: Gender bias*, 2004) defined gender bias as:

> Gender bias is the predisposition or tendency to think about or behave toward people based on their sex. It is reflected in attitudes and behaviors based on stereotypical beliefs about the sexes, rather than an independent evaluation of each individual's abilities and experiences. If an outcome, more often adversely affects one gender versus another, for whatever the reason, that too may be considered gender bias. Gender bias may be male-or female-oriented. (¶ 1)

Leadership. The operational definition of leadership used in this study is taken from A. Jago. The complete definition of Jago (1982) states:

> Leadership is both a process and a property. The process of leadership is the use of noncoercive influence to direct and coordinate the activities of the members of an organized group toward the accomplishment of group objectives. As a property, leadership is the set of qualities or characteristics attributed to those who are perceived to successfully employ such influence. (p. 315)

Vocational Administrator. Vocational administrators as used in a previous study are vocational department heads from technical colleges, community colleges, and high schools. The current term for vocational administrators is industrial and/or technical administrators.

Summary

Women hold over 50% of professional and managerial positions in the workforce and yet are significantly underrepresented in senior leadership positions. While research shows that men and women are equally capable in leadership roles, followers (male and females) view differences in the effectiveness and the attributes of male and female leaders. This survey study investigated the perceptions of gender bias of raters towards leader effectiveness and attributes of male and female leaders. While many studies have examined the topic of leader effectiveness, few studies, if any, have examined leader

effectiveness and attributes having both a male and female observer rate male and female leaders.

The results of this research are important as colleges and universities prepare men and women for future roles as educational and business leaders. In addition, this research impacts the leadership curriculum training and development initiatives that take place in business and industry by providing data on the perceptions of leadership attributes and effectiveness.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The attributes and behaviors of what constitutes an effective leader has been a controversial topic throughout the ages. While historical leaders can be enumerated, (Moses, Napoleon, Mahatma Gandhi, Adolph Hitler, Winston Churchill, Mother Teresa, John F. Kennedy, Margaret Thatcher, Martin Luther King, Golda Meir, and Jack Welch) the actual identification and measurement of leader attributes or leader effectiveness is not as easy to identify (Barge, 1994; Bass, 1990; Fiedler, 1967; Klenke, 1996; Yukl, 2002). Add to this dilemma the impact of gender on the attributes and effectiveness and the controversy heightens.

To properly analyze the concept of leadership, leadership attributes and effectiveness, and gender perceptions, a comprehensive review of these topics is essential. This chapter also reviews the concepts of the follower and rater bias since both play a critical role in determining the perceptions of leader effectiveness and attributes as well as how these perceptions exist in business. Assessment tools prove to be an effective way to examine quantitatively, the presence of bias based on gender of the rater and this chapter closes with a review of several leadership assessment tools. To summarize, this chapter reviews the following concepts:

- Historical perspective of leadership
- Definitions of leadership
- Leadership theories and models
- The relationship of leadership and gender
- Leader attributes
- Followers and leadership
- Rater bias
- Leadership assessment instruments

Historical Perspective of Leadership

Perceptions and definitions of leadership have evolved over the years. From Plato to the present day, philosophies of leadership abound. Religions look to a god as their leader; property ownership from feudal times to current times is a delineation of leaders; authority derived from birth, power, or election defines leaders; and intellectual prowess has legitimized leaders (Burns, 1978). The presence of words like "king," "prophet," or "chief" differentiates the leader from the followers (Bass, 1990; Stogdill, 1974). Since the beginning of time the concept of a leader is both symbolic and real whether in legend or reality. History has embedded the idea of leadership into every culture and civilization (Klenke, 1996). Legends of leaders are cornerstones of many societies (Bass, 1990).

The principles of leadership were evident in Egyptian hieroglyphics as early as 5,000 years ago (Bass, 1990). Plato in *The Republic* characterized three types of leadership: philosopher-statesman, the military commander, and the businessman

(Stogdill, 1974). The word "leader" first appeared in the English language in 1300, but it was not until 1800 when the concept of "leadership" first appeared in political writings in Great Britain (Bass, 1990; Stogdill, 1974).

Historically the concept of leadership was seen most consistently in rulers, religious leaders, and in military personnel. References of military achievement have considered leadership as the critical success factor (Bass, 1990). Winston Churchill was not considered a leader until there was a need; the need for leadership with the invasion at Dunkirk in 1940 (Drucker, 1990).

The debate through the ages was and still is, are leaders born or made? Dilenschneider (1991) talks about the raw materials leaders have; some are born with them, and some use them almost intuitively. Others learn about the raw materials and then learn how to use them. Kouzes and Posner (2001) felt that leadership is a process whereby an individual utilizes skills and abilities no matter what level they hold. Through 20 years of research, they indicate that anyone or everyone could be a leader.

If everyone is capable of becoming a leader what is preventing more women achieving leadership roles in business and industry? Is the existence of the perceptions of leader effectiveness a factor that stops more women from achieving leadership roles in business and industry? Before these questions can be answered, an analysis of the definitions as well as an analysis of the components and qualities of leadership is necessary.

Definition of Leadership

leadership look to Machiavelli's 1513 work, *The Prince,* as an early and lasting treatise of leadership qualities (Bass, 1990). The early studies of leadership dealt with theoretical issues focusing primarily on types of leadership and how the types related to the social demands of the time (Bass, 1990). Leaders were characterized by their position or roles not necessarily their abilities (Stogdill, 1974). During the early 1900s, studies on leaders or leadership viewed the concept as the center or catalyst of change, direction, and influencing ability (Bass, 1990).

It was in the transition to define leadership and the ability of leaders to influence that began the more abstract concepts of leadership (Stogdill, 1974). Prior to these descriptions, the attributes of leaders included more concrete descriptors such as directing the behavior and providing the stimulus. Stogdill (1974) continues to state that using influence to describe a leadership attribute shows a more complex relationship between leader and follower. Social scientists in their study of leadership had a difficult time defining leadership since it required an understanding of the context of the true nature and tasks in which leaders are involved (Hollander, 1978; Selznick, 1957).

Another issue researchers of leadership concepts struggled with is the confusion between the definitions of managers and leaders. The core distinction is that a manager forecasts and plans, organizes, commands, coordinates, and controls processes and things (Fayol, 1949) whereas a leader interacts and influences the followers (Cribbin, 1972). Managers can be defined by whom they supervise or the level they hold within an

organization and leadership ability can be held by anyone (Cribbin, 1972). "The title to manage others is a gift of the higher echelons, but the title to lead others is a gift of the followers" (Cribbin, 1972, p. 9). Kotter (1999) stated: "People say 'leadership' but describe management…" (p. 4). The confusion between the two concepts is decreasing but still the terms are used interchangeably since at the core of an effective leader is often an effective manager (Bass, 1990; Hersey, Blanchard, & Johnson, 2001a; Yukl, 2002). At issue in this argument is the development that managers and leaders need to be effective leaders. If the concepts are used interchangeably, the activities in development and learning can become muddied. Kotter (1999) indicates that "Leadership and management are two distinctive and complementary systems of action. Each has its own function and characteristics activities" (p. 51). Kotter (1999) continues:

> We say leadership when we mean management. We say leadership when we mean some combination of leadership and management. We say leadership when we are talking about people in roles from whom we expect leadership, no matter how these people actually behave. (p. 18)

A key in understanding leadership is to understand the difference between leading and managing. "Management is a set of processes that can keep a complicated system of people and technology running smoothly.…Leadership is a set of processes that creates organizations in the first place or adapts them to significantly changing circumstances" (Kotter, 1996, p. 25). Neither of these is more important than the other, the key is understanding the differences and how they are used (Kotter, 1999).

Typically management competencies include: planning and budgeting, organizing and staffing, controlling, and problem solving while leadership competencies include: establishing direction, aligning people, motivating, and inspiring (Kotter, 1996). In a changing environment, effective leaders and leadership skills are needed to assist managers in making the needed organizational transitions (Katzenback, 1995).

Deming, the guru of the total quality management movement stated that "The job of the manager is to lead, to help people do their jobs better" (Walton, 1986, p. 71). One of the more commonly known axioms centered on the differences between managers and leaders came from Bennis (1989) who stated: "Leaders are people who do the right thing; managers are people who do things right" (p. 18). Kotter (1999) further stated:

> [Leadership is] the development of vision and strategies, the alignment of relevant people and the empowerment of individuals to make the vision happen… [Management]…involves keeping the current system operating through planning, budgeting, organizing, staffing, controlling and problem solving.…The person who thinks management is leadership will manage change, hence keeping it under control,…but unable to provide the stuff required to make larger and more difficult leaps. (pp. 10-11)

Drucker (1973) felt that the new leaders that have emerged over the years are no longer the scientists or the religious leaders, but the managers. These new managers control the resources and the competencies of those resources, and therefore they now need to be responsible for social problems and issues.

"In a learning organization leaders are designers, stewards, and teachers. They are responsible for building organizations where people continually expand their capabilities to understand complexity, clarify visions, and improve shared mental

models" (Senge, 1990, p. 340). Leadership according to Burns (1978) is a "special form of power" (p. 12) with the significant variable being purpose. The critical success factor of an institution is the leader's ability to lead (Bass, 1990). This is not to say that "formal, institutionalized leadership" (p. 8) is a requirement, just the characteristic of leadership (Bass, 1990).

Another viewpoint of leadership can be stated as, "The essence of leadership is knowing that YOU CAN NEVER NOT LEAD. You have 100 percent influence, all of the time. You lead by acts of commissions and by acts of omission" (K. Schatz & Schatz, 1986, p. 18). Gardner (1995) defined leadership as the ability to influence – either directly or indirectly "the behavior, thoughts, and/or feelings of a significant number of their fellow human beings" (p. 8).

Jago (1982) viewed leadership as "both a process and a property" (p. 315). As a process, a leader influences followers through direction and coordination to accomplish an objective and the qualities or characteristics of this successful leader are the properties (Jago, 1982). Jago's definition of leadership incorporated the key concepts of followership and the leader's role. The complete definition of Jago (1982) states:

> Leadership is both a process and a property. The process of leadership is the use of noncoercive influence to direct and coordinate the activities of the members of an organized group toward the accomplishment of group objectives. As a property, leadership is the set of qualities or characteristics attributed to those who are perceived to successfully employ such influence. (p. 315)

Jago (1982) continued to state that within this definition, the leader does not use force, coercion, or domination – typical motivational processes.

Summary

To capture one definition of leadership is difficult since analysis has shown that there are more than 850 definitions articulated over the past 75 years (Bass, 1990). The more important activity is to distinguish effective leaders from ineffective leaders (Bennis & Nanus, 1985). Analysis of the definitions of leadership does not lead to any conclusions or support that leadership is limited to only men or only women. These definitions provide a framework for categorizing the attributes and behaviors. The energy to determine which definition of leadership is accurate is instead better spent on examining the attributes and behaviors of effective leaders and the role gender plays with these components.

Leadership Theories and Models

To understand the interplay of leadership and gender and the impact gender has on perceptions of effectiveness, each of the major leadership theories need to be examined. The following section reviews the findings of the major studies of leadership and the relationship these theories have with gender. The sub-sections include an overview of leadership theories and gender, research findings of leadership and gender, and the impact of leadership and gender in the workplace.

Overview of Leadership Theories and Gender

The idea that male and female leaders have different inherent abilities, traits, or characteristics of leadership is based on three theoretical explanations: 1) men and women are biologically different; 2) men and women are culturally different based on

different socialization influences; and 3) men and women have historically different position power, influence, and roles within organizations (Chemers, 2000). Yoder (2001) echoes these differences by stating:

> How women enact their role as leader is inextricably intertwined with the basic realization that they are women, bringing with it all the stereotypic baggage that comes with gender roles. Second, leadership is a process that occurs within a social context that itself is gendered. (p. 815)

These explanations have supportive research whereby male and female followers have in the past perceived differences in leadership attributes and abilities between male and female leaders (Eagly & Johnson, 1990; Heilman, Block, Martell, & Simon, 1989; Schein, 1976). The major theories of leadership have research that segments components of the theories to male and female characteristics, behaviors, and attributes. This section reviews these theories and shows the various attributes or behaviors that are gender based. Whether these attributes are currently gender based is a focus of this study.

The disconnect between the concept of women and leadership exist from the initial treatises of leadership and leadership studies. Early commentaries of leadership describe the heroics of great men. James in the 1880s stated that "the history of the world is the history of great men" (Bass, 1990, p. 37). In 1910, Carlyle related in his essays how a leader's qualities capture the imagination of the followers. He felt that world progress was a product of "the individual achievements of great men who lived during the period in which advances occurred (T. O. Jacobs, 1970, p. 3). Carlyle argued "that successful leaders possessed traits of personality and character that set them apart from

ordinary followers" (Chemers, 2000, p. 27). This theory was refuted by those who took a sociological approach by stating that it was not the great men who were so unique, but that they were just "products of the forces existing during the period in which they lived" (T. O. Jacobs, 1970, p. 3). It was not the individuals who led the changes, but rather the magnitude of societal forces that caused the changes (T. O. Jacobs, 1970). Still the leaders described in these situations were all men.

This theory of Carlyle led to the other major theories of leaders, which Jago framed into a typology that first looked at universal or contingent theories and then categorized leadership perspectives, by traits or behaviors. The resulting matrix (see Figure 2.1) provides the framework to describe the specific leadership models that exist for many of the major leadership theories.

	Leadership Traits	Leadership Behaviors
Universal Theories	Universal Trait Theory	Universal Style Theories
		Ohio State Study
		Michigan State Study
		Managerial Grid Theory
		Participatory Leadership
Situational Theories	Contingency Theory	Situational Theories
	Contingency Trait Theory	Path-Goal Theory
		Life Cycle/Situational Leadership Theory

(Jago, 1982)

Figure 2.1 Jago's Typology of Leadership Perspectives

The two major theories that are excluded from this grid are the transactional and the transformational leadership theories. In addition the more current theories of charismatic and servant leadership are not included (Barge, 1994).

Universal Theories

Universal Trait Theory

The Universal Trait Theory was prominent during the 1930s and 1940s. This theory espoused that effective leaders possessed a higher number of traits as well as a balance of traits such as intelligence, competence, alertness, emotional control, initiative, insightfulness, integrity, and self-confidence (Barge, 1994; T. O. Jacobs, 1970). Later studies of this theory caused a shift from documenting traits to identifying the motivations and specific skills of leaders (Barge, 1994).

Over the years more than a 100 traits were enumerated as applicable to leadership ranging from height to intelligence (Bass, 1990). Early studies of leadership traits or attributes included studies on age, heights, health (energy), physique, athletic prowess, tone of voice, talkativeness, fluency, appearance, intelligence, scholarship, knowledge, judgment, decision, insight, originality, adaptability, dominance, self-sufficiency, introversion-extroversion, initiative, persistence, ambition, responsibility, integrity, conviction, liberalism or conservatism, self-confidence, inferiority, modesty, mood, humor, self-control, excitability, anger, social and economic status, participation, mobility, biosocial activity, tact, popularity and prestige, and cooperation (Bass, 1990).

Many of these early studies looked at the personality and measured the various dimensions of personality rather than leadership skills (T. O. Jacobs, 1970). Stogdill in 1948 surveyed 124 studies of leadership traits and found minimal overlap in the traits from study to study (T. O. Jacobs, 1970). These early studies "hardly discussed" (p. 707) women in the context of leadership although by the 1970s women were viewed as a useful topic for future research (Bass, 1990).

The Universal Trait Theory lost favor since an individual with leadership traits of courage, wisdom, and character did not necessarily mean the individual was an effective leader (Gouldner, 1950; Hollander, 1978). Many of the studies on leadership traits failed to define leadership, employed a wide range of research methods, used a variety of criteria for leadership, and the results may have been influenced by the social compositions of the groups studied (Bass, 1990).

These early studies used a variety of methods to analyze leadership traits and attributes. The methods used to analyze leadership traits included: observations of an individual's behavior in situations where leadership would be necessary, voting (children or students voted for individuals they would prefer as leaders), nominations by qualified observers (teachers and club leaders), selection of individuals in leadership positions through rating or testing (most studies used high school or college students who held leadership positions in student government, athletics or fraternities and sororities), and review and analysis of biographical and case studies (Bass, 1990).

In 1948, Stogdill determined that leadership is the combination of traits as well as how these traits are applied to different situations. Following this revelation, Stogdill reviewed 163 studies of traits of leadership between 1948 and 1970. He developed charts that categorized the positive and negative findings of these studies. The results of this categorization led to groups of physical characteristics, social background, intelligence and ability, personality, task-related characteristics, and social characteristics. Stogdill's analysis showed that it was possible to differentiate personality traits of leaders versus followers, successful versus unsuccessful leaders, and high and low level leaders. Stogdill (1974), based on his research, felt:

> A person does not become a leader by virtue of the possession of some combination of traits, but the pattern of personal characteristics of the leader must bear some relevant relationship to the characteristics, activities, and goals of the followers. Thus, leadership must be conceived in terms of the interaction of variables that are in constant flux. (p. 76)

Universal Style Theories

Ohio State Study.

One of the earliest studies of leadership was the 1945 Ohio State Relationship/Task Study. In this study, the researchers discovered that leadership behaviors could be categorized by two independent, global dimensions: consideration (rapport, trust, concern, and participative attitude) between the leader and followers and initiation of structure (ability to structure and organize work and the workers) (Barge, 1994; Cribbin, 1972; T. O. Jacobs, 1970).

In addition, the Ohio State Study uncovered three other leadership success factors: maintenance of membership (acceptable leadership behavior), objective attainment (setting and achieving goals), and group interaction (promotion of a productive and pleasant work environment) (Cribbin, 1972; T. O. Jacobs, 1970). These concepts were synthesized into nine dimensions of leadership behaviors: initiation, membership, representation, integration, organization, domination, communication, recognition, and production (Hollander, 1978). The researchers also looked at job requirements and job performance and how these concepts related to the study of leadership (Bass, 1990). In these studies, the effective leader was an individual who exhibited high levels of both consideration and initiation structure.

This set the stage for later research and leadership theories (Barge, 1994). The original Ohio State Study and follow-up research however used only males as the participants. The questions in this study had wording such as: "He insists that he be informed on decision made by people under him" (Bass, 1990, p. 513).

Michigan State Study.

Another study that began in 1961, the Michigan State Studies, identified five major dimensions of effectiveness: (1) definition of role, (2) orientation toward the work group, (3) the closeness of supervision, (4) the quality of group relations, and (5) the type of supervision received from superiors (Cribbin, 1972). The Ohio State Study described behaviors of leaders in formal organizations in relation to group satisfaction and performance and the Michigan Study focused on productivity and group morale (T. O.

Jacobs, 1970). The researchers believed that the infusion of concern for the employees as well as high performance goals would lead to significant gains in productivity (Bass, 1990).

Leadership Grid Theory.

A leadership theory that is popular in current business environments which was based on the Ohio State dimensions is the Managerial Grid Theory [renamed as the Leadership Grid theory] (1985) by R. Blake and J. Mouton. Blake and Mouton found that there was a variety of possible styles exhibited by leaders. Using a four by four grid they depicted the prominent leadership styles. The grid had the concern for production on the horizontal axis and concern for people on the vertical axis. The ratings for the horizontal and vertical axis ranged from a low of one to a high of nine. The various styles of leadership were defined as:

- Impoverished management (rating of 1,1): low relationship, low task-leader who exerts minimum effort to accomplish work.
- Country club management (rating of 1,9): low task, high relationship – leader focuses on people even at the expense of achieving results.
- Middle-of-the-road management (rating of 5,5): moderate relationship and task – leader does just enough to maintain the status quo.
- Authority-compliance (rating of 9,1): high task and low relationship – leader tells employees what to do to achieve high production

- Team management (best style) (rating of 9,9): high task and high relationship – leader works to gain commitment and participation of employees to achieve high levels of production (Blake & Mouton, 1964).

Leaders, according to Blake and Mouton (1964) can use these styles interchangeably depending upon the followers. However, later investigations found that situational information was needed to be considered for the highest level of impact of the leadership style (Bass, 1990).

Participatory Leadership Theory.

The model of leadership developed during the 1930s by Lewin, Lippitt, and White (1946) looked at three political philosophies or social styles and their supportive leadership styles. This model described the effect these styles had on group productivity and satisfaction (Barge, 1994; Cribbin, 1972; Hollander & Julian, 1969). The focus of this research was to study leaders in different settings with defined group tasks and structures (Lewin et al., 1946). Analyzing leadership as a form of decision-making followed these studies (Likert & Likert, 1976). The Lewin et al. (1946) theory consisted of three major categories of behaviors that leaders exhibit: authoritarian (leaders make the decisions using one-way communication), democratic or participatory (leaders and followers make decisions jointly using two-way communication), and laissez faire (leaders not involved in the decision making by followers).

Further studies found that leaders described as authoritarian were later described as directive, task oriented, controlling, power-oriented, socially distant, and concerned

about performance (Bass, 1990). Democratic leaders were later described as consensual, employee centered, relations-oriented, participative, socially close, and supportive (Bass, 1990). Laissez-faire leaders were described as isolated, passive, uninvolved, withdrawn, abdicating, and unconcerned (Bass, 1990). Laissez-faire leaders have also been described as having no leadership abilities (Sarros & Santora, 2001).

This Lewin theory of leadership evolved into Tannenbaum's and Schmidt's idea that direction and participation of leadership are two halves of a continuum with many degrees in between (Bass, 1990). This continuum ranges from a leader-directed behavior to a follower-directed behavior or from an authoritarian to a participatory-delegating style of leadership (Yukl, 2002).

Universal Styles Applied to Genders

When applied to male and female leaders, the Universal theories including the Universal Trait Theory, the Ohio State Study, The Michigan State Study, Managerial Grid Theory, and Participatory Leadership Theory all reflect additional nuances. Initial studies of these theories only used men as the subjects. The following narrative describes how these theories applied to women through research that occurred between the 1970s and the early 2000s.

Klenke (1996) found that the trait of "decisiveness or judgment" when found in women was viewed as negative but in men was viewed as a desirable trait. Kabacoff (1998) found that women showed "fluency of speech" consistently higher than men. The trait of "adaptability" was found equally in men and women (Rosener, 1990), while

Schein (1976) found women consistently scored higher on the "creative" trait. Another trait, "emotional balance," was found in men at a higher degree than in women (Heilman, Block, Martel, & Simon, 1989).

Men were found to consistently exhibit those behaviors that were defined as "initiation of task" (defining work, establishing clear patterns of organization) (Eagly & Johnson, 1990; Hare et al., 1997; Powell et al., 2002; Thompson, 2000) while women were found to possess the more people oriented dimension of "consideration" (Eagly & Johnson, 1990; Kabacoff, 1998; Sczesny, 2003). The Leader Behavior Description Questionnaire, LBDQ evaluated these dimensions (Barge, 1994).

Researchers have found that men tend to exhibit the behaviors of those that have a concern for task (dictating, speed, concern for production) (Eagly & Johnson, 1990; Sczesny, 2003; Thompson, 2000). Women were found to exhibit those behaviors that deal with a concern for people (gains commitment, trust/respect) (Eagly & Johnson, 1990; Kabacoff, 1998; Sczesny, 2003).

Consistent with previous studies, men were found to possess the more authoritarian behaviors (making decisions for others, directive, power-oriented, one-way communication) (Eagly & Johnson, 1990; Rosener, 1990; Thompson, 2000). Women were found to consistently show the more people-oriented, participatory behaviors (gives suggestions, joint decisions, two-way communication) (Eagly & Johnson, 1990; Hare et al., 1997; Rosener, 1990; Sczesny, 2003).

All of these studies support the premise that men exhibit the traits and behaviors defined as initiation of structure or task that were the foundations of Universal Style theories. Men consistently showed traits and behaviors that were based on their ability to structure and organize work and the workers while women exhibited traits that demonstrated consideration (rapport, trust, concern, and participative attitude) or concern for people. The result of this premise supports the theory that men are task-oriented and women are people-oriented.

Situational Theories

Referring back to Jago's model, the next series of leadership theories are the situational theories. Situational leaders flex or change their leadership style based on the situation or change the situation that is best to meet their particular style. Early explanations of leadership focused on concepts of personality and character (Stogdill, 1974) which evolved into the concept of situational leadership comparing individual and situational factors and how a leader responds to both (Barge, 1994; Stogdill, 1974). A number of situational approaches to leadership developed including: the Contingency Trait Theory, the Path-Goal Theory, and the Life-Cycle Theory (Barge, 1994).

Contingency Trait Theory

The leadership model developed by F. Fiedler that was popular during the 1960s was the Contingency Trait Theory which distinguished situational elements influencing a particular leadership trait or style (Barge, 1994). Fiedler felt that a leader is most effective when their personality is "congruent with the favorableness of a situation"

(Barge, 1994, p. 42). Situational favorableness occurs when the group respects and trusts the leader, the task is structured, and the leader has control over positive and negative reinforcers (Fiedler, 1967; Hollander & Julian, 1969; Scott & Cummings, 1969).

According to Fiedler (1969) the Contingency Theory "operationalizes leadership style as well as situational favorableness, and therefore, lends itself to empirical testing" (p. 468). Fiedler's theory was the first to tie empirical research behind the theory (Hunt, 1999). This theory appeared to predict leadership performance in field experiments, but failed in laboratory situations (Fiedler, 1969). Fiedler developed an assessment, the Least Preferred Co-Worker Inventory (LPC), to measure the leader's traits. This assessment also examined three aspects that a leader could influence or change: the task, relationship between the leader and the follower, and the level of power (Fiedler, 1967). The Contingency Trait Theory of Fielder led to the exploration of situational approaches to leadership (Avolio & Bass, 1995; Bass & Avolio, 1994; Hunt & Larson, 1974).

Path-Goal Theory

Another early situational behavior theory was the Path-Goal Theory developed in the 1970s by House who was stimulated by a paper by G. Evans (House, 1971; 1996). This theory relied on the leader providing direction to assist followers on achieving their goals. The primary function of leadership was to clarify the routes subordinates must take to achieve personal and work goals (Filley & House, 1969). In the Path-Goal Theory followers view a leader's behavior as acceptable and satisfying when it provides immediate satisfaction or facilitates future satisfaction. In addition, acceptable leadership

behavior causes followers to expend greater effort at their work when they can meet their needs only by performing at high levels (House, 1996).

A leader is effective when they are perceived by the followers to have the ability to impact and deliver their rewards based on the follower's performance. The leader opens or clarifies the "paths" to achieve the desired outcomes or "goals"(House, 1971). This theory, while used in business to measure leadership qualities has had little research to support it due to the lack of descriptions or behaviors that support the major premise (Barge, 1994). The Path-Goal Theory focuses on follower motivation while ignoring the impact of the leader's influence on the task, resources, and skills (Yukl, 1989).

Life Cycle or Situational Leadership Model

The Life Cycle Theory developed by Hersey and Blanchard, while having minimal validity in research, remains one of the more popular approaches in management training (Barge, 1994; Bass, 1990; Yukl, 1989). This theory was built upon a number of studies including the Michigan and the Ohio State studies, Fiedler's Contingency Trait Theory, and Blake and Mouton's Managerial Grid (Hersey, Blanchard, & Johnson, 2001b).

Situational leadership looks at defining leadership styles in relation to task orientation, relationship orientation and effectiveness (Hersey et al., 2001b). The Life Cycle Theory looks at the leader's ability to adapt their leadership style (delegating, participating, selling, and telling) based on the ability and willingness of the employee. In addition, the leader flexes styles based on the readiness level of the employee (Hersey

et al., 2001b). The Life Cycle Theory or Situational Leadership Model as it was later called assumes that leaders alter their style based on the maturity level of their followers: job and psychological maturity, as well as ability and willingness. Effective leaders vary style according to "readiness" of follower (Hersey et al., 2001b). Examples of the major categories of follower maturity level and appropriate leadership style are as follows:

- Follower maturity high (both willing and able): Leader uses a delegating style (low relationship and low task),
- Follower maturity mixed (unwilling but able): leader uses a participatory style (High relationship and low task),
- Follower maturity mixed (willing but unable): Leader uses a selling style (high task and high relationship), and
- Follower maturity low (unwilling and unable): Leader using a telling style (high task and low relationship) (Hersey et al., 2001b).

Situational Theories Applied to Gender

As found in other leadership theories, men were described as having more of the traits or behaviors that dealt with the task which includes clearly spelling out goals, methods, and standards of performance (Eagly & Johnson, 1990; Sczesny, 2003). Women exhibited more of the traits or behaviors that could influence people, (relationship between leaders and followers which includes confidence and trust (Eagly & Johnson, 1990; Sczesny, 2003). Valentine and Godkin (2000) also found that women showed the ability to influence others through power.

Kabacoff (1998) found that women were rated as showing the ability to provide direction and Thompson (2000) found that men scored higher on the behavior of achievement. Women exhibit behaviors that apply to the "sell" dimension including communication, listening, high level of support, and coaching (Kabacoff, 1998; Rosener, 1990). Men show the core behaviors of the "tell" dimension which includes giving direction, as well as defining roles and goals (Eagly & Johnson, 1990; Sczesny, 2003). As seen in earlier theories, women exhibit a wide range of those behaviors that are associated with the "participatory" components including two-way communication, gaining respect, mentoring, empathy, listening, two way communication, and support (Eagly & Johnson, 1990; Hare et al., 1997; Rosener, 1990; Sczesny, 2003; Valentine & Godkin, 2000). Finally according to Eagly and Johnson (1990) and Sczesny (2003) women possess those behaviors that support a "delegating" style that includes trust and support.

Transformational and Transactional Leadership

The theory of leadership that captured the attention of researchers in the late 1990s and early 2000s is the theory of MacGregor Burns. Burns first described the transactional and transformational leadership styles in 1978. According to Burns, a leader needed to exchange something of value (a reward or punishment) to influence a follower to perform (Burns, 1978). Bass (1990) described the core dimensions of the transactional leader as contingent reward (exchanging a reward for performance), management by exception (active – looking for mistakes and passive – contingent

punishments) which provides punishment for actions, either directly or indirectly, and laissez-faire.

The transforming leader is one who builds on the beliefs, values, needs, and the potential motives of the follower to engage the full person (Burns, 1978). Transformational leaders do not rely on their ability to manipulate formal rewards and punishments but they set an example and use rhetorical skills to establish a common vision (Burns, 1978).

Great transformational leaders are also transactional (Bass, 1990). Bass in 1990 described the difference between transformational and transactional leadership as how leaders "vary in how they use strategies and techniques to organize and coordinate followers' activities: transactional and transformational" (Barge, 1994, p. 52).

Bass and Avolio (1994) described the four major components of a transformational leader as the four "Is": idealized influence (charismatic), individualized consideration (concern for people), intellectual stimulation (support and challenges people), and inspirational motivation (ability to motivate and inspire followers). The Multifactor Leadership Questionnaire (MLQ) was developed by Bass to measure transformational and transactional leadership (Bass, 1990). Yukl (2002) described the key elements of the transformational leader as one who develops collective goals; instills knowledge and appreciation of work, generates motivation and builds trust, encourages flexibility, and maintains meaningful organizational identity.

Current "research indicates that transformational leadership is more capable than transactional leadership at empowering employees and at generating higher levels of employee commitment, satisfaction, and motivation" (Barge, 1994, p. 56). The key distinction between transactional and transformational leadership is that transactional leadership tends to be focused on processes while transformational leadership focused on emotions and values and the effect the leader has on the followers (Podsakoff & MacKenzie, 1996; Yukl, 1999).

Burns (1978) stated that transformational leadership occurs "when one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality"(p. 20). Both leader and follower are actively transformed. The application of the transformational leadership theory by Bass attempted to describe the effects this style of leadership has on employee satisfaction and performance (Avolio & Bass, 1995; Barge, 1994; Jung & Avolio, 2000). Followers under this theory, because of their differing stages of individual development and readiness, respond independently but positively to transformational interventions by leaders (Avolio & Bass, 1995; Jung & Avolio, 2000).

Transactional and Transformational Theories Applied to Gender

As with the earlier theories of leadership, men were found to exhibit those behaviors that fall under the category of contingent reward (transactional leadership). These behaviors included giving direction and dominance (degree leader provides reinforcement in return for appropriate employee behavior: material rewards for

performance, recognized accomplishments, confidence in team – active; hear from leader only when failures or problems occur - passive) (Appelbaum, Audet, & Miller, 2003; Eagly & Johnson, 1990; Rosener, 1990; Thompson, 2000; Valentine & Godkin, 2000).

Women have been found to possess the qualities of a transformational leader (Appelbaum et al., 2003; Eagly & Johnson, 1990; Rosener, 1990; Thompson, 2000; Valentine & Godkin, 2000) while men possess the ability to provide direction and sense of purpose/mission (Kabacoff, 1998). Women show the characteristics of individualized consideration including empathy, personal care/consideration, coaching (Hare et al., 1997; Kabacoff, 1998; Rosener, 1990; Schein, 1976), and intellectual stimulation which consists of creativity, consensus decision-making, and supporting characteristics (Eagly & Johnson, 1990; Kabacoff, 1998; Rosener, 1990; Schein, 1976). Women were also found to possess inspirational motivation which is characterized by encouragement and working with employees (Eagly & Johnson, 1990; Kabacoff, 1998; Rosener, 1990; Valentine & Godkin, 2000).

Bass found that effective leaders possess both transactional and transformational qualities (Bass, 1990), however women were found consistently to exhibit the characteristics of the transformational leader (Appelbaum et al., 2003; Eagly & Johnson, 1990; Rosener, 1990; Thompson, 2000; Valentine & Godkin, 2000; Vinnicombe & Singh, 2002). Men exhibited more of the qualities and characteristics of a transactional leader (Appelbaum et al., 2003; Eagly & Johnson, 1990; Rosener, 1990; Thompson,

2000; Valentine & Godkin, 2000; Vinnicombe & Singh, 2002). In addition, the transformational leader is a role model for subordinates (Bass, 1990).

Charismatic Leadership

An outgrowth of the transformational leadership theory has been the charismatic leadership style that relies on referent power of the leader and the follower identifying with the leader (Barge, 1994). Often the two leadership models (charismatic and transformational) are used interchangeably (Hunt, 1999; Yukl, 1999). "Charisma accounts for most of the variance in transformational leadership studies and that, often, the terms transformational leadership and charismatic leadership are used interchangeably" (Dasborough & Ashkanasy, 2002, p. 617). This model concludes that a leader's effectiveness is based on the leader's ability to inspire and motivate followers not because of their leadership qualities or the message, but because of the leader's extraordinary character or charisma (Conger, Kanungo, & Menon, 2000). The charismatic theory has evolved to include the amount of influence the charismatic leader has over the follower (Yukl, 1999).

The specific behaviors or traits of a charismatic leader vary which makes empirical analysis of the effectiveness of this type of leader difficult (Yukl, 1999). "The defining elements of charismatic leadership are special personal characteristics leaders possess as these interact with the perceptions and needs of followers at a given moment in time" (Bess & Goldman, 2001, p. 431). These characteristics can include: self-confidence, moral conviction, communication of high expectations, emphasis on

symbolic and expressive aspects of the task, articulation of a visionary mission, and assumptions of personal risks and sacrifices (Bess & Goldman, 2001).

Servant Leadership

The servant leader espoused by R. Greenleaf in 1970 supports the idea that the primary responsibility and essence of ethical ness of a leader is to be of service to followers. This service includes concepts of nurturing, defending, and empowering followers with the intent that the followers become healthier, wiser, and able and willing to accept responsibilities (Greenleaf, 1977).

Summary

Through a review of the major leadership theories, there is an obvious shift from theories that focus only on personality traits to those that use a broader frame of reference by taking into consideration the situation or environment. The influence of gender differences as they relate to the various leadership theories is also prevalent. The majority of the studies conducted showed that males tended to exhibit or were perceived to possess task-oriented attributes and behaviors. Females in these studies tended to exhibit or possess the concern for people or relationship attributes and behaviors. These differences helped to sustain the social construct that men are task-focused and women are people-focused.

With the more recent theories of leadership (transformational and transactional), women are perceived as possessing the more transformational qualities (empathy, care and consideration). Men are perceived to possess the more transactional attributes

(provide direction and sense of purpose and mission). These research findings continue to draw the picture that leadership attributes and behaviors tend to be gender based.

What leads to the confusion is this discussion, is that for each leadership model or theory, there are different behaviors and attributes that help define the models. However, before conclusions are drawn, an analysis of the attributes that define leadership should continue to be reviewed in the context of the role of the leader and the importance of the follower.

Leader Attributes

Since the process to define leadership is so complex, the core activity to engage in is to define the traits or behaviors that describe or explain leadership (Barge, 1994). When looking at leaders, the primary idea that evolved is that "leadership is not just a discrete set of learned skills: it is lifework. Their leadership is a reflection of their life experience" (Meyer, 1986, p. 261). Kouzes and Posner (2001) stated that through years of research they have found "that leadership is an observable, learnable set of practices" (p. 82).

Early Studies of Attributes

In 1968, Mintzberg was the first to go beyond analyzing the tasks that managers accomplished. Instead he examined and analyzed the attributes and behaviors managers utilized to accomplish the tasks (Bennis, 1989). In doing this research, Mintzberg provided a description of successful leadership attributes which were: "peer skills,…leadership skills,…conflict resolution skills,…information-processing skills,…

skills in unstructured decision making,…resource allocation skills,…entrepreneurial skills,…[and] skills of introspection" (Mintzberg, 1973, pp. 189-193). These attributes have evolved over time due to the ever-changing business environment (Helgesen, 1990).

Other theorists of leaders and leadership contend that leaders who are selected or self-selected in organizations are constrained by organizational and external factors since they have a limited impact on outcomes. "Leaders are able only to react to contingencies, to facilitate the adjustment of the organization in its context, and to alter that environment to some limited extent" (Bass, 1990, p. 7). Later theories argue that leaders still have an important role to play in the organization since they manage people and the meanings (Bass, 1990).

Bennis (1989) summarized the attributes of leadership as: the management of attention through a vision (goals or directions), management of meaning (communicate the vision), management of trust (reliability or consistency), and management of self (knowing one's skills and using them effectively). Dilenschneider (1991) described the five building blocks of leadership as vision and focus, practical values, awareness and use of time, empowerment and motivation, and objectivity and judgment.

Senge (1990) described outstanding leaders as neither tall nor handsome, often mediocre speakers, they do not stand out in a crowd, nor do they mesmerize an audience with their brilliance. What makes these leaders stand out is their ability to instill confidence in others; that together they can achieve greatness.

Leadership Attributes and Followers

The role of leadership is to help others put the vision of greatness into their own words (Block, 1987). Leadership is "extolled as an authority 'bestowed' on a manager by his/her followers" (Alimo-Metcalfe, 1998b, p. 36). The key with an exceptional leader is the ability in "mobilizing others to want to struggle for shared aspirations" (Kouzes & Posner, 1997a, p. 30). Transformational leaders make "events meaningful for followers" (Yukl, 1999, p. 286).

From a follower's perspective leadership is critical, if it is not present: "without people above pointing the direction and telling us how to operate, we cannot fulfill our goals or be the kind of employees that we want to be" (Block, 1987, p. 31). Block (1987) continued to say "an important part of our leadership role is to work with subordinates to help them put into words their own vision of greatness for the future" (p. 130). "Fostering mature and robust leader-follower partnerships is what leading people is all about. But most leaders aren't pulling their weight… followers aren't following because leaders aren't leading" (Rosen, 1996, p. 8).

Kouzes and Posner (2001) described leadership as a relationship. "Sometimes that relationship is one-to-many. Sometimes it's one-to-one. But regardless of whether the number is one or one thousand, leadership is a relationship between those who aspire to lead and those who choose to follow" (p. 84). Hickman and Silva (1984) referred to similar distinctions calling the leadership skills, the "new age skills: creative insight, sensitivity, visions, versatility, focus, and patience" (p. 31).

In 1990, Kouzes and Pozner surveyed several thousand executives and inquired about the values they looked for in their leaders. Those surveyed identified more than 225 values, traits, and characteristics. These were narrowed down to a list of 20 with four capturing those traits that an individual would be willing to grant the title of leader. These were: honest, forward-looking, inspiring, and competent (Kouzes & Posner, 1997a). Kouzes and Posner developed the following statements that incorporate these attributes:

- Leaders challenge the process, any process, a change from the status quo; they are the early adopters of change;
- Leaders inspire a shared vision; they have visions and dreams of what could be;
- Leaders enable others to act. Leadership is not an individual activity. If there are no followers there is no leader;
- Leaders model the way through personal example and dedicated execution; and
- Leaders encourage the heart of their constituents to carry on (Kouzes & Posner, 1997a)

Leaders must know their constituents and speak their language (Kouzes & Posner, 1997a). Society today challenges traditional models of leadership, since the "multilevel, multidimensional concept of leadership is a reality of modern business life" (Charan, Drotter, & Noel, 2001, p. 13).

In analyzing 50 top leaders in *Lessons from the Top,* Neff and Citrin (1999) found that while very different, all the leaders had common characteristics: "passion, intelligence and clarity of thinking, great communication skills, high energy level, egos in check, inner peace, capitalizing on formative early life experiences, strong family lives, positive attitude, and focus on 'doing the right things right'"(pp. 380-387). Rosen (1996) saw eight principles that leaders had in common in analyzing 38 leaders: "vision, trust, participation, learning, diversity, creativity, integrity, and community" (pp. 21-22). Kouzes and Pozner (2001) found that leadership is based on mutual respect and caring, and at its heart is trust.

Contemporary Concepts Regarding Leadership Attributes

Today's global environment needs new horizontal leadership skills (ability to guide organizational growth through mergers and acquisitions). With companies expanding through alliances and partnership, the skills for a leader include the ability to integrate. These new skills are different from the previous skills of growing a company vertically (Charan et al., 2001).

Another attribute of leadership that has gained momentum recently is the concept of emotional intelligence (L. Gardner & Stough, 2002; Palmer, Walls, Burgess, & Stough, 2001). Even when leaders are not talking, followers are watching them to see their reactions to situations and to see their emotional response. Coleman, Boyatzis, & McKee (2002) stated that:

> Understanding the powerful role of emotions in the workplace sets the best leaders apart from the rest –not just in tangibles such as better business results and the retention of talent, but also in the all-important intangibles, such as higher morale, motivation, and commitment. (pp. 4-5)

Transformational leaders tend to exhibit more characteristics of emotional intelligence scales than the transactional leader (L. Gardner & Stough, 2002; Palmer et al., 2001). At the foundation of the concept of emotional intelligence is the leader's self-awareness that helps drive and regulate expressions of emotions (L. Gardner & Stough, 2002; Sosik & Dworakivsky, 1998). The impact of emotional intelligence on leadership effectiveness while being claimed in some studies as being significant is still being researched (Palmer et al., 2001). The initial impact appears to be seen in follower motivation and performance and high supervisory ratings of effectiveness (L. Gardner & Stough, 2002).

Does the positional level of the individual leader change leadership attributes? Position in an organization can be viewed as power. While power or the mastery of power can influence leadership effectiveness, power alone is not a definitive attribute of leadership (Kanter, 1977). "Just as clothes do not make the man, trappings never made a leader" (Rosen, 1996, p. 15). The qualities of an effective leader is an evolving process, "leadership is not an exact science – it is an art to be studied, practiced, developed and lived" (Drouillard & Kleiner, 1996, p. 31).

Drucker (1966) felt that even if the scope of responsibility differs, every executive needs to be an effective leader. Drucker continued to define the commonalities of

effective leaders as five habits or practices. Effective leaders: know where their time goes, focus on outward contributions, build on strengths (their own and others), concentrate on the few major areas where superior performance will produce outstanding results, and make effective decisions (Drucker, 1966).

The attributes of the servant leader as articulated by The Greenleaf Center (based on the writings of Greenleaf) are: "listening, empathy, healing, awareness persuasion, conceptualization, foresight, stewardship, commitment to the growth of people, and building community" (Russell & Stone, 2002, p. 146). Additional attributes attributed to the servant leadership model have been developed by Covey, Kouzes and Posner, De Pree, and many others but the issues lie in the fact that there is no empirical research to support any of the attributes of the servant leadership theory at this time (Russell & Stone, 2002).

Summary

The contemporary view of leadership supports an environment of gender neutrality in the roles and responsibilities of leaders. Contemporary researchers of leadership have been very careful not to attach traditional gender labels on the attributes of effective leaders. With this foundation in place, why is there still research support that effective leadership is gender based?

In the next sections, literature is examined where gender differences influence men and women in how they perceive leadership attributes and behaviors. When these

studies included women as participants, the construct of gender becomes a defining component of perceptions of effectiveness and specific attributes.

Research Findings of Leadership and Gender

The previous sections reviewed how gender differences apply to the major theories of leadership and leadership attributes and behaviors. This section reviews the predominate research which reveals not only the different research methods used but also how gender difference effects perceptions of leadership effectiveness.

Major Studies of Leadership and Gender

Klenke (1996) in "*Women and Leadership: A Contextual Perspective*" found that the qualities of leadership depended upon the knowledge of the follower. When examples of leaders were described as neither men nor women, both male and female followers described the characteristics of a male. Most studies prior to 1980 used only men as the sample (Klenke, 1996). Klenke developed a comprehensive overview of leadership with particular attention on the historical and contemporary perspective of leadership and gender as well as placing the concept of leadership in context of the media, work environment, barriers and challenges, and politics.

Eagly and Johnson (1990) conducted a meta-analysis of 162 studies of leadership and gender and discovered that most leadership studies were conducted under two conditions: experimental or simulated conditions using students and those studies that were conducted in the field using real managers. From this meta-analysis there appeared trends that tended to describe the people-oriented traits and behaviors to women and

those that are more associated with tasks to men (Eagly & Johnson, 1990). A majority of the Eagly and Johnson 's studies in the meta-analysis used two aspects of leadership: task accomplishment or style and interpersonal relationships or styles (Eagly & Johnson, 1990). Many of the studies examined by Eagly and Johnson used standard leadership assessment instruments including the Leader Behavior Description Questionnaire (LBDQ) and the Least Preferred Co-Worker (LPC) instrument (Eagly & Johnson, 1990). The leaders in the various studies examined by the meta-analysis came from a wide variety of environments including education, business, government, college undergraduate and graduate students, and laboratory studies(Eagly & Johnson, 1990).

As stated earlier, in the majority of the studies, men and women were found to be equally effective by their bosses if all else was equal, however followers consistently viewed men as being more effective leaders than women (Eagly & Johnson, 1990; Hare et al., 1997; Powell et al., 2002; Thompson, 2000; Valentine & Godkin, 2000). The rationale for this perception was seen as gender bias or perceptions of stereotypes. The possible exception was a study conducted by Kabacoff (1998) where he looked at 1800 male and female managers and found that women were rated slightly higher than men on the ability to have employees be productive. However, is the ability to have employees be productive the same as employees perceiving the leader to be more effective?

Kabacoff's (1998) study differed from many of the earlier studies of gender and leadership by using a methodology that increased his study's generalizability. His study was conducted within an organizational context by using 143 North American companies

(rather than an academic or simulated context) that sent managers to his training programs. Kabacoff's sample consisted of a large, diverse population of male and female managers (n = 900) who were matched for management level, job function, and management experience. He did not match to have both male and female raters provide feedback for each leader. A 360° assessment (self, boss, peer, and direct-reports) was designed by his consulting firm which compared the population on 22 leadership variables and 3 effectiveness measures (Kabacoff, 1998). Kabacoff found that for all four rater groups (self, supervisor, peer, and direct-reports) women obtained significantly higher scores than male managers on excitement, communication, feedback, dominant, and production leadership scales while men obtained significantly higher scores on conservative, innovative, strategic and restraint leadership scales (Kabacoff, 1998). Overall, Kabacoff (1998) found that supervisors rated men and women equally in terms of general effectiveness. While Kabacoff's research found that women were rated statistically higher on many traits or attributes, his research did not find any significant differences in overall effectiveness. Studies conducted over a period of thirty years found results that both supported and differed from the Kabacoff research. These studies occurred between 1976 and 1998.

Schein (1976) sampled 300 male middle managers in 1973 and 300 male and female middle managers in 1975 within a number of insurance companies in the United States and found that men were consistently rated higher on leadership abilities or that a prototypical manager was described as having male characteristics. Schein developed a

92 item inventory, the Schein Descriptive Index (SDI) to determine both the perceptions of stereotypes of male and female managers as well as characteristics of successful managers. Schein's study found that both male and female respondents felt that the characteristics needed for management success were more likely to be seen in or possessed by men rather than women (Schein, 1976).

Heilman et al. (1989) as well as Brenner, Tomkiewicz, and Schein (1989) replicated the 1976 Schein study in 1989. The Heilman et al. study used 268 male managers in a wide range of industries while the Brenner et al. study had a sample of 420 male and 173 female middle line managers from four manufacturing companies. Both studies using the Schein Descriptive Index confirmed the broad findings of the original Schein study (Brenner, Tomkiewicz, & Schein, 1989; Heilman et al., 1989) which were that both male and female respondents felt that the characteristics needed for management success were more likely to be seen or possessed by men rather than women. Interesting to note is that although the Brenner et al. (1989) outcomes for females were the same as in the earlier Schein studies, they were not at the same level of significance. In addition, the Heilman et al. study looked at perceptions of a prototypical manager without indicating the manager as a male or female. The Heilman et al. (1989) study found that stereotypes of men as the more effective leader are "widely held, deeply rooted and resistant to change" (p. 939). Both of these studies found that males tended to have a negative perception of females as effective managers (Brenner et al., 1989; Heilman et al., 1989).

Finally, Deal and Stevenson (1998) repeated the original Schein study and found the same results as in the earlier studies. Their results indicated that both males and females viewed males as more effective managers. The major difference in this 1998 study was that the sample consisted of 293 male and 409 female *students* with a mean age of 19 years (Deal & Stevenson, 1998). The original studies used male and female managers with a wide range of ages and managerial experience. Klenke (1996) reported that using college age students in studies that dealt with gender issues need to be carefully examined since students at that age are more susceptible to stereotypes. The findings of the 1998 study of Deal and Stevenson found that male and female students agreed in their perceptions of prototypical managers as well as their perceptions of male managers versus female managers (Deal & Stevenson, 1998). The Deal and Stevenson (1998) study is consistent with earlier research that reported that male participants were more likely to have negative views or perceptions of female managers. These negative views of women included perceptions that women were bitter, procrastinators, deceitful, nervous, passive, timid, and easily influenced (Deal & Stevenson, 1998).

In 1997, Hare, Koenigs, and Hare conducted a study using 130 females and 130 males who attended a leadership workshop conducted by a management-training center. The assessment used in this study was a questionnaire developed by SYMLOG (a consulting organization) of 26 items about value positions of leadership as rated by coworkers and self. These value positions included dimensions of dominant versus submissive, friendly versus unfriendly, and accepting task-orientation versus opposing it.

The results showed that the majority of male and female managers were found by co-workers to show similar values in leadership behaviors which was different from other studies (Hare et al., 1997).

Powell, Butterfield, and Parent (2002) in 1999 collected data from 206 undergraduate business students (mean age of 21.2 and 43% female) and 142 part-time graduate business students (mean age 31.7 years and 44% female) using the Bem Sex Role Inventory – short form. This inventory contains 10 items stereotypic of masculine roles, 10 items stereotypic of a feminine sex role, and 10-filler items not associated with either masculine or feminine stereotypes. Both undergraduates and graduate students viewed a good manager as possessing predominately-masculine characteristics (assertiveness, independence, and willingness to take risks). Powell and Butterfield had conducted research from 1984-85 using the same instrument with similar results. These studies indicate that over time gender stereotypes seem to be holding true even though more women are included in the studies (Powell et al., 2002). The Bem Sex-Role Inventory (BSRI) has gone though recent validations to see if the early results from 1974 still hold in present day society. Auster and Ohm (2000) conducted a study which showed that 18 out of the 20 feminine traits still qualified as feminine, but only 8 out of 20 of the masculine traits still qualified.

Data consisting of longitudinal surveys and interviews regarding individual characteristics and work related experiences from 7, 733 working adults (mean age 21.1 and 55% male) was used for analysis in a study by Valentine and Godkin (2000). While

this study did not look at characteristics of effective leaders, it did look at differences in perceptions by employees towards male and female supervisors. Consistently respondents perceived that male supervisors gave them greater variety, autonomy, and significance in their jobs while female supervisors gave them greater opportunities to develop close friendships and to deal with others (Valentine & Godkin, 2000).

An international study conducted in 2002 in Germany with 215 management students (mean age 24.4 and 43% female) used the Stimulus Group/Person Questionnaire. This questionnaire looked at leaders in general and men, women, and self with regard to leadership characteristics (Sczesny, 2003). Consistent with many of the earlier studies on gender and leadership (Universal Style Theories), both male and female participants attributed women with the person-oriented skills and less often with the task-oriented skills. Leaders in general (no gender specification) were more often attributed with task-oriented skills. Those leaders were imaged as male leaders or as both male and female leaders, however the "leaders in general" were not perceived by any participant as solely a female leader (Sczesny, 2003). Both male and female participants viewed men and leaders in general as possessing both task oriented skills and person-oriented skills (Sczesny, 2003) which may indicate that perceptions of effectiveness could be changing.

Summary

In a number of studies since the 1930s, much of the research on gender and leadership showed that women were perceived as exhibiting lower degrees of the desired leadership behaviors or participants rated women as having less of the desirable

leadership attributes. Many of these results were based on stereotypes about women (Bass, 1990). In a 2001 study, senior management reported they approved of traditional feminine leadership attributes (interpersonal and people management skills) but often women flexed their style to mirror the male attributes (decisiveness and task orientation) of their male executive counterparts (Vinnicombe & Singh, 2002).

These previous studies on gender and leadership are often difficult to compare. The methodologies of the studies differ, the research samples vary considerably, and the research instruments are often very different and measure different values, attributes and behaviors.

In terms of overall leadership effectiveness, the research supports the concept that a combination of traits and behaviors is most appropriate. However, men are still perceived as the leader who most effectively possesses this combination. This perception supports the belief that men are the leaders and they are more effective. The following section discusses the impact of this continuing perception. This review may also shed some light as to the reasons for the statistically low numbers of women in senior management positions.

Leadership and Gender in the Workplace

As stated earlier, women have continued to increase their presence in the workplace since the 1970s and subsequently their numbers are increasing in leadership positions. Women comprise 46% of the workforce (Statistics, 2002) hold more than 50% of the managerial positions (K. R. Lewis, 2004), and earn one third of the MBAs [Digest

of Education] according to the 1996 - 1997 statistics (*Advancing women*, 1998). However, in 2005 women led only seven of the *Fortune* 500 companies (Philipkoski, 2005). The interesting point is that men in the past have never been questioned as to whether or not they make good leaders, the issue had only arisen toward women with more women acquiring leadership roles (Donnell & Hall, 1980). The following sections review the various stereotypes and biases that exist toward women in the workplace.

Stereotypes and Biases of Women in the Workplace

The old phrase, "Think manager-think male" (Schein, 1976, p. 21) is losing prominence, however, leadership positions in the business and education world are still male dominated (McGregor & Tweed, 2001; Shakeshaft, 1999; Tharenou, 1999). The lack of comfort with women continues to be an inhibitor toward women advancing to leadership roles. There is some support that men are more comfortable working with, communicating with, promoting, and mentoring other men (Hull & Umansky, 1997; Tharenou, 1999). In addition, senior women executives expressed higher levels of dissatisfaction when they worked in a male dominated environment (Vinnicombe & Singh, 2002). There is evidence that the sex-role stereotyping of the leader is typically a male role. In mixed groups the determination is that men make more effective leaders (Carli, 1999; Deaux, 1983; Hare et al., 1997; Higginson & Quick, 1975; McLane, 1980). In many studies, the attitude that men were better leaders than women was also an attitude that was held equally by men and women (Deaux, 1983; Epstein, 1971; Goldberg, 1968; Higginson & Quick, 1975; McLane, 1980; Pounder & Coleman, 2002;

Tharenou, 1999; Williams, 1977). One study found that when asked to describe a successful manager, traditional masculine characteristics were described (Deal & Stevenson, 1998). While there is little evidence in the research that men are more effective leaders than women, the specific attributes of effective leadership are seen differently from the perspective of the follower (Davidson & Cooper, 1992).

When women in the past were asked about their own leadership abilities, they tended to rate themselves lower or view themselves as less effective leaders (Deaux, 1983; Goldberg, 1968; Rosenthal, 1995; Theodore, 1971). In the past, female leaders have been stereotyped negatively such as being referred to as the mother, the pet, the sex object, and the iron maiden (Kanter, 1977). Hammer in 1978 characterized four stereotypes of women in business: the earth mother (who brings cookies to meetings); the manipulator (relies of feminine wiles); the workaholic (non-delegator); and the equalitarian (denies leadership power and equates herself with her subordinates) (Bass, 1990). Negative perceptions of female leaders also included higher turnover and absentee rates (due to child-bearing and child care responsibilities) (McLane, 1980).

Another aspect of stereotyping occurs in career or occupational choices between men and women. Male dominated professional roles exist in medicine, law, science, engineering while female dominated careers are nursing, teaching, and social work (Theodore, 1971). Even in female dominated professions like teaching, the leader was often a male. Men also dominate the teaching roles in colleges and universities (Albjerg Graham, 1970; Davis, 1969; DiGeorgio-Lutz, 2002). Early research of teachers showed

that women were treated less favorably than male teachers in pay, status, and titles (males were called professor and females addressed as miss) (Shakeshaft, 1989).

Women may have historically enjoyed more leadership opportunities in the vocational fields over the business environment (J. C. Jackson, 2001), however there still exists a lag in promotion and assignment opportunities for women in education (Shakeshaft, 1995, 1999; Shakeshaft, Nowell, & Perry, 1991; "When a ceo becomes president," 2004). With more than 90% of elementary school teachers being women, it is surprising that elementary principals are 50% male and 50% female. Studies in the late 1990s show that males are selected for principalships three times more often than women (Hammond, Muffs, & Sciascia, 2001).

Additional challenges faced by women include formal and informal biases in traditional male dominated professions and the lack of female role models and mentors in the leadership roles in education and business environments (Epstein, 1971; Hull & Umansky, 1997; Lebeau, 2001; Lyness & Judiesch, 1999b; Oakley, 2000; Tharenou, 1999). Women were not admitted to Harvard Business School until 1963 (McLane, 1980). Research indicates that management books written in the 1950s included chapter titles such as "The Private World of Mobile Men," "The Wives of Ambitious Men," and "The Kinds of Women Who Make Successful Wives." In addition to the chapter titles, there was minimal mention of women having careers. Those that did mention women having careers discussed how the career women hampered their husband's careers (Warner & Abegglen, 1955).

Current books on management and leadership do not highlight distinctions between men and women. These books discuss only the leadership behaviors or attributes of effectiveness, which indicate that changes have occurred in perceptions or that authors are attempting to attract a broad based (male and female) audience (Biro, 1997; Block, 1987; Buckingham & Coffman, 1999; Charan et al., 2001; Coleman et al., 2002; Katzenback, 1995; Kotter, 1996, 1999).

Traits of Leadership in the Workplace

Early leadership traits in business were defined in terms of "masculine" qualities (tough-minded, cognitive superiority, risk-taker) primarily due to the absence of women leaders in the workforce (Higginson & Quick, 1975; Kanter, 1977; McLane, 1980; Olsson, 2000, Putnam, 1983; Williams, 1977). Early studies in leadership never mentioned gender issues (Bass, 1990). Many of these studies were based on a paramilitary or male model (Parker & ogilvie, 1996). Even looking at past models and archetypes of leaders and leadership, the models and archetypes were traditionally male (Olsson, 2000). Successful male leaders were viewed as having ability, while successful female leaders were viewed as showing extra effort or having luck (Deaux, 1983; McLane, 1980; Rosenthal, 1995).

Effective peer communication, a key leadership attribute, was often difficult for women to achieve since often the basis of effective communication was social acceptance (Carli, 1999; Kanter, 1977; Putnam, 1983). Early studies of women managers found that by the time a women manager was viewed as successful, she more resembled other male

managers than other women (McLane, 1980) or that she was held to a higher standard than male counterparts (Carli, 1999). The emerging trend is that executives who used both masculine and feminine traits were considered to have androgynous abilities, since they could exhibit leadership qualities typically associated with both males and females (Vinnicombe & Singh, 2002). These androgynous managers were found to have both task oriented and people oriented skills and behaviors (Vinnicombe & Singh, 2002).

Gender Differences in the Workplace

Gender differences may also be a result of self-fulfilling beliefs, rather than actual differences (Hare et al., 1997). Age may also impact leadership attributes as men who are at mid-life become more concerned with others while women become more assertive and independent (Klein et al., 1996).

Bem in her Sex-Role Inventory defined masculinity as "aggressive, independent, objective, logical, rational, analytical and decisive...(and) femininity includes being emotional, sensitive, expressive, cooperative, intuitive, warm and tactful nature" (Park, 1996, p. 13). Other studies included masculine traits such as logical, rational, aggressive, strategic, competitive, tough, and decision oriented (Korac-Kakabadse & Kouzmin, 1997).

Historically women viewed their jobs differently than men. In *The Managerial Women*, Hennig and Jardim (1976) found that when asked, men described their job as a task, a set of responsibilities, a means of support, and of earning a living. Women on the other hand answered the question as something that one does day to day, it has to be

done, it is a means of survival, and a way to earn a living. When asked to define career, the significant difference was that women never mentioned recognition or reward as part of the descriptions; men mentioned those concepts as part of what happens when they reach the upper positions (Hennig & Jardim, 1976). Careers were not viewed as a source of pride or accomplishment, but rather economic necessity (McLane, 1980; Theodore, 1971; Williams, 1977). Women often have been in the position of "sacrificing their career" in deference to their spouse and family (Albjerg Graham, 1970; Bass, 1990; Higginson & Quick, 1975; S. E. Jackson & Alvarez, 1992; Kanter, 1977; Klein et al., 1996; McLane, 1980; Tharenou, 1999; Theodore, 1971; Vinnicombe & Singh, 2002). Some recent studies, however, have shown that men and women tend to view their careers with similar importance (Hull & Umansky, 1997) with the concept of sacrificing their career to raise a family diminishing (E. R. Auster, 2001).

Women tend not to network as frequently because of family commitments (Singhania, 2002) or are excluded from networking opportunities in the workplace and after hours (meetings, golf outings, dinners) (Tharenou, 1999; Vinnicombe & Singh, 2002). In the past, even in community and educational organizations such as Rotary and the NEA (National Education Association), women were excluded from membership (Shakeshaft, 1989) thus limiting women from opportunities to network. This networking distinction is also based on social biases, communication styles, and level of comfort (Carli, 1999; Tharenou, 1999).

In 2002, the number of women approached 46% of the workforce with projections of the number exceeding 50% in 2005 (Singhania, 2002). Work environments; however have been developed by men for men, and therefore this may still be an alien territory for women executives. The skills and attributes women bring to the workforce may be different than those that are traditionally required or expected (Helgesen, 1990; Higginson & Quick, 1975; Korac-Kakabadse & Kouzmin, 1997).

In the past when women leaders were asked to describe their role in an organization, they described themselves as being in the middle of things, not the top. Women also viewed themselves as part of an interrelated structure (Helgesen, 1990). The views are changing with strong role models of women such as Hillary Clinton, Mary Kay Ash, Katherine Graham, and Margaret Thatcher (Klenke, 1996).

Past Studies of Leadership and Gender Differences

In the past, it has been difficult to study gender differences due to the lack of women in executive positions. Catalyst (*Advancing women*, 1998) found that the barriers to women advancing to leadership roles included negative assumptions about women's abilities and commitment to the career and their misfit with the corporate culture. Women have also hit the "glass ceiling:" that invisible barrier that prevents them from moving up the managerial ladder (Padavic & Reskin, 2002).

The first studies of barriers in the workplace focused on specific discrimination incidents and discrimination attitudes towards women in management (Basil, 1972; Hare et al., 1997). Studies have also shown that the number of female leaders is lower due to

such variables as the decision process, sex stereotyping, or organizational structure (*Advancing women*, 1998; Carli, 1999; Korac-Kakabadse & Kouzmin, 1997; Lyness & Judiesch, 1999a; Oakley, 2000; Tharenou, 1999). This lack of women due to various administrative processes is also seen in a lack of women in "foundational" roles for leadership positions such as manufacturing, marketing, and operations (Oakley, 2000; Tharenou, 1999). These low numbers are rapidly changing with the numbers of women in executive and management positions as 35% of the population in the mid 1980s (Jamieson & O'Mara, 1991) and growing to over 50% in 2003 (K. R. Lewis, 2004) .

Summary

Most studies support the premise that perceptions of leadership effectiveness and attributes are critical for leaders to be successful in their organizations. In addition, there is evidence of the differences in the perceptions and attitudes toward men and women in the workplace as leaders. While the numbers of women increase in managerial and leadership positions, the growth of women in the senior positions remains low. This could be due in part to the perceptions and biases of *both* women and men. These biases may be based on deep-seated, traditional stereotypes of behaviors, qualities, and styles men and women exhibit in the workplace in relation to leadership attributes and effectiveness. The perspective of the follower in the study of leadership takes on importance, not just in evaluating leadership effectiveness, but also in ascribing gender specific attributes to leaders.

Followers and Leadership

While the traits of a leader can be measured or observed, the underlying motivation, processes and mechanism of why or how these traits influence the follower is still to be determined (Brown & Lord, 2001). Recent studies of leadership behavior are now looking at the impact the behavior has on the follower as well as the perception of the follower toward that leader (Brown & Lord, 2001).

A contemporary leadership theory such as the transformational theory gives attention to the needs, wants, and characteristics of the followers as well the conditions of the situations (Yukl, 2002). Leaders, to be effective must have the knowledge of followers and situations and the abilities and knowledge to adapt their style to the situations and environment (Podsakoff & MacKenzie, 1996; Yukl, 1999).

This approach supports the need for leaders to not only possess the core skills of leadership, but also they need to possess a deeper understanding and internalization of their role and the impact this role has on the follower. Jago's (1982) definition of leadership by viewing leadership as "both a process and a property" (p. 315) encompasses the fundamental components of followership, the leader's role, and the attributes and behaviors that are necessary for a leader to be successful.

Early studies of leadership did not look at the gender of raters to the extent that studies after the 1990s look at this construct. This has led to a wealth of new information on the perceptions of leadership from the eyes of the rater or follower.

Followers are impacted by the leader's emotions, characteristics, behaviors, situational norms, as well as prior experience with that leader. Based on these experiences, the follower may form an attribution of how that leader is perceived (Dasborough & Ashkanasy, 2002). "Leaders do not exist without followers and followers do not exist without leaders" (Smith, 1997, p. 1).

The specific attributes of an effective leader might only be recognized in the eyes or minds of the follower (Andrews & Field, 1998). Leadership "involves behaviors, traits, characteristics, and outcomes produced by leaders as these elements are interpreted by followers" (Lord & Maher, 1993, p. 11). Rosen (1996) indicates that:

> People want to be led but they do not want the authoritarian leadership style. Nor do they want some clever new management technique. Instead, they want leaders with deeply held human values who respect people's unique talents and contributions. They want leaders who will create an environment that nurtures excellence, risk taking, and creativity. They reject intimidation or manipulation, but they positively yearn for inspiration. (p. 7)

Lord and Maher (1993) described the differences between management and leadership from the perspective of the follower. "We conceptualize leadership as resulting from a social-perceptual process –the essence of leadership is being seen as a leader by others. Management, in contrast, involves discharging a set of task activities associated with a specific organizational position" (p. 4). They continued to state that effective leaders are not necessarily effective managers and vice versa.

Kouzes and Posner (1997a) found that consistently followers look for four attributes in their leaders, honesty, competency, forward-looking and inspiring. The only

other characteristic that had some consistency was intelligence (Kouzes & Posner, 1997a).

Summary

The role the follower or observer plays in determining the effectiveness of the leader is essential to the study of leadership. Based on earlier sections of this chapter, the perception of the follower or observer as they view male and female leaders and their effectiveness, becomes a critical consideration in determining the existence of gender bias. The next section will briefly discuss the concept of gender and rater bias.

Gender and Rater Bias

The concept of bias in rating the qualities of an effective leader is an important consideration. In business where many stereotypes exist, these stereotypes can lead to biases. "Stereotypes can influence the behaviors of both the stereotype agent and target, thus making it seem as if the stereotypes are grounded in reality" (Operario & Fiske, 2001, p. 46). "There is considerable evidence for a general cultural attitude that men make better leaders" (Kanter, 1977, p. 197). While recent studies dispute this premise (Kabacoff, 1998) gender still plays a role in recruiting and promotions (Klenke, 1996). In a 2002 study, results showed that women significantly preferred a male boss rather than a woman (Vinnicombe & Singh, 2002). In this same 2002 study, women described themselves as having feminine or androgynous characteristics but described top executives as having androgynous or masculine leadership traits (Vinnicombe & Singh, 2002).

Studies that were conducted in laboratories showed differences from those conducted in field studies (A. E. Lewis & Fagenson-Eland, 1998). At issue is the difficulty to objectively rate attributes and behaviors consistently. Add to this mix the complexity of rater bias (founded on stereotypes) and the task becomes even more complex (Operario & Fiske, 2001).

Research on 360° feedback instruments found that respondents would answer the questions differently depending upon the final purpose of the feedback – developmental or evaluative (Cacioppe & Albrecht, 2000). The bias encountered in the work environment can also be segmented from the expected gender bias by that of boss – subordinate bias, as well as cultural (ethnicity) bias and level of rater/ratee bias (Mount & Scullen, 2001). The presence of the rater bias overall impacts the potential for males and females to be evaluated equally effective for assignment selections and promotability.

Summary

There is evidence that rater bias does exist. Does this fact automatically lead to the conclusions that gender bias exists? Almost 50% of the workforce is women in management roles but less than 10% in senior leadership positions. This fact seems to support a hypothesis that there is a difference in how males and females rate or perceive male and female leaders. To analyze this hypothesis, tools are needed such as leadership assessment instruments to derive quantitative data rather than anecdotal perceptions.

Leadership Assessment Instruments

There are several different types of instruments used to study leadership including performance and personality measures. Performance tests measure intelligence, aptitude, achievement, diagnostic, and performance assessment. Personality tests assess "individual differences in such aspects of personality as traits, needs, psychological disorders, values, and attitudes" (Gall, Gall, & Borg, 2003, p. 212).

Within the realm of personality assessments there are behavioral and attitudinal assessments. Behavioral inventories are used when the researcher seeks to see if a listing of statements describing behavior patterns are characteristics of the subject's behaviors (Ary, Jacobs, & Razavieh, 1996) or to observe behaviors and record scores (Creswell, 2002).

An attitude scale is used to measure attitudes, values, opinion, and other characteristics that are not easily measured by tests or other measuring instruments (Ary et al., 1996) of an "individual's viewpoint or disposition toward a particular 'object' (person, thing, an idea)" (Gall et al., 2003, p. 214). "The basic assumption that underlies all attitude scales is that it is possible to discover attitudes by asking individuals to respond to a series of statements of preference" (Fraenkel & Wallen, 2003, p. 131).

Three sixty-degree (360°) feedback instruments have proven useful since they provide feedback from a number of different perspectives; self, supervisor, peer, and direct report. Even though perceptions are subjective, they provide a broad, more

complete view of an individual's performance. The 360° assessment also provides a validation for the rater's perspectives (Atwater & Waldman, 1998; Buttner, Gryskiewicz, & Hidore, 1999).

The 360° assessments have become a valuable personnel tool since it affords valuable performance information from several perspectives. Since each rater encounters the abilities of the ratee from different perspectives, this information can be a valuable developmental tool (Buttner et al., 1999; Edwards & Ewen, 1996; Mount & Scullen, 2001).

This feedback process provides "full circle" feedback about an individual's leadership or managerial competencies (Cacioppe & Albrecht, 2000) while single source assessments provide feedback from one individual, usually the supervisor (Edwards & Ewen, 1996). While variations of the multi-rater are utilized (90°, 180° or 270°), the 360° assessment is the most comprehensive (Cacioppe & Albrecht, 2000).

The 360° assessment process enables individuals to compare their own perceptions with the perception of others (Atwater & Waldman, 1998; Cacioppe & Albrecht, 2000; McCauley & Moxley, 1996). The use of the 360° instrument is rapidly increasing in popularity as managers and human resource professionals become more comfortable with the process and the usefulness of the feedback for employee development (Beehr, Ivanitaskaya, Hansen, Erofeev, & Gudanowski, 2001; Bracken et al., 2001; Buttner et al., 1999). The multi-source feedback instrument measures how the

rater perceives the individual being rated. This perception is truth for the rater and contains valuable information for the leader (Mount & Scullen, 2001). As in the story of the emperor's new cloths, in a 360° assessment, the truth is told when feedback is gathered (Edwards & Ewen, 1996).

The first step in the design and development of any leadership curriculum is an assessment which determines the effectiveness of a leader as perceived by others (Davies, 1994). Davies (1994) points out that these assessments could include psychological tests and questionnaires, 360° (multi-rater assessments), survey feedback from the supervisor, peers, and direct reports or behavior simulations. Often the multi-source feedback, when consistent is "more likely to be perceived as accurate and useful for guiding behavior changes" (Seifert, McDonald, & Yukl, 2003, p. 561).

In a survey conducted with a number of business leaders, the 360° assessment process was rated second (67%) as a key feature of the leadership development process (action learning was #1 at 73% and exposure to senior executives was tied for second) (Gilber, Carter, & Goldsmith, 2000). Typically organizations analyze the specific leadership competencies or attributes that are valued within an organization and select a 360° assessment that supports those competencies (Gilber et al., 2000). The value of using a 360° instrument as a tool to develop learning and developmental initiatives in schools and the workplace helps to target learning in a prescriptive context rather than planning and implementing haphazard, generic training processes.

The use of a 360° by an organization gives the organization a boost in worker productivity since the 360° gives an accurate sense of strengths and weaknesses compared to the one-sided (single-source), supervisor performance appraisal (DeBare, 1997). While a number of leadership inventories and assessments are available to rate leader effectiveness, the only way to truly assess a leader's effectiveness is from a multi-rater perspective.

Many 360° feedback processes include a self-assessment component (Edwards & Ewen, 1996). In the self-assessments, leaders often see themselves as more transformational or possessing the "desired" behaviors (Bass, 1990).

Leader Behavior Description Questionnaire – LBDQ

One of the first instruments utilized to describe leadership attributes was the Leader Behavior Description Questionnaire (LBDQ) developed in 1950 and normed on male samples (McGee Banks, 1995). The LBDQ and the subsequent form, SBDQ (Supervisory Behavior Description Questionnaire), had individuals rate a leader or supervisor as to whether they possessed a specific trait, not to judge if the behavior was desirable or undesirable (Bass, 1990). The LBDQ and subsequent versions were used extensively with mixed results since many of the researchers failed to indicate instrument versions or how the various leadership scales were modified (Bass, 1990). One version, the Leadership Opinion Questionnaire (LOQ) had leaders self-assess frequency and desirability of the leadership behaviors they possessed (Bass, 1990).

Multifactor Leadership Questionnaire - MLQ

The 1985 Multifactor Leadership Questionnaire Scale of Charismatic Leadership (MLQ) developed by Bass dealt with the leader's behavior and the follower's reactions in relationship to a charismatic leadership scale. In addition, the MLQ assessed the laissez-faire leadership style (Bass, 1990). The MLQ also measured different aspects of the transactional and transformational leadership styles (Barge, 1994; Goodwin, Wofford, & Whittington, 2001; Hinkin & Tracey, 1999; Jung & Avolio, 2000). Gender studies using the MLQ reported conflicting results (Carless, 1998). There have been changes to the MLQ to include additional behaviors added with positive correlations between perceptions of positive leadership effectiveness and the traits and behaviors of transformational leaders. However even with these inclusions, the overall validity of the MLQ is still in question since there is not comprehensive agreement on the core behaviors of a transformational leader (Hinkin & Tracey, 1999; Yukl, 1999). Hinkin and Tracy in a 1999 study specifically attempted to provide the empirical research to test the validity of the MLQ. They found that although Bass and others had developed a strong theory of transformational leadership, the MLQ was not an adequate tool to assess the behaviors (Hinkin & Tracey, 1999).

The MLQ has undergone several revisions in an attempt to address some of the issues of its validity. A comprehensive analysis of the MLQ was undertaken in 2002 which found that the MLQ can be used as a valid and reliable assessment when it is used to represent the full range theory of leadership (transformational, transactional, and

laissez-faire leadership) as developed by Avolio and Bass (Antonakis, Avolio, & Sivasubramaniam, 2003). This later research found, however, that using non-homogenous samples (mixing organizational types and environmental conditions, leader/rater gender samples, levels, etc) resulted in inconsistent findings (Antonakis et al., 2003). Thus, while the MLQ is a viable instrument, its effectiveness is somewhat limited to only measuring the leadership theory of Avolio and Bass.

Leadership Practices Inventory - LPI

One of the current, most commonly used multi-rater assessment tools is the Leadership Practices Inventory (LPI) developed by Kouzes and Posner (Kouzes & Posner, 1997a). The LPI is based on transformational leadership skills (Carless, 1998) and the five leadership practices Kouzes and Posner defined in their earlier studies. These five leadership practices are: "challenging the process, inspiring a shared vision, enabling others to act, modeling the way and encouraging the heart" (Kouzes & Posner, 1997a, pp. 341-342). A variety of studies have taken place utilizing the LPI including those that analyze the leadership attributes of leaders in a variety of industries and from a variety of perspectives including the gender of the leader and raters (Kouzes & Posner, 1997a). While limited studies on male and female perceptions of male and female leaders have occurred using the LPI, one study found the female managers were more likely to exhibit the "Modeling the Way" and "Encouraging the Heart" practices (Carless, 1998). These practices included consistency in behavior and espoused views and giving positive feedback to individuals and teams (Carless, 1998).

Overall, the LPI has been consistent in regard to internal reliability with scores from .60 to .97 for various samples that included engineering and banking managers, college presidents, correctional institutional leaders, frontline supervisors in a telecommunications firm, nursing and hotel managers, and home health care agency directors (Kouzes & Posner, 1997b). The test-retest reliability of the LPI has been strong with scores of .79 and above involving school administers, superintendents, and school principals (Kouzes & Posner, 1997b). The LPI has also proven to withstand a number of empirical tests for validity (face validity and concurrent validity) and is considered one of the leading instruments in assessing an individuals' leadership behaviors and providing feedback (Kouzes & Posner, 1997b). Kouzes and Posner looked at scores from the LPI and examined the relationships between these scores and high and low performing managers (Kouzes & Posner, 1997b). The significant disadvantage of this instrument is that it is commercially distributed at costs (current unit costs: $7.50 for self and $5.00 for each set of observer assessments) that a wide range of audiences and businesses cannot justify its use. In addition, the LPI only assesses the effectiveness of leadership utilizing Kouzes and Posner model of leadership which consists of five leadership practices: "challenging the process, inspiring a shared vision, enabling others to act, modeling the way and encouraging the heart" (Kouzes & Posner, 1997a, pp. 341-342). While this model is translated into behavioral statements, the support and training for using the results of the LPI is somewhat restricted to the Kouzes and Posner model and feedback tools.

Leader Attributes Inventory and Leader Effectiveness Index

The Leader Attributes Inventory (LAI) (see Appendix A) and the Leader Effectiveness Index (LEI) (see Appendix B) are two assessment instruments developed to support the leadership definition of Jago (1982) where he stated that:

> Leadership is both a process and a property. The process of leadership is the use of noncoercive influence to direct and coordinate the activities of the members of an organized group toward the accomplishment of group objectives. As a property, leadership is the set of qualities or characteristics attributed to those who are perceived to successfully employ such influence (p. 315)

The LAI consists of 37 leader attributes that encompassed the "characteristics, knowledge, skills and values possessed by the leader" (Jensrud, 1995, p. 27). The second instrument, the LEI utilizes a "list of tasks that leaders engage in and an overall ranking of leadership effectiveness" (Jensrud, 1995, p. 25). The LAI supports the attributes that deal with the property of leadership and the LEI covers the processes of leadership or the behaviors.

This study selected the LAI and LEI assessments rather than other leadership assessments due to several factors: first, there was a large database gathered for these instruments from a 1995 study. In the 1995 study, these two leadership assessment instruments had been tested for validity and reliability and were also used to examine the gender biases of raters toward male and female leaders (Jensrud, 1995). Second, these instruments, used together, support two concepts that are important in the study of leadership, the prevalence of leadership attributes and behavior effectiveness. Third, the LAI consists of both processes and properties of leadership, including concern for people,

initiation of task as well as the more transformational components of leadership such as visionary and insightful behaviors. Examples of "concern for people" attributes from the LAI are: communication, sensitivity/respect, motivating others, team-building, and coaching. Examples of the "task-oriented" attributes from the LAI are: accountable, planning, delegating, time management, organizing, decision-making, and problem solving. Transformational attributes in the LAI include: energetic with stamina, insightful, adaptable, visionary, tolerant of ambiguity and complexity, achievement-oriented, persistent, enthusiastic/optimistic, courageous/risk-taker, personal integrity, ethical, and ideological beliefs are appropriate to the group.

Since raters often use leadership and managerial attributes interchangeably, the use of both concepts in an assessment is useful to garner a full picture of an individual's abilities. Finally, the LAI and LEI are readily available through non-commercial means and therefore can easily and affordably be used to expand the existing of body of knowledge.

The LAI and the LEI are 360° assessment tools that can be used for self and observer applications. The LAI and the LEI are assessment surveys since they involve the important components of "identifying certain observable, behavioral tendencies that can be accurately rated" (Church & Waclawski, 2001, p. 14) by followers rather than trends in behaviors or attitudes (Fraenkel & Wallen, 2003). The results of the LAI and the LEI are the attitudes of the raters, which are assessed from their own perspective, of the observable behaviors and attributes of their leaders or self.

The LAI and LEI were developed by Moss and his associates between 1989 and 1993 at the University of Minnesota and these instruments are currently being distributed through the National Dissemination Center at Ohio State University (Moss, Lambrecht, Jensrud, & Finch, 1994b). These multi-rater instruments were developed with funding from the National Center for Research in Vocational Education to provide an affordable tool that produced information on the attributes and behaviors of effective leaders for an under-researched population – educators (Moss et al., 1994b).

Designed as a diagnostic tool the LAI assesses 37 attributes of successful performance of a leader. Broad tasks of leaders were analyzed using research of Bass, Gardner, Posner and Kouzes, and Yukl and Van Fleet (Moss, Lambrecht, Jensrud, & Finch, 1994a). Broad tasks, specific qualities, attributes, and behaviors were determined from a literature review of leadership studies and the final list was derived by those attributes that were different from one another but supported in the research. Table 2.1 shows a complete listing of the final attributes used in the LAI. Specific details on the validity and reliability of the LAI are found in Chapter III of this study.

The LEI has been used to provide feedback for graduate students on their leadership abilities. This tool has been used as a pre and post-test to show improvement over specific areas after training and development (Moss et al., 1994b). The LEI consists of six descriptors of leadership behavior and one summary category. The six descriptors were developed based on Yukl's 1989 research that indicated a leader's effectiveness is

based on task, consideration to people, and ability to work within an organization (Moss et al., 1994b).

Table 2.1 LAI Attributes in Five Sub-Scales

Drive	Organization	Trust	Interpersonal	Tolerance
Initiating	Time Management	Ethical	Delegating	Tolerant of Frustration
Visionary	Organizing	Personal Integrity	Team - Building	Even Disposition
Enthusiastic, Optimistic	Dependable, Reliable	Committed to the Common Good	Appropriate Use of Leadership Styles	Stress Management
Energetic, with Stamina	Information Management	Sensitively, Respect	Coaching	Adaptable, Open to Change
Courageous, Risk-Taker	Intelligent, with Practical Judgment	Accountable	Motivating Others	Tolerant of Ambiguity
Achievement Oriented	Willing to Accept Responsibility	Ideological Beliefs	Conflict Management	Communication
Networking	Decision Making	Appropriate To Group		
Insightful	Planning	Confident		
Persistent	Problem Solving			

(Jensrud, 1995)

The LEI was found to have validity and reliability when it was tested with part-time graduate and undergraduate management students (who all worked in business), graduate vocational education students, and vocational education instructors. Specific details on the validity and reliability of the LEI are found in Chapter III of this study.

The LAI and LEI added a dimension to the study of leadership that is not included in the more popularly used instruments: the Leadership Practices Inventory (LPI) developed by Kouzes and Posner and the Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio. The dimensions that are added in the LAI and the LEI are the inclusion of both managerial AND leadership attributes and behaviors. The combination of both management and leadership attributes and behaviors rounds out the picture of an assessment of a leader's abilities, since the definitive definition of leadership and management specifically have not been determined (Bennis & Nanus, 1985). Norms have been established using the LAI and the LEI for vocational administrators and with this study, norms are beginning to be established for the business population.

In the Jensrud (1995) study a factor analysis was conducted on the LAI to determine if the 37 attributes could be grouped within similar constructs to expedite future analysis of the attributes. Five factors were determined to describe the 37 attributes after a component analysis was conducted employing communalities of 1.0, Kaiser criteria for number of factors and a varimax rotation. The five factors or sub-scales are: Drive, Organization, Trust, Interpersonal, and Tolerance (Jensrud, 1995). The 37 attributes are listed in Table 2.1 with their respective sub-scales.

Summary

The concept of leadership has been a conundrum that has created a number of theories and models all focused on defining effective leadership and specific attributes of

leadership. These theories and models look at leadership styles, traits, behaviors, situations, and perspectives of followers. While early research studies focused primarily on male characteristics and traits, studies that are more recent include women as research participants. These same contemporary studies make comparisons of attributes and effectiveness between men and women as leaders. Many studies since the mid-1980s have reported differing results as to the impact gender plays on the perception of effectiveness and attributes. While many supervisors of leaders report that when all is equal they perceive no difference in the leadership capabilities of those leaders, the direct reports perceived a difference. Ultimately, these perceptions influence the perceived effectiveness (and productivity), which also influence a leader's potential for promotion, career opportunities, challenging assignments and overall impact to the organization.

To know and understand that the biases exist is critical as educators and organizational development specialists strive to integrate leadership training interventions into the student's academic programs and employee development plans. The task to develop effective leadership training and curricula to impact and improve leadership skills is not only compounded by the differences in leadership theories and models (and subsequent leadership inventories and assessments), but also by the impact of gender perceptions of leadership effectiveness and attributes.

The additional challenge in research conducted on leadership attributes and effectiveness is that many studies were conducted with students or leaders in simulations rather than using leaders within an organizational context. This study provides the

opportunity to examine the perceived leadership effectiveness and leader attributes within an organization (not in a simulation or classroom), utilizing 360° instruments that are based on current leadership theories. The study analyzes both perceived attributes and behaviors of male and female leaders as viewed by their direct reports, peers, and supervisors. To analyze gender bias and leadership is a complex and provocative process and the opportunity to study gender bias of leader effectiveness and attributes within a variety of business environments adds interest for this study.

CHAPTER III

METHODOLOGY

Introduction

This chapter reviews the details of the overall methodology used in this study. Included in this section are the research hypotheses, demographics of the population, the variables, instrumentation of the study, a detailed review of the assessment instruments, the data analysis, and the internal and external threats to the validity and reliability of the study.

Purpose

The purpose of this study was to investigate whether perceptions of effectiveness and attributes by male and female raters (supervisors and observers) differs for male and female leaders. Using two leadership assessment instruments, this study examined perceptions of overall leadership effectiveness as well as comparisons of specific leadership attributes.

The literature review indicated a range of environments, conditions, and participants used in the research of leader attributes and effectiveness. While many leadership studies take place within an organization, most social, psychological research of this type takes place in laboratories or in simulated environments without the input of supervisors, direct reports, or peers. The advantage of studies that take place in an

organization is that the identity of the leader is known and therefore the perceptions of effectiveness or attributes by the rater (supervisors, direct reports, or peers) are applied to a specific leader. Studies occurring in laboratories have participants interacting with strangers in simulated roles and situations, which increases the potential for ambiguous results (Eagly & Johnson, 1990). While studies in all of these environments contribute to the body of knowledge on leader attributes and effectiveness, the value of having leadership research conducted within the context of the organization with real leaders, supervisors, direct reports, and peers is very useful to determine the true impact that gender currently has on perceptions of leadership.

This study took the investigation of leader attributes and effectiveness out of the "classroom" or laboratory and challenges the hypotheses in an organizational environment. To increase generalizability, this study used practicing leaders in a variety of businesses and industries. Special attention was placed on the gender of the raters and the leaders to determine the impact gender plays on the perception of leader attributes and leader effectiveness of the male and female leaders.

Research Hypotheses

The review of literature showed there is data supporting that male and female raters perceive leader attributes and effectiveness for male and female leaders through different eyes. This study analyzed the perceptions of the raters: direct reports and peers (observers) and supervisors of leaders on the attributes and effectiveness of the leader.

This study used a leader attributes and a leader effectiveness assessment in a variety of business environments to test the following hypotheses:

Leader Effectiveness - Hypotheses

1. Male leaders are rated higher than are female leaders in leader effectiveness by male and female observers.
2. Male and female leaders are rated as equally effective leaders by male and female supervisors

Leader Attributes - Hypotheses

3. Male leaders are rated higher on leader attributes than are female leaders by male and female observers.
4. Male and female leaders are rated equally on leader attributes by male and female supervisors.

Null Hypotheses

The null hypotheses generated from the research hypotheses are:

1. There is no significant difference in how male leaders are rated compared to female leaders in leader effectiveness by male and female raters.
2. There is no significant difference in how male and female leaders are rated in effectiveness by male and female supervisors.
3. There is no significant difference in how male and female leaders are rated on leader attributes by male and female observers.

4. There is no significant difference in how male and female leaders are rated on leader attributes by male and female supervisors.

Variables

"An independent variable is a variable that is thought to influence another variable, the dependent variable" (Norusis, 2002, p. 143). The independent, moderating variables in this study were the gender of raters (observers and supervisors) and leaders. Categorical variables in this study were gender, type of business, ethnicity, educational background, and managerial level. Continuous variables were age and years in a leadership position.

The focus of this study was the independent variables (IV) of gender. This included gender of the raters (peers, direct reports, and supervisors) and the gender of leaders. The independent variable of gender is considered an attribute or measured independent variable since it cannot be manipulated – it is a pre-existing characteristic of the person (Morgan, Leech, Gloeckner, & Barrett, 2004).

The dependent variable (DV) is "an attribute or characteristic that is dependent on or influenced by the independent variable. They may be called the outcome, effect, criterion, or consequence variables" (Creswell, 2002, p. 136). The dependent variables in this study were the ratings on the Leader Effectiveness Index (LEI) (Moss, Jensrud, Johansen, & Presill, 1989, 1993) and the Leader Attributes Inventory (LAI) (Moss, et al., 1989, 1993) for the leaders as rated by the observers (direct reports and peers) and supervisors. The dependent variables were continuous variables.

Table 3.1 lists all of the independent variables and dependent variables in this study. The primary variables of the study were the independent variable of gender and the dependent variable of ratings of the LEI overall leader effectiveness scores and the LAI attributes. The confounding variables of educational background of leaders and years of experience of leaders were also considered. The variables of age, ethnicity, and management levels were used for demographic purposes.

Table 3.1 Table of Independent and Dependent Variables in Study

Independent Variables	Dependent Variables
Gender of Leaders: Male and Female	Ratings of Leader Effectiveness from
Gender of Raters (Observers and Supervisors): Male and Female	LEI Overall Score
Educational Background of Leaders	Ratings of Leader Attributes on the 37 Attributes from LAI
Years of Experience	

Participants

The current number of people in the United States holding managerial positions is over seven million individuals in 30 different occupations (Statistics, 2002). This study did not attempt to conduct a random sample of this population but rather this study was conducted using a non-random, convenience sample approach. While the results of this study might not be generalizable to the entire population of managers in the United

States, the information adds to the body of knowledge on the perceptions of leader attributes and effectiveness. This study used an approach not taken in most leadership studies. This study used a 360° assessment process and analyzed results for each leader by having both male and female raters (direct reports and peers as well as supervisors) rate their attributes and effectiveness. This was also conducted in organizational settings as opposed to a simulated or classroom setting.

This study used four organizational sites and a group of leaders attending classes at a local college to elicit a sample of 204 leaders. This sample size shows a 95% confidence interval and a sampling error of 6 % (Creswell, 2002). Of the 271 leaders that signed the informed consent forms to participate, 267 (99%) completed the assessment process (returned the two leadership assessments). Of these leaders, 204 or 76% matched the criteria of the study (had at least one male and one female return the assessments and the leaders were rated "somewhat effective" to "extremely effective" on the LEI assessment).

The sample used in this study consisted of male and female leaders working in accounting, health care, financial services, retail, manufacturing, and insurance organizations. To be included in the study each leader had, at minimum, one male and one female observer (direct reports and/or peers) to evaluate their attributes and effectiveness. Not all leaders in the study had supervisors rate their effectiveness. Table 3.2 shows a breakdown by gender of the leaders in the sample.

Table 3.2 Breakdown by Gender of Leaders in Sample of Study

Industry	Total	Number of Managers in Study	
		Female	Male
Financial Services	13	6	7
Health Care	71	59	12
Insurance	24	11	13
Manufacturing	79	10	69
Misc. Industries	17	8	9
Total	204	94	110

A total of 149 leaders (72%) had supervisors rate their attributes and effectiveness using the two leadership assessments, the LAI and LEI. The visual model (Figure 3.1) depicts the subject set for this study.

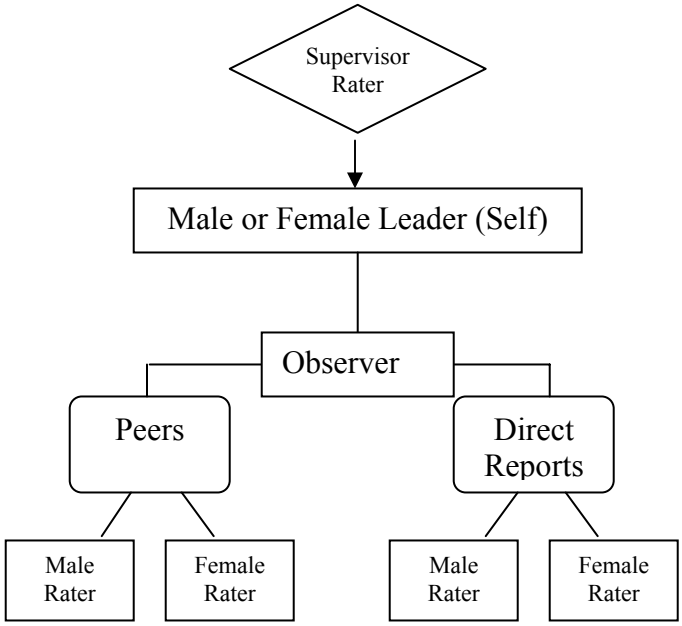


Figure 3.1 Subject Set for Study

Participants in the study completed the informed consent paperwork (see Appendix C). In addition, each participating organization used in this study provided written consent for employees in their company to participate in this research (see Appendix D). The Institution Review Board approved the research protocol for this study (see Appendix E). In consideration for participating in this study, all volunteer leaders received a written, Personal Feedback Report (see Appendix F) and were invited to participate in a two-hour workshop. At this workshop, the leaders reviewed their Personal Feedback Reports. In addition, the researcher assisted participants in preparing a Personal Development Plan (see Appendix G) based on the feedback from both assessments.

The primary ethical consideration in this study was to maintain anonymity for each rater (observer) and leader. This was accomplished in several ways: 1) the feedback report given to each leader did not include scores for assessments returned by less than three direct reports or peers. These scores were averaged into the scores of the other group of observers (either direct report or peer group) and 2) the Personal Feedback Reports were only distributed to the leader/ratee; no copies of the individual reports were distributed to officials within the participating organization. The supervisor's ratings were reported separately since supervisors routinely provide feedback to the leaders/participants. In 360° assessments, it is common for the supervisor's score to stand-alone since the supervisor also provides the direct, written feedback in the annual

performance review (Alimo-Metcalfe, 1998a; Atwater, Waldman, & Brett, 2002; Beehr et al., 2001).

This process of reporting the feedback only to the individual leader insured that at no time would the feedback information be used for appraisal, promotion, or salary decisions. The organizations were also aware that at no time would they receive the individual reports of leaders from their organization; a condition that was discussed in the organizational informed consent letter.

Research Sites

A regional health care organization was the first site, which had over 185 individuals in leadership positions as defined by hospital management. This included individuals in any supervisory positions. The researcher presented an overview of the study at three separate meetings. All attendees were invited to participate in the study with 111 (60%) of the leaders agreeing to be part of the assessment process. Of the 111 leaders, 101 or 91 % completed the assessment process (54% of the total leader population). Of the 101 leaders who completed the process, 71 (70%) had the required data (had both male and female observers and were rated "somewhat effective" to "extremely effective" scores of effectiveness on the LEI) to be included in the study. The number of leaders who met the criteria was lower in the health care group due to the high volume of female raters in the health care environment. Many leaders did not have males as either direct reports or peers. The health care organization used both a web format and

paper and pencil format to complete the process. The use of the various survey methods was due to employee access to the Internet.

The insurance company site consisted of 37 invitees solicited through the human resource office. Of the 37 invitees, 76% or 28 leaders agreed to participate through the informed consent process and of those, 86% or 25 completed the assessment process and 24 leaders (96%) met the study criteria (both male and female observers and "somewhat effective" to "extremely effective" scores of effectiveness). This organization used the web environment to complete the surveys.

Area leaders attending classes at a mid-west business school were also invited to participate in the study. The director of the MBA programs granted permission for the researcher to meet with the leaders at the end of their class periods. Of the 55 leaders contacted, 42% or 23 leaders completed the informed consent process. Of the 23 who consented, 19 or 83% completed the assessment process. Of those leaders who completed the process, 17 leaders (89%) met the research criteria (both male and female observers and "somewhat effective" to "extremely effective" scores of effectiveness). This group of leaders consisted of individuals from accounting services, banking, health care, social services, manufacturing, retail, and professional services. Participants from this group used a combination of the web surveys and paper and pencil surveys depending upon access to the Internet by their raters.

A regional bank's human resource department representative invited business units to participate in the study. The mortgage company of the bank agreed to

participate. Of the 15 who were invited, 15 (100%) completed the informed consent process and 13 (87%) met the research criteria (both male and female observers and "somewhat effective" to "extremely effective" scores of effectiveness). The mortgage company used only the web environment for the survey process.

The final group of volunteers came from a manufacturing organization with plants and offices in six states. Over 150 leaders were invited to participate with 104 (69%) completing the informed consent process. Of those, 79 leaders (76%) met the research criteria (both male and female observers and "somewhat effective" to "extremely effective" scores of effectiveness). Leaders and their raters, depending upon the location of the leaders (corporate offices or plants), used the web survey (corporate offices) or paper and pencil surveys (plants) to complete the process.

Sample Demographics

The subjects used in this study were in leadership positions representing a range of managers. Table 3.3 depicts the specific management levels for each of the survey sites. Leaders in the sample ranged from supervisors to executives in the management ranks with the highest percentage (46%) of leaders ranked as mid-level managers.

The sample included male and female leaders. Table 3.4 shows the breakdown of leader gender as well as gender of supervisors and observers for each survey site.

To be included in the study, the average "leader effectiveness" score from all raters of the leaders needed to be 3.5 or higher on the LEI assessment out of a six-point

scale. This was to insure that each participant in the study was deemed to be a "somewhat effective" to a "very effective" leader. Since this study examined if gender perceptions influence perceptions of leader effectiveness, only effective leaders were included.

Table 3.3 Management Levels of Leaders in Sample

Industry	Total	Supervisor	Manager	Senior Manager	Executive
Financial Srvc.	13	0	9	3	1
Health Care	71	13	14	29	15
Insurance	24	0	17	6	1
Manufacturing	79	12	45	16	6
Misc. Industries	17	1	9	3	4
Total	204	26	94	57	27

Table 3.4 Gender of Leaders and Raters by Industry Groups

Industry	Gender							
	Leader		Supervisor		Direct Report		Peer	
	Female	Male	Female	Male	Female	Male	Female	Male
Financial Srvc.	6	7	1	9	12	10	34	36
Health Care	59	12	44	7	47	52	52	47
Insurance	11	13	9	10	12	14	30	28
Mfg.	10	69	1	60	65	46	64	83
Misc. Indus.	8	9	3	5	4	4	20	20
Total	94	110	58	91	140	126	200	214

The ethnic breakdown of the sample including both leaders and raters, showed a high percentage of white subjects (91%). Not all leaders in the study indicated their ethnicity; therefore the *n* equals 198. Table 3.5 depicts the breakdown of ethnicity of the leaders in the sample. This high percentage of white subjects is indicative of the research sites and the ethnic diversity of all employees at the sites. Future studies need to take into account a more diverse ethnic sample of leaders.

Table 3.5 Ethnic Breakdown of Leaders by Industry

Industry	African American	Asian	Native American	White	Other
Financial Srvc.	0	0	0	12	0
Health Care	3	0	0	63	0
Insurance	0	0	0	25	0
Manufacturing	0	1	1	74	2
Misc. Industries	0	2	0	15	0
Total	3	3	1	189	2

n = 198

The number of years the leaders had in leadership positions ranged from 0 – 5 years to over 26 years. Table 3.6 illustrates the breakdown in years in leadership positions of the leaders in the sample by research sites. One hundred and ninety leaders responded to this demographic question. This table indicates that the sample included leaders with a range of experience.

Table 3.7 breaks down the variable of years of experience into male and female leaders. While there were some differences in the percentages of male and females in the various experience groups, in general, there was an even spread.

Table 3.6 Years in Leadership Position for Leaders by Industry

Industry	Years in Leadership Position					
	0-5	6-10	11-15	16-20	21-25	26+
Financial Srvc.	1	2	2	3	2	3
Health Care	24	14	6	7	14	2
Insurance	12	2	1	4	2	2
Manufacturing	22	19	14	5	2	8
Misc. Industries	1	1	7	7	0	1
Total	60	38	30	26	20	16

$n = 190$

Table 3.7 Years in Leadership Position by Gender

	0-5	6-10	11-15	16-20	21-25	26+	TOTAL
Female Leaders	34%	19%	13%	12%	19%	2%	90
	31	17	12	11	17	2	
Male Leaders	29%	21%	18%	15%	3%	14%	100
	29	21	18	15	3	14	
Total Leaders	32%	20%	16%	14%	10%	8%	190
	60	38	30	26	20	16	

The leaders' ages in the sample ranged from 17 to 70 years old with the average leader age of 50.7. Of the 204 leaders is in this study, 200 leaders reported their ages.

Table 3.8 delineates the frequency of the ages of the leaders in the sample by industry. Forty-one percent of the leaders were in the 41 to 50 year range.

Table 3.8 Age Range of Leaders by Industry

Industry	Leader Age Range				
	17-30	31-40	41-50	51-60	61-70
Financial Srvc.	0	1	7	3	2
Health Care	3	8	31	24	0
Insurance	0	7	10	7	1
Manufacturing	0	27	27	21	4
Misc. Industries	2	5	7	3	0
Total	5	48	82	58	7

n = 200

The educational level of the leaders in the study ranged from high school to doctoral or professional degrees. Table 3.9 illustrates the educational levels of the leaders included in the study. For those 199 leaders who indicated their educational level, 64% (*n* = 128) had at least a bachelor's degree.

Table 3.9 Education Level of Leaders by Industry

Industry	High School	Associate Degree	Bachelor's Degree	Master's Degree	Professional Degree/PhD
Financial Srvc.	3	2	6	1	1
Health Care	9	11	32	12	3
Insurance	6	0	17	0	1
Manufacturing.	19	10	31	18	1
Misc. Indus.	7	4	1	1	3
Total	44	27	87	32	9

Table 3.10 indicates the leaders in their educational levels by gender. As with the distribution of the leaders' experience, the distribution of leaders in the various educational levels, while not identical, appeared to be evenly distributed between males and females.

Table 3.10 Educational Levels of Leaders by Gender

	HS	Ass. Degree	Bachelor	Master	Prof. Degree, Ph.D. or MD	Total
Female Leader	26%	18%	42%	12%	2%	91
	24	16	38	11	2	
Male Leader	19%	10%	45%	19%	8%	108
	20	11	49	21	7	
Total	22%	14%	44%	16%	5%	199
	44	27	87	32	9	

Instrumentation

Surveys are a method to collect information from a group in order to "describe some aspects or characteristics (such as abilities, opinions, attitudes, beliefs, and/or knowledge) of the population of which that group is a part" (Fraenkel & Wallen, 2003, p. 396). Survey results can also describe the "relationship among variables or compare groups" (Creswell, 2002, p. 421). Surveys are most suitable when a researcher needs the theoretical construct that "seeks information to answer research questions and to test hypotheses about the propensities and predispositions of people" (Alreck & Settle, 1995, p. 5). Surveys collect information from a sample of the population rather that a similar method, census, which collects information from the entire population (Babbie, 1973).

There are two survey designs: cross-sectional and longitudinal (Creswell, 2002; Fraenkel & Wallen, 2003). The longitudinal design collects data over time with the same population, whereas the cross-sectional design compares "two or more educational groups in terms of attitudes, beliefs, opinions, or practices" (Creswell, 2002, p. 398). The proposed survey design was cross-sectional since it involved several groups of participants at one point in time. The rationale to use this design was based on the focus of this study, which was to investigate perceptions of leadership effectiveness and attributes not changes in attitudes of leadership over time.

This study sought to assess perceptions of raters as they assessed their leader's effectiveness as a leader and specific attributes of leadership. While this information could be collected using other research methods, the survey method is a "quicker, less expensive, or more accurate way" (Alreck & Settle, 1995, p. 3) to collect the data and it is one of the most commonly used methods in educational research (Creswell, 2002; Fraenkel & Wallen, 2003). Surveys are useful because they allow collection of data from a larger number of people. Surveys rely on an individual's self-report of their attitudes. As a result of this method, the validity of the information is contingent on the honesty of the respondents (Gall et al., 2003; Mertens, 1998).

The primary method for collecting information in surveys is asking questions. Thus, surveys become a useful tool and play a key role in helping to obtain "a better understanding of the thoughts, feelings, and behaviors" (Church & Waclawski, 2001, p. 2) of individuals. More specifically, a survey can also be used to assess or measure

specific behaviors or conditions that exist in an organization, trends in behaviors and attitudes rather than explanations (Fraenkel & Wallen, 2003). The LEI and LAI was used to assess perceptions of attributes and effectiveness and is an appropriate application since this study measured perceptions of leader effectiveness and attributes without explanations of the causes.

Methodology of This Study

The researcher contacted potential organizations to access the leaders used in this study. Contact was made through the human resource departments. Once access was granted, the researcher worked with a company coordinator to determine the best method of survey distribution (e.g., multiple meetings, web survey versus paper survey, etc). In most cases, a letter of invitation or email was distributed to leaders in specific departments and locations inviting the leaders to attend an informational meeting.

In other organizations, the researcher attended scheduled management meetings to invite leaders to participate. At these meetings, the researcher discussed the purpose of the study and the informed consent process. In addition, the researcher gave a brief explanation of the LEI and LAI assessments, reviewed the instructions for the 360° process, and described the feedback report and feedback meeting format. Leaders at these meetings were invited to participate in the study by completing the informed consent letter and returning a copy to the researcher at the end of the meeting.

The researcher then assigned a code number to all volunteer/leaders. All volunteers/leaders were given a packet of instructions that included their personal code

number. The packet also included instructions (see Appendix H) and informed consent letters for the leader's supervisor, peers, and direct reports (see Appendix C).

The LEI and LAI originally were paper and pencil surveys. A web version was developed for ease of access, distribution of surveys to raters, and data input. The instructions included a web address for the two assessments. The researcher sent follow-up emails to all leaders participating in the study with a link to the web address. This email invited the leaders to forward the web address to their raters for ease (and accuracy) of accessing the web survey site.

Once an individual completed the survey at the web site, the leader or rater needed to hit the "send" button and the survey process was completed. The identities of the respondents were completely anonymous.

The Assessment Instruments

The Leader Effectiveness Index (LEI) and the Leader Attributes Inventory (LAI) were developed with the intent to provide leaders information about which leadership attributes they possess and how effectively they use these leadership attributes. The summary results of the inventory are used for developing and evaluating leadership development activities as well as reflective, developmental information for each leader who participates in the assessment process (Moss, Johansen, & Presill, 1991).

Both the LEI and the LAI were initially a paper-pencil, multi-observer 360° assessments. In this study, the use of web-based software, 2way57 was also used to

present both surveys to participants as well as collect the data. For ease of participant use in this study, the LEI and LAI were combined into a single web site or paper survey with two separate sections and rating legends. The web-based format consisted of 7 LEI behaviors and the 37 LAI attributes. In addition, the assessment included demographic questions about the raters and/or the leader.

The Personal Feedback Report generated from the LEI and LAI was shared with the leader and used for developmental purposes for that leader. This report is a useful tool in a performance management process since it provides relevant data to the leader from multiple perspectives. The LEI and LAI are typically administered together to all participants since both instruments provide a view on which attributes are present and how effectively the leader is exhibiting the broad tasks of leadership (Moss et al., 1994a).

The Leader Effectiveness Index (LEI)

The LEI is a seven-item assessment that takes approximately five minutes to complete. The first six items are statements of broad leadership tasks or responsibilities of a leader. The seventh item is a question relating to the overall effectiveness of the leader being rated (Moss et al., 1994b).

This seventh item, the overall rating of effectiveness, was used as one of the primary dependent variables in this study for leadership effectiveness. The seventh item of the LEI (Moss, et al., 1989, 1993) asked, "Overall, how effective is the leadership performance of the person you are rating?"

The LEI used a six-point scale to rate the leaders effectiveness for a specific statement. The scale ranged from a rating of "1" which was "not effective" to rating of "6" which was "extremely effective."(Moss et al., 1994b, p. 41)

Reliability and Validity of the Leader Effectiveness Index – LEI

Reliability.

The LEI was administered one week apart to two groups of graduate students (n = 37, n = 38) majoring in vocational education with a test-retest correlation coefficient of the average rating on the six tasks of r = .94 and .93. The test-retest coefficients for the summary item, item seven, were r = .95 and .92 (Moss et al., 1994b). The LEI has an inter-rater reliability of the average ratings of the first six LEI items/tasks as .86. The inter-rater reliability was determined by reporting data from three to five raters for each of the 551 leaders (Moss et al., 1994b).

Using Cornbach's *alpha* as the statistic to assess internal consistency (extent to which the items comprising the instrument are measuring the same concept), the LEI's *alpha* was .92 using the average of three to five ratings by observers. A sample of 551 leaders participated in this study where norms were also established for chief vocational administrators, vocational department heads, and vocational teacher leaders (Moss et al., 1994b).

Validity.

The LEI was studied with vocational administrators as well as graduate students majoring in business and vocational education. In every administration of the LEI no

participant reported that the leadership concepts were inappropriate (Moss et al., 1994b) which supports the face validity of the LEI.

Several studies were conducted to assess construct validity for the LEI. The first study determined the actual criteria used by the observers to assess the leader's effectiveness. In this study, the observers were instructed to describe or identify events that describe the behaviors of effective leaders. Using a form of content analysis of the data, the events were classified into eleven categories. The categories with the highest frequency were used to validate five items of the LEI. The sixth item, inspires a vision was added to the five descriptions since it was consistently found in the literature (Moss et al., 1994b).

Another study had the LEI administered to two groups of graduate students comparing the average score of the first six items and item seven, the overall score. This study had a correlation between the two samples for the six items of $r = .91$ and .92.

The average difference between these scores for items one through six and the score for item seven (which is the composite score) was only .054. This study confirmed that the six tasks were measuring the perceptions of effectiveness of a leader's performance (Moss et al., 1994b).

Leader Attributes Inventory (LAI)

The LAI consists of "37 attributes-characteristics, knowledge, skills and values possessed by individuals – that predispose successful performance as a leader" (Moss et

al., 1994a, p. 1). The LAI was designed to be given to multiple observers to compare the leader's self ratings with observer's rating; compare the average of the ratings by the observers for each attribute with an appropriate norm group; and predict the level of leadership performance of the ratee in his or her norm group (Moss et al., 1994b).

The LAI also uses a six-point scale to assess leaders possessing or exhibiting the attributes from "very undescriptive" to "very descriptive" of the leader (Moss et al., 1994a, p. 61). The LAI is also useful when given as a pre-test and post-test before and after leadership development interventions.

Reliability and Validity of the Leader Attributes Inventory – LAI

Reliability.

Three studies conducted between 1990 and 1991 measured the test-retest reliability (the most common reliability method) of the LAI with participants being tested one to three weeks apart. A test-retest score of "at least .40 with .69 to .70 being considered quite high" was described by Velsor and Leslie in 1991 as the target researchers look for when determining reliability evidence (Moss et al., 1994a, p. 22).

The studies conducted on the LAI showed an average coefficient of .74 to .78 when measured one to three weeks apart. The coefficient of the average overall score of the 37 attributes was .97, which shows that the LAI has very high test-retest reliability (Moss et al., 1994a). Another measure of internal consistency had been made on the LAI using Cornbach's alpha. For two estimates of internal consistency the LAI had an alpha of .97 and .98 (Moss et al., 1994a).

The inter-rater reliability (agreement within the groups of raters for each leader) ranged from .75 to .84. The coefficients for the average score of the 37 attributes were .91 for both groups (Moss et al., 1994a).

Validity.

The LAI was found to have face, content, construct validity as well as concurrent validity when tested with the Multifactor Leadership Questionnaire (MLQ) of Bass and Avolio. The MLQ is considered to be one of the more comprehensive questionnaires for assessing transactional, transformational and laissez-faire leadership qualities (Moss et al., 1994a).

Various studies using the LAI were conducted with masters and baccalaureate levels students in vocational education, business, college instructors, and vocational educational administrators (Moss et al., 1994a). In all of these studies using the LAI assessment, no comments were made on items being inappropriate for leadership.

Concurrent validity was determined when the observer ratings correlated with the same observers completing the LAI and the MLQ. In 1990, the LAI was administered to 282 full time vocational instructors where they related all the leader attributes to four broad categories of leader effectiveness with a level of significance of $p = .001$. The four categories of leader effectiveness were: inspire a vision, foster collaboration and ownership, exercise power effectively, and enable others to act, and set the right context for the organization. In the same study, the 282 participants completed the MLQ about their vocational administrators. The scores on the LAI and the four separate

transformation scales of the MLQ had $R = .83$ to .92 and the contingent reward scale of the MLQ was $R = .74$.

For non-leadership qualities (laissez-faire leadership in the MLQ), the $R = -.69$ (Moss et al., 1994a). This also supported concurrent validity since laissez-faire leadership is the "absence of leadership" (Moss et al., 1994a, p. 30), therefore a negative correlation was an expected result.

The LAI was administered to research groups and interviews, focus groups and reports were used to collect data with results showing that the construct validity of the LAI was high as it related to measuring the National Center for Research in Vocational Education's (NCRVE) concept of leadership (Moss et al., 1994a). Attributes were shown to have "high internal consistency, indicating they are assessing the same concept – leadership – and they have the desired relationships with MLQ scores" (Moss et al., 1994a, p. 39). This was accomplished by evaluating 17 educational programs through use of the LAI, questionnaires, reports, interviews, and focus groups (Moss et al., 1994a).

In the Jensrud (1995) study, a factor analysis was conducted on the LAI to determine if the 37 attributes could be grouped within similar constructs to expedite future analysis of the attributes. Five sub-scales were determined to describe the 37 attributes after a component analysis was conducted employing communalities of 1.0, Kaiser criteria for number of factors and a varimax rotation. The five sub-scales are: drive, organization, trust, interpersonal, and tolerance (Jensrud, 1995) (see Table 3.11).

Table 3.11 LAI Attributes

Drive	Organization	Trust	Interpersonal	Tolerance
Initiating	Time Management	Ethical	Delegating	Tolerant of Frustration
Visionary	Organizing	Personal Integrity	Team-Building	Even Disposition
Enthusiastic, Optimistic	Dependable, Reliable	Committed to the Common Good	Appropriate Use of Leadership Styles	Stress Mgt.
Energetic, with Stamina	Information Management	Sensitively, Respect	Coaching	Adaptable
Courageous, Risk-Taker	Intelligent, with Practical Judgment	Accountable	Motivating Others	Tolerant of Ambiguity
Achievement Oriented	Willing to Accept Responsibility	Ideological Beliefs	Conflict Mgt.	Communication
Networking	Decision Making	Appropriate To Group		
Insightful	Planning	Confident		
Persistent	Problem Solving			

(Jensrud, 1995)

Web Survey Process Versus Paper and Pencil

Using the web survey, while it proved to be an inexpensive and time effective method (for both the raters as well as the researcher) for data collection, it also proved to be problematic. Three organizations had firewalls that prevented leader and rater access to the survey site. While these organizations created a bypass to the site, the bypass had a specific end date. In all cases, repeated contact was made with the information

technology groups to have them extend the end date of survey and rater access. Less than 2% of the respondents did not fill in the code number in the web survey that also caused for loss of some data. The leader's code number was printed on the paper survey which eliminated this issue for the paper version.

For those organizations that did not have convenient web access for their employees to complete the LAI and LEI assessments, paper copies of the assessments and a self-addressed stamped envelope was included in the leader packets. For those individuals who used the web-based survey, the self-addressed, stamped envelope to return the survey to the researcher was unnecessary.

Data Collection Process

The coding process for the survey was a five-digit code number. Each organization had a unique first digit (from one through five). Participants using the web environment had their surveys coded with the second digit in the series as a "0" and those who used the paper and pencil version were coded with the second digit as "1." Each leader who completed an informed consent form was assigned a three-digit number that was the last three digits of the five-digit code. For those participants that used the web survey, the coding went as follows:

Ratee #1 from Organization #1 was 10001

Ratee #2 from Organization #1 was 10002

Ratee #3 from Organization #1 was 10003

and so on…

Ratee #1 from Organization #2 was 20001

Ratee #2 from Organization #2 was 20002

and so on….

For those individuals that used the paper and pencil surveys, the coding was:

Ratee #1 from Organization #3 was 31001

Ratee #2 from Organization #3 was 31002

Ratee #3 from Organization #3 was 31003

and so on…

Each leader selected the direct reports, peers, and supervisor who would participate in the study. The leaders distributed rater instructions and informed consent letters to four or more individuals who reported to them and four or more individuals at the peer level who had direct knowledge of their leadership abilities. In addition, the leader distributed the supervisor instructions and informed consent to their immediate supervisor. All raters in this process were informed that their participation was voluntary and had risks associated with it.

For those raters in the study who completed paper copies of the assessment, the researcher transferred the assessment data from the paper survey to the web, survey site for tabulation. Once all leaders and their raters completed the assessments, the data from the web site was downloaded into excel spreadsheets to produce the personal feedback reports. In addition, all data for those leaders that were rated "somewhat effective" to "extremely effective" on the LEI was transferred to SPSS for statistical processing. All

leaders (except for one) who participated in this study were rated "somewhat effective" to "extremely effective."

This study attempted to equalize the number of raters for each leader. The distribution of raters to leaders is depicted in Table 3.12. If the leader had only one rater of a particular sex and multiple raters of the opposite sex, the researcher randomly chose one rater from the opposite sex to include in the study. If the one rater was from the peer group, the opposite sex rater was chosen randomly from the peer group. If the one rater was from the direct report group, the opposite sex rater was chosen randomly from the direct report group. The researcher eliminated raters not chosen in the random selection, matching process. If a leader had two female raters and three male raters, a male rater

Table 3.12 Distribution of Raters for Each Leader in Sample

Industry	Direct Reports		Peers	
	Female	Male	Female	Male
Financial Srvc.	12	10	34	36
Health Care	47	52	52	47
Insurance	12	14	30	28
Mfg.	65	46	64	83
Misc. Indus.	4	4	20	20
Total	140	126	200	214

n = 340 female raters

n = 340 male raters

was randomly chosen to be omitted from the study (and vice versa if the leader had three male raters and two female raters). This procedure produced an equal number of raters of each gender for each leader. Leaders therefore, could have one female and one male

rater, two female and two male raters, etc. In total there were 680 raters (peers and direct reports) rating 204 leaders. If the leader had more than one matched set (male and female) of raters in the observer category, the scores of each gender were averaged and those averaged scores were used in the study.

Data Analysis

Statistical tests to analyze the research questions and the four hypotheses were utilized to conduct the data analysis. The testing methods used not only provided the data to answer the research questions, but also the data derived from the statistical methods could be used for future studies utilizing the two research instruments, the LAI and the LEI.

Since this study examined differences between the independent variables of male and female observers and the male and female leaders a two-way ANOVA was used as the initial statistical test. The two-way ANOVA was used to analyze the male and female observers of male and female leaders on the LEI scores for overall leader effectiveness (Hypothesis #1). The two-way ANOVA was also used to examine the LEI scores of male and female supervisors rating male and female leaders (Hypothesis #2). The two-way MANOVA was used to analyze the LAI scores of the male and female leaders as rated by their male and female observers (Hypothesis #3), which tested simultaneously, the differences of the dependent variables of the male and female observers' scores on the 37 LAI attributes (see Table 3.11) for male and female leaders. Hypothesis #4 used the

two-way MANOVA to analyze the LAI scores of the male and female leaders as rated by their male or female supervisors.

To use the various statistical procedures, certain assumptions about the data must be met. Parametric tests such as the analysis of variance (ANOVA) and multivariate analysis of variance (MANOVA) need to have normal distributions of the data. These tests however, have a particular robust quality that allows the results to have statistical validity even when the data is not normally distributed (skewed) (Morgan et al., 2004). Finally the variances of the groups to be compared must not be substantially different.

The final assumption for the data in this study is that the independent variable of the group could not have any direct relationship with each other (Morgan et al., 2004). Since the group consisted of male and female leaders with no connection to the opposite gender, this assumption was met. The male and female observers while having a connection with a specific leader had no connection with each other in their observations or ratings of that leader. This relationship also met the assumption.

Threats to the Study's Internal and External Validity and Reliability

Participants were invited to participate in this study with the opportunity to have the feedback from two 360° assessments reported back to them. The purpose of this feedback was to be used for personal development. Research has shown that the methods of deploying 360° assessments can impact the results. Variables that can impact the assessment process include instrument design, feedback reporting process, administration

and distribution of instruments, and support for the performance improvement process (Nijhof & Jager, 1999). Instructions for the purpose, administration, and distribution of the assessments were written to minimize these threats (see Appendix H). In addition, participants in this study had a commitment through the informed consent process, to maintain confidentiality of the individual scores from the researcher (see Appendix C).

The study had validity if the results of the study were due to the relationship of the variables on one another and not some outside influence (Tuckman, 1994). This study was not without threats to the internal validity and reliability of the results and process. This researcher noted that no research site used in this study was going through any major or enterprise-wide organizational changes (e.g., layoffs, mergers, etc) that might influence employees' perceptions of leadership.

Another aspect that could influence the results was if the observers (raters) feel as if the leader was coercing them to participate in the study. Specific directions were supplied to each leader to describe how they should approach each observer (see Appendix H). While this interaction cannot be controlled completely, these directions mitigated this concern.

Another threat to the reliability of this study was the perceived purpose of the assessment; developmental or evaluative. As stated earlier, participants respond differently for a developmental assessment than they do for an evaluative assessment (Cacioppe & Albrecht, 2000). Since it was stressed that the assessments were for developmental purposes, participants were more likely to give honest feedback rather

than inflated (positive or negative) feedback. Instructions to both the leader and observers clearly stated that the purpose of the assessments were for developmental information for the leaders.

Lack of responses from all the target groups (leader, direct reports, and peers) or for all target groups having both male and female respondents also affected the validity of this study. Because participation in this assessment process was voluntary and risks were clearly spelled out, a higher level of responsiveness was expected. In general, it was found that most leaders wanted feedback on their performance. Research has shown that leaders/ratees prefer to receive feedback from individuals in addition to their supervisor (Collins, 2000). "Employees are no longer satisfied with a single performance rating from a boss they may report to only on paper. As employees become more responsible for managing their own careers...they are learning that to remain competitive, they must continually monitor their skills and choose what areas to develop further" (Collins, 2000, p. 8).

A study at Coca-Cola found that 94.8% of leaders felt that feedback should be from both supervisors and co-workers. In addition, this study found that over 95% found the results of the feedback useful and the 360° assessments should be continued (Cacioppe & Albrecht, 2000).

A 360° assessment provides useful information about strengths and identifies areas that need improvement. For a leader, the opportunity to compare multi-source feedback with one's own perceptions is a huge developmental benefit. Improved

communication between employees and a signal that the organization desires and is committed to improved feedback mechanisms are benefits to both the organization and employees (Collins, 2000).

Summary

This chapter described the process used to conduct a study that evaluates leader attributes and effectiveness in a business environment. The main questions of this study and the specific hypotheses and null hypotheses were detailed. The demographics of the sample were described using data from each respondent's survey. In addition, this chapter reviewed the research variables and the statistical tests that were used to appropriately respond to the hypotheses.

Findings from this study will help to provide data regarding the presence of gender bias towards leader effectiveness and attributes. If found, the data could lead to a better understanding for which attributers or behaviors gender bias exists. This information could help to determine educational content for leadership and management development programs, as well as the curricula in academic programs that focus on leadership development for students to produce future leaders. In addition, gender bias issues, if they exist, can be addressed through formal corporate interventions. Finally, the reasons for the bias can be the bases of further studies of leadership.

CHAPTER IV

RESULTS

Introduction

The previous chapter indicated the methodology used in this study to test the following hypotheses:

Leader Effectiveness - Hypotheses

1. Male leaders are rated higher than are female leaders in leader effectiveness by male and female observers.
2. Male and female leaders are rated as equally effective leaders by male and female supervisors

Leader Attributes - Hypotheses

3. Male leaders are rated higher on leader attributes than are female leaders by male and female observers.
4. Male and female leaders are rated equally on leader attributes by male and female supervisors.

The purpose of this chapter is to report the results of the statistical analyses that tested the above hypotheses. The statistical software used to conduct the analysis was SPSS for Windows 11.0. This chapter consists of descriptive statistics for the sample,

explanation of the rational and assumptions for each statistical test used, and results of the statistical tests for each of the four hypotheses.

Descriptive Statistics

One of the first considerations in statistical testing is knowing the demographics and distribution of the sample. As mentioned in the previous chapter, a normal distribution is the desired distribution of the data.

For the primary dependent variables of this study, the LEI overall scores of leader effectiveness, the seventh question on the LEI was used. Figures 4.1 through 4.6 show the distribution of the LEI overall scores. The LEI overall scores are depicted for the female observers (Figure 4.1) and male observers (Figure 4.2) of female leaders, female observers (Figure 4.3) and male observers (Figure 4.4) of male leaders, and supervisors (male and female) of female leaders (Figure 4.5) and supervisors (male and female) of male leaders (Figure 4.6). A skewness between -1 and 1 is within the acceptable range (Morgan et al., 2004).

In Figure 4.1, the female observer LEI overall effectiveness scores for 94 female leaders ranged from a 2.0 to a 6.0 ("slightly effective" to "extremely effective") with a distribution that was negatively skewed. The sample had a mean of 4.890 for the female observer LEI overall score and a median of 5.000 and the tail of the curve was skewed negatively to the left. A normally distributed curve would have a skewness of zero (0.0). The skewness of Figure 4.1 for female observers of female leaders was -.820, which was within the acceptable range (Morgan et al., 2004).

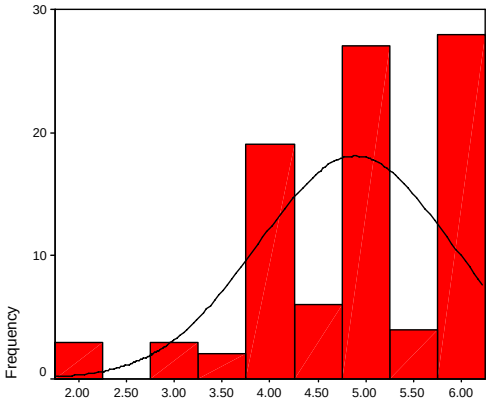


Figure 4.1 Distribution of Overall LEI Score of Female Observers of Female Leaders

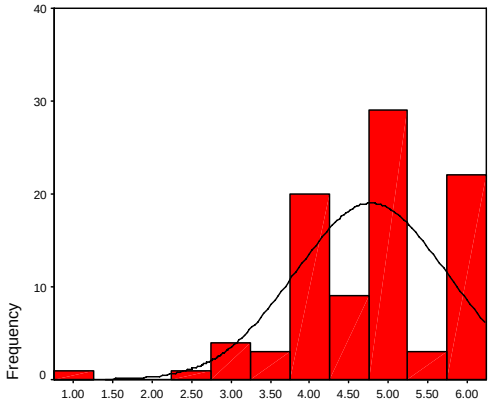


Figure 4.2 Distribution of Overall LEI Score of Male Observers of Female Leaders

Figure 4.2 illustrates the male observer LEI overall effectiveness scores for the 94 female leaders with LEI scores ranging from 1.0 to 6.0 (“not effective” to “extremely effective”). The male observer LEI scores of the female leaders had a mean of 4.783 and a median of 5.0 and the tail of the curve was skewed to the left or negatively skewed. The skewness for male observers’ scores for female leaders was in the acceptable range (-771).

Figure 4.3 illustrates the range of LEI scores by female observers of the 110 male leaders. The LEI scores for the male leaders as rated by the female observers ranged from 1.7 to 6.0 (slightly effective to extremely effective). These scores had a mean of 4.425 and a median of 4.333. Figure 4.3 depicts the range of scores as well as illustrates the negative skewness (skewness of -.026) of the curve. These scores were also within the acceptable range of skewness.

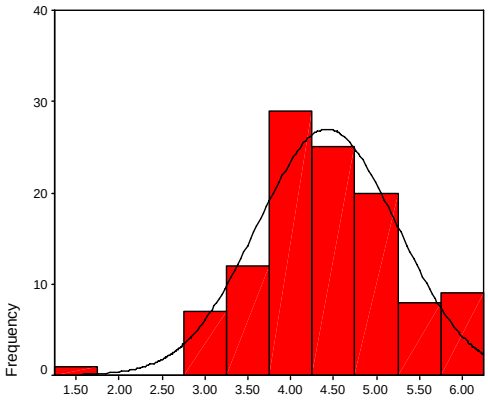


Figure 4.3 Distribution of LEI Scores of Female Observers of Male Leaders

For male observers of the 110 male leaders, Figure 4.4 presents the range of LEI scores from 1.9 to 6.0 ("slightly effective" to "extremely effective"). These scores had a mean of 4.429 and a median of 4.500. Figure 4.4 illustrates the range of the LEI scores for male observers of male leaders as well as depicts the negative skewness (-.558) of the curve which was within the acceptable range of -1 to 1.

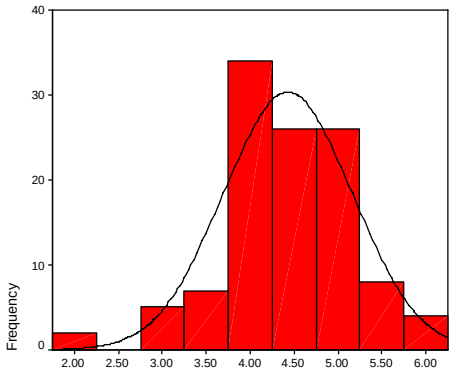


Figure 4.4 Distribution of LEI Overall Scores of Male Observers of Male Leaders

The final two figures illustrate the LEI scores for male and female leaders by the supervisors of these leaders. Figure 4.5 depicts male and female supervisors rating 65 female leaders. The scores on the LEI ranged from 2 to 6 ("slightly effective" to "extremely effective"). The LEI scores had a mean of 4.42 and a median of 5.00 for the female leaders. The distribution had a negative skewness of -.407 which was within the acceptable range.

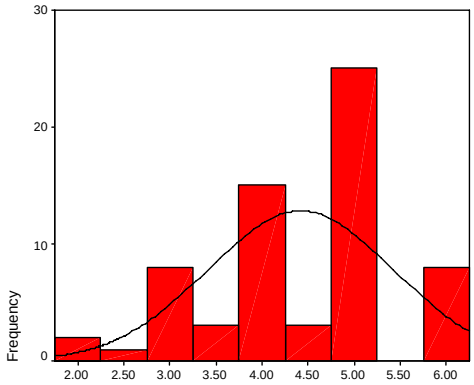


Figure 4.5 Distribution of LEI Overall Scores of Supervisors Rating Female Leaders

Figure 4.6 shows the LEI scores by male and female supervisors for the 85 male leaders. The LEI scores ranged from 1 to 6 ("not effective" to extremely effective"). The mean for the male leaders was 4.08 and the median was 4.00. This distribution had a negative skewness of -372.

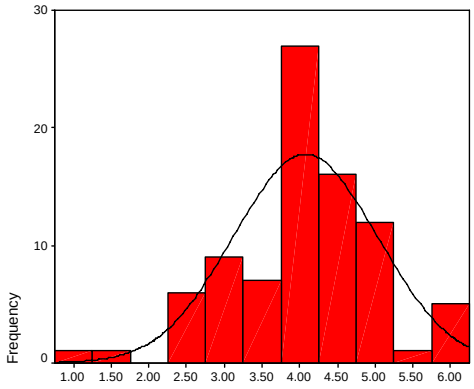


Figure 4.6 Distribution of LEI Overall Scores of Supervisors Rating Male Leaders

All of the dependent variables of the LEI scores for male and female observers and supervisors had a negatively skewed distribution. The skewness however was within an acceptable range. A skewness between +/- 1 may not impact or damage the validity of the statistic (Morgan, et al., 2004).

Rational and Assumptions of the Statistical Tests

The various tests used in this study were chosen based on the questions to be answered by the hypotheses. The hypotheses were tested using the two-way ANOVAs, and the two-way, multivariate analysis of variance (MANOVA).

With the two-way ANOVA and two-way MANOVA, three effects can be tested. The two-way ANOVA and MANOVAs tested for the main effect of leader gender, observer or supervisor gender and the degree of interaction between the leader and observer or supervisor gender. One of the assumptions when using the ANOVA is that the distribution is normal. The distribution of the LEI scores for the male and female observers and supervisors as described in the previous section were all negatively skewed. All the data for the dependent variables in this study were between the acceptable ranges of +/- 1 for skewness (Morgan et al., 2004).

Statistically significant results in this study included any differences between the scores of the male and female raters for the LEI leader overall effectiveness score or the LAI attribute scores that would be due to "some systematic influence and not due to chance" (Salkind, 2000, p. 172). The accepted levels of significance for social research is at a level of probability equal to or less than .05. The $p \leq .05$ is also the accepted level of risk associated with a Type I error (Salkind, 2000). All the statistical tests were tested at this level of significance.

Leader Effectiveness

Prior to performing the various tests for the four hypotheses, a chi-square test was run to test for distribution of frequencies for leader gender and education and leader gender and years of experience. Since this study focused on leader gender, the distribution of education and years of experience of the leaders was analyzed in relation to gender. Both tests had a chi-square value of .000 for experience and education. This

value indicated that neither the leader's education nor years of experience was significant.

Hypothesis #1: Leader Effectiveness as Rated by Observers

The first hypothesis used the Leader Effectiveness Index (LEI) and tested to see if male leaders are rated higher in leader effectiveness than are female leaders by male and female observers. This research question used the Leader Effectiveness Index (LEI) overall score to determine the answer (Item # 7 on the LEI). The overall score statement on the LEI was "Overall, how effective is the leadership performance of the person you are rating?" Only leaders who had a 3.5 or higher on the Leader Effectiveness Index were included in this study. The ratings for leader effectiveness consisted of the following scoring:

1 = not effective

2 = slightly effective

3 = somewhat effective

4 = effective

5 = very effective

6 = extremely effective

A two-way ANOVA was conducted on the sample of 204 leaders. The purpose of this test was to compare the means of the two independent factors (the gender of leaders and genders of observers) on a given dependent variable, the overall score of

leader effectiveness (LEI overall score) as derived from the ratings of the male and female observers.

Table 4.1 reports the results of the two-way ANOVA. The results of this test indicated that the interaction of observer gender and leader gender was not significant ($p = .677$), nor was the main effect of observer gender ($p = .333$). The main effect of leader gender however was statistically significant at $F = 9.412$, $p = .002$. This means that the gender of the leader was statistically significant. That is, female leaders were rated higher than male leaders.

Table 4.1 Two-Way ANOVA for Observers and Leaders on LEI Overall Score

Source	Mean Square	*F*	*Sig.*
Observer Gender	.742	.941	.333
Leader Gender	7.419	9.412	.002
Observer Gender*Leader Gender	.137	.174	.677

Table 4.2 reports the means for the two groups. These results indicated that female leaders were perceived as more effective than were male leaders when rated by both male and female observers on the LEI overall score. Female leaders had a mean of 4.823 and male leaders had a mean of 4.550.

Table 4.2 Mean Table of Leader Gender for LEI Overall Score

Leader Gender	Mean	Standard Deviation
Female Leader	4.823	1.0081
Male Leader	4.550	.7680

While the results of this test were statistically significant, the effect size for the sample was calculated to focus on the magnitude of difference (Thalheimer & Cook, 2002). The effect size for the data was $d = .41$ which indicates a moderate strength of relationship (Coe, 2000). The effect size is another way of quantifying the difference between the two groups and the strength of the results. The effect size is calculated by taking the difference of the means of the two groups and dividing the results by the standard deviation (Coe, 2000). The effect size of $d = .41$ indicates the results of the mean scores of the statistically significant group (female leaders in this case) is placed in the 66th percentile of the contrasted or compared group (male leaders) as interpreted by Cohen (1988). The indication of moderate strength adds to the significance of the results.

Hypothesis #2: Leader Effectiveness as Rated by Supervisors

The second hypothesis examined the leader effectiveness scores (LEI overall score) of male and female leaders as rated by their supervisors. Based on the review of literature, it was indicated that male and female supervisors tended to rate male and female leaders as equally effective. The sample to test this hypothesis included 139

supervisors (n = 57 female supervisors and n = 82 male supervisors) and 139 leaders (n = 75 male leaders and n = 64 female leaders).

To conduct an analysis on this hypothesis, the two-way ANOVA was used to look at the main effects of leader gender, supervisor gender, and the interaction of leader gender and supervisor gender on the LEI overall score of leader effectiveness. Table 4.3 presents the results of the two-way ANOVA. The main effect of supervisor gender was F = 2.874 and p = .092. The main effect of leader gender was F = .230 and p = .632, and the effect of the interaction between supervisor gender and leader gender was F = .000 and p = .999. All three results were not significant.

Table 4.3 Two-Way ANOVA of Leaders Rated by Supervisors on LEI

Source	Mean Square	*F*	*Sig.*
Supervisor Gender	2.399	2.874	.092
Leader Gender	.192	.230	.632
Super Gender * Leader Gender	2.108	.000	.999

These results indicated that there was no significant difference in how male and female leaders were rated by male and female supervisors. These results supported the hypothesis that male and female leaders were viewed as equally effective by male and female supervisors on the overall leader effectiveness score.

Leader Attributes

Hypothesis #3: Observers Rating Leaders on Leader Attributes

Hypothesis #3 looked at the comparison of male and female leaders as rated by observers on 37 leader attributes from the Leader Attributes Index (LAI). This hypothesis stated that male leaders are rated higher on leader attributes than female leaders by male and female observers. To conduct this analysis, a two-way MANOVA (multivariate analysis of the variance) was utilized as the statistical test. The MANOVA allowed for the testing of two or more moderately related dependent variables, the 37 leader attributes, which were analyzed simultaneously (Morgan et al., 2004).

The potential for a Type I error to occur would be highly probable if individual ANOVAs and *t* tests were conducted as the statistical test for each of the 37 LAI attributes male and female observers (Mertler & Vannatta, 2004). If the potential for a Type I error is high for individual tests, running multiple tests using the ANOVA instead of a MANOVA inflates the potential for a Type I error (Sheskin, 2004). The MANOVA, a more complex statistic, is based on the idea that the "variables were conceptually related and correlated with each other" (Morgan et al., 2004, p. 137). The dependent variables in a MANOVA need to have some connection as a group of variables that would offer a more holistic view of the results. MANOVA may also reveal differences not seen in separate ANOVAs (Mertler & Vannatta, 2004).

This hypothesis stated that male leaders are rated as more effective than female leaders by both male and female observers on all 37 attributes (the dependent variable).

This hypothesis was tested on the full sample of leaders, $n = 204$, which included $n = 94$ female leaders and $n = 110$ male leaders. To accommodate the volume of data necessary to test 37 attributes, the following section captures the statistically significant data and summarizes the significant results. Tables of the complete two-way MANOVAs for all 37 attributes are found in Appendices I through K.

A two-way MANOVA was conducted for the 37 attributes. The results of the two-way MANOVA were analyzed for the main effects of observer gender, leader gender, and the interaction of leader and observer gender for the 37 attributes. Using the two-way MANOVA provided the statistical data to test the effect that gender of the observers had on the attribute ratings of the leaders as well as the effect that the gender of the leaders had on differences of perceptions of the attributes.

The two-way MANOVA conducted for all 37 attributes resulted in the main effect of observer gender and main effect of leader gender having significance. Table 4.4 reports the results of the two-way MANOVA, Wilks' Lambda test for the main effects of observer gender, leader gender and interaction of observer and leader gender. For observer gender the significance was $p = .001$ and for leader gender the level of significance was $p = .000$, both statistically significant. These results indicated that for these two main effects, the gender of the observer and the gender of the leader, selected attributes in the MANOVA had significance. The results of the two-way MANOVA also indicated that for the interaction between observer gender and leader gender the results were not significant ($p = .474$).

Table 4.4 Wilks' Lambda Results for LAI Attributes

Effect	Value	*F*	*Sig.*
Observer Gender	.815	2.026	.001
Leader Gender	.733	3.265	.000
Observer Gender * Leader Gender	.899	1.000	.474

Main Effect of Observer Gender for Hypothesis #3

Table 4.5 reports the results of the two-way MANOVA test for the main effect of observer gender. The main effect of observer gender resulted in statistically significant results for five of the attributes: Insightful, Initiating, Willing to Accept Responsibility, Courageous, and Motivating.

The results in Table 4.5 indicated that the gender of the observer was statistically significant for 5 out of the 37 attributes. Appendix I contains the results of the MANOVA for the 37 attributes. Each of these attributes was analyzed further to see which gender of the observer, the male or the female, was statistically significant.

Table 4.6 reports the descriptive statistics for the means of the male and female observers for the five statistically significant attributes. For the five attributes that were statistically significant, the female observers had higher means than the male observers. This indicates that female observers rated male and female leaders higher than did male observers on 5 of the 37 attributes.

Table 4.5 MANOVA Results for the Main Effect of Observer Gender

Dependent Variable	Mean Square	*F*	*Sig.*
Insightful	3.241	5.124	.024
Initiating	4.503	6.809	.009
Willing to Accept Responsibility	2.135	4.576	.033
Courageous, Risk-Taker	6.413	10.370	.001
Motivating	4.358	5.370	.021

Table 4.6 Descriptive Statistics for Observers and LAI Attributes

	Observer Gender	Mean	Std. Deviation
Insightful	Female Observer	5.069	.8420
	Male Observer	4.910	.7499
Initiating	Female Observer	4.981	.8533
	Male Observer	4.748	.7698
Willing to Accept Resp.	Female Observer	5.303	.7167
	Male Observer	5.174	.6577
Courageous	Female Observer	4.877	.8395
	Male Observer	4.610	.7032
Motivating	Female Observer	4.857	.8695
	Male Observer	4.614	.9486

Table 4.7 depicts the 37 attributes of the LAI and includes the five statistically significant attributes for which the female observers rated the male and female leaders higher. This table places these five attributes in their respective sub-scales (Jensrud,

1995). When placed in the five sub-scales, three of the five significant attributes fall in the Drive sub-scale.

Table 4.7 LAI Attributes Affected by Main Effect of Observer Gender

Drive	Organization	Trust	Interpersonal	Tolerance
Initiating**	Time Mgt	Ethical	Delegating	Tolerant of
Visionary	Organizing	Personal	Team-	Frustration
Enthusiastic	Dependable	Integrity	Building	Even Disposition
Energetic	Info. Mgt.	Committed	Appropriate	Stress Mgt.
Courageous**	Intelligent	to Good	Leadership	Adaptable
Achievement	Willing to	Sensitively	Styles	Tolerant
Oriented	Accept Resp.*	Accountable	Coaching	of Ambiguity
Networking	Decision	Ideological	Motivating*	Communication
Insightful*	Making	Beliefs	Conflict Mgt.	
Persistent	Planning	Confident		
	Problem Solving			
3/9	1/9	0/7	1/6	0/6

* $p \leq .05$. ** $p \leq .01$

Main Effect of Leader Gender on Hypothesis #3

As seen in Table 4.4, the main effect of leader gender on the 37 LAI attributes was statistically significant at $p < .000$. Table 4.8 reports the results of the two-way MANOVA for the main effect of leader gender.

Table 4.8 indicates that for 17 out of the 37 LAI attributes, the results were statistically significant for the main effect of leader gender. Therefore, close to one half of the female leaders were rated higher. Appendix J reports the two-way MANOVA test results for all 37 attributes. The 37 attributes that showed statistically significant results

were: Energetic with Stamina, Visionary, Achievement-Oriented, Persistent, Enthusiastic/Optimistic, Dependable/Reliable, Communication, Sensitivity/Respect, Motivating Others, Planning, Organizing, Team Building, Coaching, Conflict Management, Time Management, Ideological Beliefs Appropriate to the Group, and Information Management.

Table 4.8 Two-Way MANOVA Test for LAI Attributes for Main Effect of Leader

Dependent Variable	Mean Square	*F*	*Sig.*
Energetic with Stamina	7.542	12.82	.000
Visionary	3.869	5.440	.020
Achievement-Oriented	3.868	8.070	.005
Persistent	2.879	6.916	.009
Enthusiastic, Optimistic	7.127	10.36	.001
Dependable, Reliable	5.041	10.04	.002
Communication	13.27	17.72	.000
Sensitivity, Respect	6.025	7.298	.007
Motivating Others	3.515	4.332	.038
Planning	2.688	4.928	.027
Organizing	2.433	4.336	.038
Team Building	4.793	5.494	.020
Coaching	9.101	12.29	.001
Conflict Management	3.140	3.991	.046
Time Management	8.222	13.96	.000
Ideol. Beliefs Appropriate to Group	5.558	11.96	.001
Information Management	2.055	3.904	.049

Table 4.9 reports the descriptive statistics of those attributes that were statistically significant from this multivariate test. The means of the female leaders for the 17 LAI attributes were higher than the means of the male leaders. This means that female leaders were rated higher than male leaders on 17 of the 37 attributes by both male and female observers. This also indicates that male and female leaders were rated the same by both male and female observers for the remaining 20 attributes.

Table 4.9 Descriptive Statistics for Leaders on LAI Attributes

Dependent Variable	Leader Gender	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Energetic with Stamina	Female	5.312	.060	5.194	5.430
	Male	5.025	.053	4.920	5.130
Visionary	Female	5.017	.066	4.887	5.147
	Male	4.811	.058	4.696	4.926
Achievement-Oriented	Female	5.291	.054	5.184	5.398
	Male	5.085	.048	4.991	5.180
Persistent	Female	5.223	.051	5.124	5.322
	Male	5.046	.045	4.958	5.133
Enthusiastic, Optimistic	Female	5.195	.065	5.068	5.323
	Male	4.916	.058	4.803	5.029
Dependable, Reliable	Female	5.325	.056	5.216	5.434
	Male	5.090	.049	4.994	5.187
Communication	Female	5.060	.068	4.927	5.193
	Male	4.679	.060	4.561	4.797
Sensitivity, Respect	Female	5.173	.071	5.033	5.313
	Male	4.916	.063	4.792	5.040

Table 4.9 Descriptive Statistics for Leaders on LAI Attributes - Continued

Dependent Variable	Leader Gender	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Motivating Others	Female	4.841	.071	4.702	4.979
	Male	4.644	.062	4.522	4.767
Planning	Female	5.053	.058	4.940	5.167
	Male	4.882	.051	4.781	4.983
Organization	Female	4.952	.059	4.836	5.067
	Male	4.789	.052	4.686	4.891
Team Building	Female	4.884	.073	4.740	5.028
	Male	4.655	.065	4.528	4.782
Coaching	Female	4.884	.067	4.751	5.016
	Male	4.568	.060	4.451	4.685
Conflict Management	Female	4.640	.069	4.504	4.777
	Male	4.455	.062	4.334	4.576
Time Management	Female	5.190	.060	5.072	5.308
	Male	4.890	.053	4.786	4.995
Ideol. Beliefs	Female	5.241	.053	5.136	5.346
	Male	4.995	.047	4.902	5.088
Information Mgt.	Female	5.131	.057	5.019	5.243
	Male	4.981	.050	4.882	5.080

This hypothesis stated that male leaders are rated higher than female leaders on the 37 LAI attributes. These results indicated the opposite to be true. Female leaders were rated higher than male leaders on 17 attributes by the male and female observers

and male and female leaders were rated as equally effective on 20 of the LAI attributes by the male and female observers. Female leaders were rated higher on almost ½ or 46% of the 37 attributes. Male leaders were not rated higher on any of the 37 attributes.

Table 4.10 visually summarizes the results of testing Hypothesis #3 for the main effect of leader gender. This table shows the 37 attributes listed by the five sub-scales. Those attributes that were statistically significant as a result of the tests for the main effect of leader gender show the appropriate statistical significant asterisk. Female leaders were rated higher than male leaders for 17 out of the 37 attributes on the LAI. Female and male leaders were rated as equally effective on the remaining 20 attributes.

Table 4.10 Leader Attributes of the LAI For Main Effect of Female Leader Gender

Drive	Organization	Trust	Interpersonal	Tolerance
Initiating	Time Mgt.***	Ethical	Delegating	Tolerant of
Visionary*	Organizing*	Personal	Team-	Frustration
Enthusiastic**	Dependable**	Integrity	Building*	Even Disposition
Energetic***	Information	Committed	Appropriate	Stress Mgt.
Courageous	Mgt.*	to Good	Leadership	Adaptable
Achievement	Intelligent	Sensitively**	Styles	Tolerant of
Oriented **	Willing to Accept	Accountable	Coaching**	Ambiguity
Networking	Resp.	Ideological	Motivating*	Communication***
Insightful	Decision Making	Beliefs**	Conflict	
Persistent**	Planning*	Confident	Mgt.*	
	Problem Solving			
5/9	5/9	2/7	4/6	1/6

*$p < .05$. **$p < .01$. ***$p < .001$.

Hypothesis #4: Supervisors and Leader Attributes

This hypothesis stated that male and female leaders are rated equally for all 37 of the LAI attributes by male and female supervisors. The data for this hypothesis consisted of 134 leaders rated by their supervisors of which 58 were female supervisors and 76 were male supervisors. For this hypothesis of the 134 leaders rated by their supervisors, 60 were female leaders and 74 were male leaders.

This hypothesis was tested for the main effect of leader gender, the main effect of supervisor gender, and the interaction of leader gender and supervisor gender. The two-way MANOVA was used as the statistical test. Table 4.11 reports the results of Wilks' Lambda test. These results indicated that the main effect of supervisor gender was the only effect that was statistically significant at $p = .010$.

Table 4.11 Wilks' Lambda for Supervisors Rating Leaders on LAI Attributes

Effect	Value	*F*	*Sig.*
Supervisor Gender	.581	1.836	.010
Leader Gender	.652	1.354	.122
Super. Gender * Leader Gender	.707	1.051	.413

The results of the two-way MANOVA for the main effect of supervisor gender rating the male and female leaders on the 37 attributes are found in Table 4.12. These results indicated that for 9 of the 37 attributes, the gender of the supervisor was

significant in rating the male and female leaders. Appendix K contains the complete results of the two-way MANOVA for the main effect of supervisor.

Table 4.12 Two-Way MANOVA Results for Supervisor Rating Leaders on LAI

Dependent Variable	Mean Square	*F*	*Sig.*
Tolerant of Ambiguity	3.375	4.156	.044
Confident	3.073	4.324	.040
Willing to Accept Responsibility	5.873	11.02	.001
Tolerant of Frustration	5.339	4.932	.028
Even Disposition	5.936	7.098	.009
Communication	7.316	7.339	.008
Sensitivity	5.641	6.111	.015
Team Building	6.286	6.917	.010
Leadership Styles Appropriate	4.434	5.924	.016

Table 4.13 reports the descriptive statistics for the supervisors in rating leaders. This table indicates that the female supervisors rated both male and female leaders higher on 9 of the 37 (approximately one forth) attributes than male supervisors rated the male and female leaders. For 28 of the attributes the male and female supervisors rated the male and female leaders equally.

Hypothesis #4 stated that male and female leaders are rated equally on leader attributes by male and female supervisors. The results of hypothesis #4 were not fully supported by the tests. For 9 of the 37 attributes there was a difference in how leaders

were rated by male and female supervisors. The main effect of the female supervisor affected the ratings. The female supervisors rated both male and female leaders higher than the male supervisors rated the leaders for 9 of the 37 attributes. For 28 of the attributes the male and female supervisors rated the male and female leaders equally

Table 4.13 Descriptive Statistics for Main Effect of Supervisors on LAI

Dependent Variable	Supervisor Gender	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Tolerant of Ambiguity	Female	4.762	.135	4.495	5.029
	Male	4.388	.124	4.143	4.633
Confident	Female	5.028	.126	4.778	5.278
	Male	4.671	.116	4.442	4.901
Willing	Female	5.443	.109	5.226	5.659
	Male	4.949	.100	4.751	5.148
Tolerant of Frustration	Female	4.787	.156	4.478	5.095
	Male	4.317	.143	4.033	4.600
Even Disposition	Female	5.007	.137	4.735	5.278
	Male	4.511	.126	4.262	4.760
Communication	Female	4.758	.150	4.462	5.054
	Male	4.208	.137	3.936	4.479
Sensitivity	Female	5.091	.144	4.806	5.376
	Male	4.608	.132	4.346	4.869
Team Building	Female	4.840	.143	4.558	5.123
	Male	4.330	.131	4.070	4.590
Use of Leadership Styles	Female	4.454	.130	4.198	4.711
	Male	4.026	.119	3.790	4.261

Summary

In summary, the results of the study showed that there were statistically significant findings for perceptions of male and female leader effectiveness as rated by male and female observers (peers and direct reports). Hypothesis #1 stated that male leaders would be perceived as more effective than female leaders by the observers. However this study found that female leaders were perceived as more effective leaders on the Leader Effectiveness Index by *both* male and female observers. Supporting Hypothesis #2, male and female supervisors viewed male and female leaders as equally effective on the LEI overall score.

Hypothesis #3 stated that male leaders would be rated higher than female leaders were rated on the leader attributes. However, this study found that female leaders were rated higher than male leaders on 17 of the 37 attributes by both male and female observers. In addition, female observers rated *both* male and female leaders higher on 5 of the 37 attributes than the male observers rated the male and female leaders.

Hypothesis # 4 stated that male and female supervisors would rate male and female leaders equally on the LAI attributes. In general this study supported the hypothesis by finding that male and female supervisors rated male and female leaders equal on 28 of the 37 attributes. In addition, female supervisors rated *both* male and female leaders higher on 9 of the 37 attributes than the male supervisors rated the male and female leaders.

CHAPTER V

CONCLUSIONS

Introduction

Leadership education and programs need to recognize and address gender bias perceptions to provide an environment that is gender neutral. This study examined leadership effectiveness and attributes as perceived by observers and supervisors of male and female leaders in business. Previous studies investigated leader effectiveness as perceived by male or female raters utilizing a variety of methodologies and sample compositions. In these previous studies, the re-occurring theme was that male leaders tended to be perceived as more effective by both male and female observers (Carli, 1999; Deal & Stevenson, 1998; Deaux, 1983; Eagly & Johnson, 1990; Hare et al., 1997; Heilman et al., 1989; Pounder & Coleman, 2002; Rosenthal, 1995; Schein, 1976; Tharenou, 1999). The research also showed that supervisors of male and female leaders viewed the leaders as equally effective (Eagly & Johnson, 1990; Hare et al., 1997; Kabacoff, 1998; Powell et al., 2002; Thompson, 2000; Valentine & Godkin, 2000).

This study examined perceptions of leadership effectiveness and attributes having each leader rated by both male and female observers. In addition, their male or female supervisors also rated the leaders in this study. No studies were found, except the Jensrud (1995) study that looked at leadership effectiveness using both a male and female rater for each leader. Finally, this study examined the perceptions of leader effectiveness

and attributes with leaders in a "real life" setting rather than in a classroom or in a simulation.

The impact of gender bias from the perspective of the rater is still a challenge in today's business environments. As stated earlier in this study, as educational processes in colleges, universities, and businesses strive to enhance, assess, and value skills and abilities of men and women equally, the need to understand the relationship between gender and leadership is necessary (Klein et al., 1996). The more educational practitioners understand the core attributes and behaviors of effective leadership, the better curricula can be defined and implemented to support leadership training, development, and education (Barker, 1997). Colleges and universities have been cited for not preparing students to assume corporate leadership roles. In addition, emphasis toward preparatory leadership development needs to be considered in the academic areas, especially for positions in the post-secondary environment (Filan & Seagren, 2003). Work has changed, but schools are not responding to these changes by preparing future leaders for their new roles and responsibilities (M. Schatz, 1997).

This study attempted to examine the construct of perceptions of gender bias using two 360° assessments. Through these assessments the perceptions of leadership effectiveness and leader attributes were studied with male and female leaders. The results of this study can be utilized to examine components of leadership training and education with the goal to neutralize perceptions of gender bias.

Major Findings

This study yielded some interesting findings regarding the perception of gender bias and ratings of leadership effectiveness and attributes by raters of male and female leaders. Discussions of the findings are included in this section.

Previous studies by Carli (1999), Deal and Stevenson (1998), Deaux (1983), Eagly and Johnson (1990), Hare et al. (1997), Heilman et al. (1989), Pounder and Coleman (2002), Rosenthal (1995), Schein (1976), and Tharenou (1999) found that male leaders were perceived as more effective leaders by male and female observers. This study found that female leaders were perceived as more effective than male leaders by both male and female observers on the Leader Effectiveness Index (LEI). These results were similar to the 1995 Jensrud study, which looked at vocational administrators. The results of the Jensrud (1995) and this current study may have differed from the earlier studies of leader effectiveness due to the fact that the Jensrud (1995) and current study had *each* leader assessed by both a male and female rater. Earlier studies did not allow for this one to one match for each leader.

This current study found that female leaders were also rated higher than male leaders on 17 of the 37 attributes by both male and female observers on the Leader Attributes Inventory (LAI). The numbers of attributes were the same as the 1995 Jensrud study but the specific attributes were not the same. Table 5.1 illustrates the 17 attributes where female leaders were rated higher than male leaders by both male and female observers and the 11 attributes that both studies had in common.

Table 5.1 LAI Attributes for Female Leaders Between Jensrud and Current Study

Drive	Organization	Trust	Interpersonal	Tolerance
Initiating	**Time Mgt*** **	*Ethical*	Delegating	Tolerant of
Visionary*	**Organizing***	*Personal*	**Team-**	Frustration
Enthusiastic*	***Dependable****	*Integrity*	**Building***	Even Disposition
Energetic**	***Info. Mgt. ****	*Committed*	*Appropriate*	Stress Mgt.
Courageous	Intelligent	*to Good*	*Leadership*	Adaptable Tolerant
Achievement	Willing to	***Sensitively****	*Styles*	of Ambiguity
Oriented*	Accept Resp.	Accountable	**Coaching****	***Communication*****
Networking	*Decision*	***Ideological***	***Motivating****	
Insightful	*Making*	***Beliefs *****	***Conflict Mgt.****	
Persistent*	**Planning***	Confident		
	Problem Solving			

Note.
Boldfaced attributes are results from current study (2005) – 17 attributes.
Italicized attributes are results from Jensrud (1995) study – 17 attributes.
Boldfaced and Italicized are LAI attributes significant in both studies – 11 attributes.
** p < .05. ** p < .01. *** p < .001*

This study found that male and female supervisors rated male and female leaders as equally effective for leader effectiveness, which was consistent with the literature. When the leader attributes were examined, there were differences in how male and female supervisors rated male and female leaders on five of the attributes. The gender of the supervisor played a role in the perception of leader attributes. In this study, the female supervisors rated both male and female leaders higher on 9 of the 37 attributes. The 1995 Jensrud study did not look at the perceptions of the supervisors on either leader effectiveness or attributes; therefore comparisons could not be made.

Information found in the literature supported the premise that gender bias exists in business. While occasional mixed reports existed, the predominate theory is that both male and female raters (peers and direct reports) view male leaders as more effective (Carli, 1999; Deal & Stevenson, 1998; Deaux, 1983; Eagly & Johnson, 1990; Hare et al., 1997; Heilman et al., 1989; Pounder & Coleman, 2002; Rosenthal, 1995; Schein, 1976; Tharenou, 1999). This study found that female leaders were viewed as more effective by both male and female raters. The literature also substantially supported the premise that when all is equal, supervisors viewed male and female leaders as equally effective (Eagly & Johnson, 1990; Hare et al., 1997; Kabacoff, 1998; Powell et al., 2002; Thompson, 2000; Valentine & Godkin, 2000). This study found similar results to the literature.

Hypothesis #1: Males Are Rated as More Effective Leaders

The most startling results of this study were discovered for the first hypothesis. The hypothesis specifically stated that raters (males and females, peers and direct reports) rate male leaders higher in leader effectiveness than female leaders on the Leader Effectiveness Inventory (LEI).

The results of the two-way ANOVA indicated that the female leaders were perceived as more effective on the Leader Effectiveness Index (LEI) overall score than were male leaders by both male and female observers. The gender of the leader was significant not the gender of the observer. These results were similar to the results found in the 1995 Jensrud study for vocational administrators.

The results from this current study and the Jensrud (1995) study are in direct contrast to the review of literature that described the earlier studies of leader effectiveness. Research that occurred between 1976 to 2002 indicated that males were consistently viewed by their direct reports as more effective as leaders (Deal & Stevenson, 1998; Eagly & Johnson, 1990; Klenke, 1996; Powell et al., 2002; Schein, 1976; Thompson, 2000; Valentine & Godkin, 2000). None of these earlier studies, however, had each leader assessed by both a male and female rater.

As stated earlier, in the majority of the studies, men and women were found to be equally effective by their bosses (supervisors) if all else was equal, however direct reports consistently viewed men as being more effective leaders than women (Eagly & Johnson, 1990; Hare et al., 1997; Powell et al., 2002; Thompson, 2000; Valentine & Godkin, 2000). The rationale for this perception was seen as gender bias or perceptions of stereotypes. The possible exception was a study conducted by Kabacoff (1998) where he looked at 1800 male and female managers and found that women were rated slightly higher than men on the ability to have employees be productive. The problem with comparing the results of the Kabacoff (1998) study with this research is that different constructs of leadership were used. Kabacoff's study used the construct of productive; while this study specifically looked at a statement describing overall leadership effectiveness. Also, the Kabacoff study did not have a one to one match of male and female raters to each leader.

To generalize this current study's results to the entire population of male and female leaders is also not feasible. Further research needs to be conducted. These future studies need to include a broader selection of research sites to ensure the sample was representative of the entire population of leaders with regard to size of sample and diversity of ethnic background. In addition, a larger sample of leaders at the senior management levels would be appropriate since research shows that the top levels of management had less than 10% of the leaders being women (*Advancing women*, 1998; K. R. Lewis, 2004; Philipkoski, 2005). While this study's results may indicate that there is a shifting of how male and female leaders are viewed by male and female observers more validation is necessary.

This study used all volunteers (raters and leaders), which could impact results. The volunteer leaders might be considered highly motivated individuals (self-selection bias) since they were interested in finding out how they were perceived by their supervisors, peers, and direct reports. The raters (peers and direct reports) were chosen by the leaders which could also impact results. While these leaders did not know that gender was being studied in this research, they did have the latitude to select the individuals who reported on their effectiveness and attributes.

This study did examine the results in regard to the gender of the leader versus leader experience and education in order to determine the strength of the gender results. Analysis of the tests found that gender was the leading variable, not education nor experience. This would indicate the strength of the results that gender was a predominate

factor in determining effectiveness and attributes not the leader's education or years of experience.

Hypothesis #2: Supervisors Rate Leaders as Equally Effective

This hypothesis stated that male and female supervisors rate male and female leaders as equally effective leaders on the LEI overall effectiveness score. Based on the results of the data analysis for the 139 leaders who had supervisors rate their effectiveness, this hypothesis was supported. There was no statistically significant difference in how male and female supervisors rated male and female leaders for leader effectiveness. These results were consistently supported by the literature (Eagly & Johnson, 1990; Hare et al., 1997; Kabacoff, 1998; Powell et al., 2002; Thompson, 2000; Valentine & Godkin, 2000). The 1995 Jensrud study did not examine the perceptions of leader effectiveness from a supervisor's viewpoint and therefore no comparison could be made between the two studies.

This study's results however, should be tested further with a larger sample of male and female supervisors for a larger sample of male and female leaders. In addition, consideration should be given for geographical diversity, ages of supervisors, and management levels of supervisors. Women are not achieving higher levels of managerial roles in business (K. R. Lewis, 2004). If supervisors view them as equally effective, perhaps the lack of women in senior positions is a result of something besides gender bias. The top levels of managers in business are still male-dominated (Appelbaum et al., 2003; Heilman, 2001; Powell et al., 2002) and a follow-up study for the LEI and LAI

instruments should include only senior level male and female leaders rated by their senior level supervisors. Another possibility is to conduct a longitudinal study where gender, effectiveness, and promotion history are tracked. Whether the lack of women in senior level positions is based on gender bias or some other underlying cause is yet to be determined.

Hypothesis #3: Observers Rate Male Leaders Higher on Leadership Attributes

The third hypothesis looked at the 37 attributes of the leader found in the Leader Attributes Inventory (LAI). Hypothesis #3 stated that male leaders are rated higher than female leaders on leader attributes by male and female observers. This analysis looked at multiple, dependent means for the independent variable of leader gender, observer gender, and the interaction of the main effects of leader gender and observer gender.

This study found conflicting results from the literature. For 17 of the 37 attributes (almost one half), female leaders were rated statistically higher than male leaders on the attributes by both male and female observers. For all 37 attributes male leaders were rated lower than female leaders. For 5 of the 37 attributes, the gender of the observer influenced the ratings of the LAI attributes. For these five attributes, the female observers rated both male and female leaders higher than the male observers.

The Jensrud (1995) study reported 17 attributes as statistically significant for female leaders being rated higher than male leaders on the LAI. Table 5.1 reports a comparison of the 1995 Jensrud study with the results of this study. As seen in Table 5.1,

both studies had the same selection of 11 out of the 37 attributes that were statistically significant for female leaders being rated higher than male leaders.

Those attributes that were in common from both studies were: Enthusiastic, Energetic With Stamina, Achievement Oriented, Persistent, Dependable, Information Management, Sensitivity, Ideological Beliefs Appropriate to Group, Motivating Others, Conflict Management, and Communication. The 1995 had six additional attributes for which female leaders were rated higher than male leaders. Those attributes were: Initiating, Decision Making, Ethical, Personal Integrity, Committed to the Common Good, and Appropriate Use of Leadership Styles. This current study had six different attributes for which female leaders were rated higher than male leaders. These attributes were: Visionary, Time Management, Organizing, Planning, Team Building, and Coaching. The reasons for the differences in these 12 attributes could be based on changes in the times (ten years separated the two studies) or the differences in the populations (vocational administrators versus business leaders). More research is needed looking at both populations with leaders randomly selected (to eliminate self-selection bias). In addition, research on the nature of the attributes and determination if specific attributes are gender-based would add to the interpretation of these results.

Finally the tests for this hypothesis indicated that there was no interaction between the gender of the observer and the gender of the leader on the 37 attributes. These results were also consistent with the 1995 Jensrud study.

Hypothesis #4: Supervisors Rate Leaders Equally on Leadership Attributes

This study found that for 9 out of the 37 attributes there were statistical significant results based on the gender of the supervisor, not the gender of the leader. These results indicated that the gender of the supervisor had a significant impact on the ratings of both the male and female leaders for 9 of the 37 attributes. On nine of the attributes the female supervisors rated both male and female leaders high than male supervisors rated the male and female leaders. These attributes that female supervisors rated both male and female leader higher than male supervisors were: Tolerant of Ambiguity, Confident, Wiling to Accept Responsibility, Tolerant of Frustration, Even Disposition, Communication, Sensitivity, Team Building, and Leadership Styles Appropriate to the Group. The analysis of these results also indicated that for 28 of the attributes, there was no difference in how supervisors rated the leaders for those 28 attributes. Additional research needs to be conducted to determine why the female supervisors rated both male and female leaders higher than male supervisors for one quarter of the attributes. Do females in general, rate people higher on certain attributes?

The results of the tests on this hypothesis also indicated that there was no significance in ratings based on the gender of the leaders who were rated by their supervisors. Finally, the results showed that there was no interaction between the gender of the leaders and the gender of the supervisors.

The results of this hypothesis was somewhat consistent with Hypothesis #2 where male and female supervisors rated male and female leaders as equally effective (except

for five attributes) on the LEI overall leader effectiveness score. These results were also fairly consistent with the literature (Eagly & Johnson, 1990; Hare et al., 1997; Kabacoff, 1998; Powell et al., 2002; Thompson, 2000; Valentine & Godkin, 2000) which stated that leaders were rated as equally effective by their supervisors. As with the LEI, the 1995 Jensrud study did not look at the supervisors' perceptions of the LAI attributes for male and female leaders.

Summary of Major Findings

The purpose of this research was to investigate if male leaders were considered more effective leaders than female leaders in a business environment. While the review of literature supported this concept, the results of this research did not. The results of the study are somewhat encouraging and hopeful for female leaders in business, however, there still appears to be some walls that women need to overcome to achieve those senior positions. With more than 800 million (Schneider, 2001) spent annually on leadership education, the need to link the curricula with gender-neutral strategies is necessary to eliminate gender bias in perceptions of leadership effectives and attributes.

Gender differences may be a result of self-fulfilling beliefs, rather than actual differences (Hare et al., 1997). Age may also impact leadership attributes as men who are at mid-life become more concerned with others while women become more assertive and independent (Klein et al., 1996).

The rationale as to why there was a tendency for female observers and female supervisors to rate both male and female leaders higher on five and nine of the attributes

could be a valuing of relationships or leniency factor. Further research on response leniency is indicated.

The reasons why females were viewed as more effective and rated higher on 17 of the 37 attributes could be that historically women viewed their jobs differently than men. When asked to define career, the significant difference was that women never mentioned recognition or reward as part of the descriptions; men mentioned those concepts as part of what happens when they reach the upper positions (Hennig & Jardim, 1976). Careers were not viewed as a source of pride or accomplishment, but rather economic necessity (McLane, 1980; Theodore, 1971; Williams, 1977). Women often have been in the position of "sacrificing their career" in deference to their spouse and family (Albjerg Graham, 1970; Bass, 1990; Higginson & Quick, 1975; S. E. Jackson & Alvarez, 1992; Kanter, 1977; Klein et al., 1996; McLane, 1980; Tharenou, 1999; Theodore, 1971; Vinnicombe & Singh, 2002). Some recent studies, however, have shown that men and women tend to view their careers with similar importance (Hull & Umansky, 1997) with the concept of sacrificing their career to raise a family diminishing (E. R. Auster, 2001).

Women tend not to network as frequently because of family commitments (Singhania, 2002) or are excluded from networking opportunities in the workplace and after hours (meetings, golf outings, dinners) (Tharenou, 1999; Vinnicombe & Singh, 2002). This networking distinction is also based on social biases, communication styles, and level of comfort (Carli, 1999; Tharenou, 1999).

Work environments have been developed by men for men, and therefore this may still be an alien territory for women executives. The skills and attributes women bring to the workforce may be different than those that are traditionally required or expected (Helgesen, 1990; Higginson & Quick, 1975; Korac-Kakabadse & Kouzmin, 1997). Issues that still need to be examine include work-life balance attitudes or philosophies, formal and informal networking and mentoring processes, professional development opportunities, work assignments, and proactive succession planning processes are just some of the interventions that could address the gender disparities in management. Whether gender bias is real or imagined, the limited number of women succeeding in business and less than 10% achieving the senior managerial positions is a current reality (K. R. Lewis, 2004).

Overall, this study found that in general supervisors viewed male and female leaders as equally effective as well as equal for 28 out of 37 attributes. This study also found that female leaders were viewed as more effective than male leaders by their male and female observers and female leaders were rated higher than male leaders on 17 out of 37 attributes. None of the male leaders were rated higher than female leaders on any of the attributes. Female observers rated both male and female leaders higher than male observers and female supervisors rated both male and female leaders higher for 9 out of 37 (approximately one quarter) attributes. The gender of the observer had somewhat of an impact on some of the ratings of the leaders' ratings.

Limitations of the Study

This study, while reporting statistically significant results also included several limitations. Limitations that existed in this study included the overall size of the leader sample with limited ethnic diversity as well as having a geographically constricted sample of leaders. The leaders in this current study were from two states. While the 1995 Jensrud research used leaders from 12 states with similar results with an educational leader population, further research with a diverse geographical population of business leaders needs to be conducted.

In addition, this study focused on a diverse range of managerial levels of leaders. To study senior leaders for perceptions of gender bias by raters and supervisors would perhaps address the reality of the corporate statistics. This last limitation might be difficult to overcome in future studies, since all data in the literature states that while women consist of more than 50% of the managerial population, the number of women in senior leadership positions is less than 10% (K. R. Lewis, 2004). To find a sample of sufficient size of leaders and supervisors that consists of male and female leaders and supervisors in the senior level category may be difficult if not impossible.

The raters in the observer category (peers and direct reports) were selected by the leaders and not randomly selected by the researcher. This "selection process" could bias the results since some leaders may have selected only those raters who would give them favorable scores. The potential for this bias was somewhat mitigated since only the leaders would see the results of the assessments. The leaders had nothing to gain from

the feedback process if they only gave the assessments to those who would provide favorable ratings. This may be a possible limitation of the study. However, even if this was the case, females were still rated higher by *both* male and female observers than male leaders.

A variation of this study could include randomly choosing raters by the researcher rather than by the leader or having all direct reports (not a selected number) rate the leader's effectiveness. The significant finding is that this research did find that female leaders were rated higher by *both* male and female observers and there was no difference between the perceptions of female observers and male observers.

The leaders in this study were volunteers. There may be an effect that only highly motivated and effective leaders would volunteer to participate in the study and perhaps skew the results. However this study had a high response rate of *all* leaders who were invited to participate and those that completed the assessments. Still, female leaders were rated higher than male leaders.

There is also some evidence that women need to work harder to achieve similar management levels as men. The women in this study might be examples of exceptional leaders and therefore the results of women being viewed as more effective might be a result of these highly motivated and skilled female leaders. Research also has found that many successful or effective women leaders exhibit traits more often found in men (Hare et al., 1997; Powell et al., 2002; Sczesny, 2003). However since no males rated higher than female leaders perhaps these attributes are no longer associated with male leaders.

A study where all individuals in management positions are required to participate (versus volunteers) would address some of these limitations. To conduct a study where the skills and experience of the leaders were equalized would be more challenging.

While the survey method is a common method of research to examine the relationship between leadership effectiveness and attributes, this method does have a major limitation. The limitation includes the issue of determining the causality of the results. This study did not look into the causes of the bias, but just to examine if biases exist. The process to discover the causes of the bias is more complicated. This would include a more qualitative approach including observations, interviews, focus groups, and assessments. In addition, a study using all leaders (and not just effective leaders) would also have merit.

Surveys are also susceptible to bias. This study attempted to eliminate the survey bias component by only using leaders that were viewed as effective and each leader in the study had both a male and a female rater (Yukl, 2002). In addition, during the deployment of the assessment, neither leaders nor raters were aware that the construct of gender was the focus of the study.

Recommendations for Future Research

This study opened the door for a number of additional, related studies. As mentioned earlier, updating the data for the educational environment and then comparing business and education would add to the strength of both the LAI and the LEI as assessment instruments. Future research expanding the use of the LAI and the LEI into

the governmental and not-for-profit sectors would also add to the norms for the assessment tools. Since both assessments are relatively inexpensive surveys, the use of the LAI and the LEI in the non-profit sector could be a significant benefit for leadership development. The sample in this study was predominately white. A study that examines ethnic similarities and differences for the two assessments would also be value-added to the concept of leadership and development of leadership and managerial competencies.

The review of literature showed that there was evidence that some specific attributes were considered more male-orientated and some were more female-oriented. Traits and attributes that were more authoritarian and task and production-oriented were considered to be more male specific traits or attributes. The female-oriented attributes were those that had a concern for people and two-way communication. At issue is that for most of the earlier studies, there was no consistent assessment, nor did these studies examined similar attributes or traits, nor was the same methodology used in the research. The rational for this study's results cannot be fully explained without more research on the attributes. More research is needed to analyze the attributes of the Leader Attributes Inventory to see if any of the attributes are specifically perceived as male or female oriented.

The 1995 (Jensrud) study took place assessing vocational administrators and this study looked at business leaders. There may be differences in the results between the two work environments however similar results were found. A study that specifically compares the two environments would be a useful exercise. Conducting a factor analysis

to update and validate the five sub-scales would also add to the strength of the assessment.

Another powerful study is to use the assessments as pre- and post- assessments in environments where specific leadership and managerial educational interventions took place. Research data that supported significant changes in leader effectiveness before and after specific educational interventions as seen in the individual leader scores on the LEI and LAI would help target the validity of effective leadership training versus generic training. In addition, the LEI and LAI could be correlated with performance ratings of leaders as well as succession planning information.

Overall Summary

In summary, this study examined the concept of leadership by having both male and female observers rate leader effectiveness and attributes of their respective male and female leaders. In addition, this study was conducted in the context of the leaders' own work environment, not in a laboratory or simulation. The results of the study add to the general body of knowledge of leadership and gender and in fact, offer decidedly unique and statistically significant outcomes. This study found that female leaders were viewed as more effective than male leaders by peers and direct reports. Male and female leaders were viewed as equally effective by male and female supervisors. On almost one-half of the attributes female leaders were rated higher than male leaders. There was some evidence that the gender of the rater could also be a factor in ratings of effectiveness and attributes. Could the impact of gender bias be shifting? While these results may be

attributed to the nature of the sample of leaders used in the study, these results beg for continued research to see if these results are generalizable to the entire population of leaders in business. This study's results as well as future studies could greatly impact a variety of leadership processes in colleges, universities, and businesses including the selection of leaders, development of educational curricula, administration of training and learning interventions, and faculty of leadership development programs and curricula.

Businesses and academic environments value effective leadership. This is evident by the amount of time, money, and resources spent annually towards leadership development. The value of improving leadership development initiatives to sensitize individuals or eliminate gender bias has the potential for tremendous impact for future leaders.

REFERENCES

Advancing women in business - the Catalyst guide: Best practices from the corporate leaders. (1998). San Francisco: Jossey-Bass Publishers.

Albjerg Graham, P. (1970). Women in academe. In A. Theodore (Ed.), *The professional woman* (pp. 720-740). Cambridge, MA: Schenkman Publishing Company, Inc.

Alimo-Metcalfe, B. (1998a). 360 degree feedback and leadership development. *International Journal of Selection and Assessment, 6*(1), 35-44.

Alimo-Metcalfe, B. (1998b). Professional forum: 360 degree feedback and leadership development. *International Journal of Selection and Assessment, 6*(1), 35-44.

Alreck, P. L., & Settle, R. B. (1995). *The survey research handbook: Guidelines and strategies for conducting a survey*. New York: Irwin Professional Publishing.

Andrews, J. P., & Field, R. H. G. (1998). Regrounding the concept of leadership. *Leadership & Organization Development Journal, 19*(3), 128-136.

Antonakis, J., Avolio, B. J., & Sivasubramaniam, N. (2003). Context and leadership: An examination of the nine-factor full-range leadership theory using the Multifactor Leadership Questionnaire. *The Leadership Quarterly, 14*, 261-296.

Appelbaum, S. H., Audet, L., & Miller, J. C. (2003). Gender and leadership? Leadership and gender/A journey through the landscape of theories. *Leadership & Organization Development Journal, 24*(1), 43-51.

Ary, D., Jacobs, L. C., & Razavieh, A. (1996). *Introduction to research in education* (5th ed.). Fort Worth, TX: Harcourt Brace College Publishers.

Atwater, L., & Waldman, D. (1998). 360 degree feedback and leadership development. *Leadership Quarterly, 9*(4), 423-426.

Atwater, L., Waldman, D., & Brett, J. F. (2002). Understanding and optimizing multisource feedback. *Human Resource Management, 41*(2), 193-208.

Auster, C. J., & Ohm, S. C. (2000). Masculinity and femininity in contemporary American society: A reevaluation using the Bem Sex-Role Inventory. *Sex Roles, 43*(7/8), 499-528.

Auster, E. R. (2001). Professional women's midcareer satisfaction: Toward an explanatory framework. *Sex Roles, 44*(11/12), 719-750.

Avolio, B. J., & Bass, B. M. (1995). Individual consideration viewed at multiple levels of analysis: A multi-level framework for examining the diffusion of transformational leadership. *Leadership Quarterly, 6*(2), 199-218.

Babbie, E. (1973). *The practice of social research*. Belmont, CA: Wadsworth/Thomson Learning.

Barge, J. K. (1994). *Leadership*. New York: St. Martin's Press.

Barker, R. A. (1997). How can we train leaders if we do not know what leadership is? *Human Relations, 50*(4), 343-362.

Basil, D. C. (1972). *Women in management*. New York: Dunellen.

Basow, S. A. (1992). *Gender stereotypes and roles* (3rd ed.). Pacific Grove, CA: Brooks/Cole Publishing Company.

Bass, B. M. (1990). *Bass & Stogdill's handbook of leadership: Theory, research, and managerial applications* (3rd ed.). New York: The Free Press.

Bass, B. M., & Avolio, B. J. (Eds.). (1994). *Improving organizational effectiveness through transformational leadership*. Thousand Oaks, CA: SAGE Publications, Inc.

Bauer, C. C., & Baltes, B. B. (2002). Reducing the effects of gender stereotypes on performance evaluations. *Sex Roles, 47*(9/10), 465-476.

Beehr, T. A., Ivanitaskaya, L., Hansen, C. P., Erofeev, D., & Gudanowski, D. M. (2001). Evaluation of 360 degree feedback ratings: Relationships with each other and with performance and selection predictors. *Journal of Organizational Behavior, 22*, 775-788.

Bennis, W. (1989). *Why leaders can't lead*. San Francisco: Jossey-Bass Publishers.

Bennis, W., & Nanus, B. (1985). *Leaders: Strategies for taking charge*. New York: HarperCollins Publishers.

Berdahl, J. L. (1996). Gender and leadership in work groups: Six alternative models. *Leadership Quarterly, 7*(1), 21-40.

Bess, J. L., & Goldman, P. (2001). Leadership ambiguity in universities and K-12 schools and the limits of contemporary leadership theory. *The Leadership Quarterly, 12*, 419-450.

Biro, B. D. (1997). *Beyond success*. New York: Berkley Publishing Group.

Blake, R. R., & Mouton, J. S. (1964). *The new managerial grid*. Houston: Gulf Publishing Company.

Block, P. (1987). *The empowered manager*. San Francisco: Jossey-Bass.

Bracken, D. W., Timmreck, C. W., Fleenor, J. W., & Summers, L. (2001). 360 feedback from another angle. *Human Resource Management, 40*(1), 3-20.

Brenner, O. C., Tomkiewicz, J., & Schein, V. E. (1989). The relationship between sex role stereotypes and requisite management characteristics revisited. *Academy of Management Journal, 32*, 662-669.

Brown, D. J., & Lord, R. G. (2001). Leadership and perceiver cognition: Moving beyond first order constructs. In M. London (Ed.), *How people evaluate others in organizations* (pp. 181-202). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Buckingham, M., & Coffman, C. (1999). *First, break all the rules*. New York: Simon & Schuster.

Burns, J. M. (1978). *Leadership*. New York: Harper & Row, Publishers.

Buttner, E. H., Gryskiewicz, N., & Hidore, S. C. (1999). The relationship between styles of creativity and managerial skills assessment. *British Journal of Management, 10*, 228-238.

Cacioppe, R., & Albrecht, S. (2000). Using 360 degree feedback and the integral model to develop leadership and management skills. *Leadership & Organization Development Journal, 21*(8), 390-404.

Carless, S. A. (1998). Gender differences in transformational leadership: An examination of superior, leader, and subordinate perspectives. *Sex Roles, 39*(11/12), 887-902.

Carli, L. L. (1999). Gender, interpersonal power, and social influence. *Journal of Social Issues, 55*(1), 81-99.

Charan, R., Drotter, S., & Noel, J. (2001). *The leadership pipeline*. San Francisco: Jossey-Bass.

Chemers, M. M. (2000). Leadership research and theory: A functional integration. *Group Dynamics: Theory, Research, and Practice, 4*(1), 27-43.

Church, A. H., & Waclawski, J. (2001). *Designing and using organizational surveys*. New York: Jossey-Bass.

Coe, R. (2000). What is an "effect size"? (Vol. 2005).

Cohen, J. (1988). Statistical power analysis for behavioral sciences (2nd ed.). Hillsdale, NJ: Lawrence .

Coleman, D., Boyatzis, R., & McKee, A. (2002). *Primal leadership*. Boston: Harvard Business School Press.

Collins, M. L. (2000). *The thin book of 360 feedback: A manager's guide*. Plano, TX: Thin Book Publishing Co.

Conger, J. A., Kanungo, R. N., & Menon, S. T. (2000). Charismatic leadership and follower effects. *Journal of Organizational Behavior, 21*, 747-767.

Creswell, J. W. (2002). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Merrill Prentice Hall.

Cribbin, J. J. (1972). *Effective managerial leadership*. New York: American Management Association, Inc.

Dasborough, M. T., & Ashkanasy, N. M. (2002). Emotion and attribution of intentionality in leader-member relationships. *The Leadership Quarterly, 13*, 615-634.

Davidson, M. J., & Cooper, C. L. (1992). *Shattering the glass ceiling: The woman manager*. London: Paul Chapman Publishing Ltd.

Davies, G. (1994). Looking at developing leadership. *Management Development Review, 7*(1), 16 - 19.

Davis, A. E. (1969). Women as a minority group in higher academics. In A. Theodore (Ed.), *The professional woman* (pp. 587-598). Cambridge, MA: Schenkman Publishing Company, Inc.

Deal, J. J., & Stevenson, M. A. (1998). Perceptions of female and male managers in the 1990s: Plus ca change... *Sex Roles, 38*(3/4), 287-300.

Deaux, K. (1983). Internal barriers. In J. J. Pilotta (Ed.), *Women in organizations* (pp. 11-22). Prospect Heights, IL: Waveland Press, Inc.

DeBare, I. (1997, May 5, 1997). 360-degrees of evaluation: More companies turning to full-circle job reviews. *San Francisco Chronicle*.

DiGeorgio-Lutz, J. (Ed.). (2002). *Women in higher education*. Westport, CT: Praeger.

Dilenschneider, R. L. (1991). *A briefing for leaders: Communication as the ultimate exercise of power*. New York: HarperCollins Publishers.

Donnell, S., & Hall, J. (1980). Men and women as managers: A significant case of no significant differences. In J. A. Shtogren (Ed.), *Models for management: The structure of competence* (pp. 520). The Woodlands: Teleometrics Int'l.

Drouillard, S. E., & Kleiner, B. H. (1996). Techniques "good" leadership. *Management Development Review, 9*(5), 30-33.

Drucker, P. F. (1966). *The effective executive*. New York: Harper & Row, Publishers.

Drucker, P. F. (1973). *Management: Tasks, responsibilities, practices*. New York: Harper & Row, Publishers.

Drucker, P. F. (1990). *Managing the non-profit organization: Practices and principles*. New York: HarperCollins Publishers.

Eagly, A. H., & Johnson, B. T. (1990). Gender and leadership style: A meta-analysis. *Psychological Bulletin, 108*(2), 233-256.

Edwards, M. R. (1992). In-situ team evaluation: A new paradigm for measuring and developing leadership at work. In K. E. Clark, M. B. Clark & D. P. Campbell (Eds.), *Impact of leadership* (pp. 559). Greensboro, NC: Center for Creative Leadership.

Edwards, M. R., & Ewen, A. J. (1996). *360 degree feedback*. New York: AMACOM.

Epstein, C. (1971). Encountering the male establishment: Sex-status limits on women's careers in the professions. In A. Theodore (Ed.), *The professional woman* (pp. 52 - 73). Cambridge, MA: Schenkman Publishing Company, Inc.

Fayol, H. (1949). *General and industrial management* (C. Storrs, Trans.). London: Sir Isaac Pitman & Sons, Ltd.

Fiedler, F. E. (1967). *A theory of leadership effectiveness*. New York: McGraw-Hill Book Company.

Fiedler, F. E. (1969). Validation and extension of the contingency model of leadership effectiveness: A review of empirical findings. In W. E. J. Scott & L. L. Cummings (Eds.), *Readings in organizational behavior and human performance* (Revised edition 1973 ed., pp. 468-485). Homewood, IL: Richard D. Irwin, Inc.

Filan, G. L., & Seagren, A. T. (2003). Six critical issues for midlevel leadership in postsecondary setting. *New Directions for Adult and Continuing Education*(124), 21-31.

Filley, A. c., & House, R. J. (1969). *Managerial process and organizational behavior*. Glenview, IL: Scott, Foresman and Company.

Fraenkel, J. R., & Wallen, N. E. (2003). *How to design and evaluate research in education* (5th ed.). Boston: McGraw Hill.

Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational research: An introduction.* Boston: Allyn and Bacon.

Gardner, H. (1995). *Leading minds*. New York: HarperCollins.

Gardner, L., & Stough, C. (2002). Examining the relationship between leadership and emotional intelligence in senior level managers. *Leadership & Organization Development Journal, 23*(2), 68-78.

Gilber, D., Carter, L. L., & Goldsmith, M. (Eds.). (2000). *Linkage Inc.'s best practices in leadership development handbook.* San Francisco: Jossey-Bass/Pfeiffer.

Goldberg, P. (1968). Are women prejudiced against women? In A. Theodore (Ed.), *The professional woman* (pp. 167-172). Cambridge, MA: Schenkman Publishing Company, Inc.

Goodwin, V. L., Wofford, J. C., & Whittington, J. L. (2001). A theoretical and empirical extension to the transformational leadership construct. *Journal of Organizational Behavior, 22*, 759-774.

Gouldner, A. W. (Ed.). (1950). *Studies in leadership: Leadership and democratic action*. New York: Harper & Brothers, Publishers.

Greenleaf, R. K. (1977). *Servant leadership: A journey into the nature of legitimate power and greatness*. New York: Paulist Press.

Hammond, J., Muffs, M., & Sciascia, S. (2001). The leadership crisis: Is it for real? *Principal, 81*(2), 28-32.

Hare, P. A., Koenigs, R. J., & Hare, S. E. (1997). Perceptions of observed and model values of male and female managers. *Journal of Organizational Behavior, 18*, 437-447.

Heilman, M. E., Block, C. J., Martell, R. F., & Simon, M. C. (1989). Has anything changed? Current characterizations of men, women, and managers. *Journal of Applied Psychology, 74*(6), 935-942.

Helgesen, S. (1990). *The female advantage*. New York: Doubleday/Currency.

Hennig, M., & Jardim, A. (1976). *The managerial woman*. Garden City, NY: Anchor Press/Doubleday.

Hersey, P., Blanchard, K. H., & Johnson, D. E. (2001). *Management of organizational behavior* (8th ed.). Upper Saddle River, NJ: Prentice Hall.

Hickman, C. R., & Silva, M. A. (1984). *Creating excellence*. New York: New American Library.

Higginson, M. V., & Quick, T. L. (1975). *The ambitious woman's guide to a successful career*. New York: AMACOM.

Hinkin, T. R., & Tracey, J. B. (1999). The relevance of charisma for transformational leadership in stable organizations. *Journal of Organizational Change Management, 12*(2), 105-119.

Hollander, E. P. (1978). *Leadership dynamics: A practical guide to effective relationships*. New York: The Free Press.

Hollander, E. P., & Julian, J. W. (1969). Contemporary trends in the analysis of leadership processes. In W. E. J. Scott & L. L. Cummings (Eds.), *Readings in organizational behavior and human performance* (revised 1973 ed., pp. 432-441). Homewood, IL: Richard D. Irwin, Inc.

Hooijberg, R., & Choi, J. (2000). Which leadership roles matter to whom? An examination of rater effects on perceptions of effectiveness. *Leadership Quarterly, 11*(3), 341-364.

House, R. J. (1971). A path goal theory of leader effectiveness. *Administrative Schiece Quarterly, 16*(3), 321-330.

House, R. J. (1996). Path-goal theory of leadership: Lessons, legacy, and a reformulated theory. *Leadership Quarterly, 7*(3), 323 - 352.

Hull, R. P., & Umansky, P. H. (1997). An examination of gender stereotyping as an explanation for vertical job segregation in public accounting. *Accounting, Organizations and Society, 22*(6), 507-528.

Hunt, J. G. (1999). Transformational/charismatic leadership's transformation of the field: An historical essay. *Leadership Quarterly, 10*(2), 129-144.

Hunt, J. G., & Larson, L. L. (Eds.). (1974). *Contingency approaches to leadership*. Carbondale, IL: Southern Illinois University Press.

Jackson, J. C. (2001). Women middle managers' perception of the glass ceiling. *Women in Management Review, 16*(1), 30-41.

Jackson, S. E., & Alvarez, E. B. (1992). Working through diversity as a strategic imperative. In S. E. Jackson (Ed.), *Diversity in the workplace* (pp. 13-29). New York: The Guilford Press.

Jacobs, E. E. (Ed.). (2001). *Handbook of U.S. labor statistics* (5th ed.). Lanham, MD: Bernan Press.

Jacobs, T. O. (1970). *Leadership and exchange in formal organizations*. Alexandria, VA: Human Resource Research Organization.

Jago, A. G. (1982). Leadership: Perspectives in theory and research. *Management Science, 28*(3), 315-336.

Jamieson, D., & O'Mara, J. (1991). *Managing workforce 2000*. San Francisco: Jossey-Bass.

Jensrud, Q. T. (1995). *The effects of rater and leader gender on ratings of leader attributes and effectiveness.* Unpublished Dissertation, University of Minnesota, Twin Cities, MN.

Jung, D. I., & Avolio, B. J. (2000). Opening the black box: An experimental investigation of the mediating effects of trust and value congruence on transformational and transactional leadership. *Journal of Organizational Behavior, 21*(9), 949-964.

Kabacoff, R. I. (1998). *Gender differences in organizational leadership: A large sample study.* Paper presented at the Annual convention of the American Psychological Association, San Francisco.

Kanter, R. M. (1977). *Men and women of the corporation*. New York: BasicBooks.

Katzenback, J. R. (1995). *Real change leaders*. New York: Random House.

Klein, E. B., Astrachan, J. H., & Kossek, E. E. (1996). Leadership education: The impact of managerial level and gender on learning. *Journal of Managerial Psychology, 11*(2), 31-40.

Klenke, K. (1996). *Women and leadership: A contextual perspective*. New York: Springer Publishing Company, Inc.

Knowledge and information services: Gender bias. (2004). Retrieved October 23, 2004, 2004

Korac-Kakabadse, N., & Kouzmin, A. (1997). Maintaining the rage: From "glass and concrete ceilings" and metaphorical sex changes to psychological audits and renegotiating organizational scripts-Part 1. *Women in Management Review, 12*(5), 182-195.

Kotter, J. P. (1996). *Leading change*. Boston: Harvard Business School Press.

Kotter, J. P. (1999). *What leaders really do*. Boston: Harvard Business Review Book.

Kouzes, J. M., & Posner, B. Z. (1997a). *The leadership challenge*. San Francisco: Jossey-Bass.

Kouzes, J. M., & Posner, B. Z. (1997b). *Leadership Practices Inventory (LPI)*. San Francisco: Jossey-Bass.

Kouzes, J. M., & Posner, B. Z. (2001). Bringing leadership lessons from the past into the future. In W. Bennis, G. M. Spreitzer & T. G. Cummings (Eds.), *The future of leadership* (pp. 81-90). San Francisco: Jossey-Bass.

Lebeau, A. (2001). *The new workplace woman - "Are we there yet?"* Retrieved 6/21/02, from http://www.bpwusa.org/content/Business_Woman_Magazine/Fall2001/WorkplaceWoman.htm

Lewin, K., Lippitt, R., & White, R. K. (1946). Patterns of aggressive behavior in experimentally created "social climates". In P. L. Harriman (Ed.), *Twentieth century psychology* (pp. 710). New York: The Philosophical Library.

Lewis, A. E., & Fagenson-Eland, E. A. (1998). The influence of gender and organization level on perceptions of leadership behaviors: A self and supervisor comparison. *Sex Roles, 39*(5/6), 479-502.

Lewis, K. R. (2004, January 11). Corporate women still hitting glass ceiling, studies find. *Cleveland Plain Dealer,* p. G1 & 6.

Likert, R., & Likert, J. G. (1976). *New ways of managing conflict*. New York: McGraw-Hill Book Company.

Lord, R. G., & Maher, K. J. (1993). *Leadership and Information processing: Linking perceptions and performance*. Boston: Unwin Hyman.

Lyness, K. S., & Judiesch, M. K. (1999a). Are Women More Likely to be Hired or Promoted into Management Positions. *Journal of Vocational Behavior, Vol. 54*, 158-173.

Lyness, K. S., & Judiesch, M. K. (1999b). Are women more likely to be hired or promoted into management positions? *Journal of Vocational Behavior, 54*, 158-173.

Maher, K. J. (1997). Gender-related stereotypes of transformational and transactional leadership. *Sex Roles, 37*(3/4), 209-225.

Martell, R. F. (1996). What mediates gender bias in work behavior ratings? *Sex Roles, 35*, 153-169.

McCauley, C. D., & Moxley, R. S. J. (1996). Developmental 360: How feedback can make managers more effective. *Career Development International, 1*(3), 15-19.

McGee Banks, C. A. (1995). Gender and race as factors in educational leadership and administration. In. (Ed.), *The Jossey-Bass reader on educational leadership* (pp. 217-256). San Francisco: Jossey-Bass.

McGregor, J., & Tweed, D. (2001). Gender and managerial competence: Support for theories of androgyny? *Women in Management Review, 16*(6), 279-286.

McLane, H. J. (1980). *Selecting, developing and retaining women executives*. New York: Van Nostrand Reinhold Company.

Mertens, D. M. (1998). *Research methods in education and psychology*. Thousand Oaks, CA: Sage Publications, Inc.

Mertler, A. C., & Vannatta, A. R. (2004). Advanced multivariate statistical methods: Practical application and interpretation (2nd ed.). Los Angeles: Pyrezak Publishing.

Meyer, C. (1986). Leadership can't be taught --only learned. In J. D. Adams (Ed.), *Transforming leadership: From vision to results* (pp. 261-269). Alexandria, VA: Miles River Press.

Mintzberg, H. (1973). *The nature of managerial work*. New York: Harper & Row, Publishers.

Morgan, G. A., Leech, N. L., Gloeckner, G. W., & Barrett, K. C. (2004). *SPSS for introductory statistics: Use and interpretation* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

Moss, J., Jr., Jensrud, Q., Johansen, B. C., & Presill, H. (1989, 1993). Leader Attributes Inventory and Leader Effectiveness Index. University of Minnesota.

Moss, J., Jr., Johansen, B. C., & Preskill, H. (1991). Developing the "Leader Attributes Inventory": An odyssey. *Journal of Industrial Teacher Education, 28*(2), 7-22.

Moss, J., Jr., Lambrecht, J. J., Jensrud, Q., & Finch, C. R. (1994a). *Leader Attributes Inventory manual* (Manual). Berkeley, CA: University of California at Berkeley.

Moss, J., Jr., Lambrecht, J. J., Jensrud, Q., & Finch, C. R. (1994b). *Leader Effectiveness Index manual* (Manual). Berkeley: National Center for Research in Vocational Education.

Mount, M. K., & Scullen, S. E. (2001). Multisource feedback ratings: what do they really measure? In M. London (Ed.), *How people evaluate others in organizations* (pp. 155-176). Mahway, NJ: Lawrence Erlbaum Associates, Publishers.

Neff, T. J., & Citrin, J. M. (1999). *Lessons from the top: The search for America's best business leaders*. New York: currency Doubleday.

Nijhof, W. J., & Jager, A. (1999). Reliability testing of multi-rater feedback. *International Journal of Training and Development, 3*(4), 292-300.

Norusis, M. J. (2002). *SPSS 11.0 guide to data analysis*. Upper Saddle River, NJ: Prentice Hall.

Oakley, J. G. (2000). Gender-based barriers to senior management positions: Understanding the scarcity of female CEOs. *Journal of Business Ethics, 27*, 321-334.

Olsson, S. (2000). Acknowledging the female archetype: Women managers' narratives of gender. *Women in Management Review, 15*(5/6), 296-302.

Operario, D., & Fiske, S. T. (2001). Causes and consequences of stereotypes in organizations. In M. London (Ed.), *How people evaluate others in organizations* (pp. 45-62). Mahway, NJ: Lawrence Erlbaum Associates, Publishers.

Padavic, I., & Reskin, B. (2002). *Women and men at work* (2nd ed.). Thousand Oaks, CA: Pine Forge Press.

Palmer, B., Walls, M., Burgess, Z., & Stough, C. (2001). Emotional intelligence and effective leadership. *Leadership & Organization Development Journal, 22*(1), 5-10.

Park, D. (1996). Gender role, decision style and leadership style. *Women in Management Review, 11*(8), 13-17.

Parker, P. S., & ogilvie, d. (1996). Gender, culture, and leadership: Toward a culturally distinct model of African-American women executives' leadership strategies. *Leadership Quarterly, 7*(2), 189-214.

Philipkoski, K. (2005). *Where are all the women?* Retrieved March 19, 2005, 2005, from htts://wired.com/news/print/0,1294,66603,00.html

Podsakoff, P. M., & MacKenzie, S. B. (1996). Transformational leader behaviors and substitutes for leadership as determinants of employee satisfaction, commitment, trust, and organizational citizenship behaviors. *Journal of Management, 22*(2), 259-298.

Pounder, J. S., & Coleman, M. (2002). Women-better leaders than men? In general and educational management it still "all depends". *Leadership & Organization Development Journal, 23*(3), 122-133.

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

Putnam, L. L. (1983). Lady you're trapped: Breaking out of conflict cycles. In J. J. Pilotta (Ed.), *Women in organizations* (pp. 39 - 53). Prospect Heights, IL: Waveland Press, Inc.

Rodler, C., Kirchler, E., & Holsl, E. (2001). Gender stereotypes of leaders: An analysis of the contents of obituaries from 1974 to 1998. *Sex Roles, 45*(11/12), 827-843.

Rosen, R. H. (1996). *Leading people: Transforming business from the inside out*. New York: Penguin Books.

Rosener, J. B. (1990). Ways women lead. *Harvard Business Review, Nov-Dec*, 119 -125.

Rosenthal, P. (1995). Gender differences in managers' attributions for successful work performance. *Women in Management Review, 10*(6), 26-31.

Russell, R. F., & Stone, A. G. (2002). A review of servant leadership attributes: Developing a practical model. *Leadership & Organization Development Journal, 23*(3), 145-157.

Salkind, N. J. (2000). *Statistics for people who (think they) hate statistics*. Thousand Oaks, CA: Sage Publications, Inc.

Sarros, J. C., & Santora, J. C. (2001). The transformational-transactional leadership model in practice. *Leadership & Organization Development Journal, 22*(8), 383-393.

Schatz, K., & Schatz, L. (1986). *Managing by influence*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Schatz, M. (1997). Why we don't teach leadership in our MBA programmes. *Journal of Management Development, 16*(9), 677-679.

Schein, V. E. (1976). Think manager-think male. *The Atlanta Economic Review, March-April*, 21-24.

Schneider, M. (2001). *Rating the management gurus*. Retrieved January 16, 2002, from http://www.businessweek.com/bschools/content/oct2001/bs20011015_3309.htm

Scott, W. E., Jr., & Cummings, L. L. (Eds.). (1969). *Readings in organizational behavior and human performance*. Homewood, IL: Richard D. Irwin, Inc.

Sczesny, S. (2003). A closer look beneath the surface: Various facets of the think-manager-think-male stereotype. *Sex Roles, 49*(7/8), 353-363.

Seifert, C. F., McDonald, R. A., & Yukl, G. (2003). Effects of multisource feedback and a feedback facilitator on the influence behavior of managers toward subordinates. *Journal of Applied Psychology, 88*(3), 561 - 569.

Selznick, P. (1957). *Leadership in administration*. New York: Harper & Row, Publishers.

Senge, P. M. (1990). *The fifth discipline*. New York: Doubleday.

Shakeshaft, C. (1989). *Women in educational administration*. Newbury Park, London: Sage Publications.

Shakeshaft, C. (1995). A cup half full: A gender critique of the knowledge base in educational administration. In R. Donmoyer, M. Imber & J. J. Scheurich (Eds.), *The knowledge base in educational administration* (pp. 319). Albany, NY: State University of New York Press.

Shakeshaft, C. (1999). The struggle to create a more gender-inclusive profession. In J. Murphy & K. S. Louis (Eds.), *Handbook of research on educational administration* (2nd ed., pp. 548). San Francisco: Jossey-Bass.

Shakeshaft, C., Nowell, I., & Perry, A. (1991). Gender and supervision. *Theory Into Practice, XXX*(2), 134-139.

Singhania. (2002, July 21, 2002). Baby boomers shift gender battle lines. *The Plain Dealer,* p. 3.

Smith, R. M. (1997). *Defining leadership through followership: Concepts for approaching leadership development.* Paper presented at the National Communication Association Annual Convention, Chicago, IL.

Sosik, J. J., & Dworakivsky, A. C. (1998). Self-concept based aspects of the charismatic leader: More than meets the eye. *Leadership Quarterly, 9*(4), 503-526.

Statistics, Bureau of Labor. (2002). *Occupational employment and wages, 2002*. Retrieved April 4, 2004, 2004, from http://www.bls.gov/news.release/ocwage.nr0.htm

Steinmetz, S. (Ed.). (1997). *Random House Webster's college dictionary* (2 ed.). New York: Random House.

Stogdill, R. M. (1974). *Handbook of leadership*. New York: The Free Press.

Thalheimer, W., & Cook, S. (2002). *How to calculate effect sizes from published research articles: A simplified methodology*. Retrieved June 5, 2005, from http://work-learning.com/effect_sizes.htm

Tharenou, P. (1999). Gender differences in advancing to the top. *IJMR, June*, 111-132.

Theodore, A. (1971). The professional woman: Trends and prospects. In A. Theodore (Ed.), *The professional woman* (pp. 1 - 35). Cambridge, MA: Schenkman Publishing Company, Inc.

Thompson, M. D. (2000). Gender, leadership orientation, and effectiveness: Testing the theoretical models of Bolman & Deal and Quinn. *Sex Roles, 42*(11/12), 969-992.

Tuckman, B. W. (1994). *Conducting Educational Research* (4th ed.). Fort Worth, TX: Harcourt Brace College Publishers.

U.S. Department of Labor. (1995). *Good for business: Making full use of the nation's human capital* (Fact-Finding Report). Washington, DC: US Department of Labor.

Valentine, S., & Godkin, L. (2000). Supervisor gender, leadership style, and perceived job design. *Women in Management Review, 15*(3), 117-129.

Vecchio, R. P. (2002). Leadership and gender advantage. *The Leadership Quarterly, 13*, 643-671.

Vinnicombe, S., & Singh, V. (2002). Sex role stereotyping and requisites of successful top managers. *Women in Management Review, 17*(3/4), 120-130.

Walton, M. (1986). *The Deming management method*. New York: Perigee Books.

Warner, W. L., & Abegglen, J. C. (1955). *Big business leaders in America*. New York: Harper & Brothers.

When a CEO becomes president. (2004). *Women in Higher Education, 13*(8), 3.

Williams, M. G. (1977). *The new executive woman*. Radnor, PA: Chilton Book Company.

Yoder, J. D. (2001). Making leadership work more effectively for women. *Journal of Social Issues, 57*(4), 815-828.

Yoder, J. D., Schleicher, T. L., & McDonald, T. W. (1998). Empowering token women leaders: The importance or organizationally legitimated credibility. *Psychology of Women Quarterly, 22*, 209-222.

Yukl, G. (1989). Managerial leadership: A review of theory and research. *Journal of Management, 15*(2), 251-289.

Yukl, G. (1999). An evaluation of conceptual weaknesses in transformational and charismatic leadership theories. *Leadership Quarterly, 10*(2), 285-305.

Yukl, G. (2002). *Leadership in organizations* (5th ed.). Upper Saddle River, NJ: Prentice Hall.

APPENDICES

APPENDIX A. LEADER ATTRIBUTES INVENTORY

Leader Attributes Inventory

Mark or Highlight circles completely. This form should be sent directly back to the individual analyzing the data. NOT to the individual leader requesting the information from you. A stamped self-addressed envelope (or email address) is provided to maintain confidentiality

ID Number	Today's Date: _____	Your Gender: ① Female ② Male
What relationship to you is the person you are rating? **I am the person's……** ① It is myself ② I am the person's Supervisor ③ I am the person's Direct Report ④ I am the person's Peer	Your Ethnic Group: ① African American ② Asian ③ Hispanic ④ Native American ⑤ White ⑥ Other	Your age: ① 17 - 30 ② 31 - 40 ③ 41 - 50 ④ 51 - 60 ⑤ 61 - 70 ⑥ 71+
How well do you know the person you are rating? ① Very Well ② Fairly Well ③ Casually ④ Not at all	Educational Background (indicate highest level completed) ① High School ② Associate Degree ③ Bachelor's Degree ④ Master's Degree ⑤ Professional Degree (Law) Doctoral Degree	**This form should be sent directly back to the individual analyzing the data. NOT to the individual leader requesting the information from you. A stamped self-addressed envelope (or email address) is provided to maintain confidentiality**
TO BE ANSWERED BY THE LEADER ONLY Years in Leadership Position ① 0 - 5 ② 6 - 10 ③ 11 - 15 ④ 16 - 20 ⑤ 21 - 25 ⑥ 26+	**TO BE ANSWERED BY THE LEADER ONLY** Managerial Level ① Supervisor ② Manager (Direct reports or Supervisors report to you) ③ Senior Manager (direct reports, supervisors, managers report to you) ④ Executive (direct reports, supervisors, managers, senior managers report to you)	**TO BE ANSWERED BY THE LEADER ONLY** Number of employees supervised by you (including other supervisors or managers) ① 1 - 5 ② 6 - 10 ③ 11 - 15 ④ 16 - 20 ⑤ 21 - 25 ⑥ 26+

Rate the leader (or yourself) on the following 37 attributes using the following scale:

① = Very Undescriptive ② = Undescriptive ③ = Somewhat Undescriptive ④ = Somewhat Descriptive ⑤ = Descriptive ⑥ = Very Descriptive

1. Energetic with Stamina – *Approaches tasks with great energy and works long hours when necessary.*	① ② ③ ④ ⑤ ⑥
2. Insightful – *Reflects on the relationship among events and grasps the meaning of complex issues quickly.*	① ② ③ ④ ⑤ ⑥
3. Adaptable, Open to Change – *Encourages and accepts suggestions and constructive criticism from coworkers, and is willing to consider modifying plans.*	① ② ③ ④ ⑤ ⑥
4. Visionary – *Looks to the future and creates new ways in which the organization can prosper.*	① ② ③ ④ ⑤ ⑥
5. Tolerant of Ambiguity and Complexity – *Comfortably handles vague and difficult situations where there is no simple answer or no prescribed method of proceeding.*	① ② ③ ④ ⑤ ⑥
6. Achievement-Oriented – *Shows commitments to achieving goals and strives to keep improving performance.*	① ② ③ ④ ⑤ ⑥
7. Accountable – *Holds self answerable for work and willingly admits mistakes.*	① ② ③ ④ ⑤ ⑥
8. Initiating – *Frequently introduces new ideas.*	① ② ③ ④ ⑤ ⑥

① = Very Undescriptive ② = Undescriptive ③ = Somewhat Undescriptive ④ = Somewhat Descriptive ⑤ = Descriptive ⑥ = Very Descriptive

9. Confident, Accepting of Self – *Appears secure about abilities and recognizes personal shortcomings.*	① ② ③ ④ ⑤ ⑥
10. Willing to Accept Responsibility – *Willingly assumes higher level duties and functions within the organization.*	① ② ③ ④ ⑤ ⑥
11. Persistent – *Continues to act on beliefs despite unexpected difficulties.*	① ② ③ ④ ⑤ ⑥
12. Enthusiastic, Optimistic – *Thinks positively, approaches new tasks with excitement, and deals with challenges as opportunities.*	① ② ③ ④ ⑤ ⑥
13. Tolerant of Frustration – *Acts calmly and patiently even when things do not go as planned.*	① ② ③ ④ ⑤ ⑥
14. Dependable, Reliable – *Can be counted on to follow through to get the job done.*	① ② ③ ④ ⑤ ⑥
15. Courageous, Risk-Taker – *Willingly tries out new ideas in spite of possible loss or failure.*	① ② ③ ④ ⑤ ⑥
16. Even Disposition – *Displays a sense of humor and stable temperament even in stressful situations.*	① ② ③ ④ ⑤ ⑥
17. Committed to the Common Good – *Works to benefit the entire organization, not just self.*	① ② ③ ④ ⑤ ⑥
18. Personal Integrity – *Speaks frankly and honestly and practices espoused values.*	① ② ③ ④ ⑤ ⑥
19. Intelligent with Practical Judgment – *Learns quickly, and knows how and when to apply knowledge.*	① ② ③ ④ ⑤ ⑥
20. Ethical – *Acts consistently with principles of fairness and right or good conduct that can stand the test of close public scrutiny.*	① ② ③ ④ ⑤ ⑥
21. Communication (listening, oral, written) – *Listens closely to people at work, and organizes and clearly presents information both orally and in writing.*	① ② ③ ④ ⑤ ⑥
22. Sensitively, Respect – *Shows genuine concern for the feelings of others and regard for them as individuals.*	① ② ③ ④ ⑤ ⑥
23. Motivating Others – *Creates an environment in which people want to do their best.*	① ② ③ ④ ⑤ ⑥
24. Networking – *Develops cooperative relationships within and outside of the organization.*	① ② ③ ④ ⑤ ⑥
25. Planning – *In collaboration with others, develops tactics and strategies for achieving organization objectives.*	① ② ③ ④ ⑤ ⑥
26. Delegating – *Appropriately and effectively assigns responsibility and authority.*	① ② ③ ④ ⑤ ⑥
27. Organizing – Establishes effective and efficient procedures for getting work done in an orderly manner.	① ② ③ ④ ⑤ ⑥
28. Team Building – *Facilitates the development of cohesiveness and cooperation among the people at work.*	① ② ③ ④ ⑤ ⑥
29. Coaching – *Helps people develop knowledge and skills for their work assignments.*	① ② ③ ④ ⑤ ⑥
30. Conflict Management – *Brings conflict into the open and uses it to arrive at constructive solutions.*	① ② ③ ④ ⑤ ⑥
31. Time Management - *Schedules own work activities so that deadlines are met and work goals are accomplished in a timely manner.*	① ② ③ ④ ⑤ ⑥
32. Stress Management – *Effectively deals with the tension of high pressure work situations.*	① ② ③ ④ ⑤ ⑥
33. Appropriate Use of Leadership Styles – *Uses a variety of approaches to influence and lead others.*	① ② ③ ④ ⑤ ⑥
34. Ideological Beliefs are Appropriate to the Group – *Models and demonstrates belief in the basic values of the organization.*	① ② ③ ④ ⑤ ⑥
35. Decision-Making – *Makes timely decisions that are in the best interest of the organization an analyzing all available information, distilling key points, and drawing relevant conclusions.*	① ② ③ ④ ⑤ ⑥
36. Problem-Solving – *Effectively identifies, analyzes, and resolves difficulties and uncertainties at work.*	① ② ③ ④ ⑤ ⑥
37. Information Management – *Identifies, collects, organizes and analyzes the essential information needed by the organization.*	① ② ③ ④ ⑤ ⑥

APPENDIX B. LEADER EFFECTIVENESS INDEX

Leader Effectiveness Index

PLEASE NOTE THE RATING CHANGE IN THIS SECTION
We are seeking your opinion about how effectively an individual is performing as a leader. Please reflect carefully about each statement and select the rating that best describes the person.

① = Not Effective ② = Slightly Effective ③ = Somewhat Effective ④ = Effective ⑤ = Very Effective ⑥ = Extremely Effective

38. Inspires a shared vision and establishes standards that help the organization achieve its next stage of development. *For example, creates a sense of purpose, defines reality in the larger context, instill shared values and beliefs.*	① ② ③ ④ ⑤ ⑥
39. Fosters unity, collaboration and ownership, and recognize individual and team contributions. *For example, creates a climate of community, builds morale, sets a positive tone, resolves disagreements.*	① ② ③ ④ ⑤ ⑥
40. Exercises power effectively and empowers others to act. *For example, facilitates change, shares authority, nurtures the skills of group members.*	① ② ③ ④ ⑤ ⑥
41. Exerts influence outside of the organization in order to set the sight context for the organization. *For example, serves as a symbol for the group, secures resources, builds coalitions, acts as an advocate.*	① ② ③ ④ ⑤ ⑥
42. Establishes an environment conducive to learning. *For example, provides intellectual stimulation, creates a supportive climate for learners, facilitates the professional development of staff.*	① ② ③ ④ ⑤ ⑥
43. Satisfies the job-related needs of members of the organizations as individuals. *For example, respects, trusts, and has confidence in members, adapts leadership style to the situation, creates a satisfying work environment.*	① ② ③ ④ ⑤ ⑥
44. **Overall, how effective is the leadership performance of the person you are rating?**	① ② ③ ④ ⑤ ⑥

Thank you for filling out the Leader Attributes Inventory and Leader Effectiveness Index!!!

Please email the form back: □
To address at right ⇨

Do not give the form back to the person you are rating.
Your data will only be used in aggregate format, unless you are a supervisor.

Questions?

APPENDIX C. INFORMED CONSENT FORMS

Department of Educational Foundations and Leadership
College of Education
Akron, OH 44325-4208
(330) 972-7773 Office
(330) 972-7770 Office
(330) 972-2452 Fax

Informed Consent Letter for Leaders

Title of Study: *Leader Effectiveness and Attributes in a Business Environment*

Introduction: You are invited to participate in a research project being conducted by Geraldine Hura, a student in the Department of Curricular and Instructional Studies at the University of Akron.

Purpose: The purpose of this study is to examine leadership attributes and effectiveness using the 360 (multi-rater) process. Using two 360 assessments, the study will analyze data from the perceptions of a self-assessment, supervisor assessment, peer, and direct report assessments. The data from this study will be used to establish industry and demographic norms.

(Name of Organization) has granted permission to Ms. Hura to conduct this research.

Procedures: If you agree to participate in this study, you will complete and return to this researcher, a Leader Demographic Sheet and this signed Informed Consent Letter. Upon receipt of these two documents, the researcher will give you a packet of information with a unique identification number (code number). Your instructions include selecting a supervisor, and up to four peers and direct reports from whom you would like to receive feedback. You will distribute to these individuals (raters) instructions and a consent letter. The instructions will direct the raters to a web site which will contain the assessments. The raters will enter your code number and complete the 15 minute assessment on your leadership attributes and effectiveness. The code number will be used by the researcher to collect the data and develop the feedback report that will be given directly to you at a feedback session at a feedback session scheduled in TBD (specifics date and times to be determined).

In addition, you will complete a self-assessment on the web of your own perceptions of your leadership attributes and effectiveness. This information will also be included in the feedback report.

The purpose of this assessment is for developmental purposes only. The individual feedback report will only be given to you the leader. Neither your supervisor, the HR department, nor any company official will see your personal feedback report – this is completely confidential (unless you choose to discuss it with other individuals). Your organization will only receive a summary report of the average of all the scores of leaders who participated in this study.

Confidential Data Collection: The results of the developmental feedback will be distributed to only you, the participant in this study. In addition, only your self-assessment scores and your supervisor scores will be free standing. Scores from peers and direct reports are averaged. You will not be able to identify who has provided the feedback (with the exception of your supervisor). If only one or two peer(s) or direct report(s) completes the assessments, their scores will be included with the other observer category (peer or direct report).

Your name and identification code number will be kept in a secure location and only the researcher will have access to this data. You will NOT be individually identified in any publication or presentation of the research results.

Risks: Participating in this study may cause minimal risks to you, the participant. You may receive feedback from your observers that is different from your own perception of your attributes or effectiveness. In addition, you may not receive feedback from all of the observers (since they also have the option not to participate). The personal

Benefits: The benefits to you for participating in this study are that you will receive feedback from multiple sources: self, supervisor, your peers, and you direct reports. As a result of participating in this study, you will also be invited to a feedback session with others from your organization who participated. At this session, you will receive your Personal Feedback Report and have an opportunity to review the report, discuss the interpretation of the report, and develop a personal action plan based on the feedback received on the report.

Right to refuse or withdraw: Your participation in this research is voluntary and you may refuse to participate or you may discontinue participation at anytime, without penalty. If you decide to discontinue your participation, you may do one or more of the following:

- not complete the self-assessment
- not invite others to complete the assessments
- not attend the feedback session
- contact Gerri Hura and ask to be removed from the study

If you have any questions about this study, you may call Gerri Hura at (440) 871-6252 (email gmh6@uakron.edu) or her advisor Dr. Qetler Jensrud at (330) 972-3403. This project has been reviewed and approved by the University of Akron Institutional Review Board and your organization's Human Resources department. If you have any questions about your rights as a research participant, you may call Sharon McWhorter, Associate Director for Research services at (330) 972-7666 or 1-888-232-8790.

In addition, you may contact _____ at _____ from your Human Resources department to discuss any questions or concerns you have.

I have read the information provided above and all of my questions have been answered. I voluntarily agree to participate in this study. My signature on this letter will serve as my consent. I have been given a copy of this consent form for future reference.

_____ _____

Participant Signature Date

Please Print Name Clearly: _____

Department _____

Work Phone Number _____

Email _____

Department of Educational Foundations and Leadership
College of Education
Akron, OH 44325-4208
(330) 972-7773 Office
(330) 972-7770 Office
(330) 972-2452 Fax

Informed Consent Letter for Supervisors

Title of Study: *Leader Effectiveness and Attributes in a Business Environment*

Introduction: You are invited to participate in a research project being conducted by Gerri Hura, a student in the Department of Curricular and Instructional Studies at the University of Akron.

(Name of Organization) has given permission to Ms. Hura to conduct this study.

Purpose: The purpose of this developmental study is to examine leadership attributes and effectiveness using the 360 (multi-rater) process. Using two 360 assessments the Leader Attributes Inventory (LAI) and the Leader Effectiveness Index (LEI), the study will analyze data from the perceptions of a self-assessment, supervisor assessment, peer, and direct report assessments. The data will be used to establish industry and demographic norms.

Procedures: If you agree to participate in this study, you will be directed to a web site where you will enter the code number of the leader requesting the feedback. You will complete the 15 minute assessment on the requesting leader's attributes and effectiveness. The code number will be used by the researcher to collect the data and develop the feedback report that will be given directly to that leader at an upcoming feedback session.

The purpose of this assessment is for developmental purposes only. The individual feedback report will only be given to the leader. Your organization will only receive a summary report of the average of all the scores of leaders who participated in this study.

Confidential Data Collection: The results of the developmental feedback will be distributed to only the leader to whom you provided feedback. Your score will be freestanding since you, as the supervisor of the leader, provides feedback to him or her formally and informally. Your scores will not be anonymous to the leader.

Risks: Participating in this study may cause minimal risks to you the participant. You may provide the leader with feedback that is different from their own perception of their attributes or effectiveness. The individual feedback report for the leader will not be used for a performance appraisal or promotion purpose. This report will only be used for the leader's self development.

Benefits: The benefit to you for participating in this study is that you will provide feedback from an important perspective to the leader. This feedback will be used by the leader to develop an action plan to strengthen their leadership and management skills.

Right to refuse or withdraw: Your participation in this research is voluntary and you may refuse to participate or you may discontinue participation at anytime, without penalty. If you decide to discontinue your participation, you may do one or more of the following:

- not complete the assessment
- contact Gerri Hura and ask to be removed from the study

If you have any questions about this study, you may call Gerri Hura at (440) 871-6252 (email: gmh6@uakron.edu) or her advisor Dr. Qetler Jensrud at (330) 972-3403. This project has been reviewed and approved by the University of Akron Institutional Review Board and your organization's Human Resources department. If you have any questions about your rights as a research participant, you may call Sharon McWhorter, Associate Director for Research services at (330) 972-7666 or 1-888-232-8790.

In addition, you may contact _____ at _____ from your Human Resources department to discuss any questions or concerns you have.

I have read the information provided above and all of my questions have been answered. I voluntarily agree to participate in this study. My submission of the data on the web site will serve as my consent. I have been given a copy of this consent form for future reference.

Department of Educational Foundations and Leadership
College of Education
Akron, OH 44325-4208
(330) 972-7773 Office
(330) 972-7770 Office
(330) 972-2452 Fax

Informed Consent Letter for Peers and Direct Reports

Title of Study: *Leader Effectiveness and Attributes in a Business Environment*

Introduction: You are invited to participate in a research project being conducted by Geraldine Hura, a student in the Department of Curricular and Instructional Studies in Secondary Education at the University of Akron.

(Name of Organization) has given permission to Ms. Hura to conduct this study.

Purpose: The purpose of this study is to examine leadership attributes and effectiveness using the 360 (multi-rater) process. Using two 360 assessments the Leader Attributes Inventory (LAI) and the Leader Effectiveness Index (LEI), the study will analyze data from the perceptions of a self-assessment, supervisor assessment, peer, and direct report assessments. The data from this study will be used to establish industry and demographic norms.

Procedures: If you agree to participate in this developmental study, you will be directed to a web site (or paper copies) where you will enter the code number of the leader requesting the feedback. You will complete the 15-minute assessment on the requesting leader's attributes and effectiveness. The code number will be used by the researcher to collect the data and develop the feedback report that will be given directly to that leader at an upcoming feedback session.

The purpose of this assessment is for developmental purposes only. The individual feedback report will only be given to the leader. Your organization will only receive a summary report of the average of all the scores of leaders who participated in this study.

Confidential Data Collection: The results of the developmental feedback will be distributed only to the leader to whom you provided feedback. Scores from peers and direct reports are averaged. The leader will not be able to identify who has provided the feedback. If only one or two peer(s) or direct report(s) completes the assessments, those scores will be included with the other observer category (peer or direct report).

Risks: Participating in this study may cause minimal risks to you the participant. You may provide your leader with feedback that is different from their own perception of their attributes or effectiveness. However since your scores will be averaged with others your feedback is completely anonymous. The individual feedback report for the leader will not be used for a performance appraisal or promotion purpose. This report will only be used for the leader's self development.

Benefits: The benefit to you for participating in this study is that you will provide feedback from multiple sources to the leader. This feedback will be used by the leader to develop an action plan to strengthen their leadership and management skills.

Right to refuse or withdraw: Your participation in this research is voluntary and you may refuse to participate or you may discontinue participation at anytime, without penalty. If you decide to discontinue your participation, you may do one or more of the following:

- not complete the assessment
- contact Gerri Hura and ask to be removed from the study

If you have any questions about this study, you may call Gerri Hura at (440) 871-6252 (email:gmh6@uakron.edu) or her advisor Dr. Oetler Jensrud at (330) 972-3403. This project has been reviewed and approved by the University of Akron Institutional Review Board and your organization's Human Resources department. If you have any questions about your rights as a research participant, you may call Sharon McWhorter, Associate Director for Research services at (330) 972-7666 or 1-888-232-8790.

In addition, you may contact _____ at _____ from your Human Resources department to discuss any questions or concerns you have.

I have read the information provided above and all of my questions have been answered. I voluntarily agree to participate in this study. My submission of the data on the web site (or mailing the completed assessments) will serve as my consent. I have been given a copy of this consent form for future reference.

APPENDIX D. SAMPLE ORGANIZATIONAL CONSENT LETTER

[redacted]

[redacted]

April 8, 2005

Geraldine Hura

[redacted]

Dear Ms. Hura:

This is to acknowledge that [redacted] grants you access to conduct your leadership assessment research with our employees. Your study, *Leader Effectiveness and Attributes in a Business Environment* will consist of conducting a 360 assessment of our supervisors and managers. We understand all the elements of this study, the risks and the benefits.

To accommodate this study we will set up meetings between you and the target leader population where you will describe the process of the Leadership Assessment and Effectiveness Study.

At this meeting you will describe the entire process and explain the inherent risks of participation to the leaders. In addition, you will indicate that this process is voluntary and gain the leaders' permission through an informed consent letter.

We understand and acknowledge that the purpose of this assessment process is for developmental purposes only not for performance evaluation purposes. Only the leaders who participate will receive a confidential Personal Feedback Report. Human Resources will not have access to these reports unless the individual leader chooses to share the information with others. We also acknowledge that the Personal Feedback Reports will not be used for the individual leader's performance appraisal, promotion, or financial rewards. These Personal Feedback Reports will be distributed to the participating leaders at feedback sessions scheduled [redacted]. At these feedback sessions, you will facilitate a discussion with the participants and distribute the Personal Feedback Reports. In addition, the participants will review their individual reports and develop action plans based on the feedback they receive. These action plans are not intended to be shared with anyone within this organization unless the individual leader chooses to do so.

You will provide us with a Summary Report that will consist of the averaged scores from all who participate in the study for the two assessments: LAI and LEI.

The data from this process at [redacted] will be used by you for your research in conjunction with the University of Akron. We understand that you will not identify individual participants or this organization in any of your research or published results.

If we have any questions about this study we could call your advisor Dr. Oetler Jensrud at (330) 972-3403. In addition, this project has been reviewed and approved by the University of Akron Institutional Review Board. If we have any questions about our rights as a research site, we may call Sharon McWhorter, Associate Director for Research services at the University of Akron at (330) 972-7666 or 1-888-232-8790.

We also understand that this study will be conducted at no cost to our employees or our organization (with the exception of employees' time).

Sincerely,

[redacted]

APPENDIX E. INSTITUTIONAL REVIEW BOARD LETTER

Office of Research Services and Sponsored Programs
Akron, OH 44325-2102
(330) 972-7666 Office
(330) 972-6281 Fax

February 25, 2005

Geraldine Hura
Curricular and Instructional Studies
The University of Akron
Akron, Ohio 44325-4205

Ms. Hura:

The University of Akron's Institutional Review Board for the Protection of Human Subjects (IRB) completed a review of the protocol entitled "*The Effects of Rater and Leader Gender on Ratings of Leader Effectiveness and Attributes in a Business Environment*". The IRB application number assigned to this project is **20041203.**

The protocol qualified for Expedited Review and was approved on February 18, 2005. The protocol represents minimal risk to subjects and matches the following federal category for expedited review:

> *(7) Research on individual or group characteristics or behavior or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation or quality assurance methodologies*

This approval is valid until February 18, 2006 or until modifications are proposed to the project protocol, whichever may occur first. In either instance, an Application for Continuing Review must be completed and submitted to the IRB.

Enclosed is the informed consent document, which the IRB has approved for your use in this research. A copy of this form is to be submitted with any application for continuation of this project.

Please note that within one month of the expiration date of this approval, the IRB will forward an annual review reminder notice to you by email, as a courtesy. Nevertheless, **it is your responsibility as principal investigator to remember the renewal date of your protocol's review.** Please submit your continuation application at least two weeks prior to the renewal date, to insure the IRB has sufficient time to complete the review.

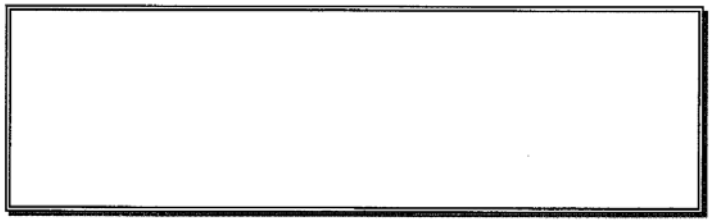
Please retain this letter for your files. If the research is being conducted for a master's thesis or doctoral dissertation, you must file a copy of this letter with the thesis or dissertation.

Sincerely,

Sharon McWhorter, Associate Director

Cc: Susan Clark, Department Chair
Qetler Jensrud, Advisor
Phil Allen, IRB Chair

APPENDIX F. PERSONAL FEEDBACK REPORTS



Personal Feedback Report

Prepared for:

_____

Prepared by: Gerri Hura,
Copyrighted 2004

Introduction

This report provides information on the results of the Leader Attributes Inventory (LAI) and Leader Effectiveness Index (LEI) recently administered. The charts contained in this report provide information on the LAI and LEI ratings received. This information should be used for developmental purposes only. The ratings are perceptions and should be viewed as such. No instrument can measure the "true" internal characteristics of individuals, only perceptions of observable behavior. Individuals attribute cause to observable behaviors and perceive people to have certain characteristics based on what they believe the behaviors mean. Therefore, what someone perceives might or might not actually be correct about another person.

The feedback from this report provides information on the perception of observable behaviors. The information can be used to enhance or change observable behaviors to produce different perceptions in future situations. In addition, this report provides some guidance on how the results from the charts may be interpreted and how to plan for future leadership development.

At no time should the leader use the results to punish individuals for ratings received. These data are perceptions and should be used as information to change or enhance observable behavior, thereby, trying to alter perceptions. Do not let the data "hurt" your feelings; again the information is how someone else perceives your behavior not how you actually are inside.

In the chart your self-rating is compared to the average ratings of your observers (supervisor, peers and direct reports). The ratings of your peers and direct reports were averaged to provide you with an overall perception of how others perceive you.

Leader Effectiveness

The first section reflects the ratings you and your observers perceived of your leadership effectiveness. The items were scored as "1 = Not Effective, 2 = Slightly effective, 3 = Somewhat Effective, 4 = Effective, 5 = Very Effective, 6 = Extremely Effective. The seventh item is the overall effectiveness rating.

The Leader Effectiveness Index contains six behaviors effective leaders engage in and an overall effectiveness question. The following are the items:

1. Inspires a shared vision and establishes standards that help the organization achieve its next stage of development.
2. Fosters unity, collaboration and ownership, and recognizes individual and team contributions.
3. Exercises power effectively and empowers others to act.
4. Exerts influence outside of the organization in order to set the right context for the organization.

5. Establishes an environment conducive to learning.
6. Satisfies the job-related needs of members of the organization as individuals.
7. Overall, how effective is the leadership performance of the person you are rating?

Leader Attributes

The second section reflects what you and your observers rated the 37 attributes. The attributes were scored as 1 = Very Undescriptive, 2 = Undescriptive, 3 = Somewhat Undescriptive, 4 = Somewhat Descriptive, 5 = Descriptive, and 6 = Very Descriptive. An average of all 37 attributes was also calculated from your and your observers' ratings. This is the last item on the chart entitled "Average."

Differences between the self-scores and the observer scores indicate that you perceive yourself differently than others perceive you. The larger the difference between the scores, the larger the gap between yours and others' perceptions. Leaders should be "on target" concerning how they are being perceived by others. Take note of those attributes with the largest gaps.

If your self-score is higher than your supervisor's, peers', or direct reports' scores, you perceive yourself to have a higher level of that attribute than your observers. The perception of the individuals around you is not as high. You might want to change your observable behaviors or enhance certain behaviors to increase others' perceptions.

If you are consistently scoring yourself below what your observers score you, you should take this into consideration and perhaps give yourself credit for being perceived as having these leader qualities. Do not cut yourself short.

Using the Feedback Results

Given the results shown on your feedback charts, the next step is to utilize that information to plan how you might strengthen some of your leader attributes. The following questions are intended to help guide you in the planning process.

1. Identify five attributes that should be further developed.
    a. Which attributes where you rated lowest on by your observers?
    b. Where are the largest gaps between your self-ratings and your observer ratings?
    c. Why do these differences exist?
        i. Did the observers have enough information to rate you accurately?
        ii. Are these the attributes you should consider strengthening?
        iii. Choose those attributes that have the highest need for change.
2. Identify five attributes that you should maintain.

   a. Which attributes where you rated highest on by your observers?
   b. Which attributes did you score yourself low on, but your observers scored you high?
   c. Take credit and be proud of your high scoring attributes!
3. Formulate a Leadership Development Plan.
   a. Using the attributes to be improved as goals, create tentative action plans that stipulate the activities, resources needed, completion date, and method of measuring progress for each of the attributes.
   b. Review the tentative goals and actions plans with your observers (if you wish).
   c. Review the tentative goals and action plans with your mentor(s).
   d. Develop a detailed action plan.
   e. Initiate the planned activities.
   f. Revise the action plans frequently and fine-tune them as needed.
   g. Keep to your deadlines.

Leader Attributes Inventory (LAI)

LEADER ATTRIBUTES	SELF	SUPER	PEER	DIRECT REPORTS
1. Energetic with stamina	4	4	5.3	5
2. Insightful	5	4	5.7	5.5
3. Adaptable, Open to change	5	3	5.7	5.6
4. Visionary	4	3	5.7	4.8
5. Tolerant of ambiguity and complexity	4	3	5.7	5.2
6. Achievement oriented	5	5	6.0	5.5
7. Accountable	6	5	5.3	5.2
8. Initiating	4	4	5.0	4.8
9. Confident, accepting of self	5	5	5.3	5.1
10. Willing to accept responsibility	5	5	5.3	5.1
11. Persistent	5	5	5.3	5.2
12. Enthusiastic, optimistic	5	4	5.7	5.5
13. Tolerant of frustration	4	3	5.3	5.5
14. Dependable, reliable	6	5	5.7	5.7
15. Courageous, risk-taker	4	4	5.3	5.3
16. Even disposition	5	4	5.3	4.8
17. Committed to the common good	5	5	5.3	5.2
18. Personal integrity	4	5	5.3	5.6
19. Intelligent with practical judgment	5	4	5.3	5.3
20. Ethical	5	5	5.3	5
21. Communication (listening, oral, written)	4	5	5.3	5.4
22. Sensitively, respect	5	4	5.3	5.3
23. Motivating others	5	4	5.3	5.6
24. Networking	5	4	5.7	5.7
25. Planning	5	5	5.7	5.6
26. Delegating	5	5	5.7	5.2
27. Organizing	6	5	5.7	5.4
28. Team Building	5	5	5.7	5.5
29. Coaching	5	5	5.3	5.6
30. Conflict management	4	4	5.0	5.2
31. Time management	6	5	5.3	5.3
32. Stress management	4	4	5.3	5
33. Appropriate use of leadership styles	5	4	5.0	5.3
34. Ideological beliefs are appropriate to the group	4	4	5.3	5.5
35. Decision-making	5	4	5.3	5.4
36. Problem-Solving	6	5	5.3	5.5
37. Information management	4	5	5.3	5.2
AVERAGE	**4.8**	**4.4**	**5.4**	**5.3**

Leader Effectiveness Index

Feedback Summary: SAMPLE

LEADER EFFECTIVENESS	SELF	SUPER	PEER (3)	DIRECT REPORTS (4)
1. Inspires a shared vision & establishes standards that help the organization achieve its next stage of development	4	3	4.3	4.4
2. Fosters unity, collaboration and ownership and recognizes individual and team contributions.	5	4	5.3	5
3. Exercises power effectively and empowers others to act	4	4	4.7	4.6
4. Exerts influence outside of the organization in order to set the right context for the organization.	3	3	5.0	5
5. Establishes an environment conducive to learning.	5	4	5.0	4.8
6. Satisfies the job-related needs of members of the organization as individuals.	4	4	5.0	5
7 Overall, how effective is the leadership performance of the person you are rating?	4	4	4.7	4.8

APPENDIX G. PERSONAL DEVELOPMENT PLAN

Personal Development Plan for _____ Date _____

Personal Development Plan

PAST DEVELOPMENT

Reflect on your last few years of work and recall two to three activities (projects, assignments, programs, accomplishments, etc.) that contributed significantly to your growth and development. Identify these activities below:

What individuals, books, training courses, educational programs, or activities outside of your work had a significant effect on your growth and development over the past five years? In the space below, list them and briefly describe what impact they had on you.

BUILDING ON STRENGTHS

Identify five attributes from the feedback that you should maintain.

Which are the attributes where you were rated highest on by your supervisor?

Your peers?

Your direct reports?

Which attributes did you score yourself low on, but your observers scored you high?

Based on the feedback on your Personal Feedback Report indicate which attributes reflect strengths you have chosen for greater utilization.

Strengths Targeted	Action Plans (Include Development Options That Might be Appropriate to Impact Your Targeted Strengths)	Resources Needed or Involvement of Others	Target Dates	Method to Measure Improvement
Strength Objective				
Strength Objective				
Strength Objective				

ADDRESSING DEVELOPMENT NEEDS

Identify five attributes that should be further developed.

Which attributes where you were rated lowest on by your supervisor?

Your peers?

Your direct reports?

Where are the largest gaps between your self-ratings and your supervisor's ratings?

What are the largest gaps between your self-ratings and your direct reports' ratings?

Why do these differences exist?

Did the observers have enough information to rate you accurately?

Are these the attributes you should consider strengthening?

Personal Development Plan for _____ 4 Date _____

Choose those attributes that have the highest need for change

Please record the development needs you have chosen for improvement.

Development Needs Targeted	Action Plans (Include Development Options That Might be Appropriate to Impact Your Targeted Development Needs)	Resources Needed or Involvement of Others	Target Dates	Method to Measure Improvement
Development Need Objective				
Development Need Objective				
Development Need Objective				

APPENDIX H. LEADER AND RATER INSTRUCTIONS

Sample Invitation Letter to Leaders

TO: All managers and supervisors (or specific target audience for that organization)

FROM: Gerri Hura via HR Representative

RE: Managerial Assessment Process

You are invited to attend a brief (1/2 hour) informational meeting to discuss your participation in a 360° (multi-rater) assessment process. This assessment process will give you a chance to obtain developmental feedback from your supervisor, peers, and direct reports.

Your participation in the 360° process is voluntary. Those who do elect to participate will have an opportunity to receive constructive feedback that will help in targeting managerial and leadership development plans.

I encourage you to attend one of the informational meetings at which time you can decide if you would like to participate in this process. The meeting will be facilitated by Gerri Hura from the University of Akron.

The 360 assessment instruments, The Leader Attributes Inventory (LAI) and the Leader Effectiveness Index (LEI) are tools that will help you collect information about how you and the people surrounding you see your leadership attributes and effectiveness. This multi-rater view is a powerful process for obtaining feedback. The assessment is completely confidential. Once each rater completes the assessments, neither you nor anyone else will have access to the data. Code numbers are used so that the scoring software can match your raters' data to yours to produce your Personal Feedback Report. This feedback report that you will receive later is also completely confidential. You are the only person who will know your personal results, unless you choose to give the report to someone else.

If you cannot attend the meeting but would like more information on this 360 assessment process, please respond to this email.

The informational meeting will be held on _____ or _____ .

If you have any initial questions please feel free to contact Gerri Hura at 440-871-6252 or Organizational Contact at _____

Leader Instructions for Leader Attributes and Effectiveness Surveys

Survey Site: (to be filled in with survey site for organization)

The *Leader Attributes Inventory (LAI)* and the *Leader Effectiveness Index (LEI)* are management assessment instruments designed to help you identify your management and leadership development needs and job strengths and give you constructive feedback as others perceive you. These instruments are based on studies that identified key competencies and behaviors necessary for effective performance in most management and leadership positions.

During this developmental assessment process, you will complete the LAI and the LEI about yourself. You will also ask your supervisor and up to four (4) direct reports and up to four (4 peers) who know you, to complete the LAI and the LEI assessments about you.

Once you and your raters have completed the assessments (takes approximately 15 minutes to complete both assessments), all responses will be analyzed and presented to you in a confidential feedback report. Your analysis of this multi-perspective feedback report will help you:

- Determine where your perceptions differ from the perceptions of those around you.
- Identify your leadership and managerial strengths as well as areas for improvement.
- Assist you in developing a plan for improvement.

This assessment process is completely confidential. Once each rater completes the web assessment, neither you nor anyone else will have access to the data. Code numbers are used so that the scoring software can match your raters' data to yours to produce your Personal Feedback Report.

Your LAI and LEI Personal Feedback Report is also completely confidential. These results will NOT be shared with anyone unless you choose to give the report to someone else. The results of this assessment are in no way associated with selection, promotion, or performance appraisal and are to be used strictly for development purposes.

The composite data for all of the leaders who complete the LAI and LEI assessment process will be used to establish industry and demographic norms and analysis.

If you agree to participate in this assessment process, please follow these steps:

STEP 1) Review and sign the Informed Consent Letter if you agree to participate in this study.

STEP 2) Submit the Informed Consent Letter to Gerri Hura during this meeting. She will assign an individual code number to you and give you the packet of information.

STEP 3) Identify four direct reports, four peers, and your immediate supervisor to whom you can include in this assessment process.

Leader Effectiveness and Attributes Instructions **Code Number:** _____

Supervisor: In most cases, the supervisor you choose will be obvious, as you likely only have one. However, if you report to more than one Supervisor, choose the person who oversees your work most often and who knows your work the best.

Direct Report Names: Individuals to whom you have a supervisory relationship (or a project management relationship).

Peer Names: Peers are those people with whom you have an important working relationship, but no supervisory relationship (e.g., internal customers, directors or managers in other work units.)

STEP 4) **Write your name and code number on the raters' instruction sheet.** Distribute to all the raters, their instruction sheet with your individual ID code and their respective informed consent letter **RESEARCHER WILL ADD THIS IF NECESSARY**: AND for DIRECT REPORTS, a paper copy of the assessments and a self-addressed, stamped envelope.

STEP 5) Go to the web site _____
and complete the self-assessment of your abilities using the LAI and LEI.

To summarize your tasks are:

- Complete the INFORMED CONSENT LETTER and return it to the researcher.
- Pick up your packet on instructions with your individual ID code
- Write your name and your Code Number on the instructions and consent letters to all you have chosen to rate your attributes and effectiveness.
- Distribute the instructions and consent letters to those you have chosen.
- Complete and submit the LAI and LEI survey for yourself.

Questions contact: Gerri Hura 440-871-6252 or gmh6@uakron.edu

Leader Effectiveness and Attributes Instructions **Code Number: _____**

Rater Instructions

TO:
FROM:

CODE NUMBER:

I am taking part in a professional development effort using two assessments that will help identify my leadership attributes and effectiveness.

Because the two assessments collect data from my supervisor, direct reports, and peers, the constructive feedback will provide me with a well-rounded picture of my ability to work with others and manage daily work.

I will not see your actual survey once you complete it. Once you complete the web-based survey and submit it the data will be tabulated by statistical software. The individual who processes all the data (the researcher, Gerri Hura from the University of Akron) will use the ID CODE that you had entered on the survey to match the assessments with my name. The report I receive will provide data broken into three categories: my self-assessment data, aggregate data from my direct report and peers, and specific supervisor data. This means that the data from direct reports and peers are completely confidential since they will always be combined with others and will never be identifiable in any way.

Immediate Supervisor please note: if you are responding as the supervisor to the leader requesting this developmental feedback you data will not be anonymous.

LEADER, PEERS and SUPERVISORS: To complete the Leader Attributes Inventory (LAI) and the Leader Effectiveness Index (LEI) simply go to the web site _____

Once you at this site, fill in the ID CODE that is listed at the top of this instruction sheet on the third screen of the web survey. Fill in your demographic data (used to establish demographic and industry norms). Both the LAI and the LEI take approximately 15 minutes to complete.

IF NECESSARY FOR THE ORGANIZATION THIS WILL BE ADDED
DIRECT REPORTS: To complete the Leader Attributes Inventory (LAI) and the Leader Effectiveness Index (LEI) simply complete the attached paper copy of the assessment (in pencil or pen) and place it in the self-addressed, stamped envelope and drop it into the mail. Both the LAI and the LEI take approximately 15 minutes to complete.

Please complete and submit (or mail) these assessments by (due date).

Thank you for your honest consideration of the assessment questions. Once completed, this assessment will be an invaluable feedback tool with which I can plan my future development.

Survey Site: _____

Questions: contact Gerri Hura 440-871-6252 or gmh6@uakron.edu

APPENDIX I. MANOVA FOR MAIN EFFECT OF OBSERVER - LAI

Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Energetic	1.454	1	1.454	2.470	.117
Insightful	3.241	1	3.241	5.124	.024
Adaptive	.037	1	.037	.040	.842
Visionary	1.258	1	1.258	1.770	.184
Tolerant of Ambiguity	1.246	1	1.246	1.640	.201
Achievement	.001	1	.001	.001	.969
Accountable	.824	1	.824	1.158	.283
Initiating	4.503	1	4.503	6.809	.009
Confident	.171	1	.171	.226	.635
Willing	2.135	1	2.135	4.576	.033
Persistent	.540	1	.540	1.297	.255
Enthusiastic	.698	1	.698	1.015	.314
Tolerant of Frustration	1.746	1	1.746	1.915	.167
Dependable	1.033	1	1.033	2.056	.152
Courageous	6.413	1	6.413	10.370	.001
Even Disposition	.191	1	.191	.230	.632
Committed to Common Good	.460	1	.460	.884	.348
Integrity	.152	1	.152	.280	.597
Intelligent	.585	1	.585	1.240	.266
Ethical	.055	1	.055	.091	.763
Communication	.074	1	.074	.099	.753
Sensitivity	3.057	1	3.057	3.703	.055
Motivating	4.358	1	4.358	5.370	.021
Networking	.524	1	.524	.739	.391
Planning	.201	1	.201	.369	.544
Delegating	.090	1	.090	.116	.734
Organization	.008	1	.008	.015	.903
Team Building	.549	1	.549	.629	.428
Coaching	.449	1	.449	.607	.436
Conflict Management	.005	1	.005	.007	.935
Time Management	.090	1	.090	.152	.696
Stress Management	.394	1	.394	.586	.445
Leadership Styles	.953	1	.953	1.153	.284
Ideological Beliefs	.459	1	.459	.989	.321
Decision-Making	.480	1	.480	.771	.381
Problem-Solving	.267	1	.267	.427	.514
Information Management	.849	1	.849	1.613	.205

APPENDIX J. MANOVA FOR MAIN EFFECT OF LEADER - LAI

Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Energetic	7.542	1	7.542	12.815	.000
Insightful	.800	1	.800	1.265	.261
Adaptive	1.433	1	1.433	1.523	.218
Visionary	3.869	1	3.869	5.440	.020
Tolerant of Ambiguity	.225	1	.225	.296	.587
Achievement	3.868	1	3.868	8.070	.005
Accountable	1.450	1	1.450	2.037	.154
Initiating	.597	1	.597	.903	.343
Confident	.525	1	.525	.695	.405
Willing	.795	1	.795	1.704	.193
Persistent	2.879	1	2.879	6.916	.009
Enthusiastic	7.127	1	7.127	10.363	.001
Tolerant of Frustration	2.891	1	2.891	3.170	.076
Dependable	5.041	1	5.041	10.037	.002
Courageous	1.318	1	1.318	2.131	.145
Even Disposition	.929	1	.929	1.122	.290
Committed to Common Good	.211	1	.211	.406	.525
Integrity	.567	1	.567	1.043	.308
Intelligent	.769	1	.769	1.630	.203
Ethical	.011	1	.011	.019	.892
Communication	13.269	1	13.269	17.722	.000
Sensitivity	6.025	1	6.025	7.298	.007
Motivating	3.515	1	3.515	4.332	.038
Networking	1.065	1	1.065	1.501	.221
Planning	2.688	1	2.688	4.928	.027
Delegating	2.232	1	2.232	2.878	.091
Organization	2.433	1	2.433	4.336	.038
Team Building	4.793	1	4.793	5.494	.020
Coaching	9.101	1	9.101	12.291	.001
Conflict Management	3.140	1	3.140	3.991	.046
Time Management	8.222	1	8.222	13.964	.000
Stress Management	1.272	1	1.272	1.889	.170
Leadership Styles	3.147	1	3.147	3.806	.052
Ideological Beliefs	5.558	1	5.558	11.961	.001
Decision-Making	.903	1	.903	1.449	.229
Problem-Solving	.259	1	.259	.415	.520
Information Management	2.055	1	2.055	3.904	.049

APPENDIX K. MANOVA FOR MAIN EFFECT OF SUPERVISOR – LAI

Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Energetic	2.578	1	2.578	3.764	.055
Insightful	.560	1	.560	.919	.339
Adaptive	3.153	1	3.153	3.432	.066
Visionary	.618	1	.618	.637	.426
Tolerant of Ambiguity	3.375	1	3.375	4.156	.044
Achievement	.605	1	.605	.732	.394
Accountable	.143	1	.143	.211	.647
Initiating	.771	1	.771	.799	.373
Confident	3.073	1	3.073	4.324	.040
Willing	5.873	1	5.873	11.020	.001
Persistent	1.602	1	1.602	1.828	.179
Enthusiastic	1.263	1	1.263	1.385	.241
Tolerant of Frustration	5.339	1	5.339	4.932	.028
Dependable	.148	1	.148	.180	.672
Courageous	2.668	1	2.668	2.739	.100
Even Disposition	5.936	1	5.936	7.098	.009
Committed to Common Good	.712	1	.712	1.215	.272
Integrity	.457	1	.457	.742	.390
Intelligent	.295	1	.295	.627	.430
Ethical	.161	1	.161	.285	.594
Communication	7.316	1	7.316	7.339	.008
Sensitivity	5.641	1	5.641	6.111	.015
Motivating	3.517	1	3.517	3.771	.054
Networking	1.406	1	1.406	1.112	.294
Planning	.459	1	.459	.571	.451
Delegating	3.961	1	3.961	3.786	.054
Organization	.295	1	.295	.407	.525
Team Building	6.286	1	6.286	6.917	.010
Coaching	.559	1	.559	.737	.392
Conflict Management	1.526	1	1.526	1.834	.178
Time Management	.341	1	.341	.363	.548
Stress Management	1.766	1	1.766	2.714	.102
Leadership Styles	4.434	1	4.434	5.924	.016
Ideological Beliefs	.538	1	.538	1.004	.318
Decision-Making	.005	1	.005	.008	.928
Problem-Solving	.604	1	.604	1.123	.291
Information Management	1.645	1	1.645	2.228	.138