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An investigation of personality characteristics and demographic profiles of women and men in management positions

Robertson, Patricia Elaine, Ed.D.

The University of North Carolina at Greensboro, 1990

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AN INVESTIGATION OF PERSONALITY CHARACTERISTICS
AND DEMOGRAPHIC PROFILES OF WOMEN AND
MEN IN MANAGEMENT POSITIONS

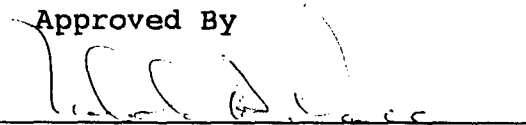
by

Patricia Elaine Robertson

A Dissertation Submitted to
the Faculty of the Graduate School at
the University of North Carolina at Greensboro
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of the Requirements for the Degree
Doctor of Education

Greensboro
1990

Approved By



Dr. Nicholas Vacc
Dissertation Adviser

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at the University of North Carolina at Greensboro.

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The purpose of this study was to investigate the personality characteristics and demographic profiles of women in upper-level management positions and describe how they differed from men in upper-level management positions and women in middle-level management positions. The participants in the study consisted of 136 upper-level women, 775 upper-level men, 307 middle-level women, and 800 middle-level men who had participated in programs at the Center for Creative Leadership in Greensboro, North Carolina from January, 1985 to September, 1989.

A multivariate analysis of covariance was utilized initially, covarying age and time as manager with the personality characteristic data from the California Psychological Inventory (CPI), the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B), and the Myers Briggs Type Indicator (MBTI) indices. Univariate analyses were then performed, after adjustment of means for age and time as manager, to determine differences between groups on the various personality indices. T-tests were performed to test for demographic differences and chi-square analyses determined discrete MBTI indices differences.

No significant differences were found between upper-level women and upper-level men or middle-level women on

leadership characteristics from the CPI. Upper-level women did score significantly lower than upper-level men on scales indicating a sense of physical and psychological well being and a sense of belonging and conformity. The primary personality differences between women and men were found on the MBTI. No significant differences were found between the two groups of women on the discrete analysis of the MBTI; nor were significant differences found between the two groups of men on the MBTI. Differences on the FIRO-B between upper-level women and men were found only on the Control (wanted) variable and only on the Control (expressed) variable between the two groups of women.

A significantly larger percentage of the upper-level women than the upper-level men are single, are not a parent, and make less money.

Comparisons with middle-level men were also made to assist in distinguishing gender, level, and gender by level interaction differences.

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I would like to lovingly dedicate this dissertation to the memory of my two grandmothers, Lillie Hensley Robertson and Carrie McLaurin McColl. They were two women with pioneer spirits, born at a time in history when the avenues for expression of that spirit were limited.

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CHAPTER ONE
INTRODUCTION

Women are entering the work force in increasingly higher numbers, and their profile is changing (Taeuber & Valdisera, 1986; U.S. Department of Labor, 1986). With work and careers becoming an important part of their lives, these women are no longer single women waiting for marriage or poor women needing to supplement income for survival or 'extras'.

Traditionally, women in the work force were not a significant topic of study since career involvement was not perceived as a primary role for women (Faver, 1981). When studying careers and job related issues, men were most often the subjects (Crites, 1981). The traditional roles of men as the family salary earners and women as the homemakers, mothers, and wives are no longer the norm.

Although the number of women working outside the home has increased, the jobs they hold continue to be skewed toward positions that are considered traditionally female-dominated (U.S. Department of Labor, 1983; 1984; 1986; Bureau of Census, 1986). Some women, however, are entering fields that have been characteristically male-dominated. Management and executive positions are among those

occupations that previously were filled by men, but the male-dominated trend for these positions is changing. One-third of today's Master's of Business Administration graduates are women and they typically enter into the work force in management positions (Nelton & Berney, 1987). As these women enter the work force, they are quickly discovering that their opportunities for upward mobility are fewer than those of their male colleagues.

Women are finding it difficult to move into positions of power and high salary (Stephens & DeNisi, 1980; Taylor & Ilgen, 1981). Various theories have attempted to explain why women are not reaching higher level management positions at a rate proportionate to their male colleagues (Becker, 1957; Blau & Ferber, 1987; Riger & Galligan, 1980). Some of these theories are based in part on a supposition that men and women differ on particular personality traits that are important to being effective managers such as self-confidence, assertiveness, responsibility, and decisiveness (Terborg, Peters, Ilgen & Smith, 1977).

Purpose of the Study

In this research, personality characteristics of women in upper-level management positions were compared to personality characteristics of men in upper-level management positions and personality characteristics of women in middle-level management positions. Comparisons with

characteristics of middle-level male managers were also investigated to clarify gender and level differences.

This information is useful because there has been little research examining the personality characteristics of women in upper-level management positions. Little is known about how these women differ from the women who do not move to upper-level positions or how they differ from their male colleagues.

Women are continuing to move into management positions and will continue to move to positions of upper-level management. The results of this research can provide helpful information to women who aspire to move into positions of greater influence and power as well as provide information to organizations who are, perhaps for the first time, dealing with women in upper-level positions.

The information provided from this study refers to the experience of the "glass ceiling" by upper-level women in management. This glass ceiling is keeping these women from moving to higher positions (Morrison, White, & Van Velsor, 1987).

This study has also added to the literature regarding the reality of perceived gender differences. Significant amounts of research has been done regarding perceptions of gender differences and how those perceptions apply to women in leadership. This study investigated the differences between women and men in management, concentrating on upper-

level women and men, across a large number of personality variables.

Counselor educators as well as practicing counselors could benefit from learning more about personality characteristics of women who are moving into "pioneer" territory in organizations. This study provided such information. By providing information about marital status, parental status, etc. counselor educators can offer concrete information to students and counselors can offer concrete information to clients on how the lifestyle of upper-level women differs from "women in general" and how it differs from men who are making similar career choices.

The Myers-Briggs Type Indicator (MBTI), the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B), and California Psychological Inventory (CPI) were used to determine whether subjects differed on personality variables such as control, dominance, affection, achievement, flexibility, extraversion-introversion and sociability. The study also examined differences in age, birth order, marital status, number of children, years of experience, salary, and educational background. Through this investigation, a profile of women in upper-level management positions emerged and a discovery of how this profile differs from the profiles of men in upper-level management positions and women in middle-level management positions is reported.

Need for the Study

Studies contrasting men and women in management positions have focused on others' perceptions of their effectiveness or potential effectiveness as managers (Dipboye, 1987; Dubno, 1985; Schien, 1973; 1975; Terborg, Peters, Ilgen & Smith, 1977). These studies do not take into account how men and women who are actually in management positions differ in personality characteristics or on demographic profiles. The literature is devoid of studies that address the following questions: Do women in upper-level management positions have a similar personality and demographic profile to men who are in upper-level management positions? Do women who are promoted to upper-level management positions have a similar personality and demographic profile to that of women who are in middle-level management positions? Few studies have addressed personality differences between women in middle-level and women in upper-level management positions.

Significance of the Study

A number of theories attempting to explain the lack of women in upper-level management positions or in other positions of "power" and influence are discussed in Chapter Two. Theories from the field of psychological research on "person-centered" explanations proposit that personality traits for men and women differ significantly. According to

these theories, management roles require traits, attributes, skills, and behaviors that are more commonly attributed to men and more easily available to men than to women (Riger & Galligan, 1980). Other researchers, however, have found no significant differences in personality characteristics or managerial behaviors between male and female managers (Howard & Bray, 1988; Dipboye, 1987; Donnell & Hall, 1980). This research study extended that body of literature by looking at personality characteristics and demographic information of men and women in middle and upper-level management positions to identify any existing differences.

Definition of Terms

To clarify the terms used in this study, the following definitions have been used:

Manager: any person in an organization who supervises the activities of others (Ghiselli, 1963).

Middle-level manager: managers above entry level including office managers, professional staff and middle-level administrators (Center for Creative Leadership Participant Background Form, 1984).

Upper-level manager: includes top and executive offices, i.e. chief executive or operating officer, president, vice-president, director, or board level professionals (Center for Creative Leadership Participant Background Form, 1984).

Glass ceiling: a term that is used to describe the barrier in organizations that is invisible, even unidentifiable, but real enough to keep women from moving upward beyond it in management roles (Morrison, et.al., 1987).

Gender roles: a collection of behaviors, characteristics, competencies and attitudes that are considered by society to be associated with and appropriate for persons based on their gender (Franks & Rothbaum, 1983).

Masculine and feminine: sex roles rather than gender terms characterizing behaviors that are generally perceived as more appropriate for men or women, respectively.

Gender bias: "an opinion, either favorable or unfavorable, which is formed without adequate reasons and is based upon what the bias-holder assumes to be appropriate for the group in question" (Schlossberg & Pietrofesa, 1973, p.44).

Gender discrimination: a bias, based on an individual's gender, put into action in the form of prejudicial treatment.

Male-dominated profession: a profession in which at least 60% of the individuals working in the profession are male (Seiling, 1984).

Female-dominated profession: a profession in which at least 60% of the individuals working in the profession are female (Seiling, 1984).

Personality traits: those factors which, when put in combination and manifest in action, become known as the characteristic behavior pattern of an individual (Jones, Stefflre, & Steward, 1970).

Summary

Women are entering the work force in increasingly high numbers and along with this influx into the work force, management positions are being filled by more women (U.S. Department of Labor, 1983; 1984). One-third of the entry-level management positions are filled by women, but these women are not progressing as rapidly as their male colleagues (Nelton & Berney, 1987; Taylor & Ilgen, 1981).

Numerous theories have attempted to explain gender discrepancies in upper-level management (Nieva & Gutek, 1981; Blau & Ferber, 1987; Riger & Galligan, 1980), but the literature has not focused on the profile of the women in management positions who are moving up. Do these women have personality characteristics that differ from women in middle-level management and from men in upper-level management? Is there anything in their personality profiles that sets them apart from women in middle-level management positions and/or from men in upper-level management positions? This research study addressed these questions.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

The literature reviewed in this chapter focuses on seven areas of information and research: a profile of women in the work place; the careers of women; characteristics of women in management positions; perceived gender differences; theories explaining women's lack of upward mobility; a comparison of characteristics of female and male managers; and characteristics of women in upper-level management positions.

Women in the Work Force

Women have been entering the work force in significantly increasing numbers over the last three decades (Moore & Rickel, 1980; Bureau of Census, 1986; Tipton, 1976). In 1950, 30% of women who were 16 years of age or older were in the work force. This number rose to 37.7% in 1960, 43.3% in 1970, to 51.5% in 1980, and 54.5% in 1985 (Bureau of Census, 1986). This increase shows how the traditional "breadwinner" versus the traditional "homemaker" (i.e., male versus the female model) is no longer the norm. In the late 1950's, 70% of the households fit the breadwinner-homemaker model and in 1985, fewer than 15% of the households had the male as the sole breadwinner

(Marshall & Paulin, 1987). By 1979, 12.6 million more women were in the labor force than in 1970 (U.S. Department of Labor, 1983). Approximately 51 million women were in the labor force in 1985 compared with 37 million a decade earlier. The Bureau of Labor Statistics (1986) has projected that by 1995, 59.9 million women will be in the civilian work force; an approximately 59% participation rate in the labor market for women 16 years of age or older. This is compared to a predicted 75% participation rate for men.

As the above data indicates, the predicted work force composition is moving toward a gender balance. The most pronounced change in the composition of those entering the work force in recent decades is among married women (Bureau of Census, 1986). When the increase among females in the work force is examined according to marital status, we find that the number of married women in the labor force has more than tripled in the last three decades while the rate of married men in the labor force is slowly declining (U.S. Department of Commerce; Moore & Hofferth, 1979). In 1950, 8 million married women were working outside the home compared to 25 million in 1981, a greater than 300% increase. In contrast, the rate for married men dropped 6% from 1970 to 1981 (Johnson, 1981).

Since 1970, the number of women in the work force under the age of 45 had increased more than any other age group

(U.S. Department of Labor, 1983). Currently, 70% of women, aged 25 to 54 years, are working with the rate of participation for women between the ages of 20 and 34 years being especially significant since these are the ages that women have often chosen to devote full-time to homemaking and parenting (Taylor, 1986). Women are, it appears, postponing marriage and childbearing and are having fewer children as they enter the work force in larger numbers (O'Neill & Braun, 1981; Bianchi & Spain, 1983).

Historically, many women have worked in order to have extra money for luxuries and frills. Survey research, however, has shown that women are now working out of economic necessity as well as a desire for identity and fulfillment (Johnson, 1981; O'Neill & Braun, 1981). This work outside the home is seen as an integral and vital part of the household and personal needs (Freedman & Phillips, 1988). With an increasing number of single-parent households headed by women, married women with spouses' incomes below the poverty line, and single women who are in "pink-collar" jobs, it appears that economic need is a stimuli for many women in the work force.

Between 1950 and 1981, the number of mothers in the labor force increased by more than 300% (U.S. Department of Labor, 1983). Sixty-two percent of the women with children under the age of 18 were in the work force in 1985 (Bureau of Census, 1986) and according to the Department of Labor

(1986) 65% of all working mothers return to work within the first year of their child's life.

Increasingly, women may combine economic need with the sense of fulfillment and autonomy which employment provides. Super (1957) suggested that much of career choice centers around individuals seeking congruence with their self-image. Other theorists have also been supportive of the view that self-concept and self-esteem play an important role in determining vocational preference (Korman, 1970). Epstein (1970) concluded that women's self-esteem suffered due to expectations of submission and this lack of self-esteem translated into low achievement regarding job choice and advancement. The theory postulated by Super (1957) was initially based exclusively on the study of men and their career development; only recently have women and their career choices been seriously studied (Cooper, 1985; Osipow, 1983).

Voydanoff (1987) reported that women who were college educated, worked at jobs of choice rather than just a position of necessity, and had spouse support were more satisfied with their lives than housewives who centered the majority of their activities around the home. The women who had low educational status, worked solely out of necessity at low paying jobs, and experienced no support from their spouses were less satisfied than homemakers (Voydanoff, 1987). Good mental health was reported as higher among

employed women than homemakers (Warr & Parry, 1982). Correspondingly, men who had wives who worked part-time or full-time out of choice were more satisfied in their marriage than men married to full-time homemakers (Moore & Hofferth, 1979).

Women are carrying full-time job responsibilities as well as full-time homemaking, and often parenting, responsibilities. O'Neill (1985) reported that full-time employed, married women spent an average of 25 hours a week working in the home. Relatedly, men with spouses who worked full-time spent an average of one-and-one-half hours more in the home per week than men who had spouses who were full-time homemakers (O'Neill, 1985).

Although the combination of a career, marriage, and parenting is potentially a fulfilling, well-balanced life, it would appear to be difficult considering the societal expectations (Miller & Garrison, 1982; Szinovacz, 1984). The interaction of the roles played by women appears to be crucial to their mental health (Cleary & Mechanic, 1983). Based on O'Neill's (1985) research findings, being a career person and a wife typically would appear to be much more demanding than being a career person and a husband with a direct relationship between total hours required to fulfill all roles and the amount of family conflict and personal stress (Pleck & Staines, 1985).

Women's Jobs and Careers

Women are in the work force in larger numbers, but the distribution of women among particular jobs is still generally segregated. Women continue to be overrepresented in clerical and service occupations (Green, 1983) and underrepresented in areas that have been considered traditionally male-dominated professions (Baron, 1977; Condry & Dyer, 1976). Women hold four out of five clerical jobs, which tend to be lower paying, and three out of ten administrative and management jobs which tend to be higher paying (Seiling, 1984).

The actual number of women in higher paying positions is still relatively few (Norwood, 1982). The majority of women represented in the 1980 Census clustered in 19 of the possible 503 classifications of jobs and most of these female-dominated occupations fell in the bottom half of earnings for all working adults (Bureau of Census, 1986). In contrast, most of the male-dominated occupations cluster in the top half of earnings for all working adults (Bureau of Census, 1986).

In 1979, of the women with five or more years of education and between the ages of 35 and 44, the majority were clustered in 8 different occupations including teachers, managers and administrators (non-educational), educational administrators, nurses, social workers, and physicians. More than 26% of the men with five or more

years of post-secondary education and between the ages of 35 and 44 years were clustered in three professions: physician, lawyer, and manager and administrator (non-educational) (Bureau of Census, 1986).

When younger, educated women, aged 25 to 34 years, were examined, 5.8% were attorneys compared to 2.3% of the women in the 35 to 44 age group (U.S. Department of Commerce, 1986). Also, 4% of the younger women were physicians compared to 3.1% of those in the 35 to 44 age bracket (U.S. Department of Commerce, 1986), indicating that younger women are entering higher-level professional positions at a greater rate than their predecessors.

In 1985, approximately 3.8 million more men than women were employed in managerial and professional positions (Riger & Galligan, 1980). There were, at the same time, approximately 9.8 million more women than men in areas of supportive administrative occupations, technical positions out-number men in administrative support four to one (U.S. Department of Labor, 1984).

This section provided information on the profiles of women in the work place and how these profiles have changed considerably over the last 30 years. The roles of women have altered considerably and women are moving into areas of employment that has traditionally been considered "off limits". One of these areas is the area of management. The

next section provides a review of literature that reports on the progress of women in the management area.

Women in Management

Women, Management Roles, and Promotions

An employment area where women have experienced a significant increase in participation is in the area of management. In 1960, women composed less than 6% of executive, administrative, and management positions. The United States Census showed that this number rose to 18.5% in 1970, to 30.5% in 1980 (U.S. Department of Commerce, 1984), and to 37% in 1987 (Baum, 1987). The gains in this area are higher than gains made in any other area of occupational grouping (Rytina & Branchi, 1984; Dobbins & Platz, 1986). It appears this movement was a function of several factors: changing societal values regarding the role of women, federal legislation prohibiting gender discrimination in employment, and the affirmative action program (White, DeSanctis, & Crino, 1981).

Enrollment in business schools by women is increasing and the door to management for women is open wider than ever before (Morrison, White, Van Velsor & Center for Creative Leadership, 1987). In 1967, 2% of the population of graduates from Masters of Business Administration programs were women (Baum, 1987). This number had increased to approximately 15% in 1978 (Taylor, 1986) and in 1987, one-

third of the Masters of Business Administration graduates were women (Nelton & Berney, 1987). This specialized training is opening doors for women into entry level management positions. However, a central issue for women who are aspiring to ascend in their careers appears to be whether these credentials will "open the door to the executive suite" (Brown, 1979).

Morrison, et al. (1987) indicated in their book, Breaking the Glass Ceiling: Can Women Reach the Top of America's Largest Corporations?, that women are moving into entry-level management positions so easily that initially they may be convinced that discrimination does not exist, but as time progresses they see their male peers advancing further and at a more rapid pace (Morrison et al., 1987; Olson & Becker, 1983; Stewart & Gudykunst, 1982).

Moving up in the corporation in the 1980's appears to be more of a problem for women than getting into the corporation at a management level (Morrison et al., 1987). One-third of the respondents in a survey by Sutton & Moore (1985) believed women would never be totally integrated into the life of the corporation. The pessimism was expressed twice as often by women than men.

A study published in Fortune (1978) surveyed 1,300 of the largest companies in America to determine the number of women in upper-level management positions and found that 10 of the 6,400 top corporation officers and directors were

women (Robertson, 1978). In 1988, a study by Von Glinow and Krzyczkowska-Mercer discovered that 1.7% of the corporate officers in Fortune 500 companies were women, while in 1984 (Fraker, 1984) only one company on the Fortune 500 list of the largest companies had a woman chief executive officer. "Even companies that have women in senior management privately concede that those women aren't going to occupy the chairman's [sic] office" (Fraker, 1984, p.40).

Business Week (1984) reported that 49,000 men held top policy making positions in major corporations in 1984 compared to 1,000 women, a 49 to 1 ratio. In Fortune 500 companies, of the 6,543 board directors, 2.8% were women. Another study of corporate boards in 1,300 public companies in the United States showed that 15,500 men held board positions compared to 367 women (Rytina & Branchi, 1984). Since board positions are generally filled by individuals in upper-level management positions and individuals with power within the company, there are fewer women who qualify for these positions.

A study by Olson and Becker (1983) researched the promotion rates of 408 men and women from a group of managers in a company that had promotion decisions made by a Quality of Employment Panel. The promotions of these 408 individuals were analyzed from 1973 to 1977 and it was determined that 32% of the women would have been promoted if they had been judged for promotion by the same standards as

the men. In actuality, 19% of the women achieved a higher-level position in the four years under investigation.

Robertson (1978) and Harlan and Weiss (1981) studied the status of Masters of Business Administration students from Harvard and found that after 15 years women were much less likely to be in upper-level management positions or positions having significant impact on policy making. In a 1984 study (Fraker, 1984), it was reported by Harvard Business School's Advanced Management Program that only 4 of the 154 positions in the program were filled by women. The Advanced Management Program is a prestigious program where companies send executives they are anticipating will have the company power. These studies, along with others, indicated that women are not moving up the corporate ladder as rapidly as their male colleagues (Olson & Becker, 1983; Stewart & Gudykunst, 1982). It is not only in business and industry where discrepancies in promotion are visible. In 1981, while 51% of the instructors in colleges and universities were women, only 36% of the assistant professors, 21% of the associate professors and 10% of the full professors were female. Sixty percent of the male faculty members compared to 30% of the women faculty members were tenured (Blau & Ferber, 1987). In federal civil service, more than 70% of the individuals in the six lowest ranks of the civil service were women while in the highest 7

ranks, women made up 10% of the population (Rytina & Branchi, 1984).

Salary Differences

A salary discrepancy between male and female managers has also been documented in a number of studies (Robertson, 1973; Harlan, 1978; Frank, 1977). It appears that women are paid less in virtually all occupations (Marshall & Paulin, 1987) and the experience and education of women does not seem to impact this salary discrepancy (Sommers, 1974; Stains, Quinn, & Shepard, 1976). In 1983, female college graduates earned approximately the same as male high school dropouts, \$14,679 and \$12,117, respectively (Marshall & Paulin, 1987). In 1981, the median earnings for employed men was \$20,260, a 69% greater earning than the \$12,001 median income of employed women. This ratio has not changed significantly since 1960 (Green, 1983).

Frank (1977) surveyed managers in several large companies and discovered that of those making over \$25,000 per year, only 3% were women and only 15 women, compared to 2,500 men, headed major corporations and earned more than \$100,000. Nelton & Berney (1987) also reported a significant salary discrepancy between men and women at levels of vice-president and above, citing that women earned "42% less than their male peers" (p. 17).

A study by Steele and Word (1974) investigated the progress of 6,400 Masters of Business Administration

graduates over a 25-year period beginning in 1947. At that time, the median starting salary for female Masters of Business Administration graduates was 83% that of their male counterparts. By 1969, it had increased to 88% of the starting salary of the male graduates. The authors, along with Donnell & Hall (1980), found that when MBA graduates had been out of school for 25 years, the salary for women was only 50% that of the men (Steele & Word, 1974).

This section has documented numerous studies that have reported that even though women are seeking training as managers, entering management positions and, in the early years of their careers, competing with their male peers for promotion, they are not moving up the corporate ladder at the same rate as their male peers. Other studies reported that women in management are not earning equivalent salaries at similar juncture points in their careers, especially as they move to higher-level positions.

This section provided a review of literature discussing women's movement into management and the "glass ceiling" these women appear to encounter as they strive for the top positions. Promotions are not as available for women and salaries, although starting out competitively, do not compare favorably with the salaries for males as the women move up the organizational ladder. The next section of Chapter Two will review perceived gender differences, in

general, and especially perceived differences between male and female managers.

Perceived Gender Differences
in Male and Female Managers

Some of the original studies of perceived gender differences were a series by the Broverman's and their colleagues (Broverman, Broverman, Clarkson, Rosenkrantz, & Vogel, 1972; 1970; Rosenkrantz, Vogel, Bee, Broverman & Broverman, 1968). The results of these studies provided some valuable information regarding perceptions of personality characteristic differences between men and women. In the studies by Broverman, et al. (1970, 1972) and Rosenkrantz, et al. (1968) mental health professionals and college students were asked to describe characteristics of a healthy, mature and socially competent adult, male, and female.

Healthy women were seen as being talkative, tactful, gentle, religious, neat, quiet, needy of security, and expressive of feelings and as being "more submissive, less independent, less adventuresome, more easily influenced, less aggressive, less competitive, more excitable in minor crisis, more conceited about their appearance, less objective and had a dislike for math and science" (Broverman et al., 1970, p. 4).

The mentally healthy man was seen as aggressive, independent, objective, dominant, liking math and science, adventuresome, self-confident, ambitious, not conceited about appearance, worldly, and skilled in business. The descriptions of the healthy adult by the mental health professionals and the college students were very parallel to the characteristics of the healthy male and contrary in most areas to characteristics attributed to a healthy female (Broverman, Broverman, Clarkson, Rosenkrantz, & Vogel, 1970).

The characteristics describing men were perceived as positive and valued in our society as healthy adult traits. Some of these male characteristics were managerial and leadership relevant, such as skilled in business, skilled in decision-making, and skilled in leadership.

Research by Schien (1973; 1975) and Basil (1972) focused directly on traits that are perceived as important for an effective manager studying how these traits may or may not be judged as gender related. Basil (1972) surveyed a nationwide sample of female and male managers and found that both the women and the men rated decisiveness, consistency, objectivity, emotional stability and analytical ability as the most important traits for an individual in an upper-level management position to possess. In addition, Basil (1972) discovered that both the female and male

managers surveyed believed these traits would more often be found in males than females.

Schien (1973) interviewed 300 males who were associated with the insurance business and asked the subjects to categorize 92 traits as typically characteristic of "men in general", "women in general" and/or "successful managers in general". Eighty-six of the traits were identified as important for effective management and of these 86 traits, 60 were perceived to be typically characteristic of "men in general". The traits identified as important for effective management and typically characteristic of men in general included emotional stability, leadership, and desire for responsibility. Of the 86 traits identified as important for "successful managers in general", 8 were judged to be more typically characteristic of "females in general" rather than "males in general".

A second study by Schien (1975) reported the results of interviews with 167 women who were associated with the insurance industry. This study also indicated that success in management is seen by both women and men as requiring traits that are perceived to be much more often attributed to men in general than to women in general. Terborg (1977), in studying the integration of women into management positions investigated the attitudes and attributes that women managers identified with successful managers. Terborg (1977) discovered that women, like men, perceived

individuals filling successful management positions as requiring characteristics that were more similar to characteristics perceived as masculine rather than feminine.

Massengill and DiMarco (1979) replicated the study by Schien (1973) using the same 92-item descriptors with 83 women and 77 men in management positions responding. The characteristics to describe "men in general" were seen by both the men and women in the sample as most similar to those characteristics describing "successful managers in general". The female managers in this study did perceive more similarity between the characteristics for women in general and successful managers than did the female respondents in Schien's (1975) study. In studying the differences in male and female respondent conclusions, the descriptions of how the respondents perceived a successful manager in general did not differ significantly. The differences, therefore, were in how the respondents perceived women in general rather than how they perceived a successful manager in general.

Five hundred and seventy four undergraduate business students and 110 Masters of Business Administration students were surveyed by Powell & Butterfield (1979), using the Bem Sex-Role Inventory (BSRI), to assess their perceptions of themselves and of a good manager. The BSRI is a 60-item scale that contains 20 characteristics considered masculine, 20 feminine, and 20 non-gender stereotypic. Individuals are

classified based on their responses as either masculine, feminine, androgynous (highly masculine and highly feminine), or undifferentiated (low on masculinity and femininity). The subjects overwhelmingly identified good managers as masculine with no significant difference in response by subject sex; 70% of the undergraduate and 82% of the graduate students were male.

As with the study by Schien (1975), women were most likely to see the good manager as unlike themselves. Of the undergraduate students, 47.1% of the women saw themselves as feminine and 8.8% saw themselves as masculine while 66.5% identified a good manager as masculine and only 2.4% identified a good manager as feminine. Of the men, 36.9% saw themselves as masculine, 27% as undifferentiated, 21.8% as androgynous and 14.6% as feminine. The majority perceived a good manager to be masculine, with 69.6% holding this view and only 1% perceiving the good manager as feminine.

In a more recent study by Dubno (1985) that was longitudinal in nature, the Managerial Attitudes Toward Women Executives Scale (MATWES) was administered to Masters of Business Administration students in three graduate schools over a period of eight years. In 1975, 1978, and 1983 the instrument was administered to a total of 376 men and 289 women in Masters of Business Administration programs. From 1975 to 1983, men retained consistently

negative attitudes toward women as managers while the female Masters of Business Administration students remained consistently more positive over time than the males.

The attitudes of the males were more significant in the negative direction than were the females' attitudes in a positive direction. This outcome resulted from the males increasing their negative attitudes over time while the females did not show increased positive responses over the eight year period. The females actually showed a slight, though statistically insignificant, negative trend.

Continuing to look at sex role attitudes regarding employment opportunities, educational opportunities and personal values, Helmreich, Spence, and Gibson (1982) surveyed responses from college students and their parents in 1972, 1976, and 1980. The subjects were administered the Attitudes Toward Women Scale (AWS) which is a 15-item instrument with items dealing with dating, marital, vocational, and educational rights and role behaviors. There were 281 males and 241 females surveyed in 1972, 301 males and 298 females in 1976, and 228 males and 288 females in 1980. The response rate from parents was 65% and this group was predominantly white-collar professionals.

The attitudinal changes between 1972 and 1976 were more dramatic for both students and parents, moving in a more favorable direction toward equal opportunity for women in education and employment. Between 1976 and 1980, the

attitudes seemed to have stabilized more, with female students, however, indicating a shift toward more conservatism.

The overall results indicated that women were more accepting than men of equality in all phases of life and, for both the women and the men, this acceptance increased significantly between 1972 and 1976 in both the student and parent populations. The students were consistently more liberal than their parents and with both groups acceptance of equality in vocational and educational areas was much more prevalent than acceptance of equality in the home.

Sutton and Moore (1985) surveyed over 1900 male and female managers in 1985 using a questionnaire assessing similar attitudes to those reported in a survey published in 1965 by the Harvard Business Review. The results indicated that male managers were more willing in 1985 to see women as desiring top jobs and competent as managers and more willing to have a female as their supervisor than were the male managers in 1965. The female managers were more positive in regards to their attitudes about female managers in general but over the 20-year period there were, overall, fewer attitudinal changes among the women.

The studies by Schien (1973, 1975) and Massengill and DiMarco (1979) clarified, along with other studies, specific areas perceived as strengths for men and weaknesses for women in management. Both women and men perceived women in

general to be lower in the area of "dominant-aggressive characteristics" such as competitiveness, high need for power, assertiveness, and aggressiveness. The men also saw women in general to be deficient in the area of "ego strength" which includes high self-regard and emotional stability. The women respondents saw women in general as possessing a higher degree of "social-humanitarian" characteristics. This area included sympathetic responses, desire for friendship, and helpfulness. Even though social-humanitarian was seen as important to successful management, it was perceived a less important area than the areas of dominant-aggressive and ego-strength, characteristics perceived as descriptive of men in general.

In a study by Rosen and Jerdee (1978), 884 male managers and administrators working in a variety of business and non-profit institutions were surveyed using a questionnaire designed to examine perceived gender differences by comparing men and women on 64 characteristics that were associated with career competence. The perceptions reflected by these managers were consistently favorable toward men as being more employable and promotable.

Men were perceived to have a high level of skills in the areas of leadership and decision making, making them more qualified for managerial roles and the women were evaluated as having skills more compatible with routine

clerical tasks. Women were perceived as being less reliable and less dependable than men as well as more emotional and less able to deal with stress. The job position the respondent was occupying did not make a significant difference in her/his response, nor did the respondent's amount of contact with women as peers or as supervisors. In this study, virtually every perceived gender difference was unfavorable toward women regarding the respondent's perceptions of characteristics needed for success in management positions (Rosen & Jerdee, 1978).

Another study by Rosen and Jerdee (1974) attempted to determine whether identical characteristics of candidates applying for a management position would be interpreted the same for male and female applicants. The resumes were reviewed by managers who were considering hiring the applicants and were identical except for the gender of the applicant. The study reported that the male applicants were rated higher and recommended for employment significantly more often than the female candidates who had identical qualifications.

Many studies reported in this section explained differences that were perceived to exist between women and men, in general, and women and men in management. Management skills are often described as "masculine" skills. Men and women alike carry a perception that men are either more 'naturally' equipped with these skills or they have

learned them more thoroughly than women. The next section will review the literature that discusses how these perceptions may contribute to job and salary discrepancies in the work place based on gender.

Theories Explaining Job Position
and Salary Discrepancies

There are a number of theories which attempt to explain the discrepancies in the advancement of females and males in management positions. Nieva and Gutek (1981) identified four levels in the organization that work to create underrepresentation of women in upper-level management positions and decelerate the progress of women. The first level identified by Nieva & Gutek (1981) is the individual level and the authors reported that it is here that individual biases against women are exhibited. Deficiencies in knowledge, skill and personality on the female's part would work against upward mobility in a more exaggerated fashion than it would for a male who was her peer (Nieva & Gutek, 1981).

The second level is that of interpersonal relationships and at this level the authors reported that women have adopted social rules that are inconsistent with a complete integration into upper-level management which is a male domain. These social rules do not integrate well with the rules that dominate upper-level management interpersonal

interactions since these existing social rules have been established around male behaviors.

The third level of potential discrimination is the group level where women are excluded from group relationships in the organization that are often represented in informal settings. These informal relationships are perceived as critical to the acquisition of influence, status, and power (Nieva & Gutek, 1981; Kanter, 1977).

Other studies have reported that women feel excluded from these informal relationships that are perceived as vital for power and upper-level position acquisition (Rogan, 1984; Rosen, Templeton, & Kochline, 1981). Kanter (1977) in her book, Men and Women of the Corporation, discussed this informal structure and supported the view that the omission of women from these relationships which often center around social activities such as golf, other sports, and after work drinks can drastically inhibit the upward mobility of women. A common illustration of this informal network of interpersonal relationships within which much formal business transactions occur is the "old boys club/network" (Instone, Major, and Bunker, 1983).

Lastly, Nieva and Gutek (1981) identified the structural characteristics of organizations as blocks for women attempting to achieve upward mobility in the organization. The organizational structure itself may work against some of the needs of women who want to pursue a

family life as well as a successful corporate career. The structure, being predominantly white male, creates a difficult environment in which women (and people of color) can achieve (Kanter, 1977; Nieva & Gutek, 1981; Gutek, 1985; Morrison et al., 1987). Because women are a very visible minority, individual behaviors are noticed and vividly noted, especially stereotypic behaviors and/or mistakes (Sutton & Moore, 1985).

The situation-centered paradigm explained by Riger and Galligan (1980) combines the group and structure level presented by Nieva and Gutek (1981). This paradigm contends that characteristics present within an organization may define the behavior of the manager rather than the individual her/himself defining the behavior.

Kanter (1977) supported the situation-centered model, believing that the organization is designed so that the opportunities in the organization, one's potential for acquisition of power, and the composition of formal and informal groups strongly affect women's mobility. Women are blocked from many opportunities, have been given significantly less power, and are surrounded more and more by men as they advance in management, often causing their elimination from informal and formal interactions (Riger & Galligan, 1980).

The Human Capital Theory of differences in achievement between men and women, as explained by Blau and Ferber

(1987), reports that men work throughout their adult life, contrary to women who may come and go in the work force. The men, according to Blau and Ferber (1987), invest more in the work force and in specific jobs and should, therefore, reap more benefits. This Human Capital Theory supports the position that businesses will and should choose men for positions that require more on-the-job training because they will get a better return on their investment. These choices are, therefore, seen as rational, not discriminatory (Polachek, 1981; Landes, 1977).

Another theory presented by Becker in 1957 attempted to explain racial as well as gender discrimination in the work force. This theory stated that individuals have discriminating tastes and even if one individual may be substituted equally for another in the work force, the employee, customer, or co-worker may have a preference, depending on her/his tastes. Choosing a male is justified, therefore, if it is the preference of the employer, the customer, or co-worker.

Lower wages for the less desirable employee are seen as justifiable according to Becker (1957) in order to compensate for what is perceived as the disadvantages in hiring a woman if she is not the preference of the individual exercising her/his discriminating tastes. The female is seen as having less utility, presenting a possible morale problem for co-workers, and lowering sales since

customers would prefer to buy from a male. Within this position, discrimination is not overt, it is just "business as usual" (Blau & Ferber, 1987).

Josefowitz (1980) in her book, Paths to Power, discussed a "clonal effect". This tendency of people, groups, and organizations to replicate themselves is believed by Loden (1985) to be the source of discrimination against the advancement of women into upper-level management positions. Loden (1985) reported that the standard senior executive is a white, 50-year old male, with an unemployed spouse, two children and traditional values. It is expected, therefore, that his comfort zone would include people most like him and he would want to surround himself with those people.

Terborg, Peters, Ilgen, and Smith (1977) asserted that a "probable explanation for the differential treatment of women may be found in the existence of pervasive and persistent sex role stereotypes" (p. 90). In C.F. Epstein's book, Woman's Place: Options and Limits in Professional Careers (1970), occupational sex typing is explained as follows:

Occupations can be described as 'sex typed' when a very large majority of those in them are of one sex and when there is an associated normative expectation that this is as it should be (p.150).

The role of manager has traditionally been viewed as a masculine role (West, 1976), even though the individual tasks that comprise the role of manager are not exclusively masculine identified. The characteristics that are perceived as more masculine have traditionally been more valued, however (Broverman, et al., Schien, 1973, 1975). The ideal manager is more often described as competitive, aggressive, rational, task oriented, decisive, and a strong leader; characteristics which are typically viewed as masculine (Sutton & Moore, 1985; Powell & Butterfield, 1979). Loden (1985) reported that organizations are "masculine" and value tight control, assertive and aggressive behavior, and analytical and strategic thinking.

Against this standard, women are viewed as inadequate and characterized more as person-oriented, emotional, passive, compassionate, intuitive, non-competitive, and social skill oriented (Massengill & DiMarco, 1979). This strong adherence by the decision-makers in organizations to stereotypic views has thwarted women's progression in management (Riger & Galligan, 1980; Powell & Butterfield, 1979; Larwood, Wood, & Inderlied, 1978).

The person-centered explanation for the void of women in top management positions contends that the American society teaches roles to women that are not compatible to the managerial role (Riger & Galligan, 1980). Women acquire personality traits and specific behaviors, such as fear of

success and opposition to risk taking, that preclude them from achieving. The fear of success among women is seen as a cultural constraint that creates an incompatibility between achievement and motivation. Implicit in this paradigm is the understanding that to be successful in management, a woman must accept the male model (Riger & Galligan, 1980).

Stereotypes based on historical roles continue to persist (Bem, 1975; Spence & Helmreich, 1978) and can be very self-validating (Larwood, Wood, & Inderlied, 1978). Even with mounting evidence to the contrary, a belief continues that men are more suited for management than are women (Powell & Butterfield, 1979). Larwood et al. (1978) discussed external and internal barriers that center around sex stereotypes and impede the advancement of women in management. The external barriers are the prevailing stereotypes and the normative gender roles that are perceived as correct and "natural". These stereotypes, whether accurate or inaccurate, can be self-validating in that individuals will tend to be receptive to ideas, behaviors, and opinions that support the existing norms and will negate information that is not supportive of existing norms. If, according to the authors, the expected norm is that men, not women, are more competent in business affairs and in skills of management, the women are automatically discriminated against by the expected lack of skills,

whether the expectations are met or not (Larwood et al., 1978).

The internal barriers addressed by Larwood et al. (1978) are those barriers the women set up themselves when they are conflicted between their perception of a good manager and a feminine woman. Since we know that women, as well as men, continue to base the manager model on the masculine traits (Schien, 1973, 1975; Terborg, 1977; Massengill & DiMarco, 1979), perceiving themselves as a good manager may be difficult for women and they may run into many barriers in integrating that role into their self-concept (Powell & Butterfield, 1979). The attributes assigned to the typical successful manager are different from those assigned to the typical woman (Dipboye, 1987) or even to the healthy woman (Broverman et al., 1970; 1972).

The stereotype of a female is that of socio-emotional. She is emotional, sensitive, warm, gentle, patient, understanding (Williams & Best, 1982; Spence & Helmrich, 1978), and less career oriented (Rosen & Jerdee, 1973). Research often suggests that this stereotype of women is so ingrained and overbearing that it is upheld in the minds of individuals even when there is strong evidence to the contrary (Freedman & Phillips, 1988). These stereotypes and the behaviors they elicit from individuals who hold onto them are very detrimental to women managers seeking

promotion and increased salary (Chacko, 1983; Heilman & Guzzo, 1978).

Fraker (1984) reported that it was discrimination, not motivational differences or career-home conflicts that accounted for the significant pay differential between 45 men and 45 women who had graduated from Columbia's Masters of Business Administration program between 1969 and 1972. These men and women had comparable educational credentials, and comparable backgrounds in the work force.

The findings of Day & Stogdill (1972), following a study of 38 male and 38 female supervisors, indicated that the slower advancement for women was not a result of lack of influence, reconciliation of conflicting demands, or effectiveness but appeared to be the result of their being female. The study investigated subordinates' descriptions of leader behavior, effectiveness evaluations by subordinates and biographical information.

Not only are stereotypes used to describe what women and men are, but literature supports a belief that goes beyond this with the idea that these stereotypes are also descriptive of the way women and men should be (Dipboye, 1987). A female manager, therefore, is often put in the position of being "damned if she does and damned if she doesn't". If she behaves in a way that is seen as stereotypically female, she is perceived as behaving as she should, but not as an effective manager. If she behaves as

an effective manager, then she is seen as masculine and not behaving as she should, since she is a woman. It appears, therefore, that the external barrier of stereotyping and the discrimination that results, can hold women back and that the internal barrier that tells a woman that femininity and being a female is incompatible with management roles (Larwood, Wood, & Inderlied, 1978) can also deter advancement.

In summary, stereotypes of women and roles they have assumed and "should" assume appears, according to the studies in this section, to have contributed to discrimination in the work place. Women are seen as less able to be good managers and, therefore, less valuable to the organization. This next section will report results from studies that have actually investigated characteristics of women in management and characteristics of men in management.

Characteristics of Women in Management and

Characteristics of Men in Management

Even though women are in management roles in much larger numbers, the belief that males are better managers continues to persist in the minds of many individuals (Rosen & Jerdee, 1978; Dobbins & Platz, 1986). One of the questions that has arisen time and time again is whether or not men and women do differ in certain personality traits

that are significant in effective management. Is there a difference and do men possess vital managerial characteristics more often than women? Studies have reported mixed results regarding gender differences with some studies reporting differences in female and male leaders (Bartal & Butterfield, 1976; Rice, Bender & Vitters, 1980) and other studies supporting findings of no significant difference (Donnell & Hall, 1980; Lee & Alvares, 1977; Butterfield & Powell, 1981; Rosen & Jerdee, 1978).

A meta-analysis of 17 studies investigating the comparison of male and female leaders on measures of initiating structure, subordinate satisfaction, consideration and/or leadership effectiveness was performed by Dobbins & Platz (1986). The meta-analysis of 8 studies that compared consideration and initiating structure behaviors of female and male managers concluded that there are no sex differences in these behaviors. Regarding the variables of subordinate satisfaction and leadership effectiveness, the 7 and 11 studies respectively, indicated no sex difference in the way subordinates viewed their supervisor in the field settings and no sex difference in leadership effectiveness. In laboratory settings, however, males were rated as more effective leaders. The authors hypothesized that gender stereotyping in laboratory settings might be more prevalent than in natural field settings.

Terborg (1977), reported that women managers have needs, motives and values that are similar to male managers and Diamond (1971) found that women and men in higher management positions scored very similarly on scales measuring masculinity and femininity. In the study by Diamond (1971), men and women in higher-level positions scored more on the masculine side with some signs of androgyny. Individuals in lower occupational groupings did not have similar outcomes on this scale in that there was much more gender delineation and stereotypic responses from these individuals. Male truck drivers, for instance, scored very differently than female office clerks, but the question arises, do female and male truck drivers score similarly?

A study of managers in the British Broadcasting Corporation (Fogarty, 1971) reported that there was no basic difference in management style of men and women who were in top management. The study did find, however, that the women were less ambitious, wanting to balance family life with their careers. The women were also more detail-oriented, less likely to delegate and less assertive. Fogarty (1971) concluded that some of the characteristics of the upper-level women were more like the characteristics of middle-level male managers.

Bruning and Snyder (1983) investigated the commitment of 583 employees, 57% female and 43% male, of federally funded social services agencies. Fifty-one percent of the

females and 77% of the males involved in the study were managers. This study showed no evidence that women were less committed to the organization in which they worked nor were they any less ambitious than the men.

In the late 1970s some studies indicated that women have less positive self esteem than do men (Barnett & Bararch, 1978; Hanlan, 1977) and these studies were performed in research settings rather than actual work settings. Instone, Major, and Bunker (1983) discovered that in a simulated organizational setting where 24 male and 24 female university students assumed supervisory roles, the women displayed lower self-confidence than the males. This self-confidence variable affected choices made by the subjects regarding influencing strategies, that is, that women attempted to influence others less often and they used a more limited range of strategies. The men used rewarding strategies more often, coercive strategies less often and, overall, exhibited more self-confidence.

The authors defined self-confidence as "a generalized expectancy for success" (p.323) and found that individuals who were highly self-confident were more likely to exercise influence using persuasive strategies. Terborg (1977) supported the contention that women in real work situations are able to wield less influence and he reported that this inability to influence others, especially peers and supervisors, may affect subordinate satisfaction.

Bruning and Snyder (1981) discovered in a study of managers in different level jobs that gender did not determine significant differences with reference to self-competence, but the difference was in the work role, the position held by the subject. Individuals, regardless of gender, in some job positions, had a greater feeling of self-confidence and competence than did individuals in other job roles.

Donnell and Hall (1980) were also interested in the question of whether male and female managers differed significantly on traits and behaviors that are vital to competent performance. They studied 950 female and 950 male managers over a two-year period. Moving on the assumption that "the way managers behave, the assumptions they have, the values they hold, and the practices they employ will in great measure determine their effectiveness" (p.62), these authors looked at the following dimensions: managerial philosophy, motivational dynamics, participative practices, interpersonal competence, and managerial style. They looked not only at the gender differences between males and females, but also differences between low, average, and high achieving managers, defined by the position level the subject held and her/his progress in her/his career.

On the variable of managerial philosophy, the adherence to Theory X or Theory Y was investigated (McGregor, 1960). Theory X is a pessimistic view of labor in which the manager

perceives the subordinate to be unmotivated, uncreative, and needy of high control and structure. Theory Y, on the other hand, views the worker to be very capable, responsible, and motivated by needs other than those of survival and security. The authors found that high achieving managers held much more closely to Theory Y assumptions than Theory X and low and average achieving women in management positions showed less subscription to Theory X than did low or average achieving male managers. For high achieving managers, there were no significant differences between men and women.

On the motivational dynamics dimension, the hygiene and motivator need referents (Herzberg, 1966) were used. Hygiene needs refer to the lower needs on Maslow's hierarchy and are not seen as relating to job satisfaction. The motivators encompass higher level needs on Maslow's hierarchy such as belongingness, and self-actualization. The authors found that high achieving managers were motivator oriented, focusing more on esteem, status, and self-actualization than did average or low achieving managers. The women in the study had lower basic need emphasis and high needs for self-actualization and, contrary to stereotypes, did not have a greater need for belonging than men. Any gender differences noted in personal motivation were primarily among average achieving managers with high and low achieving managers showing no significant gender differences.

Donnell & Hall (1980) found participative management to be more of a characteristic of high achieving managers and discovered no significant differences in how men and women employ these practices. High achieving managers were also more interpersonally competent, according to Donnell and Hall (1980), and male managers were more willing to share relevant data with their colleagues.

Lastly, the authors reported that high achieving managers were able to effectively integrate both high task and high social concerns while average achieving managers concentrate on task and low achieving managers show little concern for task or people. The authors concluded that men and women did not differ significantly in the ways they manage human resources or utilize technical resources. A significant difference in the management of human and technical resources between the high, average, and low achieving managers was present, however.

In summary, Donnell and Hall (1980) discovered, through the study of approximately 2,000 managers utilizing 43 scales, only two gender related differences: female managers were more achieving on the motivational profile and male managers were more open and candid with colleagues.

Morrison et al. (1987), in their study of executive women and men in upper-level management positions from companies with more than 5,000 employees, analyzed results of instruments measuring behaviors in problem solving,

intellect, and personality variables. The results indicated that women in management were not more impulsive, understanding, concerned with self, suspicious, or better at reducing interpersonal conflict than men in comparable positions. The female managers were found to be no less dominant, self-confident, optimistic about success, able to cope with stress, outgoing, self-disciplined, rational, intelligent, insightful, flexible, adaptable, even tempered or able to define and attain goals than the male managers (pp.51-52).

There were some gender differences found, however, in that executive men were more likely to believe that they were able to cope with the time and energy demands on them, more likely to perceive their environment similarly to their peers, and more comfortable in a structured environment where there was little ambiguity regarding expectations for success. The executive women were more likely to personalize their experiences and behave in an individual fashion and more likely to make decisions that would require movement in new and original directions.

Other studies cited by Morrison et al. (1987) also reported that there have been few personality differences documented in studies comparing men and women in management positions. Harlan and Weiss (1981) measured a number of personality characteristics such as self-esteem, need for power, and achievement motivation. The male and female

managers showed differences on none of these variables except Achievement via Conformance which measures an individual's preference for a structured environment that has clear rules for achievement and values in line with intellectual authority. Harlan and Weiss (1981), as well as Morrison et al. (1987), discovered that achievement in such an environment was significantly more desirable for men in management positions than women in management positions.

Pioneer Women

Studies have been conducted that investigated characteristics of women who were considered "pioneers" primarily in business and industry. These women were called "pioneers" because they were among the first women to occupy upper-level management positions in business and industry (Hennig & Jardim, 1977; Moore & Rickel, 1980; West, 1976; and Morrison et al., 1987).

Hennig & Jardim (1977) reported on a survey of 25 women who held upper-level management positions in major corporations regarding their personality development throughout their lifetime. Their findings showed a lot of similarity in the experiences, backgrounds, and personalities of these women.

The birth orders for these exceptional, pioneering women were all first born or only child. Birth order studies have indicated that children who are first born

usually have an advantage in creativity and leadership (Epstein, 1970), although most of the birth order research has reported only on males (Kammeyer, 1966). No consistent support has been found to confirm a correlation with success in one's career and one's birth order (West, 1976).

The 25 women surveyed each perceived her father as her primary role-model and experienced support and encouragement from her father regarding capabilities and competencies. Each woman also experienced encouragement from her father regarding self-reliant, independent, and risk-taking behaviors. A similar study by West (1976), in which 14 women in top-management positions were interviewed, indicated that these women had very strong mothers whom they perceived as role models. Only 3 of the 14 identified more strongly with their fathers.

West (1976) interviewed 14 women who were in top-level management positions who had been in the position for at least one year and whose area of management was not a traditionally female-dominated area. The average age for this group was 50.5 years and one-half of the women had at least a Bachelor's degree or a graduate degree. All of the women in the study reported by Hennig and Jardim (1977) were college graduates and most of them majored in areas of study that were traditionally male-dominated fields. The average age of the women in the study by Morrison et al. (1987) was

41 years, with 50% of the upper-level management women under the age of 40.

Moore and Rickel (1980) received responses to a questionnaire from 303 women in management positions; 156 in the area of nursing and 147 in business and industry. Moore and Rickel (1980) found that pioneer women who are in upper-level management positions in traditionally male-dominated fields were more likely than pioneer women in upper-level management positions in traditionally female-dominated fields of study to have mothers who work outside the home, have a higher level of education and hold professional positions.

The women studied by Moore and Rickel who had achieved upper-level management positions were more likely than women in lower-level management positions to marry later, have fewer children, and return to work sooner after the birth of a child. Of the 14 women interviewed by West (1976), 10 were married, 4 were not married, 3 had no children, 6 had two children, and 5 had more than two children.

Business Week (Baum, 1987) identified "50 Women to Watch" (p.80) who were women among the highest ranked female executives in the country. Nearly 50% of the women were not married and of those who were married, almost one-third had no children. In the study by Morrison et al. (1987), 25% of the women were unmarried and 50% had one or more children. The Korn Ferry (1982) study of executive women reported that

52% of the women studied had never married, were divorced, or widowed and 61% had no children. Of the men who held comparable executive positions, only 5% were not currently married and only 3% had no children.

In summary, studies have indicated that women who had reached upper-level management positions in their given career were more likely than males or women in lower-level management positions to be single and more likely to have no children or fewer children (West, 1976; Morrison et al., 1987; Hennig & Jardim, 1977). They were also likely to be college graduates (West, 1976; Morrison et al., 1987;), have a strong parental role-model (Hennig & Jardim, 1977; West, 1976), and be a first-born or only child (Hennig & Jardim, 1977; West, 1976).

Summary

Chapter Two discussed literature that documented the history of women in the work force, the movement of women into different job roles, the progress of women in management positions, perceived and real differences in women and men in management, and possible reasons for discrimination against women in management positions. This study contributes to this body of literature through the investigation of personality characteristics of over 100 women in upper-level management positions and through the analyses of how those characteristics differed from men in

upper-level management. Personality characteristics of women and men in middle-level management positions were also compared to the characteristics of upper-level women and men.

The primary purpose of this study was to examine the "profile" of upper-level women, looking for areas of commonality and areas of uniqueness that might distinguish them from their male peers and from their female colleagues who had not advanced as far. A group of middle-level male managers were also included in the study for comparison purposes. It is hoped that this research will provide information to organizations, counselors, and counselor educators who will have an impact on the careers of women in organizations. It is also hoped that this research will provide information that will assist women in their pursuits to move up to and beyond the "glass ceiling".

CHAPTER THREE

METHODOLOGY

Research Questions

Characteristics perceived as vital for successful management are associated more often with male characteristics than female characteristics (Broverman et al., 1972, 1970; Schien, 1973, 1975; Basil, 1972; Terborg, 1977). Some of these characteristics are personality characteristics which can be assessed by the California Psychological Inventory, the Fundamental Interpersonal Relations Orientation-Behavior instrument, and the Myers-Briggs Type Indicator. These instruments were used in this research study to measure a number of personality variables.

Even though women are entering management positions in larger numbers than in the last few decades (Nelton & Berney, 1987; Taylor, 1986; Baum, 1987), only a few are moving up to, and beyond the 'glass ceiling' (Morrison et al., 1987). Those women who are moving into upper-level management positions are earning less than their male colleagues (Donnell & Hall, 1980; Robertson, 1973; Harlan, 1978; Frank, 1977). This study examined how the personality characteristics and demographic profile of women in upper-level management positions differed from the men in upper-level management positions and women in middle-level management positions. This study also investigated how

these three groups differed from men in middle-level management positions. The research questions that were considered are:

1. Do women in upper-level management positions differ from men in upper-level management positions on leadership and interpersonal adequacy characteristics, sense of well-being, intrapersonal values, achievement orientation, psychological mindedness and flexibility as measured by the scales of the California Psychological Inventory?
2. Do women in upper-level management positions differ from men in upper-level management positions on inclusion, control and affection as measured by the scales of the FIRO-B?
3. Do women in upper-level management positions differ from men in upper-level management positions on Introversion/Extraversion, Sensing/Intuition, Thinking/Feeling, and Judging/Perceiving as measured by the scales of the Myers-Briggs Type Indicator?
4. Do women in upper-level management positions differ from men in upper-level management positions on demographic variables such as marital status, number of children, birth order, education, and work history?

5. Do women in upper-level management positions differ from women in middle-level management positions on leadership and interpersonal adequacy characteristics, sense of well-being, intrapersonal values, achievement orientation, psychological mindedness and flexibility as measured by the scales of the California Psychological Inventory?
6. Do women in upper-level management positions differ from women in middle-level management positions on inclusion, control and affection as measured by the scales of the FIRO-B?
7. Do women in upper-level management positions differ from women in middle-level management positions on Introversion/Extraversion, Sensing/Intuition, Thinking/Feeling, and Judging/Perceiving as measured by the scales of the Myers-Briggs Type Indicator?
8. Do women in upper-level management positions differ from women in middle-level management positions on number of children, birth order, education, and work history?
9. Do men in middle-level management positions differ from the other three groups of managers on leadership and interpersonal adequacy characteristics, sense of well-being,

intrapersonal values, achievement orientation, psychological mindedness, and flexibility as measured by the scales of the California Psychological Inventory?

10. Do men in middle-level management positions differ from the other three groups of managers on inclusion, control and affection as measured by the scales of the FIRO-B?
11. Do men in middle-level management positions differ from the other three groups of managers on Introversion/Extraversion, Sensing/Intuition, Thinking/Feeling, and Judging/Perceiving as measured by the scales of the Myers-Briggs Type Indicator?
12. Do men in middle-level management positions differ from the other three groups of managers on variables such as marital status, number of children, birth order, education, and work history?

Population

Participants

Participants for this study were upper- and middle-level managers from companies with more than 100 employees who had participated in the Leadership Development Program (LDP) or the Executive Women's Workshop (EWW) at the Center

for Creative Leadership from January of 1985 to September of 1989.

Between January of 1985 and September of 1989, there were 136 caucasian women, self-identified as upper-level managers, who attended the Leadership Development Program or the Executive Women's Workshop. In addition, there were 775 caucasian men self-identified as upper-level managers who attended the Leadership Development Program. These women and men were from companies with 100 or more employees. During the same period of time, there were 307 caucasian women and 800 caucasian men from companies employing greater than 100 individuals and who identified themselves a middle-level managers.

Approximately 82% of all of the female participants in the LDP and EWW and 93% of all of the male participants in the LDP were caucasian. Hispanic women made up the largest percentage of a non-white group attending the programs during this time period, accounting for 11% of the female participants and totaling 13 individuals. The racial variable was eliminated and the study dealt only with caucasian managers since the number of non-white managers attending these programs was too low to allow any meaningful analysis of racial distinctions.

The female subjects who held upper-level management positions ranged in age from 26 to 66 years with a mean age of 41.5 years. The age range for the males in upper-level

management positions was 27 to 69 years with a mean age of 44.7 years. Of these men, 39.4% had Bachelor's degrees, 37.4% had a Masters degree and 14.3% had doctoral or professional degrees compared to 39.7%, 33.8% and 14.7%, respectively, for the women in upper-level management positions.

The age range for the 307 women in middle-level management positions was 24 to 60 years with a mean age of 36.5 years. There were 800 males in middle-level management positions with ages ranging from 27 to 63 years and a mean age of 40 years. In middle-level management positions, 45.3% of the men held Bachelor's degrees while 37.5% of the women held Bachelor's degrees. In middle-level management positions 30.3% of the men and 39.1% of the women had Masters degrees, and 11.4% of the men and 13.0% of the women held doctoral or professional degrees.

As shown in Table 1, the size of the organization from which the subjects came varied among the subject groups. Table 1 also demonstrates that the majority of the subjects came from business and non-service oriented industry. In upper-level management positions, 65.9% of the men and 55.9% of the women were from business and non-service industry. In middle-level management positions, 78.8% of the men and 64.3% of the women were from business and non-service industry.

Table 1

Number of Employees and Organizational Type by Groups

Organizational Characteristics	Upper-Level Managers				Middle-Level Managers			
	Male		Female		Male		Female	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
	<u>n</u> = 772		<u>n</u> = 136		<u>n</u> = 795		<u>n</u> = 305	
<hr/>								
Number of Employees								
100-999	231	29.8	45	33.1	115	14.4	76	24.8
1,000-4,999	198	25.6	49	36.0	220	27.5	68	22.2
5,000-5,999	83	10.7	6	4.4	113	14.1	38	12.4
10,000 or more	263	33.9	36	26.5	352	44.0	125	40.7
Organizational Type								
Business/ Industry	509	65.9	76	55.9	627	78.9	196	64.3
Business/ Service	41	5.3	8	5.9	25	3.1	20	6.6
Education	30	3.9	11	8.1	20	2.5	47	15.4
Government	115	14.9	13	9.6	93	11.7	20	6.6
Non-Profit	28	3.6	16	11.8	8	1.0	11	3.6
Other	49	6.4	12	8.8	22	2.8	11	3.6

The subjects held various positions within the organizations as represented in Table 2. The majority of the upper-level male and female managers held administrative positions. Among the middle-level male and female managers, the subjects were more evenly distributed across a number of functional areas.

The Center for Creative Leadership

The Center for Creative Leadership is a nonprofit educational institution with its headquarters in Greensboro, North Carolina and branches in San Diego, California and Colorado Springs, Colorado. The Center has five areas of study: Leadership Development, Executive Leadership, Innovation and Creativity, Leadership Technology, and the Education and Nonprofit Sector. Each of these areas of study focuses on research as well as on application of academic scholarship. The primary mission of the Center is "to encourage and develop creative leadership and effective management for the good of society overall" (CCL Programs, 1989, p.4). This mission is to be accomplished through training, research, and publication.

The Leadership Development Program, a program of interest in this study, was designed for middle-level to executive-level managers and focuses on improving leadership skills, increasing self-awareness, goal-setting, and stimulation for personal and career growth. Managers from

Table 2

Function of Subjects in Organization

Function	Upper-Level Managers				Middle-Level Managers			
	Male		Female		Male		Female	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Accounting	12	1.6	0	0.0	36	4.5	17	5.8
Administration	491	63.6	68	50.0	69	8.6	33	10.8
Advertising/ Public Relations	7	0.9	4	2.9	12	1.5	6	2.0
Credit/Finance	14	1.8	4	2.9	9	1.1	2	0.7
Education	5	0.7	1	0.7	12	1.5	25	8.2
Engineering	10	1.3	1	0.7	62	7.8	2	0.7
Human Resources	25	3.2	15	11.0	78	9.8	47	15.4
Information/ Data Processing	19	2.5	3	2.2	47	5.9	22	7.2
Law	12	1.6	1	0.7	6	0.8	5	1.6
Manufacturing	22	2.9	1	0.7	35	4.3	4	1.3
Marketing	49	6.4	16	11.8	103	12.9	45	14.8
Materials Management	4	0.5	0	0.0	22	2.8	1	0.3
Medicine	2	0.3	1	0.7	2	0.3	4	1.3

(table continues)

Function	Upper-Level Managers				Middle-Level Managers			
	Male		Female		Male		Female	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Operations	26	3.4	5	3.7	32	4.0	11	3.6
Product								
Development	8	1.0	2	1.5	24	3.0	14	4.6
Quality Control	4	0.5	0	0.0	18	2.3	5	1.6
Research	3	0.4	1	0.7	7	0.9	9	3.0
Research and								
Development	13	1.7	1	0.7	65	8.1	9	3.0
Sales	16	2.1	4	2.9	74	9.3	10	3.3
Secretarial/								
Support	0	0.0	0	0.0	0	0.0	1	0.3
Security	0	0.0	0	0.0	27	3.4	0	0.0
Social Services	0	0.0	0	0.0	0	0.0	1	0.3
Systems Analyst	0	0.0	0	0.0	7	0.9	5	1.6
Other	30	3.9	8	5.9	53	6.6	27	8.9

around the world attend this program and many companies routinely send their upper and middle-level managers to the Center for this training.

Although the Leadership Development Program is also attended by military leaders, these were omitted from the sample due to their limited number (i.e., 3% of the upper-level males and 0% of the upper-level women were from the military).

The Executive Women's Workshop was also designed for middle- to executive-level managers, but is exclusively for female managers, including entrepreneurs. This program draws women from around the country and focuses on developmental issues and personal goal-setting.

Most of the participants in the Leadership Development Program and Executive Women's Workshop are self-referred as part of their career development plan or as a routine referral by their company which utilizes the LDP as a training program for all middle-level and upper-level managers. Seldom are the LDP or the EWW courses viewed by a company as a remediation effort for the participant. Thus, the participants are in attendance at LDP and EWW voluntarily and typically view it as a positive statement from their organization.

Instrumentation

The three instruments that were used in this study are the California Psychological Inventory (CPI) (Gough, 1957), the Fundamental Interpersonal Relations Orientations-Behavior (FIRO-B) (Schutz, 1958), and the Myers-Briggs Type Indicator (MBTI) (Briggs & Myers, 1976),. Along with the three personality instruments, a biographic information sheet and supplemental biographic information that is part of a supplemental biographic form filled out by all participants also provided data for analysis. The biographic information, along with the responses to the questions on the personality instruments, are provided to the Center prior to the participant's attendance at any program.

California Psychological Inventory

The California Psychological Inventory (CPI) was designed to "develop descriptive concepts which possess broad personal and social relevance" and to give a "brief, accurate, and dependable subscale for the identification and measurement of the variables chosen for inclusion in the inventory" (Gough, 1975, p. 5). The CPI contains 468 statements (twelve appear twice) totalling 480 true-false items. The items primarily assess typical behaviors, opinions, attitudes and feelings surrounding family matters, social interactions and ethical issues. The responses for

the CPI are converted into standardized scores and presented in a profile format. Norms for the instrument were based on testing results from over 7,000 women and 6,000 men.

The CPI has 18 scales, but only 17 of these are used in the Center for Creative Leadership interpretations since the Femininity scale has been omitted. The 17 scales are subgrouped into quadrants. The first quadrant, consisting of six scales, five of which measure interpersonal adequacy and reflect leadership potential. The five scales in this quadrant are Dominance, Capacity for Status, Sociability, Social Presence, and Self-Acceptance. The sixth scale in the first quadrant is the Sense of Well-Being scale.

The second quadrant has scores that assess maturity, intrapersonal structuring of values and socialization. This quadrant indicates the way an individual perceives her/his response to humankind. The six scales comprising the second quadrant are Socialization, Responsibility, Self-Control, Tolerance, Good Impression and Communality.

The third quadrant measures achievement potential and intellectual efficiency with the scales Achievement via Conformance, Achievement via Independence and Intellectual Efficiency.

Finally, a fourth quadrant is made up of two unrelated scales, Flexibility and Psychological Mindedness.

Following is a brief description of each of the scales on the California Psychological Inventory:

Quadrant I.

Dominance (Do) - The dominance scale is designed to identify strong, influential, dominant and ascendent individuals for leadership positions.

Capacity for Status (Cs) - This scale is designed to assess qualities of self-assurance and ambition that lead to attainment of status as well as to correlate with criteria for status such as position and income.

Sociability (Sy) - This scale is designed to assess outgoing, sociable, participative personalities and discriminate these from individuals who avoid social involvement and social visibility.

Social Presence (Sp) - This scale assesses poise and self-confidence as well as spontaneity in social interactions, including wit and verbal aggression.

Self-Acceptance (Sa) - This scale is designed to "assess factors such as sense of personal worth, self-acceptance, and capacity for independent thinking and action" (Gough, 1969, p.10).

Sense of Well-Being (Wb) - This scale assesses the ability of individuals to meet the demands of everyday life and also reflects physical and psychological well-being.

Quadrant II.

Responsibility (Re) - This scale identifies the extent to which individuals are responsible, dependable, conscientious, hold a belief that life should be governed by

law and order, and have a concern for civic and moral obligation.

Socialization (So) - This scale reflects adherence to social values, social maturity, and delinquency.

Self-Control (Sc) - This scale assesses self-regulation, impulsivity and self-control, distinguishing overcontrolled from undercontrolled individuals.

Tolerance (To) - This scale was originally designed to assess anti-Semitic attitudes following World War II. The revised scale identifies prejudice as well as a broader assessment of accepting, permissive, and non-judgmental attitudes. The scale items are designed to contrast flexibility and openness with rigidity.

Good Impression (Gi) - The Good Impression scale is used primarily to assess how important a good impression is to a particular individual, as well as to identify individuals that are most capable of making a good impression. This scale is a validity scale to detect response bias by identifying individuals who attempt to "fake good" on the CPI.

Communality (Cm) - This scale also is a validity scale and is designed to assess whether or not a respondent is answering questions in a random fashion. The Communality scale also indicates whether the individual perceives her/himself as being 'common' to others or particularly unique.

Quadrant III.

Achievement via Conformance (Ac) - This scale measures the need for achievement along with the need for, and appreciation of, structure and organization to accomplish this achievement goal.

Achievement via Independence (Ai) - This scale also measures the need for achievement and combines with that the valuing of independent thought and creativity as ways of reaching the achievement level desired.

Intellectual Efficiency (Ie) - This scale was originally designed to reflect a score that would correlate significantly with intelligence measures. The Intellectual Efficiency scale also measures the capacity of abstract thinking versus the preference for concrete problem-solving.

Quadrant IV.

Psychological Mindedness (Py) - This scale is designed to determine the sensitivity of an individual regarding her/his insightfulness toward the motivation, psychology, and needs of others. An individual with a higher score would, theoretically, be more able to assess how others feel and think, but it does not purport to measure how an individual behaves in regard to this insight.

Flexibility (Fx) - This scale was designed to identify individuals who are flexible in their approach to living and are not threatened by change.

Two reliability studies on the CPI using test-retest methods (Gough, 1975) were documented, one with high school students as subjects and the other utilizing male prisoners. There was a one-year lapse between the first and second testing for the high school students and a lapse of 7 to 21 days between the testings for the male prisoners (Table 3). The reliability coefficients for the high school students ranged from .38 to .74. All of the coefficients for this population were above .60 except for the Communality, Achievement via Independence, and Psychological Mindedness. The reliability coefficients for the CPI scales for the male prisoners ranged from .49 to .87. All of the coefficients were greater than .70 except Communality, Psychological Mindedness, and Flexibility.

The author (Gough, 1975) explains that the low scores on the Communality and Psychological Mindedness scales are potentially due in part to the limited number of items comprising these scales, 28 and 22, respectively, and the skewed distribution of the communality scale.

Regarding validation of the instrument, Gough (1975) cites the following studies for the individual scales drawn from cross-validated studies of the instrument.

Dominance: This scale is a personality scale with strong validation and one of the few scales on personality inventories with predictive validity support (Megargee, 1972). Seventy medical school applicants were assessed and

the Dominance score on the CPI was positively correlated .48 with the ratings of the evaluation staff regarding dominance for these students. One hundred military officers were also assessed and the Dominance score on the CPI correlated at +.40 with the ratings of the military staff on dominance.

Capacity for Status: One hundred military officers were assessed and the Capacity for Status score correlated at +.38 with ratings by military staff on "drive" and a +.43 correlation with staff on the "ability to communicate". A correlation of +.41 and +.48 was found with the Home Index, an objective measure of home status, with high school males and females, respectively.

Sociability: In fifteen high schools, the principals were asked to identify the most popular males and females and the mean scores for these groups in comparison with the unselected males and females were significantly different at the .01 level.

Social Presence: Seventy medical school applicants correlated at +.43 with the ratings from evaluation staff on social presence. Fifty-one female and 52 male high school students were chosen by principals in 5 high schools as being the most or least socially present. The scores for the males in the two groups had a differential score of 5.40 ($p < .05$) and the females in the two groups had a differential score of 4.65 ($p < .01$).

Table 3

Test-Retest Reliability Coefficients for California
Psychological Inventory Scales

Scales	<u>High School</u>		<u>Prison</u>
	Females (<u>n</u> =125)	Males (<u>n</u> =101)	Males (<u>n</u> =200)
Dominance	.72	.64	.80
Capacity for Status	.68	.62	.80
Sociability	.71	.68	.84
Social Presence	.63	.60	.80
Self-Acceptance	.71	.67	.71
Sense of Well-Being	.72	.71	.75
Responsibility	.73	.65	.85
Socialization	.69	.65	.80
Self-Control	.68	.75	.86
Tolerance	.61	.71	.87
Good Impression	.68	.69	.81
Communality	.44	.38	.58
Achievement via Conformance	.73	.60	.79
Achievement via Independence	.57	.63	.71
Intellectual Efficiency	.77	.74	.80
Psychological-Mindedness	.49	.48	.53
Flexibility	.67	.60	.49

Self-Acceptance: Seventy medical school applicants correlated at +.32 with the ratings by evaluation staff on self-acceptance. A correlation of -.57 was found between the scores of 40 graduating seniors in engineering with the staff's assessment of their readiness to feel guilty.

Sense of Well-Being: One hundred military officers' Sense of Well-Being scores correlated at +.26 with the ratings from military staff on health and vitality and at +.27 with self-ratings on general physical fitness. In a study comparing the scores of 354 college students with psychiatric patients and with students who were asked to fake items on the scale to reflect personal problems and anxiety, each subject group differed from the other at a $p < .01$ level.

Responsibility: Forty graduate students had scores that correlated at +.38 with the ratings of evaluation staff on positive character integration. Forty medical school seniors correlated at +.38 on the Responsibility scale with the staff ratings of responsibility.

Socialization: To document the validity of this scale, Gough (1975) placed the Socialization scores from the samples available on a continuum with the assumption that the more socialized individuals would show a higher socialized score than the less socialized individuals. In Table 4 the mean scores and standard deviations are presented. The scores have a significance level of $p < .01$

and a correlation of $r = .67$. For the female samples of socialized and asocialized individuals, the difference in means = 9.27 with $p < .01$ and $r = .76$.

Self-control: Seventy medical students correlated at $-.25$ on their Self-control scores with the staff rating of impulsivity. One hundred military officers had scores that correlated at $-.23$ with the military staff rating of impulsivity and at $+.21$ with the rating of "over controls his impulses". Fifty-one college females had scores which correlated at $+.34$ with the ratings of an interviewer's assessment of the subjects patience, self-control, restrained and self-contained behavior.

Tolerance: One hundred military officers had scores that correlated $-.46$ with the authoritarian personality scale on the California F, another psychological indicator. One hundred fifty-two adult males had Tolerance scales correlating $+.34$ with the Chicago Inventory of Social Beliefs, a measure that reflects fair-mindedness and humanitarian values.

Good Impression: The Good Impression scale correlated at $+.60$ with the correction scale from the MMPI. One hundred fifty-two adult males had a Good Impression score that correlated at $+.32$ with the interest maturity scale from the Strong Vocational Interest Blank.

Communality: One hundred military officers had Communality scores that correlated at $+.28$ with the staff's

Table 4
Means and Standard Deviation of Socialization Scores for
Groups Of Males On A Continuum from Highly to Lowly
Socialized

Groups	<u>n</u>	Mean	SD
High school best citizens	90	39.44	4.95
Business executives	116	37.47	4.19
High school students	4474	36.46	5.56
Military officers	495	36.38	4.74
Psychology graduate students	89	34.24	4.23
High school disciplinary problems	91	31.25	5.40
County jail inmates	177	29.27	6.44
Prison inmates	177	27.76	6.03
Training school inmates	100	26.53	4.89

assessment of the dependability, practicality, common sense, and good judgment of the subject. The same 100 military officers' scores correlated at $-.32$ with the staff assessment of how much at odds the officer was with himself and had major internal conflicts.

Achievement via Conformance: In a study of 1,235 females and 946 males who were seniors at 5 different high schools, their Achievement via Conformance scales correlated $r = .41$ (for both males and females) with grades. Correlations of $r = .13$ for females and $r = .19$ for males with IQ scores were also found. One hundred military officers obtained scores that correlated $+.33$ with the staff's assessment of how efficient, capable, and not stressed by work inhibitions the officer was.

Achievement via Independence: One hundred military officers received Achievement via Independence scores which correlated $+.30$ with the responses from staff assessment of self-reliance, independence in judgment and ability to think for himself. When 220 first-year agriculture students were tested on Achievement via Independence, their scores correlated $+.44$ with first semester grades and 917 psychology students received Achievement via Independence scores correlating $+.38$ with course grades.

Intellectual Efficiency: One hundred military officers received Intellectual Efficiency scores correlating $+.58$ with scores on the Terman Concept Mastery intelligence test.

Seventy university graduate students received scores on Intellectual Efficiency correlating $+0.44$ with the Miller Analogies Test.

Psychological-Mindedness: Seventy medical school applicants received Psychological-Mindedness scores which correlated $+0.44$ with the psychologist key on the Strong Vocational Interest Blank. Scores for 152 adult males on the Psychological-Mindedness scale correlated $+0.40$ with the Psychologist scale on the Strong Vocational Interest Blank.

Flexibility: Forty graduate students' scores on Flexibility correlated -0.48 with the staff ratings on rigidity and 40 medical students received scores correlating -0.36 with staff ratings of rigidity.

Fundamental Interpersonal Relations Orientation-Behavior

The Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) (Schutz, 1958) is a 54-item questionnaire that is designed to measure three fundamental dimensions of interpersonal relationships. The dimensions measured are inclusion, control, and affection. For each variable there are two scores: one score indicating the expressed behavior and the second score indicating the wanted behavior. The expressed score indicates how much the individual exhibits the particular behavior and the wanted score measures the extent to which the individual desires the behavior from others.

Inclusion scores reflect how much the individual is comfortable with and initiates association with others and how much the individual desires others to initiate social interaction with her/him. This variable is similar to the Jungian concept of Introversion and Extraversion, with introverts scoring lower on the expressed and wanted Inclusion variable and extraverts scoring higher on these scales (Schutz, 1966).

Control scores reflect how much an individual is comfortable with and desires to express authority, taking charge of situations and making decisions for her/himself and others. The wanted scales reflects how much an individual wants others to take control, make decisions, and show authority toward her/him.

The final dimension on the FIRO-B, the Affection dimension, reflects how much an individual expresses or wants intimacy. How much the individual expresses efforts to be close to people, is affectionate and intimate with others will be reflected in the expressed score. Her/his desire to received affection and intimacy will be reflected in the wanted scale.

The FIRO-B questionnaire requires the respondent to give a numerical response on a Guttman scale with responses ranging from "usually" to "never" or from "no one" to "most people" on some items. The responses indicate how important the particular variable is to the individual, how many

people the individual needs to express it to and from how many people the individual needs an expression of this variable. The FIRO-B contains only six basic questions and each question is repeated 9 times with a variation each time. The results of the responses are scored on a 0 to 9 scale with higher scores reflecting a more intense response.

Schutz (1978) reported reproducibility scores (alpha coefficient) of .94 for each of the scales on the FIRO-B with subject groups ranging from $N = 1,467$ to $N = 1,615$. In test-retest studies, the mean coefficient for all of the six scales was .76.

The instruments used in this research project are, overall, reliable and valid and should give sound information regarding the characteristics they purport to measure.

Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator (MBTI) is designed to assess the differences in people "that result from where they like to focus their attention, the way they like to take in information, the way they like to decide, and the kind of lifestyle they adopt" (Myers, 1987, p. 4). The MBTI is an instrument based on Carl Jung's theory of personality types and is a 166-item instrument with 114 open ended statements giving the test-taker two choices for completing the statement, indicating their preference. There are also

52 word pairs where the test-taker chooses the word that appeals the most to her/him and along with the 166 items measures an individual's preference on four scales. A score for each scale is determined and based on a continuum of opposites. Both polarities of the scale can be interpreted as strengths rather than one end of the continuum being interpreted as more appropriate or helpful than the other.

The first scale, the Extraversion-Introversion scale is measuring an individual's preference in regards to where she/he likes to focus attention. Individuals who score on the extravert side have a preference for focusing on the external world and they are, theoretically, more comfortable in working actively with people and things and are energized by the outer world. Introverts, on the other hand, focus more on their internal world and are more comfortable with investing energy in ideas and activity that takes place inside their heads. Introverts gather their energy from their internal world.

The second scale on the MBTI, the Sensing-Intuition scale, is designed to reflect an individual's preference regarding how she/he acquires information about the world around them. Individuals who show a preference for acquisition of information via the sensing mode use their eyes, ears and other senses to gather the facts and tend to be practical and realistic. The intuitive individual uses intuition to look at relationships and possibilities beyond

the reach of the five senses. The sensing individual usually enjoys gathering information and an intuitive individual enjoys generating ideas about problem-solving.

The third scale measures decision-making preferences with the two opposites of Thinking and Feeling. An individual who prefers the thinking mode for decision-making will tend to base her/his decisions on a logical process of looking at cause and effect and is generally more analytical and makes decisions from an impersonal perspective. An individual who tends to make decisions from a feeling preference takes into account all that is important without the determined outcome having to be logical. The feeling perspective refers to making decisions based on one's values and is not referencing emotions.

The last dichotomous scale is the scale of Judging and Perceiving. It is designed to measure how an individual orients herself/himself toward the outer world. A person with a preference toward judging is more focused on decision-making through either feeling or thinking and finds closure important. Judging individuals tend to live in an organized way that involves planning ahead and regulating and controlling life. The perceiving individual prefers an inquisitive approach to the outer world, either intuitive or sensing. They like to live an open life, keep options open and have a preference for understanding life rather than controlling and structuring it.

From an individual's responses to the items of the MBTI a "type" is determined by combining one preference from each of the four scales, resulting in a personality profile indicating tendencies toward preferences for approaching life. The MBTI type is represented by a letter from each dichotomous scale, with the following letters representing the indicated function: I-Introversion, E-Extraversion, N-Intuition, S-Sensing, F-Feeling, T-Thinking, P-Perceiving, and J-Judging.

Reliability studies documented by Myers and McCaulley (1985) using split-half internal consistency techniques reported coefficients on all scales ranging from .64 to .84. Test-retest methods of determining reliability also consistently produced high correlations for the scales on the MBTI. Myers and McCaulley (1985) reported studies with reliability coefficients (tetrachoric correlation and the Spearman-Brown prophecy formula) ranging from .74 to .88 on the Extraversion-Introversion scales; from .77 to .87 on the Sensing-Intuition scales; from .66 to .80 on the Thinking-Feeling scales; and from .84 to .93 on the Judging-Perceiving scales (Tables 5 & 6). DiVito (1985) reported on test-retest reliability studies by a number of authors with reliability coefficients ranging from .48 (14 months) to .87 (7 weeks).

Myers and McCaulley (1985) also reported validity findings on each of the MBTI scales. Regarding construct

Table 5

Reliability Findings on the Myers-Briggs Type Indicator

Sample	<u>n</u>	Gender	EI	SN	TF	JP
Massachusetts						
High	397	Males	.78	.77	.64	.78
	400	Females	.83	.74	.70	.81
Long Island						
Univ.	399	Males	.76	.75	.74	.84
	184	Females	.78	.80	.71	.81
MBTI Data						
Bank	9216	Male&Female	.83	.83	.76	.80
IPAR Data						
Bank	100	Males	.82	.85	.82	.84
	100	Females	.74	.82	.78	.84

Note. Split-half internal consistency techniques used.

Table 6

Reliability Findings on the Myers-Briggs Type Indicator

Sample	<u>n</u>	Gender	EI	SN	TF	JP
12 Graders	100	Males	.78	.77	.66	.88
College						
Students	100	Males	.88	.81	.76	.91
	100	Females	.74	.83	.80	.93
National Merit						
Finalists	100	Males	.88	.87	.80	.84

Note. Spearman-Brown Prophecy Formula utilized

validity the following was noted: Extraversion correlated from .40 to .77 with other scales measuring extraversion; the Introversion scale is significantly correlated from .40 to .75 with other measures of introversion; the Sensing scale significantly correlated with other scales in the range of .40 to .67; Intuitive correlations with other scales were .40 to .62; personality characteristics such as dominance, distrust, aggression, etc. correlated with Thinking from .40 to .57; and correlations with Perceiving were from .40 to .57.

DiVito (1985) reported that data support the relation of the MBTI to SAT performance, personality measures, interest measures, and the Edwards Personal Preference Schedule. He reported that "the correlations between corresponding dimensions are moderately high and statistically significant" (p. 1031).

Participant Background Form

The Participant Background Form (Appendix A) allows the Center to collect information from all participants regarding general demographics, education and the organization in which they work. On this form the participant identifies her/his position within the organization, the level and function. The sex, age, race, and educational background of the individual is self-reported on this form.

Supplemental Biographic Inventory

The Supplemental Biographic Inventory (Appendix B), also filled out by the participant prior to entry into the program, provides a significant amount of personal information designed to assist the counselor/psychologist in the individual session with the participant. Some of the information is also entered into the database by the Center staff to assist in future research. The information provided on this form utilized in this research study is marital status, number of children, birth order, number of years of employment, number of years as a manager, and annual gross income.

Procedures

Contact was made with Dr. David DeVries, Executive Vice-President for the Center for Creative Leadership in Greensboro, North Carolina, to obtain permission to use the data base from the Leadership Development Program and the Executive Women's Workshop. Dr. DeVries granted permission for this research project and asked the author of this dissertation to work with Dr. Ellen Van Velsor, Director of Leadership Technologies and Co-author of the book, Breaking the Glass Ceiling: Can Women Reach the Top of America's Largest Corporations? (Appendix C).

In order to access information about enough women in upper-level management positions and to keep the information

timely, it was decided that data from all participants in the Leadership Development Program and the Executive Women's Workshop from January of 1985 to September of 1989 would be utilized. It was later determined that, due to the small number of non-white participants, only caucasian participants from the Leadership Development Program and the Executive Women's Workshop would be used as subjects in this research project. Participants from the military also were eliminated due to their small number, especially among the women.

Since the goal of the study was to examine personality characteristics of men and women in middle- and upper-level management positions, participants in the Leadership Development Program and the Executive Women's Workshop were chosen. These two programs have the most thorough personality testing package and utilizing women from the Executive Women's Workshop also substantially increased the number of female participants.

Participants in the Leadership Development Program and the Executive Women's Workshop fill out numerous assessment instruments prior to attendance at the program in Greensboro or a branch site. The California Personality Inventory, the Myers-Briggs Type Indicator, and the Fundamental Interpersonal Relations Orientation-Behavior instruments are a part of the assessment package and, along with biographic information, are the instruments that were utilized in this

study. These instruments are all filled out prior to attendance so they in no way reflect changes resulting from exposure to the program content.

Ms. Diane Phillips, a researcher at the Center for Creative Leadership, agreed to be responsible for gathering all of the data needed for this study. The data utilized in this study was placed on tape at the Center and transported to the Academic Computer Center at the University of North Carolina at Greensboro. Here the data from the Center was entered and analyzed on the VAX 11/780 computer using SAS (Statistical Analysis System) procedures.

Analyses of Data

This study was an observational study. The scores from the personality inventories for the four subject groups; upper-level male managers, upper-level female managers, middle-level male managers, and middle-level female managers, were analyzed to determine if there were any significant differences among these four groups. Gender differences, level differences and gender by level interaction were investigated using the Pillai-Bartlett trace test, a multivariate test.

The Pillai-Bartlett trace statistic tested for the null hypothesis that there were no group mean differences. This test was recommended by Olson (1976) as being the most robust in comparison with the Hotelling-Lawley trace, Roy's

largest root, and Wilk's likelihood ratio tests. He also reported that the Pillai-Bartlett trace test is powerful enough to assess differences between and among populations when there may be departures from homogeneity of variances. Multivariate analysis of covariance was used rather than univariate analyses because the number of scales alone could produce some significant differences just by chance. Multivariate analysis of covariance was used to account for possible overall associations between the covariates, time as manager and age, and the personality characteristics before testing differences among the groups.

Examination of "gender differences" provided information about whether the women in management differ from the men in management. The "level differences" reflected whether upper-level managers differed from middle-level managers. Lastly, by investigating the "gender by level interaction", differences among men and women in upper-level management and men and women in middle-level management positions could be identified.

After adjustments for the covariates, age and time as manager, were made by analysis of covariance, differences in scores, if any, between levels and between gender were tested. These differences between the groups were examined to address the specific research questions. Chi-square tests were utilized to test the significance of group differences in the discrete MBTI preferences. T-tests were

utilized with the demographic variables of marital status, number of years employed, number of years as manager, salary, birth order and number of children. A .05 level of significance was selected for each analysis, multivariate and univariate.

Pilot Study

It was determined that a pilot study using data from the Center for Creative Leadership would precede the dissertation research.

Participants

Thirty women in upper-level management positions, 30 men in upper-level management positions, 30 women in middle-level management positions, and 30 men in middle-level management positions who had attended the Leadership Development Program prior to January of 1985 were the subjects for this pilot project. The Executive Women's Workshop did not begin until 1985, so there were no subjects to be drawn from that population.

Data were complete on only 27 males in upper-level management positions, 23 females in upper-level management positions, 26 males in middle-level management positions, and 28 females in middle-level management positions. The numbers may vary, therefore, throughout the report of the demographics depending on the data available for the particular variable.

Table 7 reports the organizational type, the number of employees, the educational status and the income level of the subjects. As Table 7 reveals, the majority of the subjects are from business and industry. Only the upper-level female managers do not have more than 50% of the participants from this area. Of the upper-level male managers, the upper-level female managers and the middle-level male managers, 14.8%, 26.1%, and 15.4%, respectively, of the subjects classified their organization as "other". These are high percentages of unknown organizational type. For the upper-level female managers, the type of organization from which the subjects originate varies more than the other three groups.

For upper-level male and female managers, the majority of the subjects work in companies that employ between 100 and 999 employees. The majority of the middle-level male managers work for companies with 1,000 to 4,999 employees and the middle-level female managers have 39.3% of the subjects from companies with over 10,000 employees and 32.1% from companies with 100-999 employees.

Table 7 reveals that none of the upper-level male managers earned less than \$40,000 a year while 17.6% of the upper-level female managers earned less than \$40,000. Of the middle-level managers, 27.8% of the males earned less than \$40,000 and 63.0% of the women earned less than \$40,000. On the higher end of the salary scale, 22.2% of

the upper-level male managers and 17.7% of the upper-level female managers earned more than \$90,000, with 7.4% of those men earning more than \$150,000. None of the women in upper-level management positions earned more than \$150,000. Of the middle-level managers, only one male earned between \$80,000 to \$89,999, none earned higher than this amount, and none of the middle-level female managers earned more than \$79,999.

It appears evident from this information that the male subjects earned more than the females who are in similar positions in management. It is, of course, a very small sample, so generalizations should be made with caution.

Instrumentation

Scores for the subjects on the California Personality Inventory, the Fundamental Interpersonal Relations Orientation-Behavior instrument, and the Myers-Briggs Type Indicator were obtained from the Center for Creative Leadership.

Prior to 1984, information provided on the Supplemental Biographic Inventory was not entered into the data base at the Center. Some of the demographic data that were analyzed in the research for this dissertation, therefore, were not reported in the pilot study documentation. The demographic information available on the Biographic Information sheet was a part of the pilot data.

Table 7

Demographic Data for the Four Groups of Managers

	Upper-Level Managers				Middle-Level Managers			
	Male		Female		Male		Female	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Type of Organization								
Business/								
Industry	17	63.0	8	34.8	22	84.6	20	71.4
Education	4	14.8	4	17.4	0	00.0	3	10.7
Government	2	7.4	3	13.0	0	00.0	3	10.7
Non-Profit	0	00.0	2	8.7	0	00.0	1	3.6
Other	4	14.8	6	26.1	4	15.4	1	3.6
Number of Employees								
100-999	14	51.9	14	60.9	5	19.2	9	32.1
1,000-4,999	9	33.3	5	21.7	14	53.9	5	17.9
5,000-9,999	2	7.4	1	4.4	1	3.9	3	10.7
10,000 >	2	7.4	3	13.0	6	23.1	11	39.3
Education								
<Bachelors	4	15.4	2	9.1	4	16.7	7	27.0
Bachelors	8	30.8	10	45.5	14	58.3	9	34.6
Masters	8	30.8	6	27.3	4	16.7	6	23.1

(table continues)

	Upper-Level Managers				Middle-Level Managers			
	Male		Female		Male		Female	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Dr./								
Professional	6	23.1	4	18.2	2	8.3	4	15.4
Income Level								
<\$10,000	0	00.0	1	5.9	0	00.0	0	00.0
\$10,000-								
\$19,999	0	00.0	0	00.0	0	00.0	2	7.4
\$20,000-								
\$29,999	0	00.0	1	5.9	0	00.0	6	22.2
\$30,000-								
\$39,999	0	00.0	1	5.9	5	27.8	9	33.3
\$40,000-								
\$49,999	3	11.1	5	29.4	9	50.0	5	18.5
\$50,000-								
\$59,999	3	11.1	1	5.9	1	5.6	3	11.1
\$60,000-								
\$69,999	6	22.2	2	11.8	2	11.1	1	3.7
\$70,000-								
\$79,999	3	11.1	0	00.0	0	00.0	1	3.7

(table continues)

	Upper-Level Managers				Middle-Level Managers			
	Male		Female		Male		Female	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
\$80,000-								
\$89,999	5	18.5	3	17.7	1	5.6	0	00.0
\$90,000-								
\$99,999	3	11.1	0	00.0	0	00.0	0	00.0
\$100,000-								
\$149,999	1	3.7	3	17.7	0	00.0	0	00.0
\$150,000 >	2	7.4	0	00.0	0	00.0	0	00.0

Procedures

Permission was granted from the Center for Creative Leadership for data to be made available for a pilot study (Appendix C). Data were transferred at the Center onto a tape that was transported to the UNCG Academic Computer Center. The data was placed in the VAX and analyzed at UNCG.

Research Questions

The research questions addressed in the pilot study were:

1. Do women in upper-level management positions differ from men in upper-level management positions on the scales of the CPI?
2. Do women in upper-level management positions differ from women in middle-level management positions on the scales of the CPI?
3. Do women in upper-level management positions differ from men in upper-level management positions on the scales of the FIRO-B?
4. Do women in upper-level management positions differ from women in middle-level management positions on the scales of the FIRO-B?
5. Do women in upper-level management positions differ from men in upper-level management positions on the scales of the MBTI?

6. Do women in upper-level management positions differ from women in middle-level management positions on the scales of the MBTI?

Data Analysis

Using SAS statistical software, means and standard deviations for the pilot study data were calculated on each of the scales of the CPI, the FIRO-B and the MBTI.

Frequencies and percentages were calculated on the demographic data: organization type (business/industry, education, etc.), organization number (how many employees the organization has), degree (educational level of the subjects), function (function within the organization), and income (Table 7).

Two-way analysis of variance by level, gender, and level by gender interaction was used to analyze all of the scales of the personality instruments. A Duncan Multiple Range Test was also utilized as a post hoc test to make multiple comparisons on the specific variables measured by the CPI, the FIRO-B, and the MBTI.

Results

Research question 1 and research question 2.

Table 8 shows the means and standard deviations for the CPI for the four subject groups. When analysis of variance was performed on these scores, significant differences for the groups on the Dominance scale [$F(3,99) = 5.94, p =$

.0009] were found (Table 8). When the partial F value was calculated for level, gender and level by gender interaction, significant differences were found for the level groupings only [$F(1,99) = 15.55, p = .0001$]. The mean score for the upper-level managers was 65.32 and the mean score for the middle-level managers was 58.36.

As seen in Table 9, another significant difference was found for the Sense of Well-Being scores for the groups [$F(3,99) = 4.05, p = .009$]. The difference was attributed primarily to gender differences since there were significant differences for gender only (partial F value for gender with 1,99 degrees of freedom = 7.84, $p = .006$). The mean for the males was 53.83 and 48.88 for the females.

Significant differences were found for the Responsibility scores [$F(3,99) = 3.28, p = .0241$]. The difference for both gender and level was significant (partial F value for level with 1,99 degrees of freedom = 4.32, $p = .04$; partial F value for gender with 1,99 degrees of freedom = 4.96, $p = .02$), but there was no significant level by gender interaction difference [$F(1,99) = .56, p = .45$]. The mean scores for the males and females were 50.04 and 46.22, respectively, and 49.94 and 46.53, respectively, for the upper-level and the middle-level managers.

The Socialization scale scores were significantly different [$F(3,99) = 8.00, p = .0001$]. When partial F values were calculated, however, only gender differences

were significant [$F(1,99) = 22.74, p = .0001$]. Men scored significantly higher on the Socialization scales than the women with the mean for the males equaling 51.93 and the mean for the females equaling 44.24.

The next scale, as indicated in Table 9, with significant differences was the Communality scale [$F(3,99) = 4.35, p = .006$]. There were no significant differences by level or level by gender interaction, but there were significant gender differences (partial $F(1,99) = 12.12, p = .0007$). The males scored significantly higher on the Communality scale than the females; the means for the scale were 57.02 and 51.94 for the men and the women, respectively.

The variable of Psychological Mindedness was also significantly different overall [$F(3,99) = 3.57, p = .0169$], with the only partial F value indicating significant difference being the gender values [$F(1,99) = 7.15, p = .0087$]. Females scored significantly higher than the males on the Psychological Mindedness scale with the mean for the females equaling 60.04 and the mean for the males equaling 55.72.

In summary, there are no significant level by gender interactions on the CPI. The differences that were found are level differences and gender differences. The upper-level managers scored significantly higher than the middle-level managers on the Dominance scale and the Responsibility

Table 8
Means and Standard Deviations for the CPI for the Four
Groups

CPI Scale	Upper-Level Managers				Middle-Level Managers			
	Male		Female		Male		Female	
	n = 743		n = 132		n = 772		n = 296	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Dominance	66.6	7.58	63.8	6.83	59.7	10.12	57.1	10.48
Capacity for								
Status	55.4	7.41	55.2	10.47	52.8	6.49	53.0	10.70
Sociability	55.7	8.23	53.1	10.66	52.8	8.93	54.3	12.34
Social								
Presence	58.1	9.34	55.5	11.77	56.5	9.64	55.6	9.66
Self-								
Acceptance	61.7	8.29	58.8	9.72	59.1	6.67	56.1	10.71
Sense of Well-								
Being	53.9	7.93	51.5	7.28	53.8	10.98	46.6	8.19
Responsibility								
	51.0	8.85	48.7	7.57	49.0	7.33	44.2	9.24
Socialization								
	50.6	8.95	44.7	7.92	53.3	8.83	43.9	6.98

(table continues)

CPI Scale	Upper-Level Managers				Middle-Level Managers			
	Male		Female		Male		Female	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Self-Control	48.2	6.91	48.7	7.14	49.7	8.54	48.1	5.89
Tolerance	55.2	6.62	53.4	6.61	53.2	9.34	54.5	7.60
Good								
Impression	50.4	7.60	49.4	8.44	47.6	10.29	47.3	5.91
Communality	56.3	6.45	52.7	4.66	57.7	7.09	51.3	9.99
Achievement via								
Conformance	56.7	7.27	55.2	5.80	53.5	9.88	52.9	7.49
Achievement via								
Independence	58.9	9.11	60.4	6.87	58.1	9.33	58.9	8.31
Intellectual								
Efficiency	52.9	8.90	54.1	7.45	53.4	9.64	53.0	10.85
Psychological								
Mindedness	57.3	8.25	58.5	8.51	54.0	8.03	61.3	8.11
Flexibility	52.0	9.49	53.5	10.89	53.6	9.47	56.7	9.21

Note. Mean scores are rounded to nearest tenth.

Table 9

F Statistics and p Values for the California Psychological Inventory Scales

CPI Scale	Overall $\underline{F}(3,99)$ p	Level $\underline{F}(1,99)$ p	Gender $\underline{F}(1,99)$ p	Interaction $\underline{F}(1,99)$ p
Dominance	5.9 .0009	15.6 .0001	2.3 .14	0.00 .95
Capacity for Status	.6 .60	1.9 .18	.0 .97	.01 .90
Sociability	.5 .71	.2 .63	.1 .81	1.1 .30
Social Presence	.4 .77	.2 .62	.8 .39	.2 .67
Self- Acceptance	1.8 .16	2.5 .15	2.7 .10	.0 .98
Sense of Well-Being	4.1 .009	2.4 .12	7.8 .006	1.9 .17
Responsibility	3.2 .024	4.3 .04	5.0 .028	.6 .45
Socialization	8.0 .0001	.1 .70	22.7 .0001	1.1 .30
Self-Control	.3 .83	.1 .73	.2 .68	.6 .45
Tolerance	.4 .76	.1 .73	.0 .91	1.0 .31
Good Impression	.9 .46	2.4 .12	.2 .69	.0 .83
Communality	4.4 .006	.0 .89	12.1 .0007	.9 .34

(table continues)

CPI Scale	Overall $\underline{F}(3,99)$ p	Level $\underline{F}(1,99)$ p	Gender $\underline{F}(1,99)$ p	Interaction $\underline{F}(1,99)$ p
<hr/>				
Achievement via				
Conformance	1.4 .26	3.4 .07	.5 .48	.1 .76
Achievement via				
Independence	.3 .83	.4 .52	.4 .52	.0 .85
Intellectual				
Efficiency	.1 .97	.0 .87	.1 .83	.2 .68
Psychological				
Mindedness	3.6 .017	.0 .94	7.2 .009	3.5 .06
Flexibility	1.1 .35	1.7 .19	1.5 .22	.2 .69

Note. $\underline{F}(3,99)$ = F value with 3 and 99 degrees of freedom.

$\underline{F}(1,99)$ = F value with 1 and 99 degrees of freedom.

scale. Male managers scored significantly higher than female managers on the Sense of Well-Being scale, the Responsibility scale, the Socialization scale and the Communality scale. Female managers scored higher than male managers on the Psychological-Mindedness scale.

Research question 3 and research question 4.

Table 10 shows the means and standard deviations for the scores for each group on the FIRO-B and when analysis of variance was performed on these scores, a significant difference was found overall only for the Control (expressed) scale. As seen in Table 11, the overall F value = 4.18 with 3 and 100 degrees of freedom and $p = .0078$. When the partial F statistics were calculated for level, gender, and level by gender interaction, significant differences were found for the level groupings only [$F(1,100) = 9.63, p = .0025$].

Upper-level managers expressed control significantly more than did the middle-level managers with means of 5.50 and 3.87, respectively.

Although there were no other overall significant levels of differences discovered, the Control (wanted) variable did show a significant difference for the partial F value for level [$F(1,100) = 4.37, p = .0391$]. Middle-level managers wanted control from others significantly more than did the upper-level managers with the means being 3.72 and 2.88, respectively.

Table 10

Means and Standard Deviations on the FIRO-B for the Four
Groups of Managers

FIRO-B Scales	Upper-Level Managers		Middle-Level Managers	
	Males n = 743	Females n = 131	Males n = 795	Females n = 302
Inclusion (expressed)				
<u>M</u>	3.56	3.52	3.19	3.64
<u>SD</u>	2.08	2.39	2.06	2.00
Inclusion (wanted)				
<u>M</u>	2.96	2.83	3.12	3.00
<u>SD</u>	3.23	3.06	3.43	3.13
Control (expressed)				
<u>M</u>	5.37	5.65	4.50	3.29
<u>SD</u>	2.88	3.11	2.53	2.16
Control (wanted)				
<u>M</u>	2.78	3.00	3.69	3.75
<u>SD</u>	1.67	2.17	1.85	2.43
Affection (expressed)				
<u>M</u>	3.26	2.87	2.69	3.42
<u>SD</u>	2.38	1.98	1.31	1.75

(table continues)

FIRO-B Scales	Upper-Level Managers		Middle-Level Managers	
	Males n = 743	Females n = 131	Males n = 795	Females n = 302
<hr/>				
Affection (wanted)				
<u>M</u>	.15	4.22	5.04	4.61
<u>SD</u>	2.28	2.19	2.07	2.01
<hr/>				

Table 11

F Statistics and p Values for FIRO-B Scales

FIRO-B Scale	Overall		Level		Gender		Interaction	
	<u>F</u> (3,100)	<u>p</u>	<u>F</u> (1,100)	<u>p</u>	<u>F</u> (1,100)	<u>p</u>	<u>F</u> (1,100)	<u>p</u>
Inclusion								
(expressed)	.23	.8772	.07	.7853	.27	.6028	.33	.5641
Inclusion								
(wanted)	.03	.9917	.06	.8059	.04	.8428	.00	.9865
Control								
(expressed)	4.18	.0078	9.63	.0025	.89	.3468	2.02	.1582
Control								
(wanted)	1.51	.2170	4.37	.0391	.11	.7356	.04	.8389
Affection								
(expressed)	.85	.4693	.00	.9873	.28	.5997	2.28	.1346
Affection								
(wanted)	.98	.4031	.05	.8217	2.55	.1134	.35	.5538

Note. F(3,100) = F value with 3 and 100 degrees of freedom.

F(1,100) = F value with 1 and 100 degrees of freedom.

In relation to research questions 3 and 4, the results of the pilot study revealed that there were no significant differences on the FIRO-B between upper-level female managers and upper-level male managers, nor were there significant differences between upper-level and middle-level female managers. The differences found were between upper-level and middle-level managers, in general, on the Control (expressed) and the Control (wanted) scales.

Research question 5 and research question 6

Table 12 shows the means and standard deviations of the scores from the four groups on the MBTI and Table 11 shows the distribution of subjects by type on the MBTI. Table 13 reveals that most of the men in upper-level management positions are ESTJ's, INTJ's, or ISTJ's, 18.5% in each category. Over 50% of the men in middle-level management positions are either ESTJ's or ISTJ's (57.7%). Of the women in upper-level management positions, 21.7% are INTJ's and the categories of ENFP and ENTJ each have 13.0% of the upper-level women in them. The middle-level women managers have the largest percentage in the ENFP category (17.9%) and the second largest percentages are in the ENTP, INTJ, and the INTP categories (10.7% in each group).

The results indicated, therefore, that larger percentages of upper-level managers have the INTJ category in common. The male managers share the ISTJ and the ESTJ categories and the female managers share the ENFP and the

INTJ categories. There were no common categories shared by a large number of the middle-level managers.

As Table 14 reveals, there are significant differences found in three of the four pairs of MBTI scores, the exceptions being the Extraversion and the Introversion scales. On the Sensing and the Intuitive scales, significant overall differences were found for Sensing, $F(3,100) = 6.93$ ($p = .0003$) and for Intuitive, $F(3,100) = 3.77$ ($p = .0131$). The differences were significant only on gender [for Sensing, $F(1,100) = 18.58$, $p = .0001$; for Intuitive, $F(1,100) = 9.14$, $p = .0032$].

The mean for the men ($M = 15.283$) was significantly higher on the Sensing scale than the mean for the women ($M = 8.961$). On the Intuitive scale, the women's ($M = 13.961$) scores were significantly higher than the men's ($M = 10.245$). For the decision-making scale of Thinking and Feeling, there were also significant differences on the overall scores. For the Thinking variable, the overall $F(3,100) = 4.72$ ($p = .004$), and the partial F values indicated that the differences were due primarily to gender [$F(1,100) = 12.86$, $p = .0005$]. A significant difference was also found between male and female managers on the Feeling variable [$F(3,100) = 4.15$, $p = .0081$]. The partial $F(3,100) = 10.05$ ($p = .0020$).

Men were significantly higher on their mean score on the Thinking scale than were the women; the means were

Table 12

Means and Standard Deviations for the MBTI scores for Four
Groups of Managers

MBTI Scales	Upper-Level Managers		Middle-Level Managers	
	Males n = 738	Females n = 132	Males n = 780	Females n = 295
Extraversion				
<u>M</u>	14.37	14.17	14.31	13.71
<u>SD</u>	4.82	6.58	5.67	6.70
Introversion				
<u>M</u>	13.00	12.17	13.62	13.14
<u>SD</u>	4.88	6.71	6.48	7.62
Sensing				
<u>M</u>	13.63	9.17	17.00	8.79
<u>SD</u>	8.25	6.90	7.58	7.30
Intuition				
<u>M</u>	11.56	13.65	8.88	14.21
<u>SD</u>	7.20	6.10	5.68	6.31
Thinking				
<u>M</u>	15.11	11.74	17.00	10.39
<u>SD</u>	7.49	8.14	6.34	6.75

(table continues)

Scales	Upper-Level Managers		Middle-Level Managers	
	Males	Females	Males	Females
Feeling				
<u>M</u>	5.96	7.57	3.92	7.86
<u>SD</u>	4.42	5.39	3.01	4.99
Judging				
<u>M</u>	20.22	16.30	17.73	14.29
<u>SD</u>	6.10	6.98	7.03	5.78
Perceiving				
<u>M</u>	7.56	11.04	9.96	13.07
<u>SD</u>	6.04	7.14	7.27	6.17

Table 13

Frequencies and Percentages for the MBTI Personality Types
for the Four Groups of Managers

Type	Upper-Level Managers				Middle-Level Managers			
	Male		Female		Male		Female	
	N	%	N	%	N	%	N	%
ENFJ	1	3.7	1	4.4	0	0.0	2	7.1
ENFP	1	3.7	3	13.0	1	3.6	5	17.9
ENTJ	4	14.8	3	13.0	2	7.7	0	0.0
ENTP	1	3.7	2	8.7	2	7.7	3	10.7
ESFJ	2	7.4	2	8.7	1	3.9	2	7.1
ESFP	0	0.0	0	0.0	0	0.0	0	0.0
ESTJ	5	18.5	2	8.7	10	38.5	2	7.1
ESTP	1	3.7	0	0.0	1	3.6	0	0.0
INFJ	0	0.0	2	8.7	0	0.0	2	7.1
INFP	1	3.7	1	4.4	0	0.0	1	3.6
INTJ	5	18.5	5	21.7	1	3.9	3	10.7
INTP	0	0.0	0	0.0	1	3.9	3	10.7
ISFJ	1	3.7	0	0.0	0	0.0	0	0.0
ISFP	0	0.0	0	0.0	0	0.0	1	3.6
ISTJ	5	18.5	2	8.7	5	19.2	2	7.1
ISTP	0	0.0	0	0.0	2	7.7	2	7.1

Table 14

F Statistics and p Values for the MBTI Scales

MBTI Scale	Overall		Level		Gender		Interaction	
	F(3,100)	p	F(1,100)	p	F(1,100)	p	F(1,100)	p
Extraversion	.07	.978	.06	.915	.11	.736	.03	.868
Introversion	.21	.892	.35	.557	.25	.616	.01	.890
Sensing	6.93	.0003	.61	.437	18.58	.0001	1.59	.210
Intuition	3.77	.013	.49	.487	9.14	.003	1.67	.199
Thinking	4.72	.004	.00	.992	12.86	.0005	1.31	.254
Feeling	4.15	.008	.69	.408	10.05	.002	1.72	.193
Judging	4.07	.009	3.81	.054	8.36	.005	.03	.853
Perceiving	3.26	.025	3.42	.067	6.35	.013	.02	.885

Note. F(3,100) = F value with 3 and 100 degrees of freedom.

F(1,100) = F value with 1 and 100 degrees of freedom.

16.038 and 11.000, respectively. The Feeling scale also revealed significant differences with the female managers ($\bar{M} = 7.725$) scoring significantly higher than the male managers ($\bar{M} = 4.9623$).

On the Judging and Perceiving dichotomy, significant differences were also found. The overall F value for Judging equals 4.07 with 3 and 100 degrees of freedom ($p = .0090$). On the Judging scale there was a borderline significant level difference [$F(1,100) = 3.81, p = .0538$] and a significant gender difference [$F(1,100) = 8.36, p = .0046$]. For the Perceiving variable, a significant difference was also found [$F(3,100) = 3.26, p = .0245$] with the significance originating primarily from gender differences [$F(1,100) = 6.35, p = .0133$].

Although the analysis of variance indicated significance on both the level and gender values for the Judging variable, the Duncan test did not confirm significant level differences. Table 12 suggests that, overall, the upper-level managers scored higher on the Judging variable than do the middle-level managers.

Differences were found between the men and the women with the men ($\bar{M} = 19.00$) scoring significantly higher on the Judging scale than the women ($\bar{M} = 15.196$). On the Perceiving scale, there was also an indicated gender difference with the women ($\bar{M} = 12.157$) in management scoring significantly higher than the men ($\bar{M} = 8.736$) in management.

Regarding research questions 5 and 6, significant differences found were between men and women managers, in general, on the Sensing-Intuitive scales, the Thinking-Feeling scales and the Judging-Perceiving scales. The only level difference found between upper-level and middle-level managers, in general, was on the Judging scale.

Summary

In summary, the pilot study indicated that on the scales of the California Psychological Inventory, there were significant gender differences on Sense of Well-Being, Responsibility, Socialization, Communality, and Psychological Mindedness. Males in the study, on average, scored higher on Sense of Well-Being, Responsibility, Socialization, and Communality. Females, on average, scored higher on the Psychological Mindedness scale. Lower scores of the Sense of Well-Being, Socialization, and Communality scores indicated that the women in the study experienced more of a sense of alienation, "not fitting", and less sense of physical and psychological well-being. The lower responsibility score for the women reflected less involvement in commitments beyond immediate, i.e., career and, perhaps, family. Perhaps the feelings of alienation and stress regarding well-being do not allow the women to reach out as much as the men regarding community, political, religious, etc. commitments.

On the CPI, there were significant level differences found on the Dominance and Responsibility scales. On both of these scales upper-level managers scored higher than did the middle-level managers. The upper-level managers were, on the average, more willing to assume responsibility, more assertive, more self-confident, and more willing to make decisions. They were also more involved in responding to a broader community than were the middle-level managers, on the average.

The significant level differences found on the Fundamental Interpersonal Relations Orientation-Behavior were on the Control scale, both the expressed and wanted. The upper-level managers scored significantly higher than the middle-level managers on the Control (expressed) scale and the middle-level managers scored significantly higher than the upper-level managers on the Control (wanted) scale. No gender differences were found on the FIRO-B. These results correspond with the findings of the CPI Dominance scale. The upper-level managers are more eager to be in control, make decisions, and take responsibility. The middle-level managers are more willing than the upper-level managers to have others do this. It is important to note, however, that all of the groups of managers, except the middle-level women, had a higher Control (expressed) score than a Control (wanted) score.

Significant gender differences were found on six of the eight scales of the Myers-Briggs Type Indicator. Women scored significantly higher on the Intuitive scale and men scored significantly higher on the Sensing scale. The men scored significantly higher on Thinking in their decision-making preference and the women scored significantly higher on Feeling. Lastly, the women scored significantly higher on Perceiving and the men scored significantly higher on Judging. Regarding the Perceiving-Judging scales, the upper-level managers were significantly more Judging than the middle-level managers. This was the only level difference found.

There were no significant level-by-gender interaction differences found on any of the scales used in the pilot study.

Limitations of the Study

One limitation of the present study was that the number of upper-level women was substantially lower than the number of participants in the other three groups, especially the groups of male managers. In order to obtain enough female participants from the upper-level ranks, data had to be gathered from over a five-year period. This gave a very large number of upper-level male managers and middle-level male managers, creating a substantial difference in the group sizes. It was determined, however, that to eliminate

participants would eliminate valuable data, so the group size differential was kept in mind as the data was analyzed and interpreted.

This study investigated only differences between and among groups of caucasian women and men. This is a definite limitation of the study, and a regrettable one. Due to the very small numbers of people of color who qualified as participants, no meaningful ethnic comparisons could have been made. This leaves a very large void in the generalizability of the results to non-white populations.

A third limitation of the study is that there was no instrument included which assessed attitudes about female managers. Much of the literature deals with how individuals in management perceive characteristics of a good manager and how these characteristics align with males and females. This study did not address attitudes in any way.

A fourth possible limitation of the study is that the management level and the demographic information was self-reported. Participants were given a definition of various management level and were asked to identify their management level status. Self-reporting leaves open the possibility of misinterpretation or misrepresentation.

The results of this study are based solely on instrumentation outcomes from the CPI, the FIRO-B, and the MBTI and the demographic reports. Limitations of the

instruments will also become limitations of the results of the study.

Although participants from a wide variety of companies and organizations were represented in this study, it must be noted that the organizations that choose to send employees or support employees in going to the Center for Creative Leadership may not be representative of "typical" companies and organizations. The fact that they encourage such career and personal development activities may suggest that they are more "progressive" in their thinking and more open to women in management positions.

Lastly, the study is strictly an observational study. Numerous demographic statistics and personality variables are reported and differences between the groups of managers are analyzed. Any causal relationship can be only speculative.

Summary

Chapter Three presented the research questions and discussed the methodology that was utilized in answering these research questions. Chapter Four will report the results of these analyses and a discussion of the implications and recommendations for future research will be presented in Chapter Five.

CHAPTER FOUR

RESULTS

This chapter includes demographic information for participants, data analysis for each instrument, and hypothesis testing concerning the research questions.

Demographic Information

A total of 2018 individuals participated in this study; 775 men and 136 women in upper-level management positions and 800 men and 307 women in middle-level management positions. The participants in this study attended either the Leadership Development Program or the Executive Women's Workshop at the Center for Creative Leadership in Greensboro, North Carolina between January, 1986 and September, 1989.

The majority of the individuals in each group (70% of the total group) were from business and industry. Twelve percent of the group worked in government jobs, 5% in education, 5% in a service business, 3% in other non-profit, and 5% in other non-designated organizational settings.

Fifty-one percent of the participants worked in an organization with 5,000 or more employees. Although over 50% of the middle-level managers worked in these larger organizations, only 30% of the upper-level females and 45%

of the upper-level males worked for organizations with greater than 5,000 employees. More than 80% of the participants had earned at least a Bachelors degree, approximately 35% of the participants had earned a Masters degree, and 13% had earned a doctorate or other post-graduate professional degree. Fifty percent of the upper-level female managers and 64% of the upper-level male managers were primarily in administrative positions. These percentages were much higher than the percentage of middle-level women and middle-level men in administrative positions, 11% and 8%, respectively. Rather than cluster highly in any particular functional area, the middle-level managers spread across the areas such as marketing, data processing, human resources and training, and engineering.

Eighty percent of the participants were married. Except for the middle-level female group, 50% or more of the group participants were first-born or the only child in the family. Forty-four percent of the women in middle-level management positions were first born or an only child.

The overall analysis of the three tests, the CPI, the FIRO-B, and the MBTI, will be discussed. A discussion of differences between upper-level women and upper-level men, differences between upper-level women and middle-level women, and other significant differences between the four groups of managers will follow the overall instrumentation analysis.

Analyses of Instrument Used

California Psychological Inventory Analysis

With the California Psychological Inventory (CPI) indices a multivariate analysis of covariance was used in analyzing the data, covarying age and time as manager. Age was adjusted to 41.4 years and time as manager was adjusted to 7.9 years. Associations between the covariates and the CPI scales were analyzed and comparisons were made between and among the four groups of managers after adjusting for the covariates. Differences between gender, level, and the gender by level interaction were investigated.

In examining the association between age and the CPI subscales an overall age association [$F(17, 1596) = 5.79, p = .0001$] existed. As illustrated in table 15, a significant age and scale association was present on the Dominance, Capacity for Status, Social Presence, Sense of Well-Being, Responsibility, Self-Control, Good Impression, Communality, and Achievement via Conformance scales. Significant effects were also noted on the Tolerance and Intellectual Efficiency scales, but the overall model p value for these scales was not significant ($p > .05$).

A significant association [$F(17, 1596) = 2.13, p = .005$] also existed when covarying "number of years as manager" i.e., time as manager. Significant associations were found with the following scales: Dominance, Sense of Well-Being, Socialization, Self-Control, Communality, and

Achievement via Conformance. As a result of significant covariate associations, it was necessary to adjust for these effects before testing for gender and level differences.

The Pillai-Bartlett trace test was used; it is a multivariate test that gives a statistic analogous to an F statistic. A significant age by gender by level interaction [approximate $F(34, 3192) = 1.62, p = .01$] was found as was a significant time as manager by level interaction association [approximate $F(17, 1596) = 1.81, p = .02$].

Further analyses were undertaken to compare men and women at each management level, matching on age at 30, 40, and 50 years old, and to compare upper-level and middle-level managers at different times i.e., 6 years and 10 years, in their history as managers. Because of the significant age by gender by level interaction which indicated that differences between men and women and differences between upper-level and middle-level managers on a particular scale could vary over age, gender and level differences had to be investigated by age. The overall age range for the four groups was from 24 to 69 years, while the average age for each of the four groups ranged from 37 years to 45 years. Therefore, the ages selected for investigation were 30, 40, and 50 years.

The Pillai-Bartlett trace test showed no gender differences for the CPI, overall [approximate $F(17, 1596) = 1.27, p = .20$]. A significant level difference was

Table 15

F Statistics and p Values of Covariate Association
with the CPI

CPI Scales	Covariates					
	Overall Model		Age		Time as Manager	
	F(11,1623)	p	F(1,1623)	p	F(1,1623)	p
Dominance	8.72	.0001	21.03	.0001	7.32	.007
Capacity for						
Status	2.68	.002	8.95	.003	.38	.54
Sociability	.93	.51	1.08	.30	.12	.73
Social Presence	2.86	.001	8.43	.004	.20	.66
Self Acceptance	2.94	.0007	.02	.88	1.51	.22
Sense of						
Well-Being	8.58	.0001	10.23	.001	7.64	.006
Responsibility	8.63	.0001	76.25	.0001	2.88	.09
Socialization	9.81	.0001	.67	.41	13.72	.0002
Self-Control	6.38	.0001	11.09	.0009	4.19	.04
Tolerance	1.60	.09	4.30	.04	.86	.35
Good Impression	5.13	.0001	20.57	.0001	2.21	.14
Communality	7.13	.0001	13.04	.0003	5.41	.02
Achievement via						
Conformance	5.99	.0001	13.04	.0003	5.41	.02

(table continues)

CPI Scales	Covariates					
	Overall Model		Age		Time as Manager	
	F(11,1623)	p	F(1,1623)	p	F(1,1623)	p
<hr/>						
Achievement via						
Independence	2.00	.03	.77	.38	.55	.46
Intellectual						
Efficiency	1.64	.08	7.26	.007	1.84	.18
Psychological						
Mindedness	.82	.62	1.98	.16	3.28	.07
Flexibility	2.38	.007	1.14	.29	1.00	.32
<hr/>						

discovered [approximate $F(17, 1596) = 1.82, p = .02$] but no level by gender interaction was present [approximate $F(17, 1596) = .58, p = .91$].

Table 16 documents the particular CPI scales where significant gender, level, and gender by level interactions were found in univariate analyses. A significant difference for the CPI overall was not found, but significant gender differences existed for the Dominance, Sense of Well-Being, Socialization, Self-Control, Communality, Achievement via Independence, and Flexibility scales. Significant level differences existed for the Dominance, Capacity for Status, Self-Acceptance, Self-Control, and Communality scales. It is important to note that the overall significance level of .05 was not preserved when looking at individual univariate analyses. No significant level by gender interactions were found.

Since there was a significant overall age by gender by level interaction, on each CPI scales where a significant gender difference was found, gender differences were investigated at ages 30, 40, and 50 for both management levels. Six groups, therefore, were analyzed: upper-level 30 year old managers, middle-level 30 year old managers, upper-level 40 year old managers, middle-level 40 year old managers, upper-level 50 year old managers, and middle-level 50 year old managers.

Table 16

F Statistics and p Values of Univariate Analysis of the CPI

Scales	Gender		Level		Gender by Level	
	Differences		Differences		Interactions	
	F	p	F	p	F	p
Dominance	4.00	.05	40.35	.0001	.04	.84
Capacity for Status	2.37	.12	6.50	.01	.39	.53
Sociability	.19	.66	2.26	.13	.46	.49
Social Presence	2.66	.10	.01	.92	.00	.97
Self Acceptance	2.27	.13	16.41	.0001	.00	.95
Sense of Well-Being	21.60	.0001	.16	.69	.66	.42
Responsibility	.19	.67	2.83	.09*	.21	.65
Socialization	60.89	.0001	.66	.41	.01	.91
Self-Control	6.11	.01	4.47	.03	.71	.40
Tolerance	.71	.40	.12	.72	.13	.72
Good Impression	.14	.71	.18	.67	.01	.88
Communality	34.66	.0001	6.78	.009	.53	.47
Achievement via						
Conformance	.87	.35	2.61	.10*	.09	.77
Achievement via						
Independence	14.87	.0001	1.45	.23	.53	.47

(table continues)

Scales	Gender		Level		Gender by Level	
	Differences		Differences		Interactions	
	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
<hr/>						
Intellectual						
Efficiency	.67	.41	.38	.54	.07	.78
Psychological						
Mindedness	.44	.50	.05	.83	.01	.94
Flexibility	8.07	.005	2.39	.12	.25	.62
<hr/>						

Note. df for F statistic = 1,1623

* no sequential F statistic significance, but p < .05 if variable added into equation last.

Gender differences by age are presented in Table 17. Significant gender differences for all groups, except upper-level 50 year old managers, were found for the Sense of Well-Being, Socialization, and the Communality scales. No significant differences were found on any of the scales for upper-level 50 year old managers. For all ages and levels where significance was found on the Sense of Well-Being, Socialization, and Communality scales, women scored significantly lower than men. On the Sense of Well-Being scale for upper-level women managers, the mean score was higher for older women than the younger women. The scores for men and women in middle-level management became more discrepant as they aged, however. At age 30, women, on average, scored 3 points lower than the men, but 5 points lower than men at age 50 (Table 18). A similar pattern is visible on the Socialization and the Communality scales. The difference between upper-level female and male managers decreases with age, but the discrepancy increases with age for middle-level managers.

Significant gender differences on Self-Control were apparent with upper-level 40 year old managers and middle-level 40 and 50 year old managers. For both groups, greater differences exist within the 40 year old managers. Women scored lower than the men consistently on the Self-Control scale.

Table 17

F Statistics for Gender Differences in CPI Variables
Across Age

CPI Scales	Upper-Level Managers			Middle-Level Managers		
	Ages			Ages		
	30	40	50	30	40	50
Dominance	1.17	.32	.04	2.14	.82	3.30
Sense of Well Being	5.46*	4.27*	.47	8.37**	12.11**	5.52*
Socialization	3.94*	5.51*	1.86	9.11**	34.80**	25.08**
Self-Control	2.72	4.09*	1.50	1.29	8.63**	7.26**
Communality	8.64**	10.32**	2.78	7.25**	15.48**	8.83**
Achievement via Independence	.40	2.25	2.04	8.45**	3.42	.25
Flexibility	.70	1.61	.89	.20	5.19*	5.41*

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

Note. F has (1,1623) degrees of freedom

Gender differences on the Achievement via Independence scale were found only with 30 year old middle-level managers. For the Flexibility scale, women in middle-level management who were 40 and 50 years of age scored significantly higher than males in middle-level management positions.

A significant time as manager by level interaction existed, indicating that the differences between the levels will vary according to the time spent as a manager. Data were analyzed for upper-level managers and middle-level managers with level differences examined for both 6 years as a manager and 10 years as a manager. The average number of years as a manager for both middle-level men and upper-level women was approximately 6 years. The average number of years as a manager for upper-level men was approximately 10 years.

Upper-level managers averaging 6 years as a manager and upper-level managers averaging 10 years as a manager scored significantly higher on the Dominance, Capacity for Status, Self-Acceptance, Self-Control, and Communality scales than middle-level managers with the same number of years experience.

Table 19 shows the means and p values derived from t -tests comparing females and males after analysis of covariance adjustment for age and time as manager. The Dominance scale, which prior to adjustments indicated a

Table 18

Average Score Differentiation Between Men and Women Across
Ages

CPI Scales	Upper-Level Managers			Middle-level Managers		
	Ages			Ages		
	30	40	50	30	40	50
Dominanc	-1.9	- .8	.4	-1.6	1.0	3.7
Sense of Well Being	-4.1	-2.8	-1.4	-3.2	-3.9	- 4.7
Socialization	-3.6	-3.2	-2.8	-3.4	-6.8	-10.3
Communality	-4.2	-3.5	-2.7	-2.4	-3.6	4.9
Achievement via						
Independence	1.0	1.9	2.7	3.0	2.0	1.0
Flexibility	1.8	2.0	2.3	.6	3.0	5.5

Note. Average score differentiation is defined as the difference in mean score for women minus mean score for men. The negative scores are indicating lower average scores for women than for men. The positive scores indicate higher average scores for women.

Table 19

Means (Adjusted for Age and Time as Manager), Standard Errors and p Values of CPI Variables for Female and Male Managers

CPI Scales	Female Managers <u>n</u> = 409		Male Managers <u>n</u> = 1444		Significance of Difference
	<u>M</u>	S.E.	<u>M</u>	S.E.	<u>p</u>
Dominance	62.4	.60	63.4	.26	.11
Capacity for Status	55.0	.57	54.1	.25	.15
Sociability	52.9	.62	52.9	.27	.97
Social Presence	56.5	.69	56.6	.30	.84
Self-Acceptance	59.3	.59	59.9	.25	.37
Sense of Well Being	50.0	.59	52.0	.25	.001
Responsibility	48.4	.58	48.4	.25	.97
Socialization	45.5	.60	50.0	.26	.0001
Self-Control	48.0	.60	49.1	.26	.08
Tolerance	52.9	.51	52.7	.22	.66
Good Impression	47.6	.63	47.7	.27	.93
Communality	52.2	.48	54.8	.21	.0001
Achievement via Conformance	55.2	.55	55.6	.24	.54

(table continues)

CPI Scales	Female Managers		Male Managers		Significance of Difference p
	<u>M</u>	S.E.	<u>M</u>	S.E.	
Achievement via					
Independence	61.0	.55	59.3	.24	.005
Intellectual					
Efficiency	53.1	.62	52.5	.27	.40
Psychological					
Mindedness	57.5	.60	58.6	.26	.93
Flexibility	53.6	.70	53.5	.30	.005

S.E. = Standard Error of the Mean

significant gender difference, showed no significant difference. On the Sense of Well-Being, Socialization, and Communality scales, males scored significantly higher than females. On the Achievement via Independence and Flexibility scales, female managers scored significantly higher than male managers.

Table 20 addresses level differences after analysis of covariance adjustments for covariates of age and time as manager. Using a t-test for comparing levels, differences were found in the Dominance, Self-Acceptance, and Achievement via Independence Scales. On all three scales, upper-level managers scored higher than did middle-level managers.

Fundamental Interpersonal Relations Orientation-Behavior Analysis

A multivariate analysis of covariance was utilized to analyze the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) data. Anticipating a potential association between the covariates age and time as manager, with the scales of the FIRO-B, the effects of these associations needed to be removed prior to investigating gender, level and gender by level interaction differences.

Age and Time as Manager were incorporated as covariates in analyses of covariance with each of the FIRO-B variables: Inclusion (expressed), Inclusion (wanted), Control (expressed), Control (wanted), Affection (expressed), and

Table 20

Means (Adjusted for Age and Time as Manager), Standard Errors and p Values of CPI Variables for Upper- and Middle-Level Managers

CPI Scales	Upper-level Managers		Middle-level Managers		Significance of Difference
	n = 811		n = 1042		p
	<u>M</u>	S.E.	<u>M</u>	S.E.	
Dominance	64.2	.46	61.6	.46	.0001
Capacity for Status	54.9	.44	54.2	.44	.25
Sociability	53.2	.48	52.5	.48	.30
Social Presence	56.9	.53	56.3	.53	.46
Self-Acceptance	60.4	.45	58.8	.45	.02
Sense of Well Being	51.0	.45	50.9	.46	.81
Responsibility	48.6	.44	48.3	.45	.59
Socialization	48.0	.46	47.6	.47	.57
Self-Control	48.3	.46	48.9	.47	.35
Tolerance	52.7	.40	52.9	.40	.72
Good Impression	47.5	.48	47.8	.48	.70
Communality	53.3	.37	53.8	.37	.26
Achievement via Conformance	55.7	.42	55.1	.42	.31

(table continues)

CPI Scales	Upper-level Managers		Middle-level Managers		Significance of Difference p
	<u>M</u>	S.E.	<u>M</u>	S.E.	
Achievement via					
Independence	60.7	.43	59.5	.43	.04
Intellectual					
Efficiency	52.6	.48	53.0	.48	.53
Psychological					
Mindedness	57.4	.46	57.7	.47	.61
Flexibility	55.1	.53	54.1	.54	.20

S.E. = Standard Error of the Mean

p values were obtained from t-tests

Affection (wanted). There were no significant associations between age and any of the 6 FIRO-B variables. There was, however, a significant association between the covariate time as manager and two of the FIRO-B scales, Control (expressed) [$F(1, 1623) = 6.74, p = .0001$] and Affection (expressed) [$F(1, 1623) = 1.82, p = .05$].

Utilizing the Pillai-Bartlett trace test, a significant age by level interaction association was found [approximate $F(6, 1607) = 2.42, p = .03$]. As shown in Table 21, there was a significant overall difference on the Control (expressed) variable only [approximate $F(1, 1623), p = .0001$]. On the Control (expressed) variable, the significant difference was found with gender [$F(1, 1623) = 4.61, p = .03$] and with level [$F(1, 1623) = 54.22, p = .0001$]. There was no gender by level interaction effect.

Since an interaction between age and level was found using the Pillai-Bartlett trace test, the level differences for ages 30 years, 40 years, and 50 years were investigated. The association indicated that differences between upper-level managers and middle-level managers on a particular scale could vary with age. The ages of 30 years, 40 years, and 50 years were chosen because the average age range for the four groups of managers ranged from 37 years of age to 45 years of age. These three ages spanned approximately 10 years older and 10 years younger than the overall mean for the group.

The only level by age interaction was found on the control (expressed) scale. A significant level difference was found for all ages on this variable [age 30: $F(1, 1623) = 5.32, p = .02$; age 40: $F(1, 1623) = 17.61, p = .0001$; age 50: $F(1, 1623) = 12.04, p = .0005$]. On the Control (expressed) variable, upper-level managers scored higher across ages; .73 points higher at 30 years of age, 1.12 points higher at age 40, and 1.51 points higher at 50 years of age. It appears that the difference between upper-level and middle-level managers increased as managers aged. The older upper-level managers expressed more control than older middle-level managers.

After adjusting age to 41.4 years and time as manager to 7.9 years, males scored significantly higher [$F(1, 1623) = 4.61, p = .03$] on Control (expressed) than females ($M = 4.8, M = 4.4$, respectively). There were no other significant gender differences on the FIRO-B variables. Males and females both expressed more inclusion than they wanted, expressed more control than they wanted expressed toward them, and expressed less affection than they wanted from others.

The only level difference was found with the Control (expressed) variable. Upper-level managers scored significantly higher [$F(1, 1623) = 54.22, p = .0001$] on this variable than did middle-level managers ($M = 5.11, M = 4.03$, respectively). Both upper-level and middle-level managers

Table 21

F Statistics and p Values of Univariate Analysis of the
FIRO-B

CPI Scale	Overall Model		Gender		Level	
	<u>F</u> (11,1623)	<u>p</u>	<u>F</u> (1,1623)	<u>p</u>	<u>F</u> (1,1623)	<u>p</u>
Inclusion (Expressed)	.88	.56	2.15	.14	.02	.89
Inclusion (Wanted)	1.67	.07	0.00	.96	.04	.84
Control (Expressed)	6.74	.0001	4.61	.03	54.22	.0001
Control (Wanted)	1.34	.20	1.03	.31	1.50	.22
Affection (Expressed)	1.82	.05	1.66	.20	2.36	.13
Affection (Wanted)	.73	.71	.49	.48	.29	.59

indicated that they expressed more inclusion than they want expressed toward them, expressed more control than they wanted and wanted more affection than they expressed.

Myers-Briggs Type Indicator Analysis

The MBTI scales were studied both as continuous scores and as discrete scores, giving strengths of scores for each Myers-Briggs Type as well as a Myers-Briggs profile based on the discrete score. A multivariate analysis of covariance was used in analyzing the Myers-Briggs Type Indicator data, covarying age and time as manager with the continuous MBTI scores. Associations between the covariates and the continuous scores of the MBTI scales were analyzed and comparisons between and among the four groups of managers after adjustments for the covariates were made.

Using a Pillai-Bartlett trace test, a significant overall age association was found (approximate $F(8, 1611) = 3.34, p = .0008$). This indicated that for one or more scales on the MBTI, a significant age and scale association was present. Using the same test, no overall significant association with time as manager [approximate $F(8, 1611) = 3.34, p = .16$] was found.

There was a significant association for age as it covaries with the MBTI scales of Judging and Perceiving only [approximate $F(1, 1618) = 15.64, p = .0001$ and approximate $F(1, 1618) = 14.73, p = .0001$, respectively].

The Pillai-Bartlett trace test indicated an overall gender association [approximate $F(8, 1611) = 11.00, p = .0001$], an overall level association [approximate $F(8, 1611) = 3.02, p = .002$] and an overall gender by level interaction association [approximate $F(8, 1611) = 2.15, p = .02$]. As shown in Table 22, there was a significant difference between men and women on each of the eight MBTI variables: Extraversion, Introversion, Sensing, Intuition, Thinking, Feeling, Judging and Perceiving.

The age was adjusted to 41.4 years and the time as manager was adjusted to 7.9 years. In comparing upper-level and middle-level managers, differences on continuous scores were found on six of the eight variables: Extraversion, Introversion, Sensing, Intuition, Thinking, and Feeling. The significant gender by level interaction difference was found only on the Extraversion [$F(1, 1618) = 6.02, p = .01$] and Introversion [$F(1, 1618) = 4.42, p = .04$] scale.

Table 23 shows the individual means, adjusted for age and time as manager, and the standard errors of the means for men and women as well as the overall F statistic and p values. Women scored significantly higher than men on the Extraversion, Intuition, Feeling and Perceiving scales. Males scored significantly higher than females on the Introversion, Sensing, Thinking and Judging scale.

Table 24 shows the individual adjusted means (for 41.4 years of age and 7.9 years of management experience) and

Table 22

F Statistics and p Values of Univariate Analysis of the MBTI

MBTI Manager Scale	Overall		Age		Time as	
	<u>F</u> (5,1618)	<u>p</u>	<u>F</u> (1,1618)	<u>p</u>	<u>F</u> (1,1618)	<u>p</u>
Extraversion	2.30	.04	1.56	.21	.34	.56
Introversion	3.55	.03	.52	.47	.50	.48
Sensing	13.34	.0001	.27	.61	6.96	.008
Intuition	11.93	.0001	0.00	.97	5.02	.03
Thinking	8.36	.0001	.14	.71	.09	.77
Feeling	11.69	.0001	.05	.83	.14	.71
Judging	11.35	.0001	15.64	.0001	.38	.54
Perceiving	13.56	.0001	14.73	.0001	1.05	.31
	Gender		Level		Gender by Level	
Scale	<u>F</u> (1,1618)	<u>p</u>	<u>F</u> (1,1618)	<u>p</u>	<u>F</u> (1,1618)	<u>p</u>
Extraversion	5.09	.02	5.28	.02	6.02	.01
Introversion	8.31	.004	5.64	.02	4.42	.04
Sensing	43.74	.0001	6.40	.01	.56	.45
Intuition	45.14	.0001	5.80	.02	3.08	.08
Thinking	23.06	.0001	7.15	.008	.23	.63
Feeling	37.61	.0001	5.31	.02	.17	.68
Judging	18.76	.0001	.40	.53	.79	.37
Perceiving	26.46	.0001	1.79	.18	.47	.49

Table 23

Means (Adjusted for Age and Time as Manager), Standard Error, and p Values for Male and Female Managers on the MBTI Variables

MBTI Scale	Female Managers		Male Managers		Overall	
	<u>M</u>	S.E.	<u>M</u>	S.E.	F(1,1618)	p
Extraversion	14.8	.37	13.9	.18	5.09	.02
Introversion	12.2	.39	13.5	.18	8.31	.004
Sensing	9.6	.49	13.2	.23	43.74	.0001
Intuition	14.7	.39	11.8	.18	45.14	.0001
Thinking	14.1	.39	16.2	.18	23.06	.0001
Feeling	2.4	.06	2.0	.03	37.61	.0001
Judging	15.4	.39	17.2	.18	18.76	.0001
Perceiving	3.4	.06	3.0	.03	31.10	.0001

S.E. = Standard Error of the Mean

Table 24

Means (Adjusted for Age and Time as Manager), Standard Errors, and p Values for Upper-Level and Middle-Level Managers on the MBTI Variables

MBTI Scale	Managers					
	Upper-Level		Middle-Level		Overall	
	<u>M</u>	S.E.	<u>M</u>	S.E.	F(1,1618)	p
Extraversion	14.8	.32	13.8	.26	5.28	.02
Introversion	12.3	.33	13.4	.27	5.64	.02
Sensing	10.7	.42	12.1	.34	6.40	.01
Intuition	13.8	.33	12.7	.27	5.87	.02
Thinking	15.7	.34	14.5	.28	7.15	.008
Feeling	2.1	.05	2.3	.04	5.31	.02
Judging	16.2	.34	16.4	.27	.40	.53
Perceiving	3.2	.06	3.1	.05	1.79	.18

S.E. = Standard Error of Mean

standard errors of upper- and middle-level managers as well as the overall F statistic and p value, indicating significant and non-significant level differences. Differences on continuous scores between upper-level managers and middle-level managers occurred on the Extraversion, Introversion, Sensing, Intuition, Thinking and Feeling scales with no significant difference on the Judging and Perceiving scales. Upper-level managers scored significantly higher than middle-level managers on Extraversion, Intuition and Thinking. Middle-level managers scored significantly higher than the upper-level managers on the opposite ends of these scales, i.e., Introversion, Sensing, and Feeling. An analysis of the discrete scores indicated level differences on only the Feeling/Thinking scale (Chi-Square with 1 df = 4.7, p = .03). A significantly higher percentage of the upper-level managers preferred Thinking than the middle-level managers.

Table 25 presents the Myers-Briggs categories and represents the frequencies and percentages of each group within each category. A larger percentage of men and women in middle-level management positions preferred Thinking to Feeling (80% and 69%, respectively).

Table 25

Frequencies and Percentages for the Four Groups of Managers
on the MBTI Variables

MBTI Scale	Upper-Level Managers				Middle-Level Managers			
	Male		Female		Male		Female	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Extraversion	375	48.4	78	57.4	373	46.6	154	50.2
Introversion	400	51.6	58	42.7	427	53.4	153	49.8
Sensing	359	46.3	40	29.4	409	51.1	100	32.6
Intuition	416	53.7	96	70.6	391	48.9	207	67.4
Thinking	630	81.3	100	73.5	642	80.3	212	69.1
Feeling	145	18.7	36	26.5	158	19.8	95	30.9
Judging	527	68.0	79	58.1	555	69.0	177	57.7
Perceiving	248	32.0	57	41.9	245	31.0	130	42.4

Hypothesis Testing Regarding Research Questions

Differences Between Upper-Level Women and Upper-Level Men

Perhaps the most important information this research offered was the information regarding differences between upper-level women and upper-level men. This section references some of the research presented in Chapter Two and discusses how the findings of this research compared and contrasted with earlier research.

Research Question 1. Research question 1 asked whether women in upper-level management positions differ from men in upper-level management positions on leadership and interpersonal adequacy characteristics, sense of well-being, intrapersonal values, achievement orientation, psychological mindedness and flexibility as measured by the scales of the California Psychological Inventory. After adjusting age to 41.5 years and time as manager to 7.9 years, a significant difference between upper-level women and upper-level men was found in the following variables: Sense of Well-Being, Socialization, Communality, Achievement via Independence, and Flexibility.

Table 26 provides the adjusted means for women in upper-level management positions and men in upper-level management positions. Women in upper-level management positions scored significantly lower than men in upper-level management positions on Sense of Well-Being, Socialization, and Communality. The upper-level women scored significantly

higher on Achievement via Independence and Flexibility (Figure 1).

Research Question 2. Research question 2 asked whether women in upper-level management positions differ from men in upper-level management positions on Inclusion, Control and Affection as measured by the scales of the FIRO-B. After adjusting age to 41.4 years and time as manager to 7.9 years, the only significant difference found between these two groups was on the Control (wanted) variable. As Table 27 indicates, women in upper-level management positions scored higher on Control (wanted) than did upper-level male managers ($M = 3.25$, $M = 2.78$, respectively) (Figure 2).

Research Question 3. Research question 3 asked whether women in upper-level management positions differ from men in upper-level management positions on Introversion/ Extraversion, Sensing/Intuition, Thinking/Feeling, and Judging/Perceiving as measured by the dichotomous scales of the Myers-Briggs Type Indicator.

Table 25 shows that a majority of women in upper-level management positions preferred Extraversion to Introversion, a majority preferred Intuition to Sensing, a majority preferred Thinking to Feeling, and a majority preferred Judging to Perceiving. Over 70% of these women preferred Intuition and greater than 70% preferred Thinking. Seventy-five percent of the general population prefers Sensing to

Table 26

Means (Adjusted for Age and Time as Manager), Standard Errors and p Values of CPI Variables for Upper-Level Female and Male Managers

CPI Scales	Upper-Level				Significance of Difference p
	Females n = 123		Males n = 688		
	M	S.E.	M	S.E.	
Dominance	63.5	.83	64.9	.38	.12
Capacity for Status	55.1	.80	54.7	.36	.69
Sociability	53.3	.87	53.2	.39	.90
Social Presence	56.4	.96	57.4	.44	.35
Self-Acceptance	60.0	.82	60.8	.37	.35
Sense of Well Being	50.0	.82	52.2	.37	.02
Responsibility	48.4	.80	48.8	.36	.64
Socialization	45.8	.84	50.0	.38	.0001
Self-Control	47.9	.84	48.6	.38	.47
Tolerance	52.7	.72	52.6	.33	.89
Good Impression	47.4	.87	47.6	.40	.85
Communality	52.2	.66	54.3	.30	.004
Achievement via					
Conformance	55.5	.76	55.9	.35	.63

(table continues)

CPI Scales	Upper-Level				Significance of Difference p
	Females		Males		
	<u>M</u>	S.E.	<u>M</u>	S.E.	
<hr/>					
Achievement via					
Independence	62.0	.77	59.5	.35	.002
Intellectual					
Efficiency	52.7	.87	52.5	.40	.77
Psychological					
Mindedness	57.2	.84	57.6	.38	.65
Flexibility	56.2	.96	53.9	.44	.03

S.E. = Standard Error of the Mean

p values were obtained from t-tests

Intuition and 65% of the women in the general population prefer Feeling to Thinking (Myers & McCaulley, 1985).

As with the upper-level women, a large majority of the men in upper-level management positions preferred Thinking (81%) to Feeling and a majority preferred Judging to (68%) to Perceiving. Only a slight majority of the upper-level men preferred Intuition to Sensing (54% and 46%, respectively). In contrast to the upper-level women in management, a slight majority of the upper-level men preferred Introversion (52%) to Extraversion (48%). In the general population, the majority of people (both male and female) prefer Extraversion, the majority prefer Sensing, the majority of males prefer Thinking, and the majority of all people prefer Judging.

After adjusting age to 41.4 years and time as manager to 7.9 years, women in upper-level management positions differed significantly from men in upper-level management positions on all eight variables of the MBTI. Table 28 shows that upper-level women scored significantly higher on the Extraversion, Intuition, Feeling, and Perceiving ends of the scales. Men in upper-level management positions scored significantly higher on the opposite of each dichotomous scales, i.e., Introversion, Sensing, Thinking and Judging. Table 28 also shows that women in upper-level management positions scored higher on Thinking than Feeling and higher on Judging than Perceiving (See Figure 3).

Figure 1. California Psychological Profiles for upper-level males (MHI), upper-level females (FHI), middle-level males (MMID), and middle-level females (FMID).

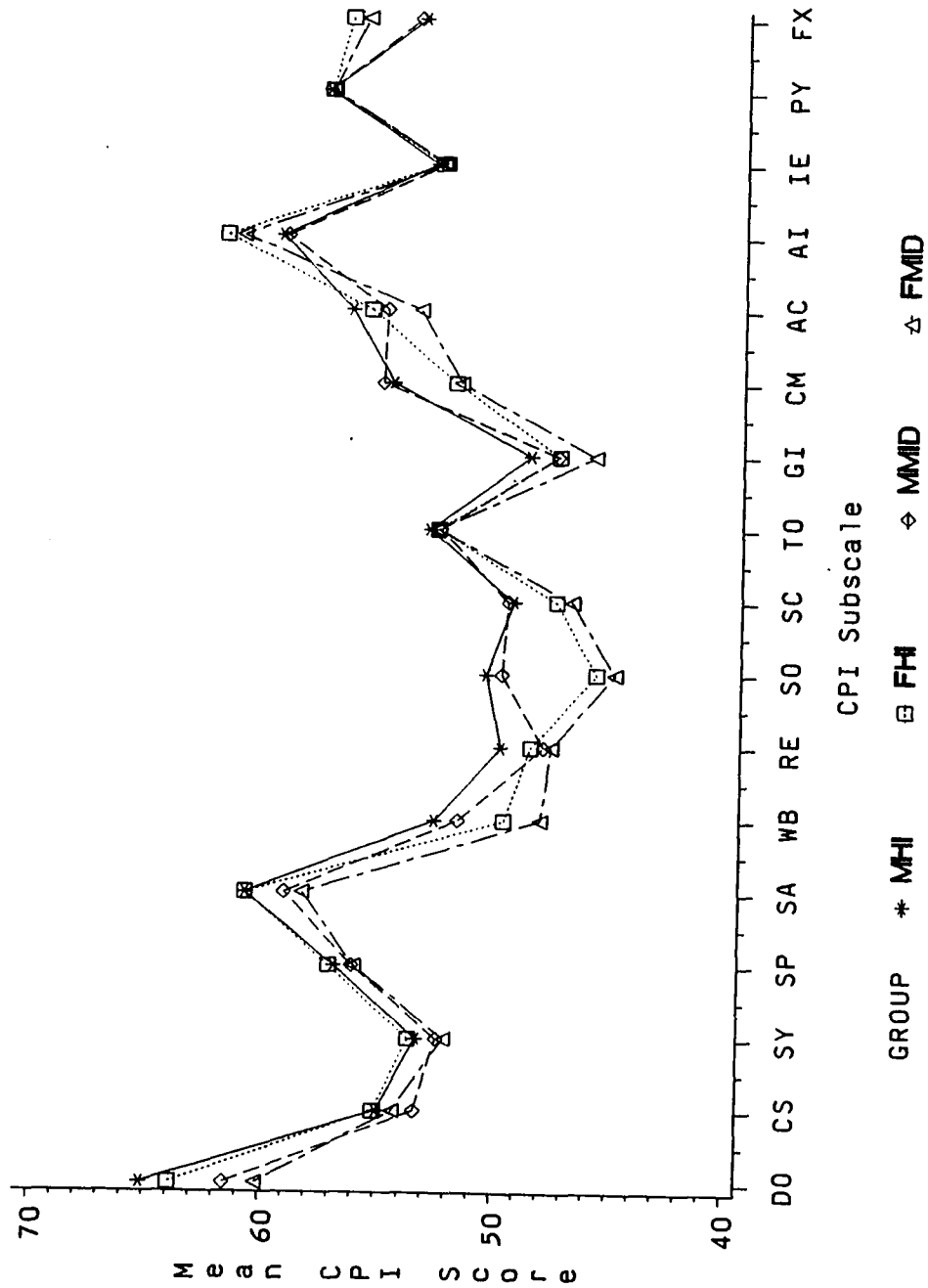


Table 27

Means (Adjusted for Age and Time as Manager), Standard Errors and p Values for Upper-Level Female and Male Managers on the FIRO-B Variables

FIRO-B Scale	Upper-Level Managers				Significance of Difference p
	Female n = 123		Male n = 688		
	<u>M</u>	S.E.	<u>M</u>	S.E.	
Inclusion (e)	3.5	.20	3.5	.09	.91
Inclusion (w)	2.6	.31	2.9	.13	.34
Control (e)	4.9	.25	5.3	.11	.16
Control (w)	3.3	.18	2.8	.08	.02
Affection (e)	3.0	.18	2.8	.08	.31
Affection (w)	4.8	.21	4.8	.09	.85

S.E. = Standard Error of the Mean

Note. p values were obtained from t-tests

Figure 2. Myers-Briggs Type Indicator profiles for upper-level men (MHI), upper-level women (FHI), middle-level men (MMID), and middle-level women (FMID).

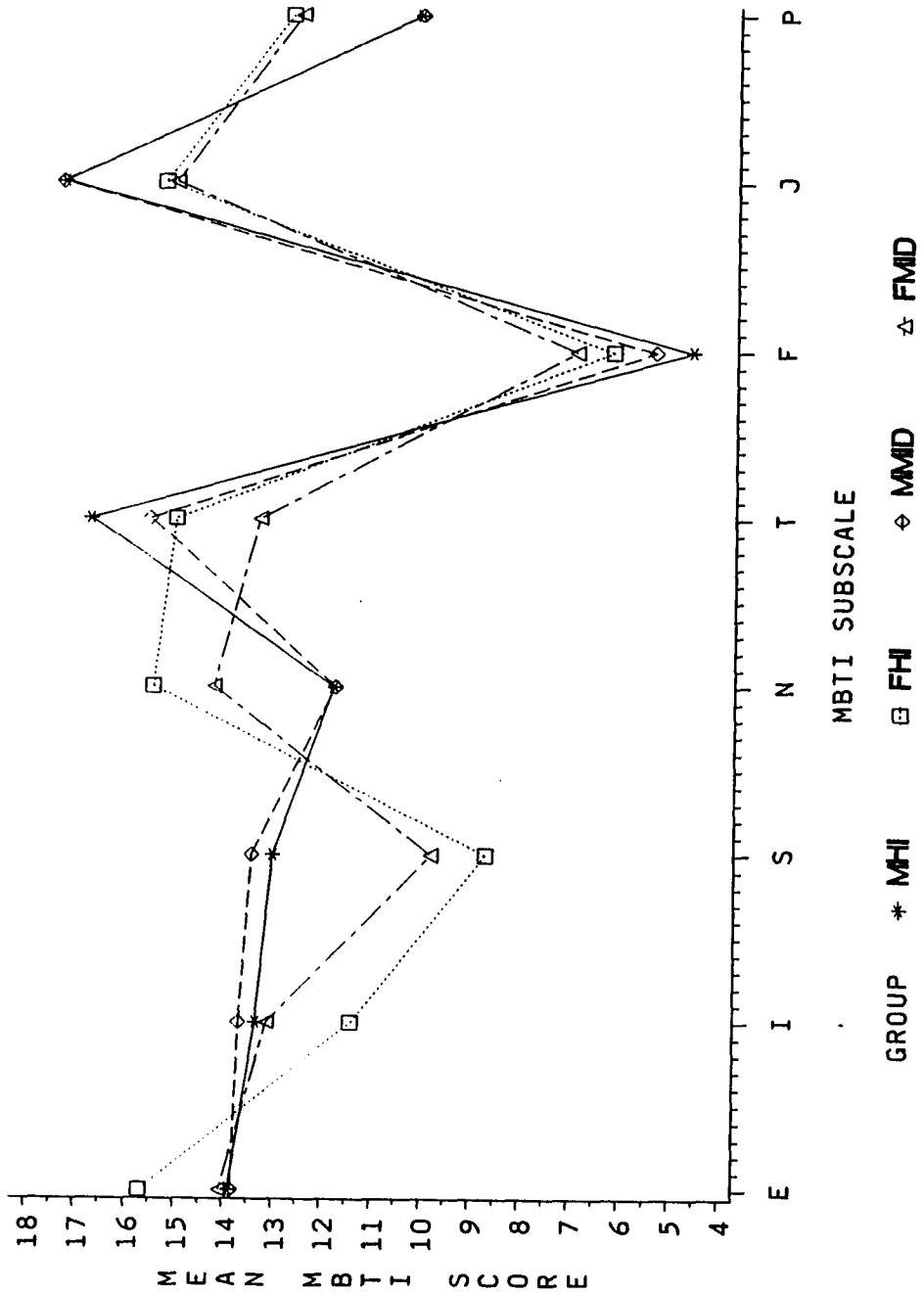


Table 28

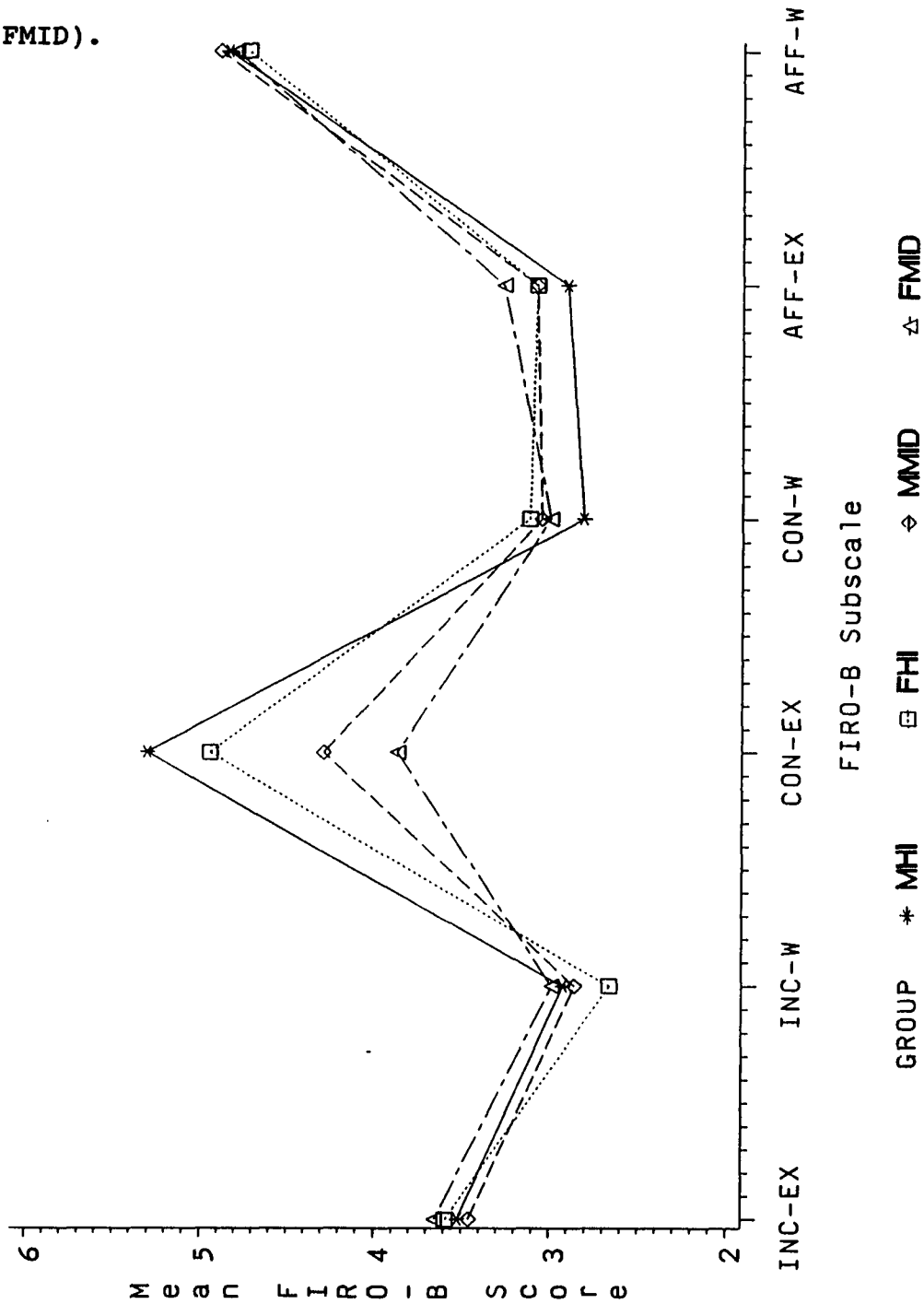
Means (Adjusted for Age and Time as Manager), Standard Errors, and p Values for Women and Men in Upper-Level Management Positions on the Continuous Scores of the MBTI Variables and Chi-Squares for the Discrete Scores

MBTI Scales	Upper-Level Managers				t-test	
	Females		Males		Significance of Difference	Chi-Square
	<u>n</u> = 123		<u>n</u> = 688			
<u>M</u>	S.E.	<u>M</u>	S.E.	p	df=1	
Extraversion	15.8	.59	13.8	.26	.003	
Introversion	11.3	.62	13.4	.27	.0002	2.8
Sensing	8.7	.78	12.7	.34	.0001	
Intuition	15.6	.61	11.9	.27	.0001	13.8*
Thinking	14.8	.62	16.7	.27	.006	
Feeling	2.3	.09	1.9	.04	.0001	7.7*
Judging	15.4	.62	16.9	.27	.03	
Perceiving	3.4	.10	3.1	.04	.004	6.8*

S.E. = Standard Error of the Mean

* $p < .01$

Figure 3. Fundamental Interpersonal Relations Orientation-Behavior profiles for upper-level men (MHI), upper-level women (FHI), middle-level men (MMID), and middle-level women (FMID).



The analysis of dichotomous scores also indicated that upper-level women and men showed a significant difference in their preferences on all of the paired scales except Extraversion/Introversion.

Research Question 4. Research question 4 asked if women in upper-level management positions differ from men in upper-level management positions on demographic variables such as marital status, number of children, education, birth order and work history. A t-test was performed to determine significance levels.

Table 29 shows that the mean age for men in upper-level management positions was higher than for the women in upper-level management positions (45 years and 42 years, respectively). There was no significant difference in upper-level women and upper-level men regarding years of education (the average number of years of education was approximately 17 years for each group) and birth order. The average birth order for both of the groups was the same (1.8) and 52% of the upper-level men and 50% of the upper-level women were first-born or only children.

There was a significant difference, however, in the employment history as represented by the number of years employed and the number of years with their present employer; a significant difference in the number of years spent as a manager was also discovered (Table 29). The mean for the number of years employed for the men in upper-level

management positions was approximately 4 years more than the mean for the number of years employed by the women in upper-level management positions. The men in upper-level management positions had spent an average of approximately 5 years longer with their present company than had the women in upper-level management positions. The average number of years that the men in upper-level management positions had been managers was approximately 4 years longer than the average number of years of management of the females in upper-level management positions.

Regarding personal demographics of marriage and number of children, there was a significant difference between the males in upper-level management positions and the females in upper-level management positions. Table 30 shows that 92% of the upper-level men were married compared to 64% of the upper-level women. Twenty-three percent of the upper-level women were separated, divorced, or widowed compared to 5% of the upper-level men. Looking at the totals, more than one-third (36%) of the upper-level women are unmarried compared to less than 8% of the men in upper-level management positions, a statistically significant difference (chi-square with 3 df = 82.5, $p < .01$).

The average number of children for the upper-level men was twice the average number for the women in upper-level management positions ($\bar{M} = 2.4$, $\bar{M} = 1.2$, respectively) ($t(141.4) = -7.80$, $p < .01$).

Table 29

Demographic Data and T-Test Statistics for Females and Males
in Upper-Level Management Positions

Demographic Variable	Upper-Level Managers		t-test (df)
	Females <u>n</u> = 125	Males <u>n</u> = 695	
Age			
<u>M</u>	41.5	44.7	
S.D.	7.6	6.8	
Range	26-66	27-69	
Birth Order			.39(786)
<u>M</u>	1.8	1.8	
S.D.	1.1	1.3	
1st Born			
<u>n</u>	62	376	
%	50	52	
Number of Children			-7.80(141.4)**
<u>M</u>	1.2	2.4	
S.D.	1.5	1.5	
Education			-1.23(818)
<u>M</u>	17.4	17.2	
S.D.	2.3	2.1	

(table continues)

Demographic Variable	Upper-Level Managers		t-test (df)
	Females	Males	
Years Worked			-4.56(152.1)**
<u>M</u>	18.9	22.6	
S.D.	8.2	7.7	
Years as Manager			-6.03(190.1)**
<u>M</u>	6.7	10.5	
S.D.	5.5	7.7	
Years with Present Employer			-6.34(200.3)**
<u>M</u>	8.5	13.4	
S.D.	6.7	9.2	

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

Table 30

Marital Status of Females and Males in Upper-Level
Management Positions

Marital Status	Upper-Level Managers			
	Females		Males	
	<u>n</u>	%	<u>n</u>	%
Never Married	16	12.9	17	2.3
Married	79	63.7	670	92.3
Separated	3	2.4	7	1.0
Not Currently Married	26	21.0	32	4.4

Table 31 shows the salary distributions for women and men in upper-level management positions. Fifty percent of the men in upper-level management positions earned \$100,000 or more compared to 28.9% of the women in upper-level management positions. Approximately 12% of the women in upper-level management positions earned less than \$50,000 compared to approximately 3% of the men in upper-level management positions.

Differences Between Upper-Level and Middle-Level Women

Much less research has been done investigating the differences between women in upper-level management positions and women in middle-level management positions in comparison to the research investigating gender differences in management. After adjusting for age to 41.5 years and adjusting time as manager to 7.9 years, many more commonalities than differences were found between the two groups of women, as was true of the two groups of upper-level managers. Following are the findings of the research questions addressing differences between upper-level and middle-level female managers.

Research Question 5. Research Question 5 asked whether women in upper-level management positions differ from women in middle-level management positions on leadership and interpersonal adequacy characteristics, intrapersonal values, achievement orientation, psychological mindedness and flexibility as measured by the scales of the California

Table 31

Salary Distributions for Females and Males in Upper-Level
Management Positions

Salary Distribution	Upper-Level Managers			
	Females		Males	
	<u>n</u>	%	<u>n</u>	%
< \$50,000	14	11.5	23	3.1
\$50,000 - 59,999	18	14.9	38	5.4
\$60,000 - 69,999	14	11.6	86	12.1
\$70,000 - 79,999	17	14.1	73	10.3
\$80,000 - 89,999	12	9.9	71	10.0
\$90,000 - 99,999	11	9.1	63	8.9
\$100,000 - 149,999	27	22.3	223	31.5
> \$150,000	8	6.6	131	18.5

$t(773) = -5.39$

$p < .01$

Psychological Inventory. Even though there were a number of level differences identified on various CPI variables, these differences were not specifically present between upper-level women and middle-level women. As can be seen from Table 32, women in upper-level management positions and women in middle-level management positions differ only on the Achievement via Independence variable (Figure 1). On this scale, upper-level women scored significantly higher than middle-level women ($M = 62.0$, $M = 59.9$, respectively).

Research Question 6. Research question 6 asked whether women in upper-level management positions differ from women in middle-level management positions on inclusion, control, and affection as measured by the scales of the FIRO-B.

Table 33 shows that women in upper-level management positions scored significantly higher than women in middle-level management positions on the Control (expressed) variable ($M = 4.9$ and $M = 3.8$, respectively, $p = .002$) (Figure 2). No other differences between upper-level and middle-level female managers on the FIRO-B were found.

Research Question 7. Research question 7 asked whether women in upper-level management positions differ from women in middle-level management positions on Introversion/ Extraversion, Sensing/Intuition, Thinking/Feeling, and Judging/Perceiving as measured by the scales of the Myers-Briggs Type Indicator. In both the upper-level and middle-level management groups a higher percentage of the women

Table 32

Means (Adjusted for Age and Time as Manager), Standard Errors and p Values of CPI Variables for Upper-Level and Middle-Level Female Managers

CPI Scales	Female Managers				Significance of Difference p
	Upper-Level n = 123		Middle-Level n = 286		
	M	S.E.	M	S.E.	
Dominance	63.5	.83	61.3	.85	.07
Capacity for Status	55.1	.80	54.9	.82	.89
Sociability	53.3	.87	52.5	.90	.53
Social Presence	56.4	.96	56.7	.99	.85
Self-Acceptance	60.0	.82	58.7	.84	.27
Sense of Well Being	50.0	.82	49.9	.84	.95
Responsibility	48.4	.80	48.5	.83	.93
Socialization	45.8	.84	45.2	.86	.63
Self-Control	47.9	.84	48.1	.87	.87
Tolerance	52.7	.72	53.1	.75	.74
Good Impression	47.4	.87	47.8	.90	.76
Communality	52.2	.66	52.3	.69	.91
Achievement via Conformance	55.5	.76	54.9	.79	.60

(table continues)

CPI Scales	Female Managers				Significance
	Upper-Level <u>M</u>	S.E.	Middle-Level <u>M</u>	S.E.	of Difference <u>p</u>
Achievement via					
Independence	62.0	.77	59.9	.80	.05
Intellectual					
Efficiency	52.7	.87	53.5	.90	.57
Psychological					
Mindedness	57.2	.84	57.9	.87	.57
Flexibility	56.2	.96	55.1	1.00	.41

S.E. = Standard Error of the Mean

p values were obtained from t-tests

Table 33

Means (Adjusted for Age and Time as Manager), Standard Errors and p Values for Upper-Level and Middle-Level Female Managers on the FIRO-B Variables

FIRO-B Scale	Female Managers				Significance of Difference p
	Upper-Level		Middle-Level		
	<u>n</u> = 123		<u>n</u> = 286		
	<u>M</u>	S.E.	<u>M</u>	S.E.	
Inclusion (e)	3.5	.20	3.6	.21	.79
Inclusion (w)	2.6	.31	2.7	.32	.75
Control (e)	4.9	.25	3.8	.26	.002
Control (w)	3.3	.18	2.9	.18	.14
Affection (e)	3.0	.18	2.9	.19	.49
Affection (w)	4.8	.21	4.6	.21	.49

S.E. = Standard Error of the Mean

Note. p values were obtained from t-tests

preferred Intuition, a higher percentage preferred Thinking, and a higher percentage preferred Judging.

Women in upper-level management positions differed significantly on MBTI continuous scores from women in middle-level management positions on Extraversion, Introversion, and Intuition (Table 34). Upper-level women scored significantly higher on Extraversion and Intuition and women in middle-level management positions scored significantly higher on Introversion (See Figure 3). The chi-square analysis of the dichotomous scores indicated no significant differences in preference proportions between the upper-level women and the middle-level women.

As with upper-level female managers, a majority of women in middle-level management positions preferred Intuition to Sensing, a majority preferred Thinking to Feeling, and a majority preferred Judging to Perceiving. Unlike the women in upper-level management positions, approximately 50% of the women in middle-level management positions preferred Introversion and approximately 50% preferred Extraversion.

Research Question 8.

Research Question 8 asked whether women in upper-level management positions differ from women in middle-level management positions on demographic variables such as marital status, number of children, education, birth order and work history. Women in upper-level management positions

Table 34

Means (Adjusted for Age and Time as Manager), Standard Errors and p Values for Women in Upper-Level and Middle-Level Management Positions on the Continuous Scores of the MBTI Variables

Female Managers					
MBTI Scale	Upper-Level <u>n</u> = 123		Middle-Level <u>n</u> = 286		Significance of Difference
	<u>M</u>	S.E.	<u>M</u>	S.E.	<u>p</u>
Extraversion	15.8	.59	13.8	.45	.008
Introversion	11.3	.62	13.2	.47	.01
Sensing	8.7	.78	10.5	.59	.07
Intuition	15.6	.61	13.8	.47	.02
Thinking	14.8	.62	13.4	.47	.08
Feeling	2.3	.09	2.4	.07	.28
Judging	15.4	.62	15.3	.47	.90
Perceiving	3.4	.10	3.3	.08	.70

S.E. = Standard Error of the Mean p values from t-test

differed from women in middle-level management positions in some predictable ways. Table 35 shows the average age of upper-level women was 5 years older than that of middle-level female managers (41.5 years and 36.5 years, respectively). The average time in the work force for women in middle-level management positions and their average time as a manager was significantly less than that of women in upper-level management positions. There was no significant difference, however, between the time middle-level female managers had spent with their present employer and the time spent by upper-level female managers (Table 35).

Of the women in upper-level management positions, 50% were first born or only children compared to 44% of the women in middle-level management positions, not a statistically significant difference. There was no significant difference between the number of years of education of the two groups of women (upper-level \bar{M} = 17.4 years, middle-level \bar{M} = 17.1 years).

The average number of children for women in upper-level management positions was 1.2 children compared to an average of 1.0 child for the women in middle-level management positions, no significant difference. Fifty-one percent of the middle-level women had no children compared to 46% of the upper-level women.

There was no significant difference in the overall marital status of the two groups of women. Table 36 shows

Table 35

Demographic Data and T-Test Statistics for Females in Upper-Level and Middle-Level Management Positions

Female Managers			
Demographic Variables	Upper-Level $\underline{n} = 125$	Middle-Level $\underline{n} = 288$	t-test (df)
Age			
<u>M</u>	41.5	36.5	
S.D.	7.6	6.6	
Range	26-66	24-60	
Birth Order			-1.65(388)
<u>M</u>	1.8	2.1	
S.D.	1.1	1.3	
1st Born			
<u>n</u>	62	127	
%	50	44	
Number of Children			1.70(173.8)
<u>M</u>	1.2	1.0	
S.D.	1.5	1.2	
Education			- .24(409)
<u>M</u>	17.4	17.1	
S.D.	2.3	2.5	

(table continues)

Demographic Variables	Female Managers		t-test (df)
	Upper-Level	Middle-Level	
Years Worked			5.83(382)**
<u>M</u>	18.9	13.9	
S.D.	8.2	7.3	
Years As Manager			4.48(164)**
<u>M</u>	6.7	4.0	
S.D.	5.5	3.7	
Years with Present Employer			2.05(387)
<u>M</u>	8.5	7.1	
S.D.	6.7	6.1	

* $p < .05$

** $p < .01$

Table 36

Marital Status of Females in Upper-Level and Middle-Level
Management Positions

Marital Status	Female Managers			
	Upper-Level		Middle-Level	
	<u>n</u>	%	<u>n</u>	%
Never Married	16	12.9	72	24.8
Married	79	63.7	166	57.2
Separated	3	2.4	12	4.1
Not Currently Married	26	21.0	40	13.8

that approximately 25% of the women in middle-level management positions had never been married, compared to 13% of the women in upper-level management positions. A larger percentage of the upper-level female managers (23.4%) were separated, divorced or widowed than the middle-level female managers (17.9%).

Other Significant Findings Between and Among the Four Groups of Managers

The final four research questions in the next section address the differences between middle-level male managers and the three other groups of managers. The means and differences are reported after adjusting for age to 41.4 years and adjusting time as manager to 7.9 years. This section will also report other significant findings between groups which have not been previously addressed in this chapter.

Research Question 9. Research Question 9 asked whether men in middle-level management positions differ from the other three management groups on leadership and interpersonal adequacy characteristics, intrapersonal values, achievement orientation, psychological mindedness, and flexibility as measured by the scales of the California Psychological Inventory. Table 37 shows that middle-level males differed from upper-level females on 6 variables: Sense of Well-Being, Socialization, Self-Control, Communality, Achievement via Independence, and Flexibility. Men in middle-level

management positions scored significantly higher than women in upper-level management positions on Sense of Well Being, Socialization, Self-Control and Communality. Women in upper-level management positions scored significantly higher than middle-level male managers on Achievement via Independence and Flexibility.

Males in middle-level management positions differed much more from males in upper-level management positions than did the two groups of female managers. Between the two groups of male managers, there were significant differences on the Dominance, Capacity for Status, Social Presence, Self-Acceptance, Self-Control, and Communality scales (Table 37). The middle-level men scored significantly higher on Self-Control and Communality. The middle-level males scored significantly lower on Dominance, Capacity for Status, Social Presence, and Self-Acceptance (See Figure 1). These scales, Dominance, Capacity for Status, Social Presence and Self-Acceptance, are identified as measures of leadership and interpersonal adequacy. These were the only results which clearly showed consistent differences between any two groups on the majority of the leadership and interpersonal adequacy variables.

Lastly, the significant differences between middle-level women and upper-level men reflected gender and level issues. As with the middle-level male managers, upper-level male managers differed from middle-level female managers on

Table 37

Means of the CPI Variables for Four Groups of Managers

CPI Scales	Middle-Level	Upper-Level	Upper-Level	Middle-Level
	Males	Females	Males	Females
	<u>M</u>	<u>M</u>	<u>M</u>	<u>M</u>
	<u>n</u> = 756	<u>n</u> = 123	<u>n</u> = 688	<u>n</u> = 286
Dominance	61.9	63.5	64.9**	61.3
Capacity for				
Status	53.5	55.1	54.7	54.9
Sociability	52.6	53.3	53.2	52.5
Social Presence	56.0	56.4	57.4*	56.7
Self-Acceptance	59.0	60.0	60.8**	58.7
Sense of				
Well Being	52.0	50.0*	52.2	49.9*
Responsibility	48.0	48.4	48.8	48.5
Socialization	49.9	45.8**	50.0	45.2**
Self-Control	49.7	47.9*	48.6*	48.1
Tolerance	52.7	52.7	52.6	53.1
Good Impression	47.8	47.3	47.6	47.8
Communality	55.4	52.2**	54.3*	52.3**
Achievement via				
Conformance	55.2	55.5	55.9	54.9

(table continues)

CPI Scales	Middle-Level	Upper-Level	Upper-Level	Middle-Level
	Males	Females	Males	Females
	<u>M</u>	<u>M</u>	<u>M</u>	<u>M</u>
<hr/>				
Achievement via				
Independence	59.1	62.0**	59.5	59.9
Intellectual				
Efficiency	52.6	52.7	52.5	53.5
Psychological				
Mindedness	57.6	57.2	57.6	57.9
Flexibility	53.1	56.2**	53.9	55.1
<hr/>				

* $p < .05$

** $p = < .01$

Note. p values obtained from t-tests comparing means of upper-level men and women and middle-level women with means of the middle-level men.

the Dominance (\underline{M} = 64.9, and \underline{M} = 61.3, respectively) and Self-Acceptance (\underline{M} = 60.8 and \underline{M} = 58.7, respectively) variables. As with the upper-level female managers, upper-level male managers differed from middle-level female managers on the Sense of Well-Being (\underline{M} = 52.2 and \underline{M} = 49.9, respectively), Socialization (\underline{M} = 50.0 and \underline{M} = 45.2) and Communality (\underline{M} = 54.3 and \underline{M} = 52.3) scales (Table 23).

Research Question 10. Research question 10 asked whether males in middle-level management positions differ from the other three manager groups on Inclusion, Control, and Affection as measured by the scales on the FIRO-B. Table 38 shows that men in middle-level management positions differed significantly from both women and men in upper-level management positions on the Control (expressed) variable (p = .02, p = .002, respectively). The average score for upper-level female managers and upper-level male managers on Control (expressed) was higher than the average score for men in middle-level management positions.

The middle-level male managers also differed significantly (p = .04) from upper-level male managers on Control (wanted). The average score for upper-level males was lower than that of middle-level male managers (See Figure 2).

Research Question 11. Research question 11 asked whether men in middle-level management positions differ from the other three management groups on Introversion/Extraversion,

Table 38

Comparisons of Means (Adjusted for Age and Time As Manager)
of Middle-Level Male Managers with the Other Three
Management Groups on the FIRO-B Scales

FIRO-B Scales	Middle-Level Males	Upper-Level Females	Upper-Level Males	Middle-Level Females
	<u>M</u> <u>n</u> = 756	<u>M</u> <u>n</u> = 123	<u>M</u> <u>n</u> = 688	<u>M</u> <u>n</u> = 286
Inclusion (e)	3.5	3.5	3.5	3.6
Inclusion (w)	2.9	2.6	2.9	2.7
Control (e)	4.3	4.9*	5.3**	3.8
Control (w)	3.0	3.3	2.8	2.9
Affection (e)	3.0	3.0	2.8	2.9
Affection (w)	4.9	4.8	4.8	4.6

Note. p values are determined from pairwise t-tests

* p < .05

** p < .01

Sensing/Intuition, Thinking/Feeling, and Judging/Perceiving as measured by the scales of the Myers-Briggs Type Indicator.

Table 39 shows that on the continuous scores of the MBTI, men in middle-level management positions differed significantly from women in upper-level management positions on Extraversion, Introversion, Sensing, Intuition, Feeling, Judging and Perceiving; this is all of the MBTI variables except Thinking. Males in middle-level management positions scored higher than women in upper-level management positions on Introversion, Sensing, and Judging. Women in upper-level management positions scored significantly higher on Extraversion, Intuition, Feeling, and Perceiving. Most of the middle-level male managers preferred Introversion, most preferred Sensing, most preferred Thinking and most preferred Judging. Most of the upper-level female managers preferred, however, Extraversion, most preferred Intuition, most preferred Thinking, and most preferred Judging (See Figure 3).

On the discrete scale chi-square analysis, these two groups were significantly different ($p < .05$, chi-square with 1 df) on their preferences of all of the MBTI scales except Thinking/Feeling. Compared to middle-level men, a significantly higher percentage of upper-level women preferred Extraversion and Intuition and a significantly lower percentage preferred Judging.

Table 39 shows that, on the continuous scores, middle-level male managers differed significantly from upper-level male managers on Sensing, Thinking, Feeling, and Perceiving. Middle-level males scored significantly higher on Feeling and Sensing and upper-level males scored significantly higher on Thinking and Perceiving. Most of the upper-level and middle-level men preferred Judging to Perceiving (68% and 69%, respectively) and preferred Thinking to Feeling (81% and 80%, respectively) (Table 25). Using chi-square to analyze the discrete scores of the pairs for both group of male managers, no significant differences were found.

Table 39 also shows that middle-level male managers scored significantly higher than middle-level female managers on Sensing, Thinking, and Judging. Women in middle-level management positions scored significantly higher on Intuition, Feeling, and Perceiving. The chi-square analysis also reported significant differences on all pairs except Extraversion/Introversion.

Research Question 12. Research question 12 asked if men in middle-level management positions differ from the other three management groups on demographic variables such as marital status, number of children, education, birth order, and work history. Table 40 shows that the average age for men in middle-level management positions was 40.0 years compared to the average age of 41.5 years for women in upper-level management positions, 44.7 years for men in

Table 39

Means (Adjusted for Age and Time as Manager) and
Significance Levels for Middle-Level Male Managers Compared
with the Three Other Management Groups on the MBTI Scales

MBTI Scales	Middle-Level	Upper-Level	Upper-Level	Middle-Level
	Males	Females	Males	Females
	<u>M</u>	<u>M</u>	<u>M</u>	<u>M</u>
	<u>n</u> = 756	<u>n</u> = 123	<u>n</u> = 688	<u>n</u> = 286
Extraversion	13.8	15.8**	13.8	13.8
Introversion	13.6	11.3**	13.4	13.2
Sensing	13.7	8.7**	12.7*	10.5**
Intuition	11.6	15.6**	11.9	13.8**
Thinking	15.7	14.8	16.7*	13.4**
Feeling	2.1	2.3*	1.9**	2.4**
Judging	17.6	15.4**	16.9	15.3**
Perceiving	2.9	3.4**	3.1*	3.3**

S.E. = Standard Error of the Mean

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

Note. p values obtained from t-tests comparing means of upper-level women, upper-level men, and middle-level women with middle-level men.

upper-level management positions, and 36.5 years for women in middle-level management positions.

All four of the management groups had an average of 17 years education. The middle-level males did differ significantly from the upper-level men and women, however, on education (Table 40). Regarding the number of years worked, and the number of years as a manager, the average number of years for the middle-level male managers and the average number of years for the upper-level female managers were not significantly different. Both groups had worked an average of approximately 18 years and had been a manager for approximately 6 years. The males in upper-level management positions had worked significantly more years and had been a manager significantly more years than the middle-level males ($t(1380) = 10.57$, $t(1164.2) = 11.11$, respectively, $p < .01$). The women in middle-level management positions, however, had worked approximately 4 years less ($t(989) = -8.00$, $p < .01$) and had been a manager approximately 2 years less ($t(506.8) = -5.71$, $p < .01$) than the middle-level males.

Table 41 shows the differences in salary for the four groups. The most important comparison not previously noted was between middle-level male managers and middle-level female managers. Fewer than 28.9% of the middle-level male managers earned less than \$50,000 compared to 49.9% of the middle-level female managers. Of the men in middle-level

management positions, 17.2% earned \$70,000 or more compared to 7.4% of the women in middle-level management positions.

Table 40

Demographic Data for the Four Management Groups

Demographic Variables	Male Managers		Female Managers	
	Middle-Level	Upper-Level	Middle-Level	Upper-Level
Age				
<u>M</u>	40.0	44.7	36.5	41.5
S.D.	6.3	6.8	6.6	7.6
Range	27-63	27-69	24-60	26-66
Birth Order				
<u>M</u>	2.0	1.8**	2.1	1.8**
S.D.	1.3	1.3	1.3	1.1
1st Born				
<u>n</u>	357	376	127	62
%	47	52	44	50
Number of Children				
<u>M</u>	1.9	2.4**	1.0**	1.2**
S.D.	1.6	1.2	1.2	1.5
Education				
<u>M</u>	17.0	17.2**	17.1	17.4**
S.D.	2.6	2.1	2.5	2.3

(table continues)

Demographic Variables	Male Managers		Female Managers	
	Middle-Level	Upper-Level	Middle-Level	Upper-Level
Years Worked				
<u>M</u>	18.2	22.6**	13.9**	18.9
S.D.	7.5	7.7	7.3	8.2
Years As Manager				
<u>M</u>	6.3	10.5**	4.0**	6.7
S.D.	5.3	7.7	3.7	5.5
Years with Present Employer				
<u>M</u>	11.3	13.4**	7.1**	8.5**
S.D.	7.3	9.2	6.1	6.7

* $p < .05$

** $p < .01$

Note. p values obtained from t-tests comparing adjusted means of upper-level men and women and middle-level women with adjusted means of the middle-level men.

Table 41

Salary Distributions for the Four Management Groups

Salary Distribution	Upper-Level				Middle-Level			
	Females		Males		Females		Males	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
< \$50,000	14	11.5	23	3.1	142	49.9	208	28.9
\$50,000 - 59,999	18	14.9	38	5.4	83	29.1	236	31.6
\$60,000 - 69,999	14	11.6	86	12.1	39	13.7	174	23.3
\$70,000 - 79,999	17	14.1	73	10.3	14	4.9	73	9.8
\$80,000 - 89,999	12	9.9	71	10.0	4	1.4	25	3.4
\$90,000 - 99,999	11	9.1	63	8.9	1	.4	15	2.0
\$100,000 - 149,999	27	22.3	223	31.5	2	.7	12	1.6
> \$150,000	8	6.6	131	18.5	0	0.0	3	.4

CHAPTER FIVE

DISCUSSION

The primary purpose of this study was to examine differences on selected personality variables and demographic data between women in upper-level management positions and men in upper-level management positions as well as differences between upper-level and middle-level women. In order to investigate other differences, additional comparisons that included middle-level male managers were also made. The sample included 136 upper-level women, 775 upper-level men, 800 middle-level men and 307 middle-level women. These participants had attended either the Leadership Development Program or the Executive Women's Workshop at the Center for Creative Leadership in Greensboro, North Carolina.

This chapter will discuss the conclusions and implications of the findings and make recommendations regarding further research. In Chapter Four, the results of the data analysis for each of the research questions were reported.

Conclusions

Discussion of Differences Between Upper-Level Female Managers and Upper-Level Male Managers

The demographic data for the women in upper-level management positions and the men in upper-level management positions differed significantly in a number of ways. A lower percent of the upper-level women than the upper-level men were married, 64% and 92%, respectively, and the upper-level women, on the average, had fewer children than the upper-level men, 1.2 and 2.4 children, respectively. Of the upper-level women, 46% had no children compared to only 8% of the upper-level men. Approximately 51% of the upper-level women and approximately 52% of the upper-level men were first-born or only children, no significant birth order differences was found.

There was no significant educational level difference between the upper-level women and men, but the women had been in the work force and in management significantly fewer years than their male colleagues and had worked for their present employer for a significantly shorter period of time. Differences due to length of time as manager and age were statistically controlled in reporting the results of this study.

A significantly larger percentage of these women, compared with the upper-level men, worked for companies with fewer than 5000 employees (69% and 56%, respectively). The

majority of the men and women in upper-level management positions were from business and industry, but 20% of the upper-level women, compared to 8% of the upper-level men, worked in education or other non-profit organizations.

A number of other studies found salary differences between upper-level women and upper-level men (Fraker, 1984; Day & Stogdill, 1972). This present study supported those findings. Upper-level males earned significantly more money than did upper-level females. The middle-level males also earned significantly more than the middle-level females. It is important to note, however, that the upper-level women and the middle-level women were younger, had been in the work force fewer years than their male colleagues. The middle-level females, however, had been in management a significantly fewer number of years than middle-level male managers.

There were also some significant personality differences found between the women in upper-level management positions and the men in upper-level management positions. No significant differences, however, were found on leadership characteristics and interpersonal adequacies as measured by the dominance, sociability, capacity for status, social presence, and self-acceptance scales on the CPI. Earlier studies assessing perceived differences in leadership characteristics between women and men reported

that men possessed leadership characteristics more often than women (Schien, 1975; Powell and Butterfield, 1979).

As with this present study, in the study by Morrison et. al. (1987), upper-level female managers were no less dominant, self-confident, or outgoing than the upper-level male managers. Donnell and Hall (1980) also found no significant differences on similar variables reflecting assertiveness, self-confidence, and sociability.

Studies by Schien (1975) and Powell and Butterfield (1979) reported that women are perceived to be lower in the areas of dominance and self-regard. Barnett and Bararch (1978) and Hanlan (1977) reported that women in management positions have less positive self-esteem than do men. The results of this present study showed that the upper-level female and male participants did not differ significantly on the self-acceptance characteristic as measured by the Self-Acceptance CPI scale.

On the average, the upper-level women in this present study possessed leadership characteristics, including assertiveness and self-esteem, to the same extent as upper-level men. The CPI is a standardized test with a mean of 50 and standard deviation of 10. Figure 1 (in Chapter Four) shows that upper-level managers scored above the mean for the general population on all of the leadership and interpersonal adequacy variables. They scored one standard

deviation or more above the mean of the general population on Dominance and Self-Acceptance.

After adjusting for age to 41.5 years and adjusting time as manager to 7.9 years, differences between upper-level women and upper-level men were found, however, in this present study on the Sense of Well-Being scale, scales reflecting intrapersonal values, the Achievement via Independence scale, and the Flexibility scale. The lower scores for the upper-level women on the Sense of Well-Being scale indicated that these women in upper-level management positions, on the average, were experiencing more stress and alienation from others and possibly from self, and less physical and psychological well-being than the men in upper-level management positions. Their average Sense of Well-Being score was slightly lower than the mean for the general population.

It could be hypothesized that because career-oriented women typically have to balance the demands of various roles more than men that they would predictably experience more stress. Many of these women, however, were not married and almost 50% did not have children, so perhaps the stress they experience is not exclusively from balancing their personal roles with their professional demands.

It has been reported that many women in management positions attributed their stress primarily to the work environment; they experience feelings of alienation and

despair due to their perception of a "glass ceiling" beyond which they cannot move ("Women in Management", 1990). Loden (1985) discusses three steps of accommodation that women move through in order to move up the organizational ladder. The first step she calls "fraternity pledging", the second step is "making first string", and, lastly, Loden (1985) reports that the women "make it" to the third step of "splendid isolationism".

As framed by Hennig and Jardim (1977), these pioneer women are unique and may regard themselves as outsiders in their work arena. Also, 23% of the upper-level women are separated, divorced, or widowed, compared to only 5% of the upper-level men. These personal experiences could be additional stressors that might contribute to the lower scores on this particular variable.

The lower scores on the two scales reflecting intrapersonal values, Socialization and Communality, also supported the finding that the women experience more feelings of alienation and dissimilarity from those around them than their male peers. Morrison et. al. (1987) found differences on the Socialization and Communality scales also. Figure 1 (in Chapter Four) indicates that the average Socialization score for both groups of the female managers fell below the mean for the general population.

Morrison et. al. (1987) identified a number of variables that might contribute to women feeling more

stress, less peaceful, and more alienated. First of all, women often find blocks that prohibit them from moving to top levels of management. They experience the "glass ceiling". A second contributing factor may be that women feel confined or hemmed in by conflicting expectations. They are to be feminine and masculine, a committed executive and a strong family person, and a risk taker with perfect outcomes. Thirdly, Morrison et. al. (1987) discuss the stresses of a vanishing support system. The upper-moving female managers are perceived to be non-traditional and their personal support system may withdraw. Women may also lose professional support as they 'buck' tradition and move up the ladder. Lastly, Morrison et. al. (1987) found that the upper-level women they studied were exhausted. The multi-faceted demands, the perceptions regarding their inadequacy, the discrimination they experienced and the feeling of constantly having to prove themselves had taken a toll.

Studies attempting to explain discrepancies in the promotion and salary of women in management compared to men in management support the theory that women who move into upper-level management positions may feel alienation because the social rules of upper-level management are rules established around male behaviors (Nieva & Gutek, 1981). Kanter (1977), Rogan (1984) and Rosen, Templeton, and Kochline (1981) reported that women feel excluded from

informal relationships in management that are perceived as vital for power and promotion.

The lower socialization score found on the CPI for women indicated that the women in upper-level management positions, on the average, questioned norms and mores of society more than the men in upper-level management positions and more than people in general. It would be predicted that these women who had reached upper-level management positions in an organization would have questioned some of society's rules and mores regarding stereotypic roles for women.

Traditionally, the role of a woman has been portrayed as the "keeper of the home", with the primary obligation being the role of wife and mother (Taylor, 1986). More than one-third of these women were unmarried and 46% had no children, compared to 92% and 8%, respectively, of the men in upper-level management positions. These women were pioneers. They were pursuing professional goals that were incongruent with traditional women's roles as well as the traditions of most of the organizations in which they worked.

It is important to note that the sense of well-being of the men and women as well as their feelings of alienation and rebellion regarding social norms, when examined at ages 30 years, 40 years, and 50 years, were significantly different only for the 30 year old and 40 year old male and

female managers. There were no significant differences on any of these scales between the 50 year old women and men.

Older, upper-level women had higher Sense of Well-Being scores than the younger upper-level women. Perhaps as women get older and spend more time in management, they become more comfortable with their environment. It could also be assumed that these older women have fewer demands on their energies. The demands of the role as parent, if they have children, has likely reduced significantly and they probably experience fewer conflicts regarding the roles of wife and career person than the younger women since they have dealt with the issues longer.

After adjusting for age and time as manager, women in upper-level management positions scored significantly higher on Achievement via Independence and Flexibility than did the men in upper-level management positions. This difference on the Achievement via Independence scale indicated that the women in upper-level management expressed a need for the opportunity to utilize independent thought and creativity more than did the men in upper-level management positions.

The pilot study for this project also found significant differences between the upper-level women and men on the Achievement via Independence scale. The study by Morrison et. al. (1981) found significant differences on the Achievement via Conformance scales only. This present study did not support the findings by Morrison et. al. (1987) that

executive women are less comfortable in an "environment where conformity to intellectual authority is desirable and the criteria for excellence are clearly specified" (Achievement via Conformance) (p. 50). The women in this present study were as comfortable as the upper-level men with a more structured and conforming environment but expressed greater needs for expression of independent thought action.

Figure 1 (in Chapter Four) reflects that the average score on the Achievement via Independence scale for both of the groups of female managers was one standard deviation or more above the mean for the general population. On both the Achievement via Conformance and the Achievement via Independence scales, the four groups of managers averaged higher than the general population.

The higher score on the Flexibility scale indicated that the upper-level women were more flexible in their approach to living and were less threatened by change. The significant difference on the flexibility scale, however, was not found in either the Morrison et. al. (1987) or the pilot studies. Because of the demands placed on upper-level women in management, the ability to be flexible and adapt is essential (Loden, 1985).

These upper-level women did not appear to seek traditional ways of obtaining security. They were independent and willing to take risks and go against the

"norm". Again, organizations could find ways to utilize these characteristics fully. These women may be very skilled at start up projects and less threatened by upward moves and new responsibilities than might be predicted when reviewing the perceptions held by men and women of women in leadership (Schien, 1973, 1975; Basil, 1972).

Perceived differences between women and men in management included the presumptions that women are not logical, are more emotional, less fact oriented, and less social and extraverted (Broverman, et. al., 1970, 1972; Schien, 1973, 1975; Basil, 1972). The results of the Myers-Briggs Type Indicator (MBTI) data analysis reported in Chapter for did not support these contentions for the women in this study. On the MBTI results, differences between continuous scores as well discrete scale results for upper-level women and upper-level men were analyzed. More than 50% of both the upper-level women and upper-level men preferred Extraversion to Introversion, more than 50% preferred Intuition to Sensing, more than 50% preferred Thinking to Feeling, and more than 50% preferred Judging to Perceiving. Even though these scales were individually the preferences of most of the participants, there were some significant differences on both the discrete as well as the continuous scores (See Figure 2 in Chapter Four).

In analyzing the differences for the discrete variable, upper-level women and men differed significantly on the

Sensing/Intuition type, the Thinking/Feeling type, and the Judging/Perceiving type. A higher proportion of upper-level men significantly more often preferred Sensing, preferred Thinking, and preferred Judging than the upper-level women. Even though the majority of the upper-level men preferred Intuition, a smaller proportion preferred it than the proportion of the upper-level women (See Table 32 in Chapter Four). Fogarty (1971) reported that a larger proportion of women in upper-level management positions were detail-oriented (Sensing) than the proportion of men in upper-level management positions. This study did not support Fogarty's (1971) findings.

A significantly larger proportion of the upper-level women in this study preferred Feeling and Perceiving than the proportion of upper-level men, although the majority (75%) of the women preferred Thinking to Feeling in decision-making and the majority (59%) preferred Judging to Perceiving in orienting themselves to the outer world. On the continuous scores, however, women in upper-level management positions also scored significantly higher on the Extraversion scale than men in upper-level management, and men in upper-level management scored significantly higher on the Introversion scale.

The results of the analysis of the MBTI indicated that the women and men in upper-level management participating in this study were not "typical" in a number of areas. Most of

the upper-level men and upper-level women scored higher on Intuition than Sensing. In the United States population, about 75% of the people prefer Sensing (Myers & McCaulley, 1985). About 75% of the U.S. population are Extraverts (Myers & McCaulley, 1985) but more of the upper-level men in this study were Introverts, while a slight majority of the upper-level women preferred Extraversion.

Approximately 65% of the women in the U.S. prefer Feeling to Thinking (Myers & McCaulley, 1985). The majority of the women in this study (approximately 74%) preferred Thinking, indicating that they preferred making decisions through logical connections rather than the Feeling mode which weighs relative values and merits of issues in decision-making.

Intuition is often devalued as unscientific and is seen as a 'feminine' trait -- "a woman's intuition" (Powell, 1988). This study helps to validate the contribution of intuition by reporting that the majority of upper-level managers prefer Intuition to Sensing.

Women, on the average, had less variation between their Thinking and Feeling scores and their Judging and Perceiving scores. This balance may give them a greater selections of behaviors from which to draw.

If a majority of women in the United States prefer Sensing, and a majority of women in the United States prefer Feeling, can we assume that women who are unique, who prefer

Intuition and women who prefer Thinking are more likely than women who are more "typical" to move to upper-level management positions? Or, can we assume that experiences that moved these women to upper-level positions shaped their preferences? Research in this area could be very beneficial in understanding if particular characteristics are part of a profile of upper-level women; a profile that is different from the general female population.

The Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) measures the variables of Inclusion, Control, and Affection. How much an individual expresses and desires these characteristics was measured. There were no significant differences found between the two groups of upper-level managers on the Inclusion scale. Women were no more or less likely than men to initiate social interaction or be comfortable with social interactions. The women were also no more needy of having others include them in social activities.

Contrary to perceptions expressed on previous studies (Schien, 1975; Powell & Butterfield, 1979), the upper-level women in this study did not reflect less willingness than the upper-level men to be socially outgoing and interpersonally comfortable. The results of the MBTI Extraversion/Introversion scales as well as the CPI Sociability, Dominance, Social Presence, and Capacity for Status scales also supported the finding that upper-level

women did not show a deficit in the interpersonal adequacy area.

Also, contrary to reported perceived differences that women were warmer, more nurturing, and more needy of affection (Williams & Best, 1982; Spence & Helmrich, 1978), the upper-level women in this study were no more affectionate than the men, nor did they express more of a need for affection than the upper-level men. Both groups reported more of a need to receive affection than they were willing to express affection (See Figure 3 in Chapter Four).

Lastly, the upper-level women and men expressed no significant difference on Control (expressed), indicating no difference in their willingness to take responsibility, make decisions, be assertive and exert leadership. A significant difference was found, however, in the Control (wanted) scores. Upper-level women expressed more willingness to have others express control than did upper-level men. These women desired to express considerably more control than they wanted others to express, but were more willing than the upper-level men to have others exhibit control. Perhaps this speaks to the idea that women in management are more willing to involve others in decision-making than are men in management; that they are more participative and collaboratively oriented (Powell, 1988; Loden, 1985). Willingness to allow others to be involved in making

decisions may be seen as an unwillingness to take control and make decisions, the results from the FIRO-B as well as the Dominance scale results on the CPI did not support a finding that upper-level women were more reticent than upper-level men to assume roles of leadership and authority.

In summary, there were no significant differences between women in upper-level management positions on variables that are typically indicative of leadership skills: Dominance, Control (expressed), social adequacy skills, and achievement orientation (except the women expressed more of a need for expression of independent thought and creativity in achievement). Perhaps the issue is not so much to change the stereotypes of what is perceived as a good manager, but to alter the belief that those characteristics are more often found in men. This study reports that characteristics which are typically perceived as 'feminine' also seem to be found in upper-level women and upper-level men, the preference for Intuition over Sensing, for example.

Discussion of Differences Between Upper-Level and Middle-Level Female Manager

In studying the profile of upper-level women, investigating how the upper-level women differed from the middle-level women as well as from the upper-level men was helpful. The women in upper-level management positions

were, on the average, five years older than the women in middle-level management positions. A larger percentage of the upper-level women than the upper-level men were first-born or only children (51% and 44%, respectively). Both groups, on the average, had the same number of years of education, but the upper-level women had been in the work force, on the average, five years longer than the middle-level women, had been a manager three years longer and had worked for their present employer approximately 2 years longer.

A higher percentage of the upper-level women were married (64%) compared to the middle-level women (57%) and 51% of the middle-level women had no children compared to 46% of the upper-level women. These findings did not support the findings of Moore and Rickel (1980) who reported that women in upper-level management were more likely to have fewer children and less likely to be married.

The upper-level women and the middle-level women differed significantly on only one variable measured by the CPI. The scale on which the two groups of women differed was Achievement via Independence. Upper-level female managers indicated a significantly higher need to express independent thought and creativity in their achievement orientation. Women in upper-level management positions did not score significantly differently on leadership characteristics, interpersonal adequacies, or intrapersonal

values than did the women in upper-level management. This indicates that these women were also very capable of exhibiting leadership behaviors and that they also expressed similar feelings of alienation and decreased physical and psychological well-being.

It is important to note that even after adjusting for age (to 41.4 years) and time as manager (to 7.9 years), the middle-level women were more similar to the upper-level men on leadership and interpersonal adequacies than were the middle-level men. The middle-level women scored significantly lower than the upper-level men (not the upper-level women, however) on the Self-Acceptance and the Dominance scales of the CPI, whereas the middle-level men scored significantly lower than the upper-level men on all of the leadership and interpersonal adequacy scales except the Sociability scale. Again, this could indicate that women who enter management have particular, similar personality characteristics and that, perhaps, on a whole the women have stronger leadership characteristics.

The MBTI results comparing the continuous scores for the two groups of female managers indicated significant differences on two of the dichotomous scales. On the Extraversion/Introversion scale, women in upper-level management positions scored significantly higher, on the average, than the women in middle-level management positions on the Extraversion preference. The reverse was true on the

Introversion scale, middle-level women scored significantly higher than did upper-level women. Approximately 57% of the upper-level female managers preferred Extraversion, compared to 50% of the middle-level managers.

When the discrete scores were analyzed, there were no significant differences between the two groups of women on any of the scales. Even though upper-level women scored higher on the Extraversion scale, there are not a significantly higher percentage of women in upper-level management positions compared to women in middle-level positions who have a preference for Extraversion.

On the Sensing/Intuition pairing, upper-level women scored significantly higher on the Intuition scale than did the women in middle-level management positions. There was no significant difference, however, on the Sensing scale. Seventy-one percent of the upper-level females preferred Intuition compared to 67% of the middle-level female managers. The majority of the upper-level and middle-level women preferred Thinking and the majority of both groups preferred Judging.

In analyzing the discrete differences, again, none were found between upper-level and middle-level women on any of the MBTI variables. On the whole, both groups of women prefer Intuition to Sensing, as do the men. The upper-level women, on the average, have a stronger preference for Intuition, corresponding, perhaps, to their higher

Achievement via Independence scoring on the CPI. A high valuing of ideas, creativity, and independent expression appeared to be expressed by these upper-level women.

Perhaps moving up the ladder is seen as a way to meet needs regarding independence and creativity.

In analyzing the FIRO-B data for the two groups of female managers, the only significant difference between the two groups of women was found on the Control (expressed) variable. The women in upper-level management were more willing to express authority, take responsibility, and make decisions than the women in middle-level management positions. Even though the middle-level women did not score significantly differently than the upper-level women on the CPI Dominance scale, they did score significantly differently from the upper-level men on the Dominance scale, the Control (expressed) scale, as well as the Control (wanted) scale. Women in middle-level management positions may feel less confident about making decisions and taking responsibility due to their lack of experience.

There was a significant difference between the upper-level and middle-level managers on the Control (expressed) variable at ages 30, 40, and 50. The older upper-level managers, on the average, scored higher than the older middle-level managers on this variable. The differences in the scores of the older upper-level managers and the older middle-level managers was greater than the difference

between the scores of the younger upper-level managers to the younger middle-level managers. Experience as a manager appeared to make more of a difference in the willingness to take control and assume responsibility with the upper-level managers than with the middle-level managers.

On the whole, the women in upper-level management positions had a very similar profile to women in middle-level management positions. The upper-level women were more willing to take responsibility and expressed a greater need for independent thought. Perhaps these two variables are connected in that the need for independence motivates the upper-level women to take charge in order to have more input in outcomes.

Discussion of Remaining Differences Within the Four Groups

There were a few remaining discoveries that require discussion. When comparing men in middle-level management positions with the other three management groups, the men in middle-level management in comparison to the women in upper-level management and the women in middle-level management were more likely to be married and they were significantly more likely to have children, (only 17% of the middle-level male managers, had no children). These middle-level men were significantly different in their educational background than both of the upper-level management groups.

The differences between upper-level women and middle-level men on the variables measured by the CPI were the same that were found between upper-level women and upper-level men. This supported findings that the differences were gender-related rather than level-related because the difference were not found between upper-level and middle-level women.

In addition to the differences between upper-level women and middle-level men on Sense of Well-Being, Socialization, Communality, Achievement via Independence, and Flexibility, a significant difference was also found on the Self-Control scale. Men in middle-level management scored significantly higher than women in upper-level management and men in upper-level management on this scale, indicating that the middle-level men were more self-regulated, less impulsive and more controlled than the upper-level women and the upper-level men.

Although only one difference was found between the two groups of women in the CPI, there were a number of differences found between the two groups of men. On four out of the five primary scales reflecting leadership and interpersonal adequacy skills, there were significant differences between the two groups of men. Upper-level men were significantly more dominant, had a significantly higher capacity for status, scored significantly higher on the Social Presence scale and on the Self-Acceptance scale.

This indicated that the upper-level men possessed more of interpersonal skills and leadership qualities than the middle-level male managers.

There were fewer differences between upper-level men and middle-level women on these variables and no difference between upper-level women and middle-level women.

Unlike the upper-level and middle-level women, the upper-level and middle-level men differed significantly on their demographic profiles. The upper-level men were more likely than middle-level men to be married, have more children, be more educated, and be a first born or only child.

Regarding the MBTI, on all of the scales except the Thinking scale, upper-level women and middle-level men differed significantly. These two groups also differed significantly on the discrete scales of the MBTI except the Thinking/Feeling dichotomy. A higher percentage of the upper-level women preferred Extraversion to Introversion, a higher percentage preferred Intuition to Sensing, a higher percentage preferred Thinking to Feeling, and a higher percentage preferred Judging to Perceiving (Table 25). A higher percentage of the middle-level men preferred Introversion to Extraversion, a higher percentage preferred Sensing to Intuition, a higher percentage preferred Thinking to Feeling, and a higher percentage preferred Judging to Perceiving.

Differences between middle-level males and upper-level males on the MBTI were found on continuous scores on both the Thinking and Feeling end of that dichotomous scale, but only on the Sensing side of the Sensing/Intuition scales and only on the Perceiving side of the Judging/Perceiving scales. Middle-level males were significantly stronger sensors, and scored significantly higher on the Feeling variable. The middle-level males had a significantly weaker preference for Intuition and scored significantly lower on the Perceiving scale. As with the two groups of females, results of the discrete score analysis showed no significant difference in the preferences of the males.

As with the comparison between upper-level women and middle-level women on the FIRO-B, the upper-level women differed from the middle-level men on the Control (expressed) variable only. Upper-level women as well as upper-level men were more willing to take control, make decisions, and assume leadership than the middle-level males. No significant differences between middle-level men and middle-level women were found on this instrument, however.

Upper-level managers are more willing than middle-level managers, overall, to take control, exert leadership, and make decisions. There were no gender differences on this variable. Counselor educators can benefit utilize this information in helping to clarify the myths of gender

stereotyping. In working with women and business and industry, counselors and consultants can point out that women do not appear to be any less willing to be assertive, responsible, and controlling than men.

In summary, the results of these final analyses showed that middle-level men were most similar to upper-level women on work history variables. The upper-level and middle-level women looked more alike on personal demographics such as birth order, marital status, number of children, and educational background than did the two groups of males.

Middle-level males appeared to have the weakest personality variables reflecting leadership characteristics of the four groups. Upper-level men and upper-level women had the strongest leadership characteristics. Some studies have suggested that upper-level women have more in common with middle-level men than they do with upper-level men. This study did not confirm that finding. Regarding leadership characteristics, the upper-level women and the upper-level men were very similar and the middle-level women were more like them than were the middle-level men.

Implications

Counselor Educators and Counselors

Women in upper-level management positions did not score lower than men in upper-level management positions on leadership variables of the CPI. Counselor educators can

use this information to help alleviate persistent gender stereotyping regarding male managers as more effective managers. Counselors and counselor educators need to know characteristics that are perceived to be necessary for management effectiveness in order to work with women on career development and planning. Also knowing that the women who reach upper-level management positions are not deficient in these characteristics can help female clients regarding their perceptions of women in management and, therefore, their perceptions of themselves in management.

The proposition that women and men in leadership position differ on important leadership characteristics is not supported by this research. Women do not appear to be more sensitive to the motivation of others (CPI: Psychological Mindedness), more warm and supportive (FIRO-B: Affection-expressed), less willing to exert control (FIRO-B: Control-expressed; CPI: Dominance), more tolerant (CPI: Tolerance), or less self-confident (CPI: Self-Acceptance, Capacity for Status, and Dominance).

Regarding self-esteem, the self-acceptance scores for these upper-level women were more than one standard deviation above the mean for the general population (see Figure 1 in Chapter Four). These women felt better about themselves than do people in general.

It is important for counselor educators, counselors, and counselors-in-training to be aware that women in

management experience less of a sense of psychological and physical well-being than do men (CPI: Sense of Well-Being). They also experience more feelings of isolation, uniqueness, and resistance to the "status quo".

Does the increased stress and lack of well-being result from the multiple role demands on the women that the men may not experience? This study reported, however, that approximately 36% of the upper-level women were unmarried and 46% of the upper-level women had no children. Perhaps the alienation and stress originate more from the work environment than the personal demands.

Another consideration for counselor educators, counselors, and women, in general, is whether women who may perceive themselves as "unique" and who feel alienation as a result of that uniqueness self-select into management roles or does the increased "uniqueness" of their positions in a male dominated profession contribute to this result.

Studies by Barnett and Barach (1978), Hanlan (1977) and Instone, Major, and Bunker (1983) reported that women who were taking Business courses and female managers in research settings express lower self-esteem. This study does not support those findings for women in management. Upper-level and middle-level females were not less self-accepting or less self-confident than their male peers. Perhaps a pre-

existing high esteem is necessary to enter a predominantly male profession.

Studies by Broverman et.al. (1972), Schien (1973, 1975), and Basil (1972) reported that women also see men as possessing more characteristics that are appropriate for strong leadership. These attitudes were not assessed in this present study, but it could be hypothesized that women who are in upper-level management positions are less likely to integrate stereotypic norms (Socialization scale) and, therefore, be less influenced by stereotypic expectations.

Regarding the non-traditional demographics of marriage and children, helping women determine if they perceive professional success mutually exclusive of family commitment would prove beneficial. Have they made or do they have to make a choice and, if so, what might they gain and what might they lose by their choice?

Women in management were not "typical" on their MBTI preferences. The majority preferred Intuition to Sensing and Thinking to Feeling. An investigation into this issue could result in the finding that the women are very "typical" until they move into management positions and find that their preferences need to change in order to compete in the environment that is considered a "male-dominated" world.

All four groups reported more of a need to receive affection than they were willing to express affection (See Figure 3 in Chapter Four). A potential message for both

upper-level men and upper-level women is that often individuals receive what they express in regards to warmth, intimacy and caring. If one has a greater desire for warmth and caring than she/he is willing to express, there may be a deficit in this area of life and feelings of rejection and loneliness may be the outcome.

Another potential impact of this unbalanced profile on the Affection scale is that individuals who express a high need for control, which these women and men did, may moderate the possible negative effects of controlling behavior by expressing it through a warm and caring mode rather than an unaffectionate facade. Learning to express more warmth and affection could moderate possible negative outcomes from a high need to control. Also, it could benefit upper-level managers to investigate the impact of low expressed affection on those individuals in their personal lives who look to them for meeting their affection needs.

In examining the demographics regarding marriage and family of both the upper-level and middle-level women, one cannot overlook the fact that the women have made very different choices than their male counterparts. Of the upper-level men, 92% are married and 92% have one or more children. Of the middle-level men, 86% are married and 83% have one or more children. Do the women in management feel that they have to choose between their career and marriage

and/or parenting? Do these women experience frustration about their choices or are they comfortable with them? What kind of pressures do they experience from family, business associates, community, and possibly, self regarding their choices not to accept a more traditional path? All of these questions need to be addressed with women who are making career choices. To ignore the existence of the issue is to give power to circumstance rather than affirming that the individuals who are making the choices have the power and the capacity for making the choices that are affirming.

Organizations, Business, and Industry

The results from this study also have implications for business and industry as well as other organizations. Information presented here can be very useful for individuals in organizations who are working with company promotion plans as well as individual career plans. This study indicated that women do not lack necessary leadership characteristics. They are as assertive, willing to make decisions, self-confident, interpersonally skilled, and responsible as the men. Helping to educate individuals and organizations about reality could alter misperceptions and, perhaps, help alleviate existing gender discrimination regarding promotion.

The women in management experienced less sense of physical and psychological well-being and more feeling of alienation and "uniqueness". These areas might be addressed

through networking with their colleagues, especially other women. Networking and mentoring was not found to be as common with female managers as it is with male managers (Childress, 1986). Professional and personal support systems may be needed for and helpful to these women. Companies could become involved in helping with networking, mentoring, and support for women. Business and industry might also attempt to investigate ways of changing traditions that would make upper-level women less unique and less isolated.

The upper-level women scored higher than the male managers on Achievement via Independence, indicating higher needs to express creativity and independent thought in their achievement. Finding ways to maximize and channel the achievement orientation, the creativity, independence, and entrepreneurial skills of these upper-level women could be very helpful to organizations. Understanding that these needs exist and seeing them as positive and potentially productive for the organization might reduce feelings of alienation on the part of the upper-level women. It could be useful to know if higher need for utilizing independent thought worked for or against these women.

The results of the MBTI analysis indicated that women and men in upper-level management positions and women in middle-level management positions differ from the general population in their preference for Intuition over Sensing.

Intuition is often devalued as unscientific and is seen as a "feminine" trait -- "a woman's intuition" (Powell, 1988). This study helps to validate the contribution of intuition. Organizations could benefit from examining the positive contribution of intuition as well other characteristics considered more "feminine" such as cooperation, valuing of affiliation, and collaboration (Gilligan, 1982; Belenky,, Clincy, Goldberger, & Tarule, 1986).

Extraversion skills are typically valued as a needed management characteristic. Assisting organizations in realizing that women are not inclined to be lacking ability regarding extraversion and inclusion behaviors could aid in expanding the number of women allowed to move into upper-level management. It would be a step in breaking down stereotypic perceptions by utilizing concrete data.

A higher percentage of women than men in this study preferred Extraversion to Introversion. The upper-level women also indicated equal interpersonal adequacies as measured by the CPI Sociability and Social Presence scales.

Women, on the average, had less variation between their Thinking and Feeling scores and their Judging and Perceiving scores. This balance may give them a greater selection of behaviors from which to draw. Assisting managers in utilizing skills from each preference could increase their effectiveness and their versatility in responding to

problems, making decisions, being creative, organizing and planning.

Lastly, removing the labels of 'feminine' and 'masculine' from effective ways of behaving would be beneficial in reducing the impact of gender stereotyping and possible gender discrimination in the work force. Bem (1974) discusses the concept of androgynous people. These individuals view themselves as exhibiting a high number of both feminine and masculine characteristics and behaviors. Management is an androgynous role and requires the best of androgynous behaviors.

Recommendations

This study suggests, along with some others (Donnell & Hall, 1980; Lee & Alvares, 1977; Rosen & Jerdee, 1978), that there were few significant differences in leadership characteristics between women and men in upper-level management positions. As with the study by Morrison et. al., differences on intrapersonal values regarding alienation were found. One avenue for further research would be to examine the causes for the feelings of alienation expressed by these women, as well as the women in middle-level management positions.

Research investigating the behavior of women and men in upper-level management positions would be very helpful. How do these personality characteristics affect behavior? Even

though there are no significant differences found in leadership skills, indicating no support for 'feminine' versus 'masculine' leadership, do women and men behave significantly differently in exerting leadership.

Extensive research is needed regarding the investigation of management mobility for non-white managers. This study did not address any comparisons with managers of color and, therefore, the results cannot be generalized to non-white individuals or groups.

The significant differences on the MBTI would be another avenue for research. It would be very helpful to know if the gender differences found affect behavior in the work place, especially regarding decision-making, planning and organization.

Another question for future research is how generalizable are these results regarding gender differences. Do women who choose to work in a management role and strive for promotion tend to be women who have characteristics that would be considered more masculine or androgynous than women in general. The middle-level female managers tended, on the average, to show stronger leadership and interpersonal adequacy personality characteristics than the middle-level male managers. Are females who enter management, on the average, stronger leaders than the average male who enters management?

This study controlled for age and time as manager, but it would also be interesting to look at women in management longitudinally to see if their personality characteristics alter as they move up the corporate ladder. Do they change in order to blend more with the expectations of this predominantly male environment.

Lastly, this study found that women managers were more often single than men and were much more likely not to have children. Research to discover differences in feelings of stress and alienation between women who have a family and those who do not is needed. It could be assumed that women would experience less sense of well-being because they have to balance too many roles and respond to more demands than their male counterparts. Since many of them did not have the role of wife and mother, perhaps the stress and alienation is not a result of any facet of their personal lives.

Summary

This study evolved out of an interest in women and their progress in moving up the management ladder. The findings support the contention that upper-level women are not lacking in characteristics such as assertiveness, self-confidence, willingness to make decisions and take control, and interpersonal skills that are perceived as being needed to be a successful manager.

Information gathered from this research can be helpful to counselors in the work force as well as counselor educators. As counselors work with women who are making career decisions, understanding a "profile" of the women who are making it to upper-level management positions can be very helpful. Knowing that women in management positions differ from men in management positions on some personal lifestyle characteristics is also very useful information in working with clients who are making career choices. If they want to "succeed" in management, is it necessary that they choose between their career and a family? What might be the "price" for moving into upper-level positions if you are one of a very small number of women?

Counselor educators need to understand possible biases that exist regarding the advancement of women in the work force. Training counselors to be aware of gender bias and how to help clients work with it and how to assist in alleviating it is part of our ethical commitment.

Counselor educators also train managers. Many of the individuals who graduate from counselor education programs will work in management positions. Understanding what characteristics are expected in management and how those characteristics are related, if at all, to gender differences can be very important in training counselors who will be managers.

Lastly, this information can be very helpful to organizations. Understanding the strengths of women and attempting to investigate the discrimination in promotion and salary could result in new awareness for organizations. Even though management is typically viewed as a "masculine" profession, this study did not support that the men were any stronger in the "masculine" characteristics than the women.

Loden (1985), in her book, How to Succeed in Business Without Being One of the Boys, spends her last three chapters discussing concrete action that women, men, and organizations can take to recognize and take advantage of the contributions women could and do make through leadership roles. The first suggestion for both the women and the men is to learn about the issues. It is hoped that this research will assist in that step.

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APPENDIX A
PARTICIPANT BACKGROUND FORM

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APPENDIX B
SUPPLEMENTAL BIOGRAPHIC INVENTORY

CENTER FOR CREATIVE LEADERSHIP

5000 Laurinda Drive
Post Office Box P-1
Greensboro, North Carolina 27402-1660
919-288-7210, Telex 3772224, FAX 919-288-3999

March 26, 1990

Ms. Pat Robertson
534 Lindley Road
Greensboro, NC 27410

Dear Pat:

This is to confirm that you have our permission to include both our Biographic Inventory and the Supplemental Bio Form in the appendices of your doctoral dissertation.

Best of luck with this research.

Sincerely,



Ellen Van Velsor, PH.D.
Director
Leadership Technologies Research

APPENDIX C

LETTER FROM CENTER FROM CREATIVE LEADERSHIP

GRANTING PERMISSION FOR STUDY

CENTER FOR CREATIVE LEADERSHIP

5000 Laurinda Drive
Post Office Box P-1
Greensboro, North Carolina 27402-1660
919-288-7210, Telex 3772224, FAX 919-288-3999

November 7, 1989

Ms. Pat Robertson
University of North Carolina
Greensboro, NC

Dear Pat:

This is to confirm our agreement regarding your use of the dataset derived from our CCL test database.

We have agreed that Dianne Phillips, Research Analyst in the Leadership Technologies Research Group, will prepare a dataset for your use and will arrange for its transfer to the UNC-G VAX. This dataset will include the following data: biographical, Myers-Briggs, Firo-B, CPI and the Supplemental Bio. The data will be stripped of participant names and other identifying information (such as address, company, program date, etc.).

We have agreed that this data will be used solely for the purpose of data analysis for your doctoral research and that you will acknowledge the Center as your data source in your dissertation and in any subsequent publication of this material.

Good luck with your research!

Sincerely,



Ellen Van Velsor, PhD
Director
Leadership Technologies Research

cc: David DeVries
Mary Ellen Kranz
A. Dianne Phillips