

Personal Characteristics and Career Choice Considerations of
Female Secretarial and Management Students

by

Teresa I. Sztaba

A thesis
presented to the University of Manitoba
in partial fulfillment of the
requirements for the degree of
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in
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PERSONAL CHARACTERISTICS AND CAREER CHOICE CONSIDERATIONS
OF FEMALE SECRETARIAL AND MANAGEMENT STUDENTS

BY

TERESA I. SZTABA

A thesis submitted to the Faculty of Graduate Studies of
the University of Manitoba in partial fulfillment of the requirements
of the degree of

MASTER OF ARTS

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Abstract

Given the large number of studies on organizations and the roles assumed by employees, it is notable that little research has focused on secretaries, the women who occupy one of the most traditionally feminine of occupational roles. The present study compared secretarial students with management students in order to determine if the two groups differed on characteristics that have been shown to differentiate between traditional and nontraditional career women. The following measures were administered to 55 female secretarial students and 55 female management (Bachelor of Commerce) students: (a) The Work and Family Orientation Questionnaire (WOFO); (b) the Attitudes toward Women Scale (AWS); (c) the Powerful Others, Personal Control, and Chance Scales (I-E Scale); (d) the Personal Attributes Questionnaire (PAQ); and (e) a measure of career choice considerations. A variety of background information was gathered. Principal components analysis and multivariate analysis of variance, followed by canonical discriminant analysis and examination of univariate Fs and means, were employed in analyzing the results. The variables of achievement orientation, locus of control, sex-role identity, and attitudes toward women were significantly related to choice of program of studies when considered simultaneously. A significantly greater percentage of the secretarial students than of the management students identified with a feminine sex-role orientation,

whereas more of the management students than the secretarial trainees were classified as masculine in sex-role identity. Students in the secretarial group were higher in external locus of control, or the belief that powerful others and chance determine one's life events, than were the management students. Two aspects of achievement motivation--competitiveness and desire to master difficult intellectual challenges--were higher in Commerce students than in secretarial students. There were no differences between the two groups in terms of their attitudes toward women's roles and rights. Secretarial students were more likely to have chosen their training program because of desire to interact with others than were Commerce students; management students were more likely to have chosen their program because of extrinsic characteristics of their desired job than were secretarial students. The results are discussed with respect to career orientation, role expectations, sex-role socialization, and the denigration of secretarial work.

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Although only one name appears on the cover of this thesis, the project was by no means a one-woman show. I have been fortunate in having several special people who have helped me along the path to completion of this paper.

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Introduction

It has been attested that the doors to most occupations are beginning to open for women (Lips & Colwill, 1986) and that many organizations are establishing affirmative action programs to increase the entry of women into prestigious, high-paying, male-dominated professions (Quaintance, 1984). Yet the reality of women's employment patterns is that women workers still dominate the lowest paid and least protected sectors of the labor market. In 1983, 57% of all women in paid employment held clerical, sales, or service positions (Canadian Advisory Council on the Status of Women [CACSW], 1983); and two years later the clerical sector alone accounted for nearly one third of the female labor force (CACSW, 1985).

Standley and Soule (1974) describe two major distinctions between "feminine" and "masculine" careers: (a) the sex ratio of the occupation, that is, whether men or women predominate numerically among its workers and (b) the nature of the work role, that is, whether the usual activities of the job are thought to be more compatible with traditional feminine or masculine attitudes, skills, and values. Perhaps the most feminine of all occupations, according to these criteria, is secretarial work, in which women are undoubtedly in the majority. In fact almost all Canadian secretaries, stenographers, and typists are women

(Abella, 1984). Furthermore, the nature of the secretarial role has been traditionally viewed as congruent with stereotypically feminine characteristics. This viewpoint has been supported by research: Students rating occupations from 1 to 7, with 1 being masculine and 7 feminine, rated private secretary and receptionist as 6.250 and 6.333 respectively, with only registered nurse and manicurist rated as more feminine (Shinar, 1975). Within occupations, actual percentage distributions of employees by sex have been shown to closely approximate sex-role stereotypes (Harmon, Kass, Tinsdale, & Moreland, 1979).

Despite the continued tendency for large numbers of women to choose secretarial work, a secretarial shortage has plagued business for several years (Dodd, 1985; Stead, 1980). Various groups, often with widely divergent perspectives, have been concerned about these patterns. Feminists and others who are aware of the problems of women in female sex-segregated occupations might well question why secretarial work in its current state still appeals to women; businesspersons are realizing the need to consider which aspects of that appeal are fading (Colwill, 1985). The problem, then, is essentially two-faceted: why do some women chose secretarial work, despite its low pay, lack of opportunity for advancement, and stressful, repetitive job duties (Kanter, 1977); and why do others avoid it, despite

the current employment demand? Few definitive answers have been found. Generally, researchers have tended to focus on the relative anomaly of women working in occupations which are nontraditional for their sex; only a few have paid attention to secretaries--those women who occupy one of the most feminine of positions for female workers.

The Secretarial Role

In her research on organizational behavior, Kanter (1977) studied the several thousand secretaries, all women, of a large corporation. She found that training opportunities were poor and that the secretarial career ladder was short; in almost all cases the peak position attainable was that of executive secretary. The few women who reached that position early in their careers no longer had a higher position to which they could aspire. Status and promotion were determined, not by ability or by the difficulty of job duties, but by affiliation with a high-status boss. Kanter suggests that this derived status tends to promote and perpetuate a patriarchal system in which the secretary assumes the supportive, nurturing role of an "office wife."

The secretary as "office wife" has been a tradition since the beginning of widespread use of the typewriter, which coincided with a gradual change from clerical work being performed wholly by men to its being assumed almost

entirely by women (Davies, 1982). As this change in occupational sex dominance occurred, so too did a change in the status of clerical work, from respected apprenticeship training to low-status, dead-end assistantship. (It is interesting to note that at one time women were refused office work because of their alleged physical and biological unsuitability to such work--the same argument which is now used in support of the superior suitability of females for clerical positions [Davies, 1982]).

The female secretarial role has mirrored in many ways the traditional role of women in society. The private secretary serves as a buffer or "gatekeeper" between the employer and the outside world (Vinnicombe, 1980) and as a deferent servant and loyal extension of her employer (Davies, 1982). A great deal of emphasis is placed on the secretary's appearance and personality (Davies, 1982); requests for secretarial employees have often included specifications as to height, age, color of hair, and sex appeal. Similar to the duties of housework, the tasks performed by the secretary are often repetitious, exhausting, highly stressful, and intellectual unchallenging. Secretaries are given a great deal of responsibility but little autonomy or authority. Yet, as shown in Kanter's (1977) study, the secretary has had a certain associative power and has been encouraged to take satisfaction in being the "woman behind the man" at the

office. Thus, this highly traditionally feminine role of secretary contains a number of elements which at first glance may be appealing to today's female employee, raised in a society which encourages women to support men.

Few researchers have surveyed secretarial staff to ascertain the elements which contribute to job satisfaction or dissatisfaction. In one of the rare studies of this kind, Vinnicombe (1980) completed a comprehensive investigation of the functions, roles, and attitudes of secretaries in over thirty British companies. In general, the secretaries were dissatisfied with the overall content of their jobs. They viewed their duties as tedious and monotonous, and felt that they were capable of handling more responsibility. A number of the secretaries considered their job pressures to be excessive, and they frequently skipped lunch breaks and worked overtime. On the positive side, the women in Vinnicombe's study were satisfied with their salaries, and generally felt strong work commitment to their bosses, by whom they felt well treated.

To examine the reasons why women initially choose secretarial work, Silverstone and Towler (1984) administered questionnaires to 200 British secretaries in 1981. They compared their answers to the responses of 500 secretaries sampled in 1970. In 1970, 44% said that they chose secretarial work because they were "unable to do what they

really wanted or could not think of anything else to do." In the 1981 sample, only 19% cited this reason. Instead, approximately one half said that "good pay" had been an important influence on their choice, and that they expected a "plentiful supply of jobs" and interesting work. More of the 1981 sample (33%) as compared to the 1970 sample (24%) thought that secretarial work would offer a steppingstone into other kinds of employment. In other words, women in the more recent sample were more likely to expect job mobility and career advancement through their choice of secretarial work. This finding is particularly unusual in light of the fact that 60% of the sample said that they had no opportunity for promotion in their present jobs.

Some women, then, appear to be entering secretarial work for misinformed, or certainly misguided, reasons. It is possible that some women hold the misconception that secretarial work is prestigious and that it offers good opportunities for advancement; perhaps many women choose to become secretaries with their eyes open to its many disadvantages. Why, then, are large numbers of women still choosing secretarial work? Some answers may be provided by two different areas of research--the literature relating to theories of women's career choice and the research comparing women in what Standley and Soule (1974) called feminine jobs with women in masculine jobs.

Theories of Women's Occupational Choice

A number of general theories of individual occupational choice have been advanced. Developmental theories (Super, 1953) view occupational choices as developing gradually in a series of stages. Super defines career in a broad sense as the sequence of major positions occupied by persons throughout their lives. These positions include roles as student, employee, and pensioner, as well as avocational, familial, and civic roles. Choice of roles and adjustment to these roles is a continuous process, a series of life stages involving "growth, exploration, establishment, maintenance, and decline" (Super, 1953, p. 189).

Other theories involve applications of general behavior theory; for example, Krumboltz's Social Learning Theory of Career Selection (Krumboltz, Mitchell, & Jones, 1976) describes occupational decisions as the outcomes of a lifelong series of learned responses. Four categories of factors which influence career decision are included in this theory: genetic endowment and special abilities (including sex), environmental conditions and events, learning experiences, and task approach skills.

A variety of other disciplines have attempted to explain vocational choice. Personality-based theories, such as Holland's (1959) well-known typology theory, consider career orientations and preferences in terms of personality types

(e.g., "enterprising"). Decision theories, like Vroom's Expectancy Theory (cited in Graham, 1982), examine decision making based on the expected consequences of alternative decisions. Workers make choices in order to satisfy needs and to gain desired rewards; if the need is strong enough, they will make an effort toward career change or development. Based on the study of social stratification, sociological theories have generally focused on the status dimensions of careers as motivators for choice (Marini & Brintin, 1984). Economists, too, have devised an explanation for occupational selection by expanding the theory of human capital to include career decisions. This model describes how an individual in a particular period of the life cycle allocates time between work, leisure, and human capital investment "in order to maximize the present value of utility" (Polachek, 1979, p. 139). Economists have been able to devise a means of restating this model in mathematical terms for each individual (Polachek, 1979).

Until recently, the occupational behavior of women in particular has not been treated comprehensively, largely because female employees have been viewed as "individually transient and collectively insignificant due to the type and level of jobs available to them in our society" (Vetter, 1973). Yet, general theories of vocational selection do not, in themselves, explain why males and females select different

occupations (Marini & Brinton, 1984). In order to address this problem, a number of researchers have focused specifically on women's career choices and on the ways in which these choices differ from those of men.

Strange and Rea (1983) asked university students in either male- or female-dominated majors to respond to a series of 10 career choice considerations by indicating the importance of each consideration in their choice of major. Both male and female students seemed to choose their major for highly traditional reasons: male-dominated fields were chosen for their status and potential for material gain and female-dominated fields for their value on service and interpersonal skills. These results are consistent with Stake's (1978) finding that women tend to make occupational choices based on intrinsic factors such as work enjoyment and satisfaction, whereas men place more emphasis on extrinsic concerns like job security.

Several other studies have shown that the reasons women cite as having been important in their choice of careers are similar to those generally cited by men. Male and female college business students in Brenner and Tomkiewicz's (1979) study made similar choices when asked to rank a list of desirable job characteristics. In Rand and Miller's (1972) work, junior high school, high school, and college females' top reason for choosing an occupation was "personal

satisfaction and work enjoyment", but "rate of pay" was ranked a close second by the high school and college women. Female high school students in Gaskell's (1981) study entered commercial courses despite finding them boring because they believed that these courses would open the door to job opportunities. Thus, these girls were willing to sacrifice intrinsic satisfaction for more extrinsic career considerations.

Today, most researchers assume that the career development of women is not fundamentally different from that of men, but is far more complex than men's because of the attitudes, sanctions, and role expectations of the sex-role-socialization process (Fitzgerald & Crites, 1980). Thus, researchers who have been interested in women's vocational choices have found that the career progress of women tends to be impeded by several factors, such as (a) discouragement from family members (Goodale & Hall, 1976), (b) discouragement from counselors (Ahrons, 1976; Fitzgerald & Crites, 1980), (c) discrimination against competent women (Hagen & Kahn, 1974), (d) men's attitudes toward women in management, (e) myths regarding female competence and commitment, (f) lack of nontraditional role models, and (g) sex-role stereotypes (O'Leary, 1974).

It has been noted that external barriers to equality and career progress eventually become internalized (Barnett,

1975). Researchers have questioned whether women's internal barriers might cause them to prefer less prestigious occupations (Barnett, 1975) or to limit their own advancement (Shann, 1983). Studies have demonstrated that sex typing of behavior is established at an early age (Kohlberg, 1966). If this sex typing leads to an internalized acceptance of sex-role stereotypes, individual career choices may be limited to acceptable sex-role-appropriate occupations. Those few women who occupy nontraditional positions seem to have been able to reject stereotypical sex roles and, in fact, appear to be more similar to their male colleagues in needs, motives, and values than to other women in traditional fields (Shann, 1983).

Betz and Hackett (1981) have proposed a "self-efficacy" approach to women's career development, based on social learning theory (Bandura, 1977). They assert that the sex-role socialization of females, which includes the internalization of barriers, is less likely than that of males to encourage the development of strong career-related self-efficacy expectations. Therefore, according to Betz and Hackett, a woman is less likely than a man to believe that she has the ability to perform a given task successfully and is less likely to engage in activities that will increase or strengthen feelings of self-efficacy. In their research, Betz and Hackett examined self-efficacy expectations of men

and women regarding jobs that were either traditional or nontraditional for their sex. Whereas males reported equal levels of self-efficacy for traditional and nontraditional occupations, female self-efficacy expectations were significantly lower for nontraditional occupations. The latter finding was particularly true for professions in which emphasis is placed on mathematical ability or interest (e.g., accounting and engineering).

O'Leary (1974) reviewed a number of other internal factors which have been studied in the attempt to understand women's career choices. These factors include self concept, role conflict, achievement motivation, fear of failure, and fear of success. She concluded that, while each of these factors or potential "attitudinal barriers" to occupational aspirations are significant, no comprehensive hypothesis of women's career development has been confirmed.

Pioneer versus Traditional Career Women

Until the early 1970s, the literature on women's career choices involved comparisons between "homemakers" and "career-oriented" women. This dichotomous division incorporated the idea that all women with careers, regardless of the type of work performed, were somehow the same. In the 1970s, researchers began to approach the issue by dividing the career groups into "pioneers" (women in male-dominated occupations) and "traditionals" (women in female-dominated

occupations; Wolkon, 1972), or "role innovators" and "traditionals" (Tangri, 1972). This division has proven to be a more useful construct than the earlier dichotomy, particularly in light of research that demonstrates greater similarities between traditionals and homemakers than between traditionals and pioneers (Wolkon, 1972).

Background Characteristics

In considering the reasons for women's choice of stereotypically masculine careers, a number of personal and familial background variables have been investigated. A consistent research finding has been that children's sex-role attitudes are less traditionally stereotyped if the mother is employed outside the home than if she is not (Marini & Brinton, 1984). Although there is considerable evidence that maternal employment encourages a strong career orientation in women, there is conflicting evidence that it affects women's entry into nontraditional fields. Tangri (1972) presented a socialization typology for role innovation in which the education and work status of the mother interacted to determine her role model status. The best maternal predictors of a daughter's role innovation were her mother's current employment status, innovativeness of occupation, and level of education (women were more likely to take the mother as a role model if she had at least a B.A. degree). Other studies (Almquist, 1974; Almquist & Angrist, 1970)

demonstrated that among students whose mothers were currently working, the mothers of career-oriented women who chose masculine program of studies were more likely to be employed full time than were the mothers of women who chose feminine programs. Students with nontraditional career plans tended to have mothers with higher education than did students with more traditional career plans. In addition, it has been reported that masculine sex-role typing of her mother's employment is the critical factor influencing a woman's entry into a traditionally male occupation (Marini & Brinton, 1984).

Other research (Lemkau, 1979; Lunneborg, 1982; Standley & Soule, 1974) has shown that the emotional support of and identification with both parents, as opposed to either mother identification or father identification, fosters daughters' involvement in careers that are nontraditional for their sex. This nontraditional orientation is likely to be developed within a generally supportive environment in which other family members, peers, and teachers are supportive of the individual's career choice.

A wide variety of other background factors have been studied in order to determine their influence on women's choice of pioneer or traditional occupations. Some of these are (a) marital/familial status and socioeconomic status (Astin & Myint, 1971), (b) secondary school counselors'

judgements of occupational sex appropriateness (Medvene & Collins, 1976), (c) actual and self-estimated knowledge of masculine and feminine jobs (Yanico & Mihlbauer, 1983), (d) women's perceptions of male views of the feminine ideal (Hawley, 1971), (e) differential training of female students in mathematics and science (Marini & Brinton, 1984), (f) streaming of students into high school commercial courses (Lips & Colwill, 1986; Marini & Brinton, 1984), and (g) work experience and school activities (Almquist, 1974).

Personality Characteristics

While various background characteristics may be related to women's choice of careers that are nontraditional for their sex, the characteristics that differentiate role innovators and traditionals most strongly are personality-motivational factors (Tangri, 1972). As compared to women in feminine professions, women in masculine professions have been found to be more autonomous, more individualistic, and more highly motivated by internally-imposed demands to perform to the best of their abilities. They also express more doubts about their identity and their ability to succeed, which, according to Tangri (1972), reflects the fact that "the roles they have chosen are more difficult in standards of performance and more ambiguous in social meaning." Women who prefer male-dominated occupations more often prefer higher income and freedom from close

supervision, and are adamant about wanting to use their special abilities. Those who choose feminine occupations prefer working with people, helping others, and adhering to their parents' ideas of success (Angrist & Almquist, 1975). Innovators are more career-committed than are traditionals, more likely to feel that their professional activities are at least as important as those of their husbands, and seem to more successfully integrate the roles of homemaker and worker (Nagely, 1971).

More recently, considerable research has focused on personality characteristics which have consistently related to traditionality of women's occupational preferences. Four of these characteristics are discussed below: sex-role identity, feminist attitudes, locus of control, and achievement and family orientation.

Sex-role identity. Sex-role identity refers to the degree to which persons regard themselves as possessing sex-stereotyped characteristics (Marshall & Wijting, 1980). The terms "masculine" and "feminine" have been used to describe those who regard themselves as either high in masculine sex-stereotyped characteristics or high in feminine sex-stereotyped characteristics, respectively (Bem, 1974). Researchers in the area of sex-role identity also frequently use the term "androgynous" to label those who are high in both sets of characteristics, and "undifferentiated" to label

those who are not high in either set of characteristics (Helmreich & Spence, 1978). It seems logical to assume that women who gravitate toward occupations which have been stereotyped as masculine would be more likely to view themselves as possessing a masculine sex-role identity. Masculine-typed, high-status careers have focused on getting the job done or the problem solved, whereas feminine-typed careers have been associated with an expressive, feminine orientation; concern for others; and group harmony. Therefore, one would expect feminine-typed women to choose traditionally feminine careers.

Considerable research has shown this, in fact, to be the case. Occupational choice has been found to relate to the degree to which an occupation is perceived to be consistent with the self concept (Greenhaus, 1971). Strange and Rea (1983) found females enrolled in female-dominated majors to be primarily feminine according to their scores on the Bem Sex Role Inventory (BSRI; Bem, 1974), whereas the largest proportion of those in male-dominated majors were masculine. Wolfe & Betz (1981) also demonstrated that masculine-typed women were most likely to make nontraditional occupational choices, but that women choosing traditional careers were equally likely to be feminine, androgynous, or undifferentiated.

In Holms' (1985) study, high school girls who obtained

high grades in school identified with a masculine or androgynous sex-role, and had more liberal attitudes toward women, high commitment to career, and high educational goals. Feminine or undifferentiated girls with more traditional attitudes toward women demonstrated lower commitment to career and lower educational goals.

Marshall and Wijting (1980) considered career orientation to be related to two separate concepts, which they termed "career centeredness" and "career commitment." Career commitment implies an intention to work steadily throughout one's life. The life-style associated with career centeredness is one in which a career is considered to be more important, demanding more time commitment, and offering greater satisfaction than other areas of life, including the family. The career centeredness orientation is considered to be one which is not generally positively sanctioned for women. It was found that a masculine sex-role identity was more related to career centeredness than to career commitment, the orientation which is generally considered appropriate for women today. Femininity had an equal negative relation to both characteristics, which suggests that femininity was as debilitating for sex-role-appropriate career orientation as it was for those orientations which were seen as sex-role-inappropriate. Women with androgynous (high masculine/high feminine) or undifferentiated (low

masculine/low feminine) identities were not necessarily highly career-oriented.

Considerable research has demonstrated the relationship of sex-role identity to various factors of career orientation. In one study, both masculinity and the absence of femininity predicted women's achievement, with masculinity positively correlated with career achievement (Wong, Kettlewell, & Sproule, 1985). In comparing college women in engineering with those in home economics, Yanico, Hardin, and McLaughlin (1978), using the BSRI, found that more women in engineering identified with a masculine sex-role identity than did women in home economics. In a three-year follow-up study, they also found that women in engineering who changed majors tended to persist in their choice of masculine sex-typed majors or careers (Yanico & Hardin, 1981). Several others have found feminine sex-role identity and traditional beliefs about the importance of being married and having children to be significantly related to traditionally feminine career and educational choices and to inhibited achievement behavior (Harren, Kass, Tinsley, & Moreland, 1979; O'Leary & Hammock, 1975; Trigg & Perlman, 1976; Waddell, 1983).

Feminist attitudes. Because sex-role identity relates to career choice, it is not surprising that women's attitudes toward women's roles (i.e., their levels of identification

with a feminist orientation) seem to correlate with career choice as well. Feminist attitudes have been measured in a number of ways in several studies and have, in all cases, distinguished between pioneer and traditional women.

Self-designation of the title "Ms" was utilized in one study as an operational definition of the acceptance of feminism (Swatko, 1981). Those women who called themselves "Ms" were more likely to be intellectual, analytical, critical, and independent; the self-designation also indicated a greater tendency to aspire to occupations with a higher percentage of male than female employees.

Feminist attitudes have been consistently related to choice of nontraditionally sex-typed careers or college majors (Lyson & Brown, 1982; Orcutte & Walsh, 1979). Spence and Helmreich's (1972) "Attitudes toward Women Scale" (AWS) has been used in numerous studies to investigate this relationship between feminism and career choice. Female college students majoring in male-dominated fields have more liberal attitudes, as measured by the AWS, with respect to the vocational, educational, and intellectual roles of women than do students in traditional areas of study (Crawford, 1978). Those with more liberal attitudes on the AWS also are higher in self-actualization (Hjelle & Butterfield, 1974), and score lower on measures of identity crisis (Stein & Weston, 1982) and higher on male occupational interest scales

(Tipton, 1976). Women who are traditional in their attitudes toward women tend to rate career as being less central in their lives (Illfender, 1980), are more likely to choose female-dominated careers (Harren, Kass, Tinsley, & Moreland, 1979), and have lower commitment to career and lower educational goals (Holms, 1985) than do women with more liberal attitudes.

Locus of control. In his theory of internal-external locus of control, Rotter (1966) states that individuals interpret events in one of two ways. An "internal" person believes that an event is contingent upon his or her own behavior or characteristics; a person with an "external" locus of control attributes events to external forces such as luck, chance, fate, or the control of powerful others.

Locus of control relates to career choice in several ways. Students with an internal locus of control tend to make more decisive educational and vocational choices than do those with an external locus of control (Kishor, 1981). Wong, Kettlewell, and Sproule (1985) demonstrated (although not by using the I-E Scale) that feminine sex-typed women, who tend to choose feminine jobs, are more likely to make external attributions for success. In other words, they tend not to attribute their career performance to ability and effort, but to external variables, such as chance or luck. Lastly, in one of the few studies involving secretaries,

Waddell (1983) found that female entrepreneurs and managers were significantly higher in internal locus of control, as measured by Rotter's I-E Scale, than were secretaries.

Achievement and family orientation. Young women tend to make their occupational choices from a narrow range of sex-role-appropriate jobs (Kenkel & Gage, 1983). This may occur, as Holms (1985) suggested, because of the anticipated conflict of domestic and work roles. Thus, according to Holms, women may choose female-dominated jobs with high turnover rates in order to facilitate re-entry into the job market after taking time off to deal with familial responsibilities.

As discussed previously, a great deal of research has focused, until recently, on the perceived dichotomy of homemaking or career orientation. Thus, an achievement orientation and a family orientation have been viewed as opposite ends of a continuum, with high work orientation implying low family orientation, and vice versa. The literature has not conclusively demonstrated the verity of this view, however. In fact, high career commitment and high marriage/family commitment often go hand in hand (Fassinger, 1985; Holms, 1985). In a sample of female college students (Parelias, 1975), commitment to marriage and motherhood was generally strong. Among those planning to combine marriage, motherhood, and a career, there was an increasing acceptance

of a combined career-homemaking pattern without interruptions for child rearing.

Some research, however, has indicated a negative correlation between career commitment and family orientation. For women more often than men, the choice of marriage and parenthood is often made at the expense of occupational achievements. In an 11-year study of high-school graduates, sex differences in achievement grew larger between the 5- and 11-year follow-ups as more women in the sample became wives and mothers (Card, Steel, & Abeles, 1980). Women became less achievement-oriented as familial responsibility increased, possibly as a result of the realistic difficulties involved in juggling several demanding life roles.

Other researchers have considered homemaking commitment, defined as interest in having a home and family, to be at the opposite pole to career commitment on a linear continuum. Using this model, Farmer (1981) found homemaking commitment to negatively predict long-term career motivation, although the effect was not large. Richardson (1975) demonstrated similar findings: Women whose self concepts were congruent with values of home and family were not highly career oriented. Moreover, Lyson and Brown (1982) found that female home economics students were more likely than female agricultural students to believe that women should work full time only before they have children, and that a woman's real

fulfillment comes from motherhood.

As discussed earlier, traditional career women tend to have lower career salience (i.e., the degree of centrality of the career to their lives) than do pioneer career women. A more complex and perhaps more useful way of looking at this pattern has been suggested by Richardson (1974), who differentiated between career orientation and work orientation. Career-oriented women perceived career as being of primary importance in their lives and were highly career-motivated. Women with a work orientation had well-defined occupational goals and placed a high value on both a career role and marriage and family responsibilities. Career-oriented women aspired to higher-level, masculine occupations, whereas work-oriented women tended to choose traditionally feminine occupations.

Supporting Richardson's theory is Cochrane's (1983) study, in which students with higher status professional aspirations were found to have stronger career orientations than did students with lower career aspirations. These findings are in keeping with the research of Greenfeld, Greiner, and Wood (1980), who demonstrated that women in male-dominated positions rated success as more important to their feelings of well-being than did women in female-dominated positions. Women in feminine jobs rated the importance of their work higher than did women in masculine jobs.

Clearly, the research involving differences between women in feminine occupations and college majors versus women in masculine occupations and college majors has been extensive. Although controversy still exists as to the exact nature of the differences between role innovators and traditionals, several background and personality variables have consistently been related to traditionality of career choice. The study of personality-motivational factors such as sex-role identity, locus of control, feminist orientation, and achievement motivation has undoubtedly made a significant contribution to our understanding of women's occupational choices.

Models of Women's Career Choice

It is unlikely that any one of the previously discussed characteristics solely accounts for women's choice of occupation. Instead, a number of background factors and personality characteristics interact to determine vocational selection. Several studies have indicated the influence of combinations of factors in distinguishing between groups of women in varying career roles. For example, Crawford (1978) determined that the most critical factors were mother's educational level and employment status, sibling interaction, feminine role perception, and attitudes toward women's sex roles. Compared with women in nontraditional occupations, women in traditional occupations (a) were more conservative

with respect to marital relationships and obligations; (b) had less educated, non-employed mothers; (c) had more restrictive attitudes about appropriate behavior for women; and (d) were more likely to have brothers as adjacent siblings. In another study, Harren, Kass, Tinsley, and Moreland (1979) found that women who identified with feminine characteristics, had traditional attitudes toward women's roles, and used few constructs in judging female-dominant occupations tended to choose sex-role stereotypical occupations.

In a more specialized look at career choice, Waddell (1983) compared groups of female secretaries, managers, and owner/entrepreneurs in order to determine variables which predicted occupational choice in self-employed women. Female entrepreneurs and managers were significantly higher than secretaries in achievement motivation, internal locus of control, and masculine sex-role orientation.

Although few attempts have been made to test a more comprehensive model of factors affecting women's career choice, Fassinger (1985) successfully tested eight models of college women's career choice using structural equation modeling and the LISREL VI computer program. The most plausible model suggested that women's career choices are determined by the influence of their orientation toward family (desire for marriage and children) and career

(attitudes toward women and career salience). This orientation is in turn determined by a combination of ability (measured by scholastic aptitude tests [SAT], high school grade-point average [GPA], and college GPA), achievement orientation, and feminist orientation (measured by the use of the title "Ms" and willingness to call oneself a "feminist"). Ability, in addition to its indirect effect on career choice by means of its influence on career orientation, also directly affects career choice. Achievement-oriented feminist women of high ability demonstrated strong career orientation and strong family orientation. This career/family orientation led to career choices that tended to be nontraditional for women and high in prestige.

In summary, there is as yet no definitive model which explains women's career choice patterns. The complexity of these patterns, resulting inevitably from the many roles adopted by today's women, has made the development of comprehensive theories a formidable task. A large number of critical personality, background, and attitudinal factors have been considered in the effort to understand women's vocational selection process, with a particular emphasis on the differences between role innovators and traditional career women. Secretaries, who work in a highly traditional, feminine area, have largely been ignored in the career literature. An understanding of the women who enter such

feminine occupations, despite increasing opportunities to enter seemingly more desirable male-dominated fields, will add to our general knowledge of factors related to women's career choice process.

The Present Study

The purpose of the present study was to investigate the ways in which female students in training for a traditionally female secretarial position differ from female students in a traditionally masculine program of studies. Bachelor of Commerce students enrolled in a management program were chosen as a comparison group for secretarial trainees for several reasons. First, only small percentages of women as compared to men are currently employed as managers. In 1979, only 4.5% of employed Canadian women were managers and administrators, while 9.3% of employed Canadian men held such positions (Coffey, 1979). Within the Canadian Public Service in 1982, only 0.2% of all female employees were managers, as compared with 2.4% of male employees (CACSW 1983). Second, management is still largely a male-dominated occupational area; only 31.9% of the managerial/administrative positions in the Canadian labour force in 1984 were held by women (Labour Canada, 1986). On the other hand, almost all secretarial positions are held by women (Abella, 1984). Third, both management and secretarial students generally plan to work within the same types of organizations. Yet,

within those organizations, secretaries will be at the bottom of the company hierarchy, supervised by managers at higher levels of the hierarchy. For the purpose of the present study, therefore, it was assumed that female management students were representative of women aspiring to nontraditional, higher-status employment.

In keeping with the causal model proposed by Fassinger (1985), the students' attitudes toward women, achievement motivation (work and family orientation), and feminist orientation were assessed by the use of various questionnaires. Because sex-role identity and locus of control also have been shown to be related to women's choice of traditional or nontraditional careers, this study included these considerations as well. Demographic data were gathered in order to examine familial and other background factors. Finally, female students' reported reasons for choosing their program of studies were examined.

Hypotheses

Based on the data demonstrating that women in traditional career paths have been found to differ from women in nontraditional career paths in achievement motivation, sex-role type, locus of control, and attitudes toward women, the following five hypotheses were advanced:

Hypothesis 1. Given that background and personality variables interact to determine women's vocational selection

(Crawford, 1978; Fassinger, 1985; Harren, Kass, Tinsley, & Moreland, 1979; Waddell, 1983) it was hypothesized that female students in secretarial programs would differ from those in the management program on the variables of achievement motivation, sex-role type, locus of control, and attitudes toward women, when these variables were considered simultaneously.

Hypothesis 2. Given that high career orientation and achievement behavior is associated with higher status professional aspirations (Cochrane, 1983) and less traditionally feminine occupations (Lyson & Brown, 1983; Richardson, 1974), it was hypothesized that achievement motivation would be higher in female management students than in female secretarial students.

Hypothesis 3. As discussed earlier, a number of researchers (Harren, Kass, Tinsley, & Moreland, 1979; O'Leary & Hammock 1975; Strange & Rea, 1983; Waddell, 1983; Wolfe & Betz, 1981; Yanico, Hardin, & McLaughlin, 1978) have demonstrated that women in female-dominated occupations or educational majors tend to be feminine in sex-role orientation and that women in masculine vocations or educational majors tend to identify with a masculine sex-role identity. Therefore, it was hypothesized that female secretarial students would identify more strongly with a feminine sex-role identity and less strongly with a masculine

identity than would female management students.

Hypothesis 4. Given that traditional attitudes toward women's roles and rights have been consistently related to women's choice of feminine sex-typed occupations (Harren, Kass, Tinsley, & Moreland, 1979; Lyson & Brown, 1983; Orcutte & Walsh, 1979; Tipton, 1976), it was hypothesized that female management students would have more liberal attitudes toward women than would female secretarial students.

Hypothesis 5. Secretaries and feminine sex-typed women are more likely to make external attributions for success (Wong, Kettlewell, & Sproule, 1985) and less likely to have an internal locus of control (Waddell, 1983) than are female managers and masculine sex-typed women. Therefore, it was hypothesized that female management students would have a more internal locus of control than would female secretarial students.

Method

Subjects

The subject sample consisted of 55 female students, aged 17 to 25, enrolled in a management program at The University of Manitoba and 55 female students, aged 17 to 25, enrolled in a secretarial program at Success/Angus Business College in Winnipeg, Manitoba. Subjects in management were recruited from among those taking a course entitled "Environment and Functions of Business," a requirement for all first-year

management students. Secretarial subjects were recruited from among those beginning a secretarial training program at Success/Angus Business College, a private business college in Winnipeg, Manitoba. Both groups were in the initial two months of their respective programs.

Students were approached during a class period and asked to participate in a study of the backgrounds and attitudes of students (see Appendix A, p. 95). Subjects were run in groups ranging from 15 to 50 students. In order to minimize demand characteristics, both male and female students were approached, although data gathered from the responses of male students were not utilized in the present study.

Procedure and Materials

Completion of questionnaire booklets took place within the students' classrooms. Subjects were greeted by the female experimenter and asked to remain at their desks. The experimenter explained subject rights and assured subjects of anonymity and the right to leave the experiment at any time. Subjects were asked to complete a booklet (see Appendix A) containing: (a) questions regarding demographic information; (b) a scale of career choice considerations, constructed for the present study; (c) The Attitudes toward Women Scale (Spence & Helmreich, 1972); (d) Levenson's (1974) Internal-External Scale; (e) The Personal Attributes Questionnaire (Spence, Helmreich, & Stapp, 1974); and (f) the Work and

Family Orientation Questionnaire (Helmreich & Spence, 1978). For the purpose of minimizing order effects, two different forms of the questionnaire, each with a unique arrangement of the scales, were distributed randomly to students. In the first form, the questionnaires were ordered as follows: background information, career choice considerations, The Work and Family Orientation Questionnaire, The Attitudes toward Women Scale, Internal-External Locus of Control Scale, and The Personal Attributes Questionnaire. Questionnaires in the second form were ordered in this way: background information, career choice considerations, Internal-External Locus of Control Scale, The Attitudes toward Women Scale, The Personal Attributes Questionnaire, and The Work and Family Orientation Questionnaire. Completion of the booklet took from 30 to 50 minutes. One student only, out of the total number approached, refused to complete the entire questionnaire booklet.

Demographic Information

This portion of the booklet was comprised of questions (written for the present study) to ascertain the subject's age, title used (Miss, Mrs., Ms, or Mr.), highest level of education completed, stream in high school (business--typing or accounting, University entrance, technical/vocational), parents' level of education, parents' current work status, mother's work status while the subject was in Grades 1 to 12,

previous work experience, and current financial assistance (e.g., scholarship, bursary).

Work and Family Orientation Questionnaire

The Work and Family Orientation Questionnaire (WOFO; Helmreich & Spence, 1978) is a 32-item scale that measures achievement motivation and attitudes toward family and career (see Appendix A, p. 101). Spence and Helmreich (1978) devised the questionnaire as a practical, simple measure of achievement motivation, which they conceptualized as a multifaceted rather than unitary phenomenon. Twenty-three of the items deal with achievement motivation and have been factor analyzed to yield four factors, namely work, mastery, competitiveness, and personal unconcern. Work is associated with the desire to work hard; mastery with the desire for intellectual challenge; and competitiveness with the desire to succeed in competitive, interpersonal situations. The fourth factor, personal unconcern, which measures attitudes about possible negative consequences of achievement, is conceptually related to the idea of fear of success. The four factors comprise the four subscales of the WOFO.

Subjects are asked to respond to the first 29 statements on a 5-point Likert scale from strongly agree to strongly disagree. The last three items are multiple choice. Each scale is scored separately, with items coded from 0 to 4 and scores obtained by summing the item scores.

Reliabilities were satisfactory for scales of this length: Cronbach alphas for female students were .62 for the Mastery scale, .63 for the Work scale, .72 for the Competitiveness scale, and .50 for the Personal Unconcern scale (Helmreich & Spence, 1978).

The construct validity of these measures of achievement orientation is indicated by their ability to differentiate between groups that would be expected to vary in their behavior (Helmreich & Spence 1978). A group of psychologists who were Fellows of the American Psychological Association or members of various professional organizations were found to differ significantly on all scales from a group of college athletes, with psychologists scoring higher on the Mastery and Work scales, and athletes scoring higher on the Competitiveness scale. Female psychologists scored significantly higher than did both male athletes and male psychologists on the Work scale. Correlations with masculinity and femininity have also been found to be in the expected direction with all scales (Spence & Helmreich, 1978).

The nine items of Part II are not included in any subscale, and are intended to be considered individually. These items deal with educational aspirations, salary expectations, desire for prestige, attitudes toward employment of spouse, relative importance of marriage versus

career, and number of children desired.

Attitudes Toward Women Scale

The Attitudes toward Women Scale (AWS; Spence & Helmreich, 1972) is a Likert-type scale containing statements about the roles and rights of women in vocational, educational, and intellectual activities; dating and sexual behavior; and marital relationships. The AWS-Short Form (Spence, Helmreich, & Stapp, 1973) consists of 25 items, each of which has four response alternatives, ranging from "agree strongly" to "disagree strongly" (see Appendix A, p. 106). Each item is given a score from 0 to 3, with 0 representing the most traditional and 3 the most profeminist response. The highest (most liberal) total possible score is 75.

The AWS-Short Form has been shown to have internal-consistency reliability of .82 for college females (Stanley, Boots, & Johnson, 1975), and has been shown to correlate almost perfectly (.97) with the full scale for both sexes (Spence, Helmreich, & Stapp, 1973). Correlations between total scores and scores on individual items have been reported as ranging from .31 to .73, with the modal value for a male and female university student sample being in the .50s (Spence, Helmreich, & Stapp, 1973).

Construct validity of the AWS has been demonstrated in several studies. The scale is sensitive to differences between northern and southern United States college samples

and between male and female students, in accordance with expected sex-role stereotyped beliefs (i.e., southern students were more traditional in their attitudes than were northern students and males were more traditional than were females [Lunneborg, 1974]). Lunneborg also found that a group of students exposed to a course on the psychology of sex differences were more liberal on the AWS following completion of the course than they had been prior to taking the course. The AWS was also able to distinguish between Calgary students and Lunneborg's (1974) southern sample (Loo & Logan, 1977). Furthermore, both white and black women have been shown to be generally less traditional than white and black men in their attitudes toward women's expanding sex roles at home, as measured by the AWS (Gackebach, 1978). Lastly, as would be expected, Kilpatrick and Smith (1974) reported that female members of the National Organization for Women had significantly more feminist attitudes on the AWS than did nonmembers.

Attitudes toward women, as measured by the AWS, are also correlated with internal-external scores on Rotter's I-E Scale and sex-role identity as measured by the Bem Sex-Role Inventory (BSRI), with profeminist females being more external and higher in masculinity than nonfeminist females (Minnigerode, 1976).

Internal-External Locus of Control Scale.

Most research investigating individual locus of control has utilized the Rotter (1966) Locus of Control (I-E) Scale, which assumes that locus of control is a unidimensional construct, with internal and external orientations at opposite ends of a continuum. Because of the limitations of Rotter's scale, the present study incorporated an alternative measure developed by Levenson (1974; see Appendix A, p. 111).

There are several reasons why Levenson's scale is preferable to Rotter's unidimensional scale. Research has indicated that the I-E scale is, in fact, multidimensional (Blau, 1984; Reid & Ward, 1973) and Levenson developed her scale as a three-dimensional alternative to Rotter's I-E Scale. Factor analytic procedures revealed that Levenson's scale separated into three subscales: 1) Personal Control or Internal, which involves the belief that personal events are dependent on one's own behavior, 2) Powerful Others, relating to the belief that powerful others control personal events in one's life, and 3) Chance, involving the belief that events in one's life are determined by chance, luck, or fate. Thus, both the Powerful Others and Chance subscales reflect a belief in a nonpersonal locus of control (Levenson, 1974). Walkey's (1979) factor analysis clearly confirmed the three-factor structure underlying Levenson's questionnaire.

Levenson's (1974) scale consists of several statements,

with responses ranging from -3 to +3. Subjects are asked to respond according to whether or not the statement describes how they generally feel. The items represent an attempt to sample beliefs about locus of control over a wide range of situations. Each of the subscales--Personal Control, Powerful Others, and Chance--consists of eight items. In order to avoid negative numbers, 24 is added to each of the subscales. Thus the highest score possible on any subscale is 48, with high scores indicating agreement that events are determined by one's own behavior, by the influence of powerful others, or by fate.

Correlations among the three scales (Levenson, 1974) indicated a moderate correlation of .59 between the Powerful Others and Chance subscales, and small negative correlations of both the Powerful Others and Chance subscales with the Internal scale (-.14 and -.17, respectively).

Blau (1984) reported that the Levenson (1974) measure had been found to be more factorially stable than the Rotter (1966) scale and that the reliabilities for the three subscales were .67 (Personal Control), .73 (Powerful Others), and .80 (Chance), as compared to .71 for the Rotter I-E scale. Discriminant validity of the Powerful Others subscale has been demonstrated by its relation to causal attributions (Sherman & Ryckman, 1980).

Personal Attributes Questionnaire

Because of its simple factor structure and consistency in social desirability relative to the BSRI (Tesch, 1984), the Personal Attributes Questionnaire (PAQ; Spence, Helmreich, & Stapp, 1974) was used as a measure of the psychological dimensions of masculinity and femininity (see Appendix A, p. 114). The PAQ-Long Version contains 55 items representing individual characteristics which are sex-role stereotypically attributed to males or females (Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972).

The scale is comprised of three subscales: Masculinity (M), Femininity (F), and Masculinity-Femininity (M-F). Each item consists of a pair of characteristics and subjects are asked to choose a letter from A to E to describe where they fall on a scale between the two characteristics. Each item is scored from 0 to 4, with a high score on the Feminine scale items indicating an extreme feminine response and a high score on M and M-F items indicating an extreme masculine response. Total scores are determined for each scale by adding the individual scores on the items comprising the scale.

Spence and Helmreich (1978) have adopted a median-split approach for classifying individuals into one of four sex-role identity categories: masculine, feminine, androgynous, and undifferentiated. Median scores for the sample on the M

and F scales are first determined, and then individuals are classified according to their position above or below the median on these scales. Subjects scoring above the median on the M scale and below the median on the F scale are considered to be masculine. Those individuals who are above the median on the F scale and below the median on the M scale are classified as feminine. If scores on both scales are above the median, the subject falls in the androgynous classification. Undifferentiated individuals are those scoring below the median on both the M and F scale. An alternate eight-way classification method using the M-F scale may also be used.

For the PAQ-Long Version, internal-consistency and test-retest reliability have been reported as .91 (Spence, Helmreich, & Stapp, 1974). The short form of the PAQ consists of eight items from each of the three subscales, with total scores ranging from 0 to 32. Correlations between the full-length and the short form of each subscale are .93, .93, and .91 for M, F, and M-F, respectively, and the correlation between total scores on the two forms is .94 (Spence et al., 1974). Cronbach alphas for the short form are .85 for the M subscale, .82 for the F subscale, and .78 for the M-F subscale (Spence & Helmreich, 1978).

Spence and Helmreich (1978) offer the classification scheme based on using the M and F scales alone as an

appropriate means of interpreting their measure and have utilized this method themselves in their investigations of correlates of sex-role identity. Furthermore, the only other study of women's career choices known by this author which has utilized the PAQ (Holms, 1985) employed the two-scale median-split method. For these reasons, it was decided that only the M and F scales would be adopted for the present study.

Career Choice Considerations

Subjects were asked to respond on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree) to a series of 15 statements concerning reasons for choosing one's program of studies. This questionnaire (see Appendix A, p. 103) was developed for the present study, and incorporated several of Strange and Rea's (1983) career choice considerations. The questionnaire includes a wide range of items in an attempt to cover many possible reasons for career or educational choice. Each item is scored separately. Test-retest reliability (Pearson product-moment coefficients) was determined in pilot testing with secretarial, management, and accounting students. Coefficients for females ranged from .38 to .93 on the various questions with most of the coefficients being .50 or higher.

Design

Subjects were required to respond to a series of

questionnaires and scales. The independent variable was type of program chosen (secretarial or management). There were ten dependent variables, consisting of scores on the following scales and subscales: Work, Mastery, Competitiveness, and Personal Unconcern (WOFO); AWS; Internal, Powerful Others, and Chance (I-E Scale); Masculine and Feminine (PAQ). This yielded a one-way design with multiple dependent measures, with 55 subjects in each of two cells.

Results

Demographic Data

A number of chi-square analyses were performed on the demographic data, with probability of significance set at .05. In order to achieve adequate cell size for meaningful chi-square analysis, some of the responses were grouped into larger, more inclusive categories.

Although subjects in both groups ranged in age from 17 to 25, the secretarial students were significantly older than the management students, $\chi^2(8, N = 110) = 26.453, p < .001$. Among the management students, 93% were aged 17-20, whereas only 69% of the secretarial students were in that age range. In order to investigate the possibility that age may have accounted for differences between the two groups on the dependent measures, a multivariate analysis of covariance

(MANCOVA) was performed. There was no significant effect for age on the group of dependent variables taken together.

None of the women in the management group were married; of those in the secretarial group, only three were married, one was divorced, and the remainder had never been married.

Ninety percent of the respondents used the title "Miss"; only six of the single management students and two of the secretarial students used the title "Ms".

The two groups differed on their sources of financial assistance with their schooling, $\chi^2(4, N = 110) = 33.03$, $p < .001$. The secretarial students were more likely to have been funded by a government loan and bursary program (42%) or by a public sponsoring agency (36%). Only 11% of the management students had received a loan or bursary and 18% had been sponsored. Scholarships, which were not available to secretarial students, had been awarded to 22% of the management group. No financial assistance had been received by 45% of the management students, but only 16% of the secretarial students had received no financial assistance.

There was little difference between the students in their level of schooling prior to entering the College or University. Grade 11 was the highest level achieved by 3 of the secretarial students; 43 (84%) had completed Grade 12; 3 had some community college or vocational training; and 5 had

completed some University courses. The majority of the management students (49, or 89%) had completed Grade 12; 5 had completed some University courses; and 1 individual had some community college or vocational training.

As could be reasonably expected, the two groups had chosen or been streamed into different options in high school. Of the management students, 13% had taken business or vocational training in high school and 87% had been enrolled in the university entrance program. The secretarial students had a significantly more heterogeneous background, $\chi^2(1, N = 110) = 17.23, p < .001$, with 47% having taken business or vocational training and 53% having taken university entrance courses. The management students reported significantly higher grades than did the secretarial students, $\chi^2(2, N = 110) = 25.31, p < .001$. Most of the management students reported an A average (47%) or a B average (51%) for their last year of formal schooling, whereas the majority of the secretarial students reported an average of B (56%) or less (31%).

The two student groups also differed significantly in their work history, $\chi^2(2, N = 110) = 14.95, p < .001$. The management students had primarily held summer jobs or part-time work (98%); only 2% had ever been employed full time. A number of the secretarial group (28%) had returned to school

after having worked full time and 72% had had experience with summer jobs or part-time work. More of the secretarial trainees (29%) than the management students (2%) had worked full time for two years or more.

Although there were no group differences in mother's education, the groups did differ in terms of father's education, $\chi^2(5, N = 110) = 15.38, p < .01$. Thirty-two percent of the management students versus 55% of the secretarial students had fathers with Grade 11 or less educational standing; 33% of the management students and 20% of the secretarial students had fathers with a completed Grade 12; 15% of the management students and 6% of the secretarial students of the fathers had some post-secondary training; and 29% of the management students but only 15% of the secretarial students had fathers who had completed a University degree.

One of the questions relating to background information addressed the working history of the students' mothers while the students were in grade school. For the years that the two groups of students were in Grades 1 to 6, their mothers' employment status did not differ. However, as the students grew older, their mothers began to establish significantly different vocational patterns. A larger percentage of the mothers of the management students (76%) than of the

secretarial students (54%) worked outside of the home while their children were in Grades 7 to 9, $\chi^2(1, N = 110) = 5.85$, $p < .05$. In general, as both groups of students progressed into high school (Grades 10-12 or 13) the percentage of their mothers who worked outside of the home increased. However, there was once again a significant difference between the two groups, $\chi^2(1, N = 110) = 4.44$, $p < .05$. Of the management students' mothers, 80% were employed outside of the home, as compared to 61% of the mothers of secretarial students.

Students were asked to describe the jobs that their mothers had held during the students' school years. To prepare the data for chi-square analysis, job types were grouped into several categories: not employed, clerical, sales and service, manual labor, and professional and management. There were no significant differences between the types of jobs held by the mothers, either in the past or at the current time. There were also no differences between students in the two programs in types of jobs held by their fathers.

Students in this study were asked to describe the job which they would most like to obtain following graduation and the job which they most expected to obtain. The great majority of the secretarial students (95%) wanted to work in

a clerical position and 96% of the group expected that they would in fact obtain clerical work after graduating. A broader range of likes and expectations was chosen by the management group than by the secretarial group. Higher level management or professional positions were desired by 50% of the management students; 41% wanted middle management or general administrative positions; and 6% said that they would most enjoy owning their own business. With respect to employment expectations, 29% of the management students thought that they would actually find higher level management or professional positions; 62% expected to obtain middle management or administrative positions; and 2 individuals (4%) thought that they would be most likely to become private business owners.

Hypotheses

Because scores on the dependent measures AWS, I-E Scale, PAQ, and WOFO are thought to be related when considered simultaneously to the independent variable of program of studies chosen, the data from these scales were analyzed using a one-way multivariate analysis of variance (MANOVA), or Hotelling's T-square, with $p < .05$. Tabachnik and Fidell (1983) suggest that when the independent variable consists of only two groups, Hotelling's T-square can be used to discover whether the groups differ on a set of dependent measures thought to be intercorrelated.

Although the four general areas being investigated were locus of control, sex-role identity, achievement orientation, and attitudes toward women, all but the AWS scale were comprised of subscales. These subscales were entered into the MANOVA as separate variables, yielding ten dependent variables: Internal, Powerful Others, and Chance (I-E Scale); AWS; Masculine and Feminine (PAQ); Mastery, Work, Competitiveness, and Personal Unconcern (WOFO) scores. Program of studies, either secretarial or management, was the independent variable.

Prior to performance of the MANOVA, assumptions of variance homogeneity and normality were met. Although the data were examined for outliers, it was decided that all scores would be meaningful for data interpretation, and thus should be retained. Missing data were estimated by insertion of a score of "2" on scales scored from 0 to 4, or by random selection between the two middle scores on questions with an even number of possible responses. Intercorrelations between the ten dependent variables were, in general, below .30 (see Table 1). Three exceptions were the correlation of .61 between the Chance and Powerful Others subscales, similar to that found by Levenson (1974); the correlation of .46 between the Work subscale and the AWS; and the correlation of .38 between the Masculine and Mastery subscales. Because the Chance and Powerful Others subscales are factorially distinct

Table 1

Pearson Correlation Coefficients Among Dependent Measures ^a

Subscales	2	3	4	5	6	7	8	9	10
1. Internal	.07	<u>.19</u>	.02	<u>.23</u>	-.08	<u>.28</u>	.10	<u>.20</u>	-.14
2. Chance	---	<u>.61</u>	-.13	<u>-.24</u>	.14	-.12	-.13	.02	-.14
3. Powerful Others	---	<u>-.27</u>	-.16	.05	-.10	<u>-.19</u>	<u>.19</u>	<u>-.22</u>	
4. AWS		---	<u>.27</u>	-.05	.18	<u>.29</u>	-.04	.12	
5. Masculine			---	-.10	<u>.38</u>	.04	<u>.22</u>	.10	
6. Feminine				---	.04	<u>.22</u>	<u>-.26</u>	.01	
7. Mastery					---	<u>.42</u>	<u>.22</u>	-.06	
8. Work						---	-.09	<u>.21</u>	
9. Competitiveness							---	-.02	
10. Personal Unconcern								---	

^a N = 110Note. Correlations significant at $p < .05$ are underlined.

(Levenson, 1974), although moderately correlated, and because most of the correlations among the subscales were very low, it was clear that multicollinearity was not present.

Based on the Hotelling-Lawley Trace, the multivariate F is reported. The analysis indicated a significant difference, $F(10, 99) = 4.33, p < .0001$, on the variables sex-role identity, achievement orientation, locus of control, and attitudes toward women as a function of program of studies. This confirmed the first hypothesis of a significant difference between the two groups of students on the dependent variables, when these variables were considered simultaneously. Examination of the univariate F s (see Table 2) indicated that the two groups differed on six of the dependent measures: Powerful Others, $F(1, 108) = 4.20, p < .05$; Chance, $F(1, 108) = 8.88, p < .005$; Masculine, $F(1, 108) = 17.52, p < .0001$; Feminine, $F(1, 108) = 4.92, p < .05$; Mastery, $F(1, 108) = 15.31, p < .001$; and Competitiveness, $F(1, 108) = 6.35, p < .05$. Univariate F s for Internal Locus of Control, Attitudes toward Women, Work, and Personal Unconcern were not significant.

Mean scores on the six significant variables indicated by the univariate F s and the discriminant analysis were examined in order to determine the direction of the differences between management and secretarial students (see Table 3). Management students' mean scores were

Table 2

Univariate Fs Using Program of Studies as the Independent Variable

Source	Measure a				
	Internal	POS	Chance	AWS	Masculine
Program					
of Studies	<1.00	4.20*	8.88**	<1.00	17.52**
	Feminine	Mastery	Work	Comp	PersUnc
Program					
of Studies	4.92*	15.31**	<1.00	6.35*	<1.00

Note. POS = Powerful Others; AWS = Attitudes toward Women; Comp = Competitiveness; PersUnc = Personal Unconcern.

a degrees of freedom = 1,108

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

Table 3

Mean Scores and Standard Deviations on Dependent Measures as a
Function of Program of Studies

Program of Studies	Measure							
	Internal		POS		Chance		AWS	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Secretarial	34.60	5.92	20.49	9.16	23.47	8.75	58.51	8.90
Management	34.96	5.82	16.95	8.03	18.60	8.40	59.95	8.24

	Masculine		Feminine		Mastery		Work	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Secretarial	18.89	3.85	25.60	4.70	17.89	3.86	20.95	2.44
Management	22.04	4.03	23.67	4.40	21.18	4.90	20.75	2.59

	Comp		PersUnc	
	Mean	S.D.	Mean	S.D.
Secretarial	11.24	3.40	10.35	3.38
Management	13.00	3.92	10.02	2.48

Note. POS = Powerful Others; AWS = Attitudes toward Women;

Comp = Competitiveness; PersUnc = Personal Unconcern.

higher on the masculine subscale ($\bar{M} = 22.04$) than were the mean scores of secretarial students ($\bar{M} = 18.89$). The management group also scored higher on the mastery subscale ($\bar{M} = 21.18$) than did the secretarial students ($\bar{M} = 17.89$) and higher on competitiveness ($\bar{M} = 13.00$) than did the secretarial group ($\bar{M} = 11.24$). On the remaining three of the dependent measures with significant univariate F s, the secretarial students scored higher than did the management students. Mean scores for secretarial and management students on these three subscales were as follows: Powerful Others, ($\bar{M} = 20.49$, secretarial; $\bar{M} = 16.95$, management); Chance, ($\bar{M} = 23.47$, secretarial; $\bar{M} = 18.60$, management); and Feminine, ($\bar{M} = 25.60$, secretarial; $\bar{M} = 23.67$, management).

In order to examine more fully the differences in sex-role identity between the two groups of students, each subject was assigned to a sex-role orientation group using the median-split procedure (Spence & Helmreich, 1978). On the feminine subscale, the median was 25, and on the masculine subscale, the median was 20. In total, 26 (24%) of the students were classified as androgynous, 26 (24%) as feminine, 28 (25%) as masculine, and 30 (27%) as undifferentiated.

There were significant differences between the two groups with respect to sex-role identity, $\chi^2(3, N = 110) =$

13.68, $p < .005$. Only 8 (15%) of the management students identified with a feminine sex-role identity, as compared to 18 (33%) of the secretarial students who were classified as feminine. The reverse was true for the masculine sex-role orientation. Only 6 (11%) of the secretarial students, as compared to 22 (40%) of the management students, were assigned to the masculine group. In the androgyny category were 12 (22%) of the management students and 14 (25%) of the secretarial students; 13 (24%) of the management group and 17 (31%) of the secretarial group fell within the undifferentiated classification.

As a further follow-up to the MANOVA, a canonical discriminant analysis was performed. The ten measurement variables were used as predictors of membership in the two groups, secretarial or management program of studies, in order to examine the relative weights of the variables in contributing to separation between groups.

Borgen and Seling (1978) suggest that when predictor variables are intercorrelated, the total canonical structure coefficients provide more directly interpretable information than do the standardized weights. Therefore, the total structure matrix, which shows the correlations between the ten variables and the discriminant variate, was examined for relative contributions of the variables. The discriminant function significantly separates the secretarial and

management students, $F(10, 99) = 4.43, p < .0001$. The loadings (see Table 4) suggest that the Masculine scale score is the primary variable in distinguishing between secretarial students and management students, followed by the Mastery, Chance, Competitiveness, Feminine, and Powerful Others scores, in descending order of importance. Loadings less than .30 were not interpreted.

In summary, consistent with Hypothesis 1, the secretarial students differed from the management students on the variables of achievement motivation, sex-role identity, locus of control, and attitudes toward women, when these variables were considered simultaneously. Hypothesis 2 was partially confirmed; female management students were higher than were female secretarial students on two of the four dimensions of achievement motivation--mastery and competitiveness. Consistent with Hypothesis 3, female secretarial students identified more with a feminine sex-role identity and less with a masculine sex-role identity than did female Bachelor of Commerce students. Hypothesis 4 was not supported, as secretarial and management students did not differ in their attitudes toward women's rights and roles. Finally, partial confirmation was attained for Hypothesis 5; secretarial students were less internal than were management students on the Powerful Others and Chance subscales, but the two student groups did not differ on the Internal subscale.

Table 4

Total Canonical Discriminant Structure Matrix Showing
Correlations Between Predictor Variables and the Discriminant
Function

Variable	Discriminant I
Internal	-.056
Powerful Others	.366
Chance	.496
Attitudes toward Women	-.151
Masculine	-.672
Feminine	.375
Mastery	-.634
Work	.072
Competitiveness	-.424
Personal Unconcern	.100

Career Choice Considerations

A principal components analysis with varimax rotation was performed on the career choice questionnaire developed for this study. Five orthogonal factors were extracted from the 15 questions (see Table 5), accounting for 67.4% of the variance. Each question was assigned to the factor on which it loaded most highly.

Factors meeting a minimum eigenvalue criterion of 1.0 were retained, and performance of a scree test (Cattell, 1966) confirmed the inclusion of five factors. In order to further confirm that five factors should be retained, sums of squares of the factor loadings (SSLs) were calculated (Tabachnik & Fidell, 1983). For the factors included, SSLs were greater than 1.0, thus meeting Tabachnik and Fidell's criterion. In addition, the factors retained were considered interpretable and meaningful.

The first factor, which accounted for 25.2% of the variance (eigenvalue = 3.77), loaded on Questions 6, 7, and 8. These questions were all related to what have been called the "extrinsic" rewards of a job (Marini & Brinton, 1984): money, status, and power. In this questionnaire, these extrinsic characteristics were referred to as prestige, salary, and level of responsibility. Thus, Factor 1 will be called "extrinsic job characteristics" in further analysis.

Factor 2 included Questions 13, 14, and 15, and

Table 5

Principal Component Analysis for Career Choice Considerations

Question	Factor				
	1	2	3	4	5
1	.226	.028	.182	.227	<u>.742</u>
2	.397	.015	.354	-.050	<u>.566</u>
3	-.000	.135	<u>.729</u>	.174	.092
4	.084	.179	<u>.764</u>	-.048	.130
5	.454	.081	.092	.168	- <u>.575</u>
6	<u>.882</u>	.120	.013	.158	.039
7	<u>.841</u>	.090	-.037	.093	.012
8	<u>.843</u>	.133	.119	-.011	.142
9	.226	.080	.039	<u>.840</u>	-.017
10A	.040	.067	-.463	<u>.578</u>	.084
11	-.010	.029	.295	<u>.637</u>	-.046
12	.084	.085	<u>.480</u>	.224	-.476
13	.084	<u>.921</u>	.030	-.005	.001
14	.063	<u>.911</u>	.158	.072	-.029
15	.181	<u>.738</u>	.145	.096	-.021
% Variance Accounted for	25.2	13.3	11.2	9.7	8.1
Factor Labels	Extrinsic Job Charac- teristics	Role Compati- bility	Inter- personal relationships	Influence of parents and educators	Comfort

accounted for 13.3% of the variance (eigenvalue = 2.00).

These three questions addressed the issue of one's choosing a career that fits with roles and life plans. Subjects were asked if they had chosen their program because it was compatible with their plans to marry and to have children, and whether it was appropriate for people of their sex. Factor 2 will be labelled "role compatibility."

Items 3, 4, and 12 loaded on Factor 3, accounting for 11.2% of the variance (eigenvalue = 1.67). Factor 3 relates to desire to interact with people, either through the job, with friends in similar programs or positions, or by helping others. Factor 3, then, will be titled "interpersonal relationships."

Factor 4, accounting for 9.7% of the variance (eigenvalue = 1.45), was comprised of Questions 9, 10A, and 11. These items related to advice from, or the example of, teachers, counselors, and parents. Factor 4 will be referred to as "influence of parents and educators."

Factor 5 is not as clearly interpretable as the other four factors. It accounted for 8.1% of the variance (eigenvalue = 1.22) and loaded on items 1, 2, and 5. Question 1 asks whether the program is suited to the student's interests. Question 2 focuses on whether the intellectual requirements of the program are well suited to the student's abilities. In the last item, Question 5,

subjects were asked if they believed it would be easy to obtain a job after completing their program. Because Factor 5 seems to involve a general issue of the relative ease of taking certain programs and, subsequently, of finding related employment, Factor 5 will be referred to as "comfort".

Following the principal components analysis, a MANOVA employing these five factors as dependent variables and program of studies as the independent variable was performed. Assumptions of normality and variance homogeneity were met. The null hypothesis of no overall program difference was not accepted, $F(5, 103) = 8.02, p < .0001$, using Wilk's criterion. Examination of the univariate F s indicated that the observed difference could be accounted for by Factor 1, extrinsic job characteristics, $F(1, 107) = 7.53, p < .01$, and Factor 3, interpersonal relationships, $F(1, 107) = 22.77, p < .0001$ (see Table 6).

By examining the means (see Table 7), it appeared that students of management ($M = 11.14$) were more likely than were secretarial students ($M = 10.05$) to have chosen their program of studies based on extrinsic characteristics of the types of jobs they would obtain after graduation. Management students were less likely ($M = 5.57$) than were secretarial students ($M = 6.80$) to have made career choices based on the desire to interact with and/or help others.

Table 6

Univariate Fs Using Program of Studies as the Independent Variable and Career Choice Factors as Dependent Variables

Source	Factor a				
	Extrinsic Job Charac- teristics	Role Compati- bility	Inter- personal relation- ships	Influence of parents and educators	Comfort
Program of studies	7.53*	.77	22.77**	.66	.57

a degrees of freedom = 1, 107

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

Table 7

Mean Scores and Standard Deviations on Career Choice Factors as
a Function of Program of Studies

Program of Studies	Factor					
	Extrinsic Job Characteristics		Role Compatibility		Interpersonal Relationships	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Secretarial	10.05	2.44	6.46	2.68	6.80	1.49
Management	11.14	1.52	5.55	3.65	5.57	1.18

	Influence of Parents and Educators				Comfort	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Secretarial	3.71	1.74	7.61	1.01		
Management	4.06	1.99	7.60	.98		

Marriage and Family Orientation

The five unscaled questions of the WOFO which deal with marriage and family orientation and the four unscaled questions which relate to job and educational satisfaction were examined by use of chi-square analyses and frequency distributions. Secretarial and management students did not differ significantly with respect to the importance placed on marriage and children. Of the secretarial students, 13% considered marriage to be of primary importance in their lives and wanted to work primarily for financial reasons; 18% of the management group shared this point of view. A large percentage of both groups (41% of the secretarial trainees and 30% of the management students) considered marriage to be relatively more important than their work. Marriage and work were valued as equally important by 30% of both groups of students; 7% of the secretarial group and 13% of the management group expressed the belief that marriage was relatively less important than their work; and 9% of the secretarial students and 11% of the management students considered marriage unimportant and would be content if they did not marry.

In terms of number of children the women planned to have, the groups were not significantly different. The majority of both sets of students (65% of the secretarial group and 55% of the management group) said that they would

ideally like to have two children. Only 9% of the management students and 2% of the secretarial students did not want to have children; in the other direction, 15% of the management group and 7% of the secretarial group wanted to have four or more children.

The majority of students in both programs of studies either slightly or strongly agreed that they would like their husband to have a job that pays well (secretarial, 84%; management, 78%) or a job that brings recognition or prestige (secretarial, 54%; management 44%). A large majority in both groups considered good pay for their own work to be important to their future satisfaction (secretarial, 96%; management, 87%) and 60% of the secretarial students and 56% of the management students agreed that job prestige was important to them. The majority of both groups (75% of the secretarial students and 65% of the management students) strongly agreed that it was important to them to get a job in which there would be opportunity for promotion and advancement.

There was a significant difference, $\chi^2(4, N = 109) = 9.93$, $p < .05$, between the subjects in the two programs when they were asked whether or not it would bother them if their spouse had a better job than they did. The majority of the secretarial students (80%) strongly agreed, and 11% slightly agreed, that they would not be bothered if their husbands had

better jobs than they did. Fewer of the management students (55%) strongly agreed that they would not be disturbed by having a spouse with a better job than theirs; 35% slightly agreed that they would not be bothered by that situation.

As might be expected in light of their current choice of educational program, secretarial students differed significantly from management students, $\chi^2(4, N = 109) = 25.55, p < .001$, with respect to the least education that would satisfy them. Among the secretarial students, 13% would be satisfied with graduation from high school, 26% with completion of some special vocational training beyond high school, 7% with some college training, 50% with graduation from college, and 4% with an advanced professional degree. Of the management students, 4% reported that they would be satisfied with high school graduation, 4% with some special vocational training, 7% with some college courses, 51% with graduation from college, and 35% with an advanced professional degree.

Discussion

The present study involved a specific population of women who were beginning education which would significantly affect their future employment options. As in earlier research involving models of womens' career preferences, the complexity of the vocational selection process, that is, the

interaction of a number of attitudinal, personality, and background factors, was highlighted. It is evident that this was the case for the students in the present study; women in secretarial programs differed significantly from women pursuing a management degree in a variety of critical ways.

As expected, women in the secretarial program differed from those in the management program in achievement motivation, sex-role type, locus of control, and attitudes toward women, when these variables were considered simultaneously. However, only certain aspects of these constructs contributed to this significant difference.

Achievement motivation, as conceptualized by Helmreich and Spence (1978), is comprised of four factors, which represent desire to work hard, desire for intellectual challenge, desire to succeed in competitive situations, and unconcern about the negative responses of others to one's success. The secretarial and management students reported an equal willingness to work hard and did not differ in the extent to which they were concerned with the unfavorable reactions of others to personal achievement. However, when desire to master intellectual challenges and competitiveness were examined, differences between the two sets of students appeared. Management students were significantly higher in both of these aspects of achievement orientation than were secretarial students.

One might speculate that a relationship exists between the various subscales of the WOFO (Helmreich & Spence, 1978) on the one hand and the concepts of career centeredness and career commitment (Marshall & Wijting, 1980) on the other. If career commitment implies an intention to work steadily throughout one's life, then the desire to work hard is likely an essential component of career commitment. Competitiveness and desire to tackle difficult challenges may be related to a career centeredness orientation, in which a career is the primary source of satisfaction, demanding more time commitment than other areas of one's life.

A similar comparison might be made between certain achievement factors and Richardson's (1974) concepts of career and work orientation. For career-oriented, highly career-motivated women, who tend to aspire to higher-level and less traditionally feminine occupations, competitiveness and difficult challenges may be an intrinsic part of succeeding in a employment area dominated by males. The work orientation, found in women who chose feminine types of occupations, involves well-defined occupational goals, without the emphasis on career as primary in the women's lives. This orientation may involve desire to work hard, but may not require competitiveness or desire to master difficult challenges.

These parallels between mastery and competitiveness on

the one hand and career-centered orientations on the other are not completely supported by the results of the present study, if the students' marriage and family orientations are considered. Women with either a career centeredness orientation (Marshall & Wijting, 1980), or what Richardson (1974) simply calls a career orientation, place greater importance on career than on family. The large majority of students in this sample, regardless of program, considered marriage to be equally important or relatively more important than their careers. Therefore, it can be argued that a dichotomy between commitment to family and marriage and achievement orientation does not exist. In fact, as several researchers (Fassinger, 1985; Holms, 1985; Parelhas, 1975) have demonstrated, career commitment and family commitment may coexist with equal strength in ambitious women.

Almost all the students in this study were relatively young and had never been married. Therefore, longitudinal studies of secretarial and management students, examining changes in achievement orientation that may occur with marriage, child rearing, work history, and other life experiences, would be valuable. The phenomenon of women becoming less achievement-oriented as they marry and have children has already been demonstrated (Card, Steel, & Abeles, 1980). However, as Holms (1985) suggests, conflict between the roles of mother and employee may not become

salient until both roles are actually performed. Although on a whole the management students were relatively high in achievement orientation, 30% considered marriage to be more important than their work. Furthermore, most of the secretarial students felt strongly that they would not be bothered if their husbands had better jobs than they did. It is quite possible then, that as these students become wives and mothers, role conflicts may modify the extent to which they place importance on achievement and career.

As hypothesized, secretarial students were higher on the Feminine scale of the PAQ (Spence & Helmreich, 1974) and were more ^{identified more strongly} ~~likely to identify~~ with a feminine sex-role orientation than ^{did} ~~were~~ management students. Students in the management program were higher on the Masculine scale and more likely to ascribe to a masculine sex-role identity than were the secretarial students. This is not an unusual finding, considering the wealth of research (Harren, Kass, Tinsley, & Moreland, 1979; Holms, 1985; Strange & Rea, 1983; Trigg & Perlman, 1976; Yanico & Hardin, 1978) which has shown feminine sex-role type to be strongly related to choice of feminine careers or curricula, and masculine sex-role type to be related to nontraditionally feminine career choices. However, the data indicate that the secretarial trainees were almost as likely to be undifferentiated as they were to be feminine, whereas a far greater percentage of the management

students were masculine as opposed to any other sex-role orientation. This finding appears to validate theories of women's career choice in which the presence of masculinity or instrumentality is a critical factor in selection of nontraditional occupations (Wolfe & Betz, 1981).

The women in this study also differed on two of the three dimensions of locus of control, confirming the utility of Levenson's (1974) multidimensional approach. Secretarial and management students were equally likely to make internal attributions, believing personal events to be determined by their own behavior. Furthermore, for all students, the mean score on the Internal subscale was the highest of the three subscale means. However, the groups differed with respect to the belief that powerful others or chance determine personal events in one's life. The secretarial students were more external on these constructs than were the management students. In other words, they were more likely to believe that powerful individuals or luck influenced events that happened in their lives. Thus, although secretarial students were relatively high in the belief in self-determination, they did not rule out the influence of powerful others or chance to the same extent that the management students did.

It may be hypothesized that the expectation that powerful persons will influence one's success or failure may be intimately related to a reluctance to enter male-dominated

occupations. If a woman is sensitive to the presence of employment discrimination against her sex within organizations, the tendency to believe that powerful others determine one's success may make the inevitably difficult entry into masculine jobs appear doubly intimidating.

An unanticipated result in the present study was the inability of the Attitudes toward Women scale (Spence, Helmreich, & Stapp, 1973) to differentiate between the women in the feminine or masculine programs of studies. It may be useful in this case to compare the scores attained by subjects in this study to those obtained by other groups on the 25-item AWS-Short Form. The mean scores attained by the secretarial and management students (58.51 and 59.95, respectively) are slightly above the 1973 norm of 50.26 (out of a possible highest score of 75) for United States college student samples (Spence, Helmreich, & Stapp, 1973) and near the mean of 59.24 for a group of Australian college students surveyed in 1975 (Stanley, Boots, & Johnson, 1975). In comparison, the 1974 mean score on the AWS for female members of the National Organization of Women was 70.62 (Kilpatrick, & Smith, 1974) and a group of members of the Women's Electoral Lobby in Australia had a mean score of 68.13. Thus, although these figures are dated and the comparisons made here have not been tested statistically, it could be stated that the students in this study had moderately liberal

attitudes about the roles of women in society, but were not as liberal as women who we would expect to be profeminist.

These present data do not support the results of studies which have demonstrated that feminist attitudes are related to choice of sex-typed jobs (Crawford, 1978; Harren, Kass, Tinsley, & Moreland, 1979). The lack of significant differences between the secretarial and management students on the AWS is particularly unusual in light of the positive association of profeminist attitudes with a masculine sex-role identity (Holms, 1985; Spence & Helmreich, 1978) and the fact that the management group tended to identify with the masculine identity.

There may be several reasons why the two student groups did not differ in their attitudes toward women as measured by the AWS. As suggested by Fassinger (1985), the AWS may lose its discriminative ability in a sample which is generally disposed toward relatively liberal attitudes. Fassinger found feminist orientation, as measured by the use of the title Ms and willingness to call oneself a feminist, to be a better predictor than sex-role attitudes in her model of women's career choice. However, the fact that only a very small minority of both groups in the present study used the title Ms seems to indicate not only that feminist orientation was likely not related to choice of program, but that there may be a disparity between the moderately liberal expressed

attitudes of the students and their willingness to adopt feminist modes of behavior.

Although Spence and Helmreich (1978) consistently found low but not always uniformly significant correlations between the AWS and sex-role identity, they emphasized the distinction between abstract attitudes toward appropriate role behaviors and the psychological attributes of masculinity and femininity. In their opinion, the acting out of role expectations is distinct from the personal beliefs and feelings of the individual. Thus, a man or woman may choose behavior which is congruent with the self concept, or may "role play", either consciously or unconsciously, in a manner which is incongruent with the self concept. For example, women for whom approval of and support for men is very important may be unwilling to visibly support feminist ideology for fear of threatening their relationships with significant male figures in their lives. Measures of self-esteem, self-efficacy, assertiveness, and the tendency to respond in socially desirable ways, used in conjunction with the measures in this study, would add important dimensions to our understanding of this issue.

According to Spence & Helmreich (1978), attitudes toward the rights and privileges of women may not be related to the roles which women choose to play. A woman may personally choose to work in a stereotypically feminine occupation for a

number of reasons, but may still believe that women in general should be allowed to succeed in male-dominated fields. Further research exploring the relationship between sex-role attitudes and sex-role stereotypical behavior choices would help to elucidate this possible phenomenon.

Background Factors

From the demographic information, some interesting associations between background factors and program of studies were revealed. It can be speculated that financial considerations may have been involved in the students' choice of program of studies. The secretarial program requires an average of 12 months to complete, whereas a Bachelor of Commerce degree is usually completed in 8 four-month terms. Although annual tuition fees at a private business college are approximately four times higher than at the University of Manitoba, the opportunity costs are greater for the management students than for the secretarial trainees. Furthermore, the majority of secretarial students, but only one half of the management students, had requested and received financial assistance from sponsoring agencies. Thus, for secretarial training, the availability of funding and the low total program costs relative to university programs may have appealed to individuals with lesser financial resources. Because the present study did not examine parental and student income levels, it was impossible

to determine the significance of financial considerations.

Both paternal educational achievement and maternal employment contributed to the differences between students in the Success/Angus secretarial program and students in the Bachelor of Commerce program. Father's educational level seemed to be related to choice of program of studies. More fathers of management students than of secretarial students had completed Grade 12, some post-secondary training, or a University degree. However, the groups did not differ in terms of father's type of employment. Greenfeld, Greiner, and Wood's (1980) research indicated a similar pattern: women in male-dominated jobs had better-educated fathers than did women in female-dominated jobs, but women in the former group were just as likely as those in the latter group to have fathers who had high occupational status. Those authors concluded that the key to women's career aspirations is father's educational orientation.

Although mothers of secretarial trainees and management students did not differ with respect to educational attainment, they did differ in terms of their employment patterns while their daughters were in grade school. More of the mothers of management students than the mothers of secretarial students worked outside the home while their daughters were in Grades 7 to 12. These results empirically validate the conclusions of other researchers (Almquist,

1974; Crawford, 1978) that mothers of pioneer career women are more likely to have had paid employment while their daughters were growing up than are mothers of traditional women.

It seems clear that the secretarial students and the management students had either chosen or been streamed into different educational tracks prior to entering post-secondary programs. Whereas most of the management students had been in the university entrance option in high school, only half of the secretarial students had taken this option. The other half of the secretarial group had taken the business skills option. As well, educational attainment in terms of average grades prior to entering post-secondary training was higher for the management students than for the secretarial students.

It is not known if the division into different streams occurred because of interest, ability, or recommendations from teachers and counselors. It is also not clear if the grades attained by the students indicated general scholastic aptitude level, or level of interest and motivation. Nevertheless, there seems to be a relationship between scholastic aptitude and career orientation. According to Astin and Myint (1971), girls with high scholastic aptitude, particularly in mathematics, tend to choose higher education and to have greater career commitment than do those with less

aptitude. Plans to do office work usually are made by girls with lower aptitude and fewer academic interests. A similar conclusion was drawn by Holms (1985), who demonstrated that lower academic performance was related to lower educational goals in female adolescents.

In the present study, the high overall average of the management students may simply be an artifact of higher acceptance criteria within the Bachelor of Commerce program than at Success/Angus Business College. However, these criteria do not explain why women with higher demonstrated scholastic abilities do not enter secretarial programs, although one might intuitively expect that high achievers would not want to be secretaries--that secretarial work has so little prestige, appeal, and opportunity for advancement that few woman with a wide range of options would choose it. As Colwill (1985, page 12) suggests, highly intelligent women are becoming less and less willing to be "cloaked in the invisible guise of a secretary."

Further research designed to examine the relationship between the socialization process, sex-role stereotyping, sex-role identity, and academic performance is needed. Are girls being streamed into typing and shorthand classes because, in adolescence, they are already willing to choose business skills training at the expense of leaving open the door to university education? An equally likely explanation is that

girls are being encouraged, either overtly or through a complex sex-role socialization process, to take traditionally feminine career paths. The fact that a large percentage of the secretarial students identified with a feminine sex-role identity may also be a part of this socialization process--a socialization process that Holms (1985) argues may be associated with less emphasis on scholastic achievement resulting in lower grades.

Reasons for Program Choice

The students in this study differed in their reported reasons for choosing their program of studies. Management women were more likely to make choices based on extrinsic characteristics of the jobs to which they hoped the program would lead than were the secretarial women. The desire to interact with and help others was a more critical factor in choice of a secretarial program than in choice of a management program. These results are consistent with other research (Strange & Rea, 1983) which indicated that male-dominated fields are chosen for extrinsic variables such as status and money, whereas female-dominated fields are chosen for their emphasis on interpersonal skills and service. Similarly, in Marini and Brinton's (1984) study, females valued opportunity to work with and help others more than did males, who valued status, money, and power more than did females. The emphasis on "people skills" is evident in

clerical workers as a whole, who, when asked to rate departmental work goals, rank social goals such as cooperation and a friendly department as primary (Hofstede, 1974).

It seems logical to postulate a correlation between a feminine sex-role orientation and the valuing of interpersonal skills; the PAQ feminine scale (Spence & Helmreich, 1974), consisting of characteristics which have been considered socially desirable for women, measures identification with expressive interpersonal traits. However, the perception that only feminine careers emphasize interpersonal relationships may be a faulty one. As Kenkel and Gage (1983) discuss, women need to be made aware that there are many traditionally masculine jobs through which they can help others and enjoy satisfying interactions with coworkers and clients, as well as have the opportunity to attain financial success and career status.

Kenkel and Gage (1983) further suggest that the reasons why women in feminine occupations do not emphasize extrinsic rewards of a job may not be related to lack of interest in these rewards. Instead, this lack of emphasis on extrinsic job characteristics may be due to a socialization process which teaches that it is not feminine to covet money, status, and power. Thus, it is possible that the sex-role socialization process serves to effectively reduce the number

of competitors for desirable, but limited, job rewards. Perhaps, as the principle of equal pay for work of equal value is adopted by increasing numbers of organizations, and as "women's work" becomes more highly valued, women will not necessarily need to move into male-dominated jobs in order to pursue extrinsic job characteristics. As these changes become reality, both feminine and masculine occupations will provide the opportunity for extrinsic as well as intrinsic rewards.

Although many women fantasize about nontraditional occupational choices, they abandon these fantasies when faced with the realities of the working world (Blimline, 1976). The prospect of applying for a position in a male-dominated field can be highly anxiety-arousing. Women in masculine professions, suffering from role strain, experience more emotional problems than do "average" women (Standley & Soule, 1974). Given that traditional women tend to have less academic self-confidence than do men (Farmer, 1976), and that feminine women tend to be lower than masculine or androgynous women in assertiveness and self-esteem (Adams & Sherer, 1985; Spence & Helmreich, 1978), feminine women could be expected to have particular difficulty with nontraditional career paths. The disadvantages of feminine occupations like secretarial work may not appear to be as negative when compared to the anxiety, stress, and difficulties associated

with atypical career choices.

Many women enter "women's jobs" by choice, but societal prejudice and both internal and external barriers to success restrict their freedom to do otherwise (Cassidy & Nussbaum, 1983). However, a disservice may be done if it is assumed that women need to be encouraged to move away from highly feminine careers. Certainly, women should be helped to develop their self-confidence and self-esteem, and encouraged to break away from sex-role stereotyped career expectations if they choose to do so. Yet women in female-dominated jobs are not necessarily unhappy, frustrated, or less satisfied with their work than are women in male-dominated fields (Greenfeld, Greiner, & Wood, 1980). Career counselors, in attempting to open more doors for women, should be cautious of disparaging these roles (Richardson, 1979) and placing undue value on masculine careers and masculine traits. Concurrent with non-sexist career counseling, those interested in the improvement of working life for women should focus on changing the tendency of society, and secretaries, to undermine and undervalue secretarial functions. As women's work becomes more valued, both attitudinally and monetarily, those who perform women's work will increasingly value themselves.

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Appendix A

QUESTIONNAIRE

This questionnaire is designed to gather information about the backgrounds, attitudes, and personal characteristics of students. Please answer each of the questions frankly and honestly. Your name is not required on this booklet, and confidentiality will be maintained.

While your participation is voluntary, it is important that you answer all of the questions as best you can. Please work quickly in order to complete the entire questionnaire during this class period. Please begin with the following page.

BACKGROUND INFORMATION

Age _____

Male _____ Female _____

Miss _____ Mrs. _____ Ms _____ Mr. _____

Married _____ Never
Married _____ Divorced _____ Separated _____

Current program of studies _____

Have you received any financial assistance while in your
current program?

Scholarship _____

CEIC sponsorship _____

Bursary _____

Other sponsorship _____

Canada Student Loan _____

Other _____

What is the highest level of formal schooling you had completed
prior to starting your current program of studies?

Grade 10 _____

Some Community College/

Grade 11 _____

vocational training _____

Grade 12 _____

Some University _____

Completed University degree _____

What was your stream or option in high school?

Technical/vocational _____

Business (typing or accounting option) _____

University entrance _____

What was your overall average in your last year of
formal schooling?

A _____

D _____

B _____

F _____

C _____

What was your previous work experience?

Summer jobs _____

Summer jobs and part-time work during school year _____

Full-time work _____ How many years of full-time work? _____

How many jobs, either part-time or full-time, have you held? _____

What is the highest level of formal schooling your parents completed?

Mother _____

Father _____

Did your mother work outside the home during the time you were in elementary school (grades 1-6)? _____

If so, at what job? _____

Did she work outside the home while you were in junior high school (grades 7-9)? _____

If so, at what job? _____

Did she work outside the home while you were in high school (grades 10-12 or 13)? _____

If so, at what job? _____

Please describe your parents' current jobs, and indicate if they are full-time or part-time.

Mother's _____

Father's _____

What type of job would you like to obtain after completing your current program of studies? _____

What type of job do you expect to obtain after completing your current program of studies? _____

This questionnaire is designed to investigate the reasons students choose a particular field of study. Please consider the reason you ORIGINALLY DECIDED to enter your current program.

Please circle the number that most closely represents the way you feel about each of the following statements. For example, if you strongly agree with a particular statement, circle the number "5"; if you strongly disagree, circle the number "1"; if you disagree, but not strongly, circle the number "4". Please circle only one number.

I CHOSE MY PROGRAM OF STUDIES BECAUSE:

1. I believed that the program would provide an outlet for my interests.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5

2. I believed that the intellectual requirements of the program would be well suited to my abilities.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5

3. I believed that the program would give me the opportunity to interact with people.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5

4. I believed that I would have the opportunity to help others.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5

5. I believed that it would be easy to get a job after graduation.

Strongly
Disagree

Strongly
Agree

1

2

3

4

5

6. I believed that the program would lead to a job with the level of prestige I desired.

Strongly
Disagree

Strongly
Agree

1

2

3

4

5

7. I believed that the program would lead to a job with the salary I desired.

Strongly
Disagree

Strongly
Agree

1

2

3

4

5

8. I believed that the program would lead to a job with the level of responsibility I desired.

Strongly
Disagree

Strongly
Agree

1

2

3

4

5

9. I was following the advice of family members.

Strongly
Disagree

Strongly
Agree

1

2

3

4

5

10. (a) One or both of my parents has a job in this area.

Strongly
Disagree

Strongly
Agree

1

2

3

4

5

(b) If one or both of your parents have worked in the area for which you are training, please indicate which one(s).

Mother _____
 Father _____

11. I was following the advice of teachers or counselors.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5

12. My friends were entering similar programs.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5

13. A career in this area was compatible with my marriage/
plans for marriage.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5

14. A career in this area was compatible with my family
obligations/plans to have a family.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5

15. I believed that it was a good program for people of
my sex.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5

The following statements describe reactions to conditions of work and challenging situations. For each item, indicate how much you agree or disagree with the statement, as it refers to yourself, by choosing the appropriate letter on the scale, A, B, C, D, or E.

1. I would rather do something at which I feel confident or relaxed than something which is challenging and difficult.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

2. It is important to me to do my work as well as I can even if it isn't popular with my co-workers.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

3. I enjoy working in situations involving competition with others.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

4. When a group I belong to plans an activity, I would rather direct it myself than just help out and have someone else organize it.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

5. I feel that good relations with my fellow workers are more important than performance on a task.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

6. I would rather learn easy fun games than difficult thought games.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
----------------------	----------------------	-------------------------------	-------------------	-------------------

A	B	C	D	E
---	---	---	---	---

7. It is important to me to perform better than others on a task.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
----------------------	----------------------	-------------------------------	-------------------	-------------------

A	B	C	D	E
---	---	---	---	---

8. I worry because my success may cause others to dislike me.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
----------------------	----------------------	-------------------------------	-------------------	-------------------

A	B	C	D	E
---	---	---	---	---

9. I find satisfaction in working as well as I can.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
----------------------	----------------------	-------------------------------	-------------------	-------------------

A	B	C	D	E
---	---	---	---	---

10. If I am not good at something I would rather keep struggling to master it than move on to something I may be good at.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
----------------------	----------------------	-------------------------------	-------------------	-------------------

A	B	C	D	E
---	---	---	---	---

11. I avoid discussing my accomplishments because other people might be jealous.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
----------------------	----------------------	-------------------------------	-------------------	-------------------

A	B	C	D	E
---	---	---	---	---

12. Once I undertake a task, I persist.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
----------------------	----------------------	-------------------------------	-------------------	-------------------

A	B	C	D	E
---	---	---	---	---

13. I prefer to work in situations that require a high level of skill.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

14. There is satisfaction in a job well done.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

15. I feel that winning is important in both work and games.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

16. I more often attempt tasks that I am not sure I can do than tasks that I believe I can do.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

17. I sometimes work at less than my best because I feel that others might resent me for performing well.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

18. I find satisfaction in exceeding my previous performance even if I don't outperform others.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

19. I like to work hard.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

20. Part of my enjoyment in doing things is improving my past performance.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

21. It annoys me when other people perform better than I do.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

22. I like to be busy all the time.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

23. I try harder when I'm in competition with other people.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

24. It is important to me to get a job in which there is opportunity for promotion and advancement.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

25. Assuming that I get (or am) married, I would like my husband or wife to have a job or career that pays well.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

26. It is important to my future satisfaction in life to have a job or career that pays well.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A	B	C	D	E

27. Assuming that I get (or am) married, I would like my husband or wife to have a job or career that brings recognition and prestige from others.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
----------------------	----------------------	-------------------------------	-------------------	-------------------

A	B	C	D	E
---	---	---	---	---

28. It is important to me to have a job or career that will bring prestige from others.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
----------------------	----------------------	-------------------------------	-------------------	-------------------

A	B	C	D	E
---	---	---	---	---

29. Assuming that I get (or am) married, it wouldn't bother me if my spouse had a better job than I do.

Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
----------------------	----------------------	-------------------------------	-------------------	-------------------

A	B	C	D	E
---	---	---	---	---

30. What is the least amount of education that will satisfy you?

- a. graduate from high school
- b. some special vocational training beyond high school (electronics, auto mechanics, nursing, secretarial school, etc.)
- c. some college
- d. graduate from college
- e. advanced professional degree (Ph.D., MD, law degree etc.)

31. How important do you think marriage will be to your satisfaction in life, in comparison to a job?

- a. the most important thing; I will work primarily for financial reasons.
- b. marriage relatively more important than my work.
- c. marriage and my work equally important.
- d. marriage relatively less important than my work.
- e. marriage is unimportant; I would be reasonably content if I did not marry.

32. How many children would you ideally like to have?

- a. 0
- b. 1
- c. 2
- d. 3
- e. 4 or more

The statements listed below describe attitudes toward the roles of women in society which different people have. There is no right or wrong answers, only opinions. You are asked to express your feeling about each statement by indicating whether you (A) disagree strongly, (B) disagree mildly, (C) agree mildly, or (D) agree strongly.

Circle the letter that best describes your feeling.

1. Swearing and obscenity are more repulsive in the speech of a woman than a man.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

2. Women should take increasing responsibility for leadership in solving the intellectual and social problems of the day.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

3. Both husband and wife should be allowed the same grounds for divorce.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

4. Telling dirty jokes should be mostly a masculine prerogative.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

5. Intoxication among women is worse than intoxication among men.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

6. Under modern economic conditions with women being active outside the home, men should share in household tasks such as washing dishes and doing the laundry.
- | | | | |
|----------------------|--------------------|-----------------|-------------------|
| Disagree
strongly | Disagree
mildly | Agree
mildly | Agree
strongly |
| A | B | C | D |
7. It is insulting to women to have the "obey" clause remain in the marriage service.
- | | | | |
|----------------------|--------------------|-----------------|-------------------|
| Disagree
strongly | Disagree
mildly | Agree
mildly | Agree
strongly |
| A | B | C | D |
8. There should be a strict merit system in job appointment and promotion without regard to sex.
- | | | | |
|----------------------|--------------------|-----------------|-------------------|
| Disagree
strongly | Disagree
mildly | Agree
mildly | Agree
strongly |
| A | B | C | D |
9. A woman should be as free as a man to propose marriage.
- | | | | |
|----------------------|--------------------|-----------------|-------------------|
| Disagree
strongly | Disagree
mildly | Agree
mildly | Agree
strongly |
| A | B | C | D |
10. Women should worry less about their rights and more about about becoming good wives and mothers.
- | | | | |
|----------------------|--------------------|-----------------|-------------------|
| Disagree
strongly | Disagree
mildly | Agree
mildly | Agree
strongly |
| A | B | C | D |
11. Women earning as much as their dates should bear equally the expense when they go out together.
- | | | | |
|----------------------|--------------------|-----------------|-------------------|
| Disagree
strongly | Disagree
mildly | Agree
mildly | Agree
strongly |
| A | B | C | D |

12. Women should assume their rightful place in business and all the professions along with men.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

13. A woman should not expect to go exactly the same places or to have quite the same freedom of action as a man.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

14. Sons in a family should be given more encouragement to go to college than daughters.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

15. It is ridiculous for a woman to run a locomotive and for a man to darn socks.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

16. In general, the father should have greater authority than the mother in the bringing up of children.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

17. Women should be encouraged not to become sexually intimate with anyone before marriage, even their fiancé.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

18. The husband should not be favoured by law over the wife in the disposal of family property or income.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

19. Women should be concerned with their duties of childbearing and house tending, rather with desires for professional and business careers.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

20. The intellectual leadership of a community should be largely in the hands of men.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

21. Economic and social freedom is worth far more to women than acceptance of the ideal of femininity, which has been set up by men.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

22. On the average, women should be regarded as less capable of contributing to economic production than men.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

23. There are many jobs in which men should be given preference over women in being hired or promoted.

Disagree strongly	Disagree mildly	Agree mildly	Agree strongly
A	B	C	D

24. Women should be given equal opportunity with men for apprenticeship in the various trades.

Disagree
strongly

Disagree
mildly

Agree
mildly

Agree
strongly

A

B

C

D

25. The modern girl is entitled to the same freedom from regulation and control that is given to the modern boy.

Disagree
strongly

Disagree
mildly

Agree
mildly

Agree
strongly

A

B

C

D

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the left of the statement to indicate how you generally feel. There are no right or wrong answers.

- | | |
|-----------------------------|--|
| -3 -2 -1 +1 +2 +3 | 1. Whether or not I get to be leader depends mostly on my ability |
| -3 -2 -1 +1 +2 +3 | 2. To a great extent my life is controlled by accidental happenings. |
| -3 -2 -1 +1 +2 +3 | 3. I feel like what happens in my life is mostly determined by powerful people. |
| -3 -2 -1 +1 +2 +3 | 4. Whether or not I get into a car accident depends mostly on how good a driver I am. |
| -3 -2 -1 +1 +2 +3 | 5. When I make plans, I am almost certain to make them work. |
| -3 -2 -1 +1 +2 +3 | 6. Often there is no chance of protecting my personal interest from bad luck happenings. |
| -3 -2 -1 +1 +2 +3 | 7. When I get what I want, it's usually because I'm lucky. |
| -3 -2 -1 +1 +2 +3 | 8. Although I might have good ability, I will not be given leadership responsibility without appealing to those in positions of power. |
| -3 -2 -1 +1 +2 +3 | 9. How many friends I have depends on how nice a person I am. |

- | | | | | | | | |
|----|----|----|----|----|----|-----|--|
| -3 | -2 | -1 | +1 | +2 | +3 | 10. | I have often found that what is going to happen will happen. |
| -3 | -2 | -1 | +1 | +2 | +3 | 11. | My life is chiefly controlled by powerful others. |
| -3 | -2 | -1 | +1 | +2 | +3 | 12. | Whether or not I get into a car accident is mostly a matter of luck. |
| -3 | -2 | -1 | +1 | +2 | +3 | 13. | People like myself have very little chance of protecting our personal interests when they conflict with those of strong pressure groups. |
| -3 | -2 | -1 | +1 | +2 | +3 | 14. | It's not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune. |
| -3 | -2 | -1 | +1 | +2 | +3 | 15. | Getting what I want depends on pleasing those people above me. |
| -3 | -2 | -1 | +1 | +2 | +3 | 16. | Whether or not I get to be a leader depends on whether I'm lucky enough to be at the right place at the right time. |
| -3 | -2 | -1 | +1 | +2 | +3 | 17. | If important people were to decide they don't like me, I probably wouldn't make many friends. |
| -3 | -2 | -1 | +1 | +2 | +3 | 18. | I can pretty much determine what will happen in my life. |
| -3 | -2 | -1 | +1 | +2 | +3 | 19. | I am usually able to protect my personal interests. |

-3 -2 -1 +1 +2 +3

20. Whether or not I get into a car accident depends mostly on the other driver.

-3 -2 -1 +1 +2 +3

21. When I get what I want, it's usually because I worked hard for it.

-3 -2 -1 +1 +2 +3

22. In order to have my plans work, I make sure that they fit in with the desires of people who have power over me.

-3 -2 -1 +1 +2 +3

23. My life is determined by my own actions.

-3 -2 -1 +1 +2 +3

24. It's chiefly a matter of fate whether or not I have a few friends or many friends.

The items below inquire about the kind of person you think you are. Each item consists of a pair of characteristics, with the letters A-E underneath. For example,

Not at all artistic

Very artistic

A B C D E

Each pair describes contradictory characteristics - that is, you cannot be both at the same time, such as very artistic and not at all artistic.

The letters form a scale between the two extremes. You are to choose a letter which describes where you fall on the scale. For example, if you think you have no artistic ability, you would choose A, if you think you are pretty good, you might choose D, and if you are only medium, you might choose C, and so forth. Please circle your answers.

1. Not at all
aggressive

Very aggressive

A B C D E

2. Not at all
independent

Very independent

A B C D E

3. Not at all
emotional

Very emotional

A B C D E

4. Very submissive

Very dominant

A B C D E

5. Not at all
excitable in a
major crisis

Very excitable
in a major
crisis

A B C D E

6. Very passive

Very active

A B C D E

- | | | | | | | |
|-----|--|---|---|---|---|--|
| 7. | Not at all
able to devote
self completely
to others | | | | | Able to devote
self completely
to others |
| | A | B | C | D | E | |
| 8. | Very rough | | | | | Very gentle |
| | A | B | C | D | E | |
| 9. | Not at all
helpful to others | | | | | Very helpful |
| | A | B | C | D | E | |
| 10. | Not at all
competitive | | | | | Very competitive |
| | A | B | C | D | E | |
| 11. | Very home
oriented | | | | | Very worldly |
| | A | B | C | D | E | |
| 12. | Not at all
kind | | | | | Very kind |
| | A | B | C | D | E | |
| 13. | Indifferent to
others' approval | | | | | Highly needful of
others' approval |
| | A | B | C | D | E | |
| 14. | Feelings not
easily hurt | | | | | Feelings easily
hurt |
| | A | B | C | D | E | |
| 15. | Not at all
aware of others'
feelings | | | | | Very aware of
others' feelings |
| | A | B | C | D | E | |
| 16. | Can make
decisions easily | | | | | Has difficulty
making decisions |
| | A | B | C | D | E | |

- | | | | | | | |
|-----|--|---|---|---|--|--|
| 17. | Gives up
very easily | | | | | Never gives
up easily |
| | A | B | C | D | | E |
| 18. | Never cries | | | | | Cries very easily |
| | A | B | C | D | | E |
| 19. | Not at all
self-confident | | | | | Very self-confident |
| | A | B | C | D | | E |
| 20. | Feels very
inferior | | | | | Feels very
superior |
| | A | B | C | D | | E |
| 21. | Not at all
understanding of
others | | | | | Very understanding
of others |
| | A | B | C | D | | E |
| 22. | Very cold in
relations with
others | | | | | Very warm in
relations with
others |
| | A | B | C | D | | E |
| 23. | Very little need
for security | | | | | Very strong need
for security |
| | A | B | C | D | | E |
| 24. | Goes to pieces
under pressure | | | | | Stands up well
under pressure |
| | A | B | C | D | | E |