A STUDY OF PERCEIVED PARENTAL INFLUENCE TOWARD DAUGHTER CHOICE OF COLLEGE ACADEMIC MAJOR

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CHAPTER I

INTRODUCTION

This study reflects a concern for better counselor understanding of female career during this period of time permeated with change in the traditional female role in American society. Theories of career development essentially have been concerned with explaining both psychologically and sociologically the career behavior of middle-class American males (Osipow, 1973). The increasing number of working women in this decade, along with expanding opportunities for female entry into more diverse occupations has drawn attention to the need for examining career development theory as it applies to both the male and female members of the society.

Osipow (1975, p. 2) stresses that vocational life for women as well as men is developmental and that "changes stem both from within the individual as a reflection of physical, social, and intellectual capacities and orientations, as well as from social forces." Considering career development as a psychological expression of self concept, individually held definition of appropriate sex role behavior may be a variable that influences the decisions a female makes from early childhood; these decisions, of course, can be career development related (Tyler, 1964).

Background of the Study

Traditionally in American society, vocation has been a masculine

task and a male means of identity. Although increasing numbers of women are working, the female has traditionally developed identity as a wife, mother, and homemaker. While alternatives to this path toward identity are increasing in visibility, the state of research about female vocational behavior exhibits inconsistency in organizing concepts and definitions (Levitt, 1971).

Mulvey (1963) extended Super's (1957) female career patterns by separating career patterns which specify acceptance of work as a "primary" or as a "secondary" means of expressing identity. Thus, Mulvey's research aimed at a basic question in determining stages and tasks differential to the career development of women and men: Is career the primary concern of the individual female or is it secondary to the childbearer and homemaker function? Similarly, Kriger (1972, p. 429) found that "the main vocational decision a growing girl faces is a decision between committing herself to homemaking vs. committing herself to a career." In female career development research, females are usually seen to have more than one alternative whereas males are usually expected and expect to work in a pattern of continuous vocational participation.

Psathas (1968), a sociologist, calls for female career theory which considers the relationship of sex role and occupational role. Marriage, family finances, social class, education and occupation of parents, social mobility, and mate selection are "relevant aspects of the setting as it exists for women in this society" (Psathas, 1968, p. 265).

In characterizing the distinctive sex differences relative to career development theory for women, Zytowski (1969) emphasizes the social role for women which results from the female childbearing function. He

proposes three vocational participation patterns for the study of female vocational behavior which clearly recognize the childbearing role as affecting female vocational life sequence. Both social expectation and personal expectation enter into a woman's decisions concerning marriage, family, and vocation. While both men and women may become nurturant parents, the decision to accept, accept with limitation, or reject the parent role has psychological implications which are probably different in the development of women than men. These implications indicate adjustments in career development models which are sequenced with male life-timing research.

A model has been developed by Super (1957) which combines the human development hypothesis with career theory. Super (1957) uses a framework of life stages which indicate vocational tasks that reflect larger life tasks in a career theory in which vocational choice by an individual is an expression of self. Super, Starishevsky, Reuben, Matlin, and Jordaan (1963) have contributed to career development theory the conceptualization of occupational choice as a process of implementing the self concept. This has important implications for understanding female self-held attitudes about appropriate sex role behavior. Mischel (1966) suggests that sex appropriate behavior is acquired through a social learning process. In forming a concept of one's self in relation to appropriate sex role behavior, definitions are gained from parental acceptance as well as from observations made in the cultural setting.

Parent influence is basic to Roe's (1957) theory of career development and has been examined by many researchers. Kriger (1972) reports that homemakers perceived their parents as highly restrictive while career oriented women perceived their parents as permissive. In studying

career-oriented women, "Role Innovators", Tangri (1972) concluded that the quality of the relationship between daughter and parents was a greater contributing factor than a sex related parent variable.

Paternal influence has been examined by career researchers less frequently than maternal influence, however, some researchers have reported the existence of the father's influence in the career development of daughters (Roe and Siegelman, 1964; Steinmann, 1970; Kinnane and Bannion, 1964; Oliver, 1975; Durcholtz, 1977; Nagley, 1971; and Hennig and Jardim, 1977). Generally findings indicate that a father-daughter relationship which has allowed from early childhood autonomy, independence, acceptance, intellectual expectation, and competence facilitates a female who is motivated by internalized goals more effectively than from social expectation. Helson (1972) describes such a relationship existing between fathers and creative mathematician daughters. Bardwick (1963) proposes a cross-sex model explaining the development of achievement motivation in females which identifies a supportive father who encourages risk-taking and competence.

Significance of Study

Research concerning the career development of American females indicates that much is yet to be learned in order to implement career education models which consider social environmental influences coming to bear on the development of abilities, interests, and attitudes of females (Osipow, 1975). Information for explanation of both female and male career development yields similarities and differences which can increase understanding of the process of career development for more individuals (Osipow, 1973, 1975). While existing well developed career

theories provide a foundation for the explanation of much career behavior, a clear application of these theories to women's career development seems confounded by different social roles, developmental tasks, and expectations operating for females. There exists little assessment of the impact of such influences upon the career development or the tempering of female career decision making by social environmental considerations.

Viewing career as a developmental process of orderly stages, interest arises in the relationship of experiences in early childhood and schooling to the development of female attitudes toward work. There is a need to identify and examine interacting psychological and social variables which influence a female through career development and which contribute to individual patterns of choice. Clear awareness of self and values as well as alternatives at any stage of development contribute to greater self expression and maturity in career decision making. Clearer understanding of influences operating for a female at stages of development indicate to counselors the timing and nature of meaningful intervention.

In Super's (1963) career development scheme, the upper division college woman who has declared her major has "specified" an occupational choice and can identify personal preferences indicating a vocational pattern plan. Vocational patterns of college women indicate that some will work continually through a full life career pattern; others will combine marriage, family, and career; and others will become homemakers after a short work period or no work period and may re-enter the work world after children are older. Quite importantly, each of these career patterns involves a different life style and indicates different

approaches to continuing adult female psychological development and self-fulfillment.

Implied for counselors at this and every stage of development is the importance of maintaining open alternatives and encouraging women to "identify the type of education which is appropriate for each woman and not just for women as a broad general class" (Harmon, 1970, p. 77). Professional and career opportunities have become more available to women over the last few years. It does not necessarily follow that most bright college women will be career oriented nor that less intellectually talented women will not possess the motivational and interest characteristics which would be attributes in a traditionally male occupation.

Just as vocational pattern preferences indicate future directions they also indicate the influence of choices made earlier in life and exhibit consistency in mentally healthy individuals which is probably related to expression of the woman's definition of her female role. "It seems clear that vocational life is developmental, that is to say, an individual's concept of what is appropriate work and work attitudes at one stage of his life are likely to be shaped over time" (Osipow, 1975, p. 2). Because choices related to a female's learned definition of appropriate sex role behavior seem actively involved in expression of self through career, it is important to examine relationships which may contribute to that female self definition.

Statement of the Problem

While theories exist for explaining career development of the American male, the appropriateness of these explanations for females remains

tentative. A problem in developing female career theory from existing foundations is to clarify the impact of interacting individual and social variables in the career development of females. One such variable is learned appropriate sex role behavior as it relates to career related decisions. Examination of antecedent learning which contributes to the development of an individual's definition of appropriate sex role behavior in career decision making may be illuminated by expressed daughter perceptions of the attitude of the usual career role model in the American home--the father. This study was designed to answer the following question: Do perceived father attitudes and mother vocational pattern influence a daughter's choice of college academic major?

Assumptions

The following assumptions are basic to the design of this investigation:

1. Sex appropriate behaviors are acquired through a social learning process in which behaviors typically elicit different rewards for one sex than for the other (Mischel, 1966).
2. A father's attitude toward women's roles has basically been consistent over the lifetime of the daughter and she can accurately perceive and report her father's attitude.
3. People perceive attitudes they attribute to others and choose behaviors in relation to those perceived attitudes.
4. Choice of an academic major by the junior year in college is a commitment to a major field of study which can be identified as Traditional or Pioneer.

5. Choice of college academic major is one of a series of decisions which relate to one another in a career development process for a female.
6. Measures of daughter perceived attitudes of fathers toward women's roles are normally distributed in the population of Oklahoma State University women students.

Limitations

The sample for this study is limited to college women who by virtue of school years completed are not representative of most American women. They are more likely than other females to exhibit achievement, competence in intellectual skills, and an orientation to enter the work world with career goals.

The planned work or career indicated by the student women is not actual career behavior. The actual behavior of these women following graduation would add more vital information for the research question.

The means of gathering data from subjects randomly selected was through a mailing process. The study sample, therefore, includes data from subjects who returned the questionnaire rather than every subject in the selected sample.

The sample of women selected for this study is not necessarily representative of women from other educational, social, or geographic settings.

Definition of Terms

Traditional majors--those majors in which at least 70 percent of the graduates were female according to information from Earned Degrees

Conferred (U. S. Dept. of Health, Education, and Welfare, 1975).

Pioneer majors--those majors in which at least 70 percent of the graduates were male according to information from Earned Degrees Conferred (U. S. Dept. of Health, Education, and Welfare, 1975).

Traditionals--women in female dominated majors or occupations (Osipow, 1975).

Pioneers--women in male dominated majors or occupations (Osipow, 1975).

Homemakers--women who work outside the home very little or not at all (Osipow, 1975).

Career-oriented--women who may be either Traditionals or Pioneers in occupational choice but who do not choose the Homemaker occupation (Osipow, 1975).

Feminine patterns of vocational participation--patterns of work participation outside the home distinguished by age(s) of entry into the work force; span of participation; and degree of participation as defined by the proportion of men to the total number of women employed in the occupation (Zytowski, 1969).

> Mild Vocational Pattern--indicated by entry into work outside the home very early or late, a span of less than eight years, and in an occupation in which at least 60 percent of the participants are women.
>
> Moderate Vocational Pattern--indicated by early entry into work outside the home, a span of eight or more years in an occupation in which at least 60 percent of the participants are women, or multiple entry into an occupation in which no more than 40 percent of the participants are women.
>
> Unusual Vocational Pattern--early entry into work outside the home for a span of twelve or more years in an occupation in which no more than 40 percent of the participants are women (Zytowski, 1969, pp. 662-663).

Significant Career Other--a person identified from a list of role titles as influential in the choice of major.

Socio-economic position--a position determined by a two factor system of assigning value and weight to the father's occupation and education yielding scores which may be located on a continuum or within one of five classes (Hollingshead, 1957).

Hypotheses

An alpha level of $p < .05$ is specified as needed in order to reject the following hypotheses:

I--There is no difference in perceived father-held attitudes toward roles of women between daughters choosing Traditional majors and daughters choosing Pioneer majors.

I_a--There is no difference between the educational levels achieved by fathers of daughters choosing Traditional majors and fathers of daughters choosing Pioneer majors.

I_b--There is no difference between educational levels achieved by mothers of daughters choosing Traditional majors and mothers of daughters choosing Pioneer majors.

I_c--There is no difference between socio-economic position of families of daughters choosing Traditional majors and families of daughters choosing Pioneer majors.

II--There is no relationship between the vocational patterns of mothers of daughters choosing Traditional majors and mothers of daughters choosing Pioneer majors.

III--There is no relationship between vocational patterns planned

by daughters choosing Traditional majors and daughters choosing Pioneer majors.

IV--There is no difference in reported Significant Career Other between women choosing Traditional majors and women choosing Pioneer majors.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The rationale for this study is drawn from a review of the literature about female vocational development, career choice, parent attitudes, and sex role perception. Findings are oriented toward five prominent aspects for the conceptualization of this study: (1) career development, (2) parental influence, (3) environmental influences, (4) individual factors, and (5) the measurement of attitudes toward women. The chapter concludes with a summary of the review of the findings.

Career Development

Given that there is something systematic about people's careers and their development, the problem which follows is to know what is "normal" career development for women. Data are accumulating to indicate that careers for both sexes are appropriately similar, however, it is clear that social organization exerts an impact on career development differently for each sex (Osipow, 1975).

Super's Developmental Theory

Super's (1957) developmental theory lends itself to examining some important aspects of career development which occur differentially for

males and females. His use of the concepts of developmental stages and career patterns of development are particularly appropriate for the study of female career development. Super proposes that a person strives to implement his/her self-concept by choosing to enter the occupation he/she sees as most likely to permit self-expression. The particular behaviors a person engages in for implementation of self-concept vocationally are related to the individual's stage of life development. An individual's self-concept becomes stable as he/she matures. The manner in which it is implemented vocationally is dependent upon conditions external to the individual.

Super's theoretical framework is based upon three areas of psychological foundation. The first is the field of differential psychology. On the basis of existing data, Super drew the assumption that any given person possesses the potential for success and satisfaction in a variety of occupational settings. People are more apt to be satisfied if they are in an occupation that requires a pattern of interests and abilities closely corresponding to their own characteristics.

Super (1957) identified these career positions for women:

(1) The stable homemaking career pattern--marriage and little significant work experience.

(2) The conventional career pattern--schooling followed by a brief work experience prior to marriage.

(3) The stable working career pattern--schooling followed by work which becomes the woman's life work.

(4) The double-track career pattern--schooling followed by work while also being a homemaker. She may take occassional time out for childbearing.

(5) The interrupted career pattern--schooling and work followed by marriage and childbearing. When children are old enough or necessity dictates, the woman returns to work (pp. 77-78).

The second psychological area influencing Super's explanation of career development is self-concept theory. Super, Starishevsky, Matlin, Reubin and Jordaan (1963) advanced the ideas that vocational self-concepts develop on the basis of children's observations of and identification with adults involved in work. As maturation continues, the self-precepts become even more complex and develop eventually into self-concepts: The vocational self-concept is one aspect of the person as he/she sees him/herself in relation to the environment.

Developmental psychology provides the third area of foundation for Super's theory. As an individual moves through identifiable stages, different aspects of vocational development become central. Accomplishment of tasks related to the central vocational concerns determines the extent of development of the individual toward the next stage. Stages identified by Super include Growth, Exploration, Establishment, Maintenance, and Decline and they extend over the entire vocational life span. Osipow (1973) lists as developmental tasks: Crystallization (ages 14 to 18), Specification (18 to 21), Implementation (21 to 24), Stabilization (25 to 35), and Consolidation (35 years plus).

Female Career Development

After conducting an extensive review of the literature about the development of career theory for women, Levitt (1971) concluded that for women a conceptualization of stages related to Super's theory required expansion to reflect differences in family and work commitment possible in the years beyond college. Levitt states:

> Perhaps other psychological variables are related to various stages in the woman's life after the college years. Future researchers and certainly future theorists concerned with

> career development of women might best be concerned with recognizing and integrating the existence of such life stages within their work (p. 382).

Matthews and Tiedeman (1964) studied the relationship between 18 attitudes toward career and marriage and the life styles of over 1,200 young women in a cross-sectional representation of developmental stages from early adolescence through young adulthood. They found that the life style of the young woman is definitely related to her attitudes towards career and marriage and that the relationship is modified developmentally. The nature of the life plan contributes one dimension of the characterization of the marriage-directed or career-directed attitudes. "Although attitudes and life plans are intimately related, the relationship is best understood within the perspective of a developmental stage" (Matthews and Tiedeman, 1964, p. 383).

Recognizing the importance of social factors as well as individual factors in the career development of females, Psathas (1968) calls for female career development theory which weighs heavily the social force aspect operating in occupational choices of women. "An understanding of the factors which influence entry of women into occupational roles must begin with the relationship between sex role and occupational role" (p. 257). Among the factors Psathas identifies as influential are: (1) marriage, intention, and fulfillment; (2) family finances; (3) social class, education and occupation of parents; and (4) social mobility and mate selection. These are "relevant aspects of the setting as it exists for women in this society" (Psathas, 1968, p. 265).

In characterizing the distinctive sex differences important to consider in looking toward a career development theory for women,

Zytowski (1969) emphasized the existant social role for women which results from the female childbearing function.

> No special theory of vocational development for women would be necessary if the portion of their lives which they spend as a mother and homemaker could be regarded as one of the several occupations which they have available to choose from. But such is not the case: Many, even most, women have dual careers of homemaker and some occupational role which produces money and is engaged in outside the home (p. 660).

Patterns of vocational participation and determinants of patterns are considered by Zytowski to be influenced by the distinctive developmental pattern of females which cannot be separated from the childbearing function.

Zytowski (1969) proposed three major patterns of vocational participation: mild, moderate, and unusual. Determinants of the patterns are age of entry into occupation, how long the person continues to work, and degree of participation as determined by proportion of male to female persons engaged in that occupation.

The mild vocational pattern is characterized by very early or late entry, a relatively brief span, and a low degree of participation. The moderate vocational pattern is characterized by early entry, lengthy span, and a low degree of participation or by multiple entries and a high degree of participation. The unusual vocational pattern is characterized by early entry, a lengthy or uninterrupted span, and a high degree of participation.

Wolfson (1976) examined 306 female career histories spanning 25 years to determine if women pursuing different career patterns as defined by Zytowski (1969) differed in certain respects from each other in order to determine if it is possible to predict at the time of college entrance or after entering college what a woman's career pattern will

be. Findings indicate that there are quantifiable differences among women who pursue different vocational patterns but that these differences are not apparent until some time after a woman has entered college. Graduation from college, a vocational major, attendance in graduate school, and an unmarried status were most characteristic of women pursuing the high moderate and unusual patterns.

Other researchers report evidence supporting the importance of the sexually distinctive role of females to their career development in this society. Mulvey (1963) after examining women's career patterns 20 to 27 years after high school graduation states:

> The career pattern notion is important for theory of personality development. It reflects (a) style of life, (b) level of adjustment, (c) concepts women have come to hold of themselves, and (d) hopes and expectations that expand or constrict their orientations to life development tasks (p. 382).

Mulvey concluded that early commitment to marriage limited career exploration in the women she studied.

Similarly, Harmon (1970) followed women 10 to 14 years beyond college entrance and found that career committed women attended college longer, worked more years, married later in life, and had fewer children. Rossi (1972a) observed that 70 percent of the married Pioneers in her study were working and 25 percent were going to school while among the group of married Homemakers only one third were still working and two percent going to school. She concluded that for the Pioneer the crucial event in the career development would be childbearing; for the Homemakers it had been marriage which decided a pattern.

Mulvey (1963, p. 316) followed her synthesis of career development theories as they relate to women with the conclusion that "Marriage and/or work in the validation of self is a crucial aspect of the

attainment of a mature integration of personality in women." The findings of her study suggest that the work role is more central to women's existence and more internalized than many writers would contend.

Self-Concept and Sex Role

The developmental aspect and the concern with female career patterns are related to the self-concept aspect of Super's theory. Intertwined with self-concept is the female's perception of herself in relation to her sex role. Patterson (1973) points out that self-concept is the pervasive variable that determines not only what career, but also whether the female selects a career. He calls for "effective and honest recognition during the developmental years of the intrapsychic conflict associated with sex-role and career-role attainment" (p. 274).

After investigating the relationship of feminine role and self-concepts to vocational maturity, Putnam and Hansen (1972) concluded that self-concept in 16 year olds is useful in the prediction of vocational maturity. In viewing the relationship between the feminine role concept of self in relationship to vocational maturity, the more the girl viewed her role as being liberal, the higher her level of vocational maturity. They state:

> That is, the more she believes in the achievement orientation of the American culture and therefore strives to fulfill herself directly by achieving her own potential, the more able she is to cope with the vocational developmental task for formulating ideas regarding an appropriate occupation (pp. 339-340).

Results indicate that self-concept and feminine role concept of self are useful in predicting vocational maturity while the feminine role concepts of the ideal woman and man's ideal woman are not.

Richardson (1975) examined the relationship of college women's self and role concepts to their orientation toward future roles. The data give strong support for the expectation that women who perceive themselves as similar to their picture of a homemaker would not be career oriented. No support was found for the expectation that a high degree of similarity between self and career role concepts would be associated with a high level of career orientation.

Richardson (1975) concluded that although self-concept may be an important variable, the basic assumption of a self-concept theory of vocational development theory for women is not sufficient to explain nontraditional orientations in college women. In relation to the roles, however, Richardson suggests that differentiation apparently aids the less traditional female in the development of a consistent and integrated set of self-concepts and role orientation. The differential influence of self esteem facilitates a female's ability to deviate from a traditional role.

Elsewhere, Richardson (1974) reports that a viable career theory must be based on an understanding of women's underlying sex-role orientation. Women who desire careers must first make decisions about the roles that they hope to enact in the future before they can become involved in the particular occupation they hope to pursue. She suggests:

> It is possible that career-oriented women experience role conflict (since most also expect to marry) and that the resulting anxiety inhibits their ability to commit themselves to a particular occupation, to seek information about it, and to make plans for entering the field and advancing (p. 171).

Richardson identified two career patterns. Career-oriented women were described as highly career motivated and as perceiving their career roles to be primary in their adult lives. These women also aspired to higher

level, less traditional occupations. Work oriented women have well defined occupational aspirations and place a high value on both the career role and marriage and family responsibilities in their future. They aspired to more traditional female occupations. Work oriented women do not deviate to the same extent from the traditional feminine role. Thus, there is little likelihood that they would experience conflicting role expectations.

Lawlis and Crawford (1975) examined interpersonal cognitive differentiation and found that Pioneer women seem more capable of perceiving a wider range of roles, and, therefore, have less restrictive choice of vocational goals. Previous researchers had found a significant correlation between the degree of cognitive differentiation and the perception of differences between self and others.

Rand (1968) found that career-oriented women score higher not only on masculine characteristics but on many feminine characteristics as well. The career-oriented freshman adheres more closely to the traditional concept of femininity.

Rossi (1972b), in discussing ambivalence of females toward the role of women in American society points out that ambivalence can be admitted most readily toward those roles which are optional.

> The more critical the role is for the maintenance and survival of a society, the greater the likelihood that the negative side of ambivalence will be repressed, and negative sanctions applied to their expression (p. 125).

The majority of American women may choose whether or not to work and, therefore, their ambivalence can be openly shown. The pressure to accept the marriage role is strong, however, and pressure is even stronger to accept maternity. Elsewhere, Rossi (1972a) indicated that the influence

on the Pioneer career woman of childbearing was more significant than marriage.

Tomlinson-Keasey (1974) contrasted fear of success in two groups of college women students--one group older married coeds and the other group younger unmarried coeds. They concluded from the findings that fear of success imagery is an indication of anxiety about roles rather than a predictor of achievement. These conclusions suggest that the change in roles is the critical factor and that marriage has the specific effect of reducing anxiety about success. According to Hoffman (1972), conflict between affiliation and achievement is heightened in the college years when marriage (affiliation) and career (achievement) conflicts are at their zenith. Farmer and Bohn (1970) concluded after measuring vocational interests that the level of vocational interest in women, irrespective of their marital status, would be raised if the home-career conflict were reduced.

Summary

Generally, research findings indicate that while the same theoretical processes may operate in the career development of males and females, social factors come to bear so differently on females than males that one must explain and understand the nature of the personal context in which an individual female has experienced development before the pattern of her career decision making can be understood. Her decisions are guided by a developmental pattern closely related to her attitudes about her female self.

Parental Influence

Social Learning Process

A basic assumption of this study was that sex appropriate behavior is acquired through a social learning process. This process and the development of self concept are closely related in early childhood. Mischel (1966) defines sex-typed behaviors as those which typically result in different consequences for one sex than the other. Different consequences related to behavior have different values and occur with different frequencies for each sex. Sex-typing is a process by which the individual acquires sex-typed behavior patterns. Mischel explains that first the child learns to discriminate between sex-typed behavior patterns and then to generalize from the specific learning experiences to new situations.

Mischel also explains that sex-typed behaviors are acquired by imitation and identification through a tendency to reproduce the actions, attitudes and emotional responses exhibited by real life or symbolic models. Observational learning can take place without direct reinforcement to the observer. Facilitating the learning is a nurturant relationship between the observer and the model and willingness of the model to reward the observer. Cross-sex imitation occurs when the opposite sex model is more powerful than the same sex model. In terms of occupational endeavors the father is typically the more powerful model. Greater exposure of the observer to opposite sex behavior also facilitates the imitation of this behavior. A child who is not limited in opportunity to participate in games and activities typical of the opposite sex would develop a larger repertory of sex appropriate behavior. According to

Mischel (1966, p. 63), "The child's behaviors are determined not by his gender role, but by his social learning history." He believes that there is less evidence that cognitive changes produce behavior changes than there is that values and cognitions are realigned to make them consistent with behavior and may even justify behavior. Therefore, it becomes important to explore the influence parents may have in the social learning history of females relative to their career development.

Roe's Theory

Parental influence upon career development of offspring has been most thoroughly examined in relation to Anne Roe's personality theory of career choice. Roe (1957) describes three basic parental attitudes--acceptance, concentration, and avoidance--which determine the style of parent-child interactions. Studies have attempted to determine the relationship of early family interactions to career choices of females but with little success.

Green and Parker (1965) concluded that the parent-child relationship and influence upon a subject's occupational choice when dichotomized on a person, non-person basis, appears not to yield an effective means for exploring vocational development. They did report that specific parent-child relationships appeared to affect boys and girls differently. "Influence of fathers upon the occupational orientation of girls appeared to be much stronger than that of the mothers" (Green and Parker, 1965, p. 302).

Research by Utton (1962) also could not find significant support for Roe's theory. Support was reported, however, for the aspect of the theory in which it is hypothesized that people in occupations with a

welfare orientation, in comparison with people otherwise employed, exhibit a stronger commitment for social values as opposed to other types. Utton (1962, p. 52) cites Roe: "The whole situation is very much more complex with women than with men."

Roe in interpreting findings of her research with Siegelman states that:

> Generally satisfactory early experience with interpersonal relationships, both with parents and others--experience which is sufficiently warm and supportive, but neither stressful nor very intense--should, within adequately stimulating environments, permit individual development allowing free play to individual aptitudes within a wide range of culturally approved activities (Roe and Siegelman, 1964, p. 210).

Further, Roe and Siegelman (1964) indicated that personality is only one broad factor in the decisions made at any occupational choice point and that occupational life history is never dependent upon one choice alone.

Parent Influence and Daughters

While Roe's theory has not received research validation, evidence is available which supports her contention that parental behavior in relation to the child is influential in the career development of females. Hoffman (1972) implied that "over-help" which girls receive may inhibit the development of independence and achievement in females. According to Hoffman:

> Since the little girl has (a) less encouragement for independence, (b) more parental protectiveness, (c) less cognitive and social pressure for establishing an identity separate from the mother, and (d) less mother-child conflict which highlights this separation, she engages in less independent exploration of her environment. As a result she does not develop skills in coping with her environment nor confidence in her ability to do so (p. 147).

Kriger (1972) studied mature females who enter male-dominated or female-dominated occupations or who choose to become homemakers. She

concluded that more overprotective or restrictive parental attitudes and behaviors result in a greater commitment to homemaking. Kriger reports:

> A direct relationship exists between child-rearing behavior of the parents (or a girl's perception of her parent's childrearing behavior) and the subsequent vocational choice of their daughter (p. 428).

Nagely (1971) found that parental influence seems to be significant in the differentiation between Pioneer and Traditional working mothers. Pioneers' fathers were more highly educated and were also more likely to accept the employment of women. Traditionals were more likely to report that they got along well with both parents. Pioneer departure from the traditional female role is in some way related to distance perceived between them and their parents. "Those subjects who reported a close relationship with their mothers also tended to see their careers as secondary to homemaking" (Nagely, 1971, p. 339). Women who scored high on Feminine social orientation tended to have grown up in families where the father was in control.

In a study involving both female and male engineering students, Durchholz (1977) found that both male and female engineers expressed good family relationships and unusual coping abilities for difficult situations. Both men and women engineering students received high support from their fathers, with 80 percent of both sexes reporting that their fathers' attitudes were either extremely favorable or very favorable toward their choice of engineering as a career. Mothers favored their sons' choice of engineering as a career only slightly more than their daughters' choice of engineering. "Fathers did rank as one of the strongest influences on the career choice of daughters, but their influence was even more notable for sons" (Durchholz, 1977, p. 296).

Studying college women students, Oliver (1975) found that career oriented females perceive significantly less father acceptance than do homemaking oriented subjects. She interprets this lesser father acceptance as "lesser nurturance" and indicates that "such a parental attitude could have been important in the career oriented subjects' having developed relatively greater needs for independence and achievement" (p. 9). There was no significant difference found in mother acceptance for either group. The crucial factor seems to be the father's attitude in the determination of the degree of career commitment of the undergraduate female.

Rossi (1972a) observed different patterns of attitudes toward family and family activity interests between Homemakers and Pioneers. She concluded that close interpersonal ties have different meanings for the Homemaker and the Pioneer. Women whose childhood was characterized by intense and extensive relationships with their families are far more apt to grow up with a conservative image of appropriate roles for women. They are nurturant toward those younger and frailer than themselves and dependent toward those older, stronger, or more authoritative than themselves. Pioneers sustain less intense interpersonal relationships and are free of the need to be dependent on others or nurturant of others.

Role Innovation is a term used by Tangri (1972) to denote choice by women of non-sextypical occupations. Tangri found that Role Innovation is associated with autonomous relationships with both parents; relationships may embrace some disagreements and areas of distance as well as agreements and areas of closeness. She reported that aspects of the relationship with both parents are likely to be better for Role Innovators with more educated mothers. Disagreement with mother on substantive

issues like college goals may be greater for Role Innovators. Among the goals at issue is the daughter's future occupation and Tangri notes that mothers, in general, exert a negative influence on role innovation.

A similar observation was made by Matthews and Tiedeman (1964) who indicate that parents usually state a wish for girls to be able to earn a living, and yet they are concerned that their daughters be marriageable. This leads many parents to caution their daughters not to be overly competent in their careers and to seek a "suitable" marriage partner.

Socioeconomic status in relation to female career development occupies an unclear position as a factor for explaining career aspirations. Kinnane and Bannon (1964) studied perceived predominance of influence by one parent over the other as reflected in the work-value orientation of college women and found that perceived parental influence is highly related to the socioeconomic status of the family. Fathers who are engaged in professional work and whose level of education and training is superior to that of the mother exert a greater influence on the female child. However, the daughter does not appear to introject the father's work-value orientation; rather, it is the father's idealized goals for the daughter that are internalized. The girl who identifies with the mother more often comes from a home where the father works at the skilled or unskilled level and where work is a more realistic possibility for the women. Therefore, work-value orientations are stronger.

Fifty-one young women enrolled in sociology courses at a liberal arts college in a suburb of New York City were subjects in a study by Steinmann (1970). Responses given by parents when compared with those

of their daughters indicate that there appears to be a definite relationship between the attitudes of fathers and those of their daughters with regard to women working. The relationship is not quite as clear in the case of mothers. The young women adopted the view that they are capable of working and raising a family at the same time. Steinmann concluded that this probably reflected, to a large extent, the mothers' unfulfilled aspirations in terms of working. "When the young women assert that an ideal woman would be home oriented they seem to be expressing the views of their fathers" (Steinmann, 1970, p. 31). Steinmann concluded:

> Evidence from the present study suggests strongly that counselors must consider the potential life-style of young women clients against the background of the views and life styles of their parents. Parent's attitudes represent both a direction and a limitation for young women (p. 32).

Influence of the Working Mother

The question of the influence on a daughter of a working mother is not clear. The beneficial effect of maternal preference for a career may be mediated by career oriented mothers who encourage achievement and competence in their daughters. Earuch (1973) compared subjects whose mothers differed in work history and attitudes toward careers. In this study maternal preference for a career had a positive effect upon subjects' self-esteem and evaluations of their own competence, however maternal employment did not. Thus a daughter's attitude depended upon whether mother wanted to work and liked to work. Liking work is probably more true of well-educated, well paid mothers. Low paid, low esteem jobs for the mother probably lead to less positive work orientation for the daughter.

Tangri (1972) drew similar conclusions. More educated working mothers, particularly those who were themselves in male dominated occupations, were taken as role models by role innovative daughters. Innovators from less educated homes found the mother is less attractive as a role model. "Her status will engender mobility aspirations in the daughter in addition to achievement motivation" (Tangri, 1972, p. 195). An interesting observation is made by Tangri about this latter group:

> The innovative daughter who finds her mother's position unenviable because it seems to involve not the best but the least desirable of both worlds--a low status, less remunerative occupation, without much reduction in domestic burdens--may be less intimidated by the prospect of delayed marriage than her more conventionally socialized counterpart. Her mother may also convey more negative feelings about the dual role, because of the lesser status and rewards of her work than that of the more educated working mother. Therefore, the daughter may be able to perservere in her aspirations more easily in the absence of masculine role support (p. 196).

The importance of the maternal attitude toward homemaking as well as work are pointed out by Etaugh (1975). She found that children of women who were dissatisfied with homemaking held more liberal views about sex roles than did children of women who enjoyed homemaking.

Almquist (1974) examined college women students' occupational choices and found some ways women who choose occupations which employ largely men differ predictably from women who select feminine occupations. They found that mothers of students who choose men's fields have attained higher educational levels and are more likely to have worked than mothers of the Traditional students. Persons indicated by students as having influenced one's occupational choice are more likely to have been associated with the occupational field. Almquist concluded that women choosing Pioneer occupations differ in terms of familial influence,

work values, work experience, role model influence and some collegiate activities.

Summary

Parental influence in the social learning history of a female is only one factor in career development. Emerging from this collection of family environment research, however, is a picture of parental influence which appears to be a viable element for study in the development of the female career.

Environmental Influences

Intellectual Development and the School Environment

From the early childhood home, the child expands her environment when experiencing new social influences in school. Tyler (1964) examined in a longitudinal study "Career" and "Noncareer" patterns of interest among girls in grades 6 through 12. Twelfth grade girls were selected into a Career or a Noncareer group by means of significantly indicative scores on the Strong Vocational Interest Blank for Women (SVIB-W). Their profiles from various previous testings were examined. At the first grade level Career girls showed a more masculine average on the Dreese-Mooney Inventory which suggests that these six year old girls were interested in boys' activities at an early age. By the fourth grade the Masculine-Feminine difference was not significant. The Career females as fourth graders were described by their classmates as "less popular, less good-looking, less active, and poorer than the others"

(Tyler, 1964, p. 210). Classmates found them bossier, more restless, more talkative, and more interested in reading. By the eighth grade a difference in basic orientation or motivation between the groups occurred in terms of curricular orientation toward college preparatory educational choices. Judging from administrations of the SVIB-W in tenth, eleventh, and twelfth grades, Tyler concluded that the difference in orientation between the Career and Noncareer females must have occurred before the subjects entered high school. In summation Tyler (1964) states:

> Girls who do not accept the traditional concepts with regard to sex roles during the preschool years are more likely to develop Career interests than those who do accept them at six or younger. It is early masculinity of interests, not masculinity at later ages, that is related to the development of this particular pattern (p. 212).

In discussing women's intellect, Maccoby (1966) identifed personality characteristics which appear to be requisites for good analytical thinking--dominance, independence, and active striving. She observed that a girl who as a pre-schooler is full of curiosity, is dominant and independent and likes boys' activities will find that boys form their own exclusive play groups leaving her to the company of girls during school years. "Evidence indicates that she will discover that not behaving as girls are expected to behave will cause a certain amount of anxiety" (Maccoby, 1966, p. 35).

Inquiries by Levine and Rolwing (1977) into reasons women do not pursue mathematical careers provided conclusions relating to societal pressure. They found that awareness of this pressure was most visible at the high school level.

> Although fourth grade students were unaware of discrimination, high school girls and some college sophomore women were

> extremely conscious of peer pressure and of prejudice displayed by parents, teachers, and counselors (p. 47).

Stereotyping and the Work World

Acceptance and encouragement of individual self expression by significant others including parents, teachers, and counselors needs to be free of stereotypic sex role or occupational role boundaries. Barnett (1975) found support for the line of reasoning which suggests that internal obstacles of attitudinal barriers arising from early socialization and sex role learning may cause females to choose less prestigious occupations which provide little or no competition with men. She found that females as early as age nine avoid preferences for prestigious occupations while males are learning to prefer them.

The pervasive sex typing of occupations exists at all levels of the labor force from the unskilled service workers to the highest levels of business and the professions. Almquist's (1974) research found that women who selected male-dominated fields reported having had a greater amount of work experience in a broader variety of jobs than those who chose traditional fields. The opportunity for exploratory investigation and reality testing in a wide range of choices suggests that meaningful variations exist in the content of women's choices.

Rossi (1972a) concluded that men are more conservative concerning women's roles than women are. In response to the statement, "Even if a woman has the ability and interest, she should not choose a career field that will be difficult to combine with childbearing" (p. 76), half of the women and two-thirds of the men agreed. Men were three times more likely than women to state that there was "no need" for changes

recommended by the President's Commission on the Status of Women.

> This provides indirect evidence not only for the direction of the effect marriage may have on a woman's views, but for the likely reception women may experience as these young men move into policy positions (Rossi, 1972a, p. 76).

Etaugh (1975) using the Attitudes Toward Women Scale (AWS) (Spence and Helmreich, 1972) with men and women college students found that students in Engineering and Business scored more conservatively than other students. Since there are more male students in these fields, then these findings are not surprising. However, they do indicate the difficulties which a female may encounter when entering these fields professionally.

Also using the AWS, Valentine, Ellinger, and Williams (1975) made similar observations among graduate men and women students at the University of Texas and concluded that women who had prepared for career fields may experience conservative attitudes among male peer workers in job situations.

Shepard and Hess (1975) found increasing liberality occurring in subjects from kindergarten through college. Throughout each age group, except kindergarten, there was significant difference between the sexes with females being more liberal.

Burlin (1976) found that adolescent females were more apt to aspire to an innovative occupation in their ideal choice of occupation than in their real choice.

> This suggests then that the desire to pursue a broader range of occupations is present in the young women, however, personal and social forces appear to have limited their belief that in real life these occupations could actually be pursued (p. 128).

Externally controlled individuals in the Burlin study tended toward more traditional occupational choices while internally controlled girls moved

toward occupations which relied upon their own abilities or skills. Externals believe that the system, fate, or powerful others determine outcomes.

Inner-Directedness and Other-Directedness

It becomes evident then that the impact of environmental expectations are handled differently by some females than others. Gable, Thompson, and Glanstein (1976) examined differences in vocational maturity of women across different levels of internal-external control and typical versus atypical vocational choice. They found that internally controlled women have significantly higher vocational maturity than externally controlled females. No differences were found in vocational maturity between those making typical and atypical vocational choices. The lowest level of vocational maturity is found for externally controlled females making atypical vocational choices.

Using both the AWS and the Personality Orientation Inventory (POI), (Shostrom, 1968), Hjelle and Butterfield (1974) arrived at findings that suggest that profeminist subjects perceive themselves as relying more confidently upon their own internal norms without seeking constant support from others for self-validation (Inner Directed Scale).

> Although the etiology of profeminist attitudes is presently unclear, it is probably a result of socialization experiences when early attempts to resist internalization of traditional role behaviors were met with parental approval. This is one area clearly deserving of additional research attention (p. 229).

Tangri (1972) reported that the traditional woman expects to live through others while the Role Innovator expects to make a life for herself through her own efforts. The emphasis on autonomy is further

strengthened by the Role Innovator's tolerance for delayed marital gratification and later closure on choice of occupation. She appears to rely upon her own opinions, considers herself somewhat unconventional and has others depend on her.

Epstein (1973) who has accumulated research findings on women and careers over several years expresses concern for the "other directedness" of women.

> Women are constantly urged to consider, 'Am I doing the right thing?' 'What shall I do or be that will please my future husband and children?' Females seem to be taught to consider anything inappropriate if it makes primary demands on their time and is not available for tapping by others (p. 38).

She observed that it is not unusual for women to be tracked into less productive, less interesting, less honored, more dead-end places, with little recognition of what has happened to them along the way. They are neither expected to excel in skill areas of math and science nor intellectually stimulated by demands of persons in control of learning experiences.

Summary

Environmental influences appear to be more limiting for women than for others. Generally, environmental influences seem not to be supportive of a career development pattern for women which is the same as the usual career development pattern considered "normal" for males in most theories. Research indicates that sex role related environmental influences operating throughout school experiences may offer less intellectual challenge to females than males and create anxiety for some females.

Individual Factors

Individual factors examined for this research are presented in sections of Abilities, Interests, and Motivation. Recognition of the limitations of the population under study is important. Not all choices of non-traditional or male dominated occupations involve academic aptitude. "Despite studies which suggest otherwise, there is no minimum amount of education or socioeconomic status required for a Pioneer orientation" (Osipow, 1975, p. 53).

Abilities

Maccoby (1966) summarized differences between the sexes on various intellectual tasks. In verbal ability girls exceed boys in most aspects of performance through preschool years and early school years. In number ability during early school years there is no difference in arithmetic computation ability. Fairly consistently, boys excel in arithmetic reasoning in high school and college. While there is no difference in early childhood, by school years boys consistently do better on spatial tasks. On measures of field independence boys of school age score consistently and substantially higher than girls. On analytic problems requiring convergent thinking, boys perform better than girls but girls demonstrate greater divergent analysis ability.

According to Maccoby (1963), the key to explaining why some people develop more analytic modes of thought than others is related to:

> . . . whether, and how soon, a child is encouraged to assume initiative, to take responsibility for himself, and to solve problems by himself, rather than rely upon others for the direction of his activities (p. 31).

She proposes that sex differences in intellectual ability reflect girls'

greater conformity and passive-dependence. "The environmental factors embodied in parent-child interaction do indeed make a difference in the child's intellectual performance" (Maccoby, 1963, p. 51). The brighter girls are the ones who have been allowed and encouraged to fend for themselves.

Indications from research involving women mathematicians supports the contention that personality characteristics related to family environment are active determinants of creativity in women. Helson (1972) reports ambivalence toward mother, the need for autonomy, and the development of strong symbolic interests occurring in creative female mathematicians. Recurring in the background of these women are fathers who seem to have modeled the use of intellectual activity for self-expression and for purpose in life.

According to Rossi (1972a), if more women are to enter science, not only as teachers of science but as scientists, then educators must encourage the cultivation of the analytical and mathematical abilities science requires. She states:

> To achieve this means encouraging independence and self-reliance instead of pleasing feminine submission in the young girl, stimulating and rewarding her efforts to satisfy her curiosity about the world to the same extent her brothers' efforts are, cultivating a probing intelligence that asks why and rejects the easy answers instead of urging her to please others and conform unthinkingly to social rules (p. 79).

The Scholastic Aptitude Test (SAT) was used by Goldman and Hewitt (1976) to predict the major field choices of students at four large universities. The results strongly suggest that mathematical ability is an important determinant of major field choice and that the male-female difference in major field choice is largely mediated by the sex difference in mathematical ability.

Durchholtz's (1977) study of women engineering students indicated that in the study's population, females scored 24 points higher on the average on the SAT composite than did men. No dramatic difference occurred on the American College Testing Program college entrance instrument (ACT). On SAT math scores, women dropped slightly but insignificantly behind men, but scored higher on the verbal portion of the test. Both sexes reported having taken four science courses in high school but a slightly greater percentage of women had taken calculus and chemistry in high school.

Using multiple regression analysis, Karman (1973) found that one variable, a positive response to the statement, "I like math and science," discriminated traditional from non-traditional women college students. Among other variables the most discriminating was theoretical orientation, ranking second was college grade point average, and seventh was a self description, "I am analytical."

Astin and Myint (1971) found that the best predictor variables for college women pursuing a career was scholastic aptitude--particularly math aptitude. Multiple regression analysis produced similar findings for Elton and Rose (1967) who report that Scholarly Orientation was the single most discriminating variable in an analysis of vocational choices by freshman women. They suggest that women with similar feminine attitudes but differing commitment to intellectuality or conformity, make diverse occupational choices. "Women may be equally accepting of their femininity and yet may view different occupations as congruent with that femininity" (Elton and Ross, 1967, p. 297).

Women who won National Merit Scholarships (scholars) were followed up five to nine years later by Watley and Kaplan (1971) to determine

their marriage and/or career plans. Most female scholars indicated that they intended to pursue professional careers and that they were also marriage oriented. In addition to being able, these women were generally motivated to excel. The authors note that an earlier study of gifted women by Terman and Oden (1959) showed that most women did not actually pursue a career. Among the Watley and Kaplan scholars, 85 percent reported that they planned to pursue a career and 52 percent were already working in their career fields.

Interests

An early study of career interests of females by Hoyt and Kennedy (1958) found that career-oriented college women had significantly higher average scores than did the homemaker-oriented women on six Strong Vocational Interest Blank for Women (SVIB-W) occupational scales: Artist, Author, Librarian, Psychologist, Physical Education Teacher, and Physician. Women identified as Homemakers had significantly higher average scores when compared to Career group on eight SVIB-W scales: Buyer, Housewife, Elementary School Teacher, Office Worker, Stenographer-Secretary, Business Education Teacher, Home Economics Teacher, and Dietitian. Comparing women on the Edwards Personal Preference Schedule (EPPS), Hoyt and Kennedy found differences on five scales. The Homemaking group scored higher than the Career group on the Heterosexuality and Succorance scale, but lower on the Achievement, Intraception, and Endurance scales.

Wagman (1966) conducted a cross validation of the Hoyt and Kennedy (1958) study and found evidence supporting the contention that women planning marriage versus women planning essentially for professional

careers do not differ in certain patterning characteristics on the SVIB-W. Vetter and Lewis (1964) investigated interest patterns on the SVIB-W as did Hoyt and Kennedy but used senior level Home Economics students. They found two scales, Housewife and Nurse, significantly correlated with homemaking. They also reported biographic data which indicated that families of career-oriented women expressed no particular attitude toward wives working while families of homemaking-oriented women more often expressed some disapproval of working wives.

Examining freshman women student aspirations toward marriage and career, Zissis (1964) found expressed interests of career-oriented women to be more scientific and definite. Women in this study followed SVIB-W patterns similar to Hoyt and Kennedy (1958) and others. On the Leary Interpersonal Check List, marriage-oriented women described themselves as more docile, self-effacing, and cooperative while career-oriented women described themselves as more competitive, aggressive, and managerial.

Gysbers, Johnston, and Gust (1968) used the SVIB-W occupational scales to establish a homemaker-oriented group and a career-oriented group for an investigation of attitude differences which may exist. As with Hoyt and Kennedy (1958), Gysbers, Johnston, and Gust found that career-oriented women may be motivated by one or more of four relatively independent needs one of which is achievement.

According to Holland's (1966) types, career-oriented women are more Enterprising and Intellectual while homemaker-oriented women are more Social and Conventional.

Grandy and Stahmann (1974) tested Holland's hypothesis that parents encourage the development of their own personality types in their

offspring. They determined that sons' personality types resembled the types of their father. However, no relationship was found to exist between the personality types of sons and mothers. Findings for daughters indicated that relationships existed between both mother-daughter and father-daughter personality types. They considered this finding, that relationships existed with both parents for daughters rather than with just one parent, as unexpected.

Motivation

The literature on motivation in women has yielded conflicting information about the impact of achievement and affiliation and ways these motives operate in career development. Bardwick (1971) speaks to the interaction between motives for achievement and affiliation:

> In women one must look at the relationship between affiliation and achievement motives and consider to what extent achieving behaviors derive from achievement or other motives and whether achieving is perceived as a probable threat to affiliation (p. 172).

Bardwick offers a possible explanation for the achievement pattern she observes in females. A boy learns to be independently achieving through pressure from his father while his mother remains warm, supportive and encouraging of self-confidence even in risky adventures. The girl is emotionally supported by her father while her mother demands and critically evaluates her achievement. This is not usual in American culture. Since mastery of skills is not considered crucial for girls, and achievement is controversial, the learning situation for achievement is less often present than is a situation of praise and approval for the female's accomplishments.

According to Hoffman (1972), while boys learn effectiveness through mastery, the effectiveness of girls is contingent upon eliciting help from others. Affective relationships are paramount in females and much of their achievement behavior is motivated by a desire to please. If achivement threatens affiliation, performance may be sacrificed or anxiety may result.

Houts and Entwisle (1968) reported finding an investigation between sex-role orientation and achievement attitudes among tenth-grade girls. Competitive attitudes toward boys related to academic performance among girls with a masculine sex-role orientation. The researchers concluded that traditional girls are inhibited in expressing their competitive feelings.

Horner (1972, p. 62) describes a "motive to avoid success" among women resulting from the American definition of femininity in which achievement and femininity are mutually exclusive. Horner studied college women who provided thematic imagery which indicated a fear of success.

Other researchers have criticized the emphasis by Bardwick (1971) and Horner (1972) on the "other oriented" tendencies of women. Sedney and Turner (1975) reported evidence which indicates that many achieving women are busy with accomplishments associated with high career orientation goals and choose to engage in fewer affiliative behaviors. They report no difference in need for affiliation and need for achievement between men and women in their sample. They view need for career orientation as an intervening variable which is consistent with other choices made by the individual. They do not find career orientation to be compensatory for poor affiliative success. Tangri (1972) reported

that the motive to avoid success operates differently in Traditionals and Innovators. It is more likely to depress intrinsic motivation scores among Traditionals and extrinsic motivation--particularly social comparison scores--among Innovators.

A study by Oliver (1974) examined the interaction between need for achievement and need for affiliation in career-oriented and homemaking-oriented college women and found a significant interaction. Oliver stresses the importance of looking at the interaction of the motivational variables of affiliation and achievement rather than at the effects of just one or the other.

Career decision is seen as a function of the child-rearing mode of the parents by Kriger (1972). The field of occupation and the level within an occupation that a girl chooses to pursue were found to be a function of the level of achievement motivation. According to the results, a girl who perceives her parents as controlling, restrictive, and overprotective is likely to make a decision to become a homemaker, where her needs for nurturance and love are likely to be satisfied. A girl who perceives her parents as permissive and accepting is likely to decide in favor of a career, where her needs to develop herself as an individual are likely to be satisfied. Homemakers were found to score lower than women in either female-dominated occupations or male-dominated occupations on the need for achievement scale. Women in female-dominated occupations scored lower than did women in male-dominated occupations.

When Rossi (1972a) asked college educated women which kind of success they admired most in women, they chose the woman who achieves outside the home. However, for themselves, the choice for success was to live in the shadow of the accomplishments of their husbands and

children. Married Pioneers in this sample agreed with the view that "it is more important for a woman to help her husband's career than to have one herself" (Rossi, 1972a, p. 81). Implied here is that marriage leads to putting her own career in second place.

Harmon (1970) explored the career development of educated women 10 to 14 years beyond college entrance and concluded that:

> . . . women become career committed after age 18 and college entrance. The career committed do stay in college longer, earn higher degrees (although they are not brighter), and work more (p. 79).

The reasons for development of career commitment appear in this group to be motivational rather than circumstantial.

Summary

Females have been less evident in career fields requiring study in mathematics and sciences. This may reflect developmental experiences which call for more conformity than ingenuity and result in less analytical thought processes. Some interests patterns have been identified as differentiating traditional and non-traditional female career preferences. Literature concerning the effectiveness of achievement and/or affiliation motives in women is inconclusive. Research points to a negative value placed upon achievement for females. The interaction of affiliation and achievement motives seems to be an important aspect of motivation in female career development.

Measuring Attitudes Toward Women

The Attitudes Toward Women Scale (AWS) in both full form and short form is frequently cited in the literature and has been used in the study of relationship of attitudes toward women to other variables. The AWS

was developed by Spence and Helmreich (1972) from the Kirkpatrick Belief-Patterns Scale for Measuring Attitudes Toward Feminism (1936). Kirkpatrick was concerned with quantitatively measuring attitudes toward feminism as they relate to the roles of women in the family and society. He was particularly interested in attitude differences between men and women as well as differences between college students and their parents.

Spence, Helmreich, and Stapp (1973) developed a Short-Form, a 25-item version of the AWS. The AWS-Short Form was used by Holcomb (1976) for identifying traditional, non-traditional, and control male and female subjects for an investigation. Normative data from that study are reported on a sample of 40 men and women students.

Little and Roach (1974) investigated peer social modeling of interest in non-traditional occupations for women as a possible technique in career counseling. The AWS was used to assess changes in attitudes following an experimental videotape modeling experience. No change was found in the reported attitude scores.

Hjelle and Butterfield (1974) examined differences in degree of self-actualization in relation to attitudes toward women's rights and roles in society as measured on the AWS. The results of relating the AWS to the Personal Orientation Inventory (POI) (Shostrom, 1968) indicated substantial support for the prediction that women professing liberal, profeminist attitudes are more self-actualized than women endorsing traditional social role attitudes.

The AWS was used in a study by Valentine, Ellinger, and Williams (1975) to test the hypothesis:

> Those who choose traditionally feminine occupations do so partly because they are more conservative in their attitudes toward women's activities and perceive more potential role

> conflict between career and family than do women choosing traditionally masculine occupations (p. 49).

Results suggest that individuals choosing a typically opposite-sex profession are more liberal in their attitudes toward sex roles than are individuals choosing a typically same-sex profession. Further, they found that graduate women were more non-traditional in their attitudes toward women's roles than were the men. The authors suggest that perhaps earlier male support from fathers of these women in some way provides the confidence needed to tolerate stresses in male-female peer relationships.

Tipton (1976) used the AWS along with the Strong-Campbell Interest Inventory (SCII) to investigate differences in vocational interests between male and female college students having traditional, conservative attitudes toward the roles of women in our society, and those having more contemporary, liberal, profeminist attitudes. Both males and females with traditional attitudes toward the roles of women and those with conservative attitudes scored higher on the Conventional Theme of the SCII.

Lunneborg (1974) found that the AWS was sensitive to differences between northern and southern college samples as well as to differences in a northern group exposed to a course on the psychology of sex differences. Women students in the course grew more liberal and the original difference between the men and women students disappeared.

Subjects responding to the AWS in this study were classified according to academic majors which could be identified as either Traditional or Pioneer according to the Department of Education national report on Earned Degrees Conferred (1973). College major has been used

for classification or identified as important in other studies of female career development. Lawless and Crawford (1975) used college major to classify female students into groups identified as Traditional or Pioneer for study of cognitive style.

Mintz and Patterson (1969) investigated the attitudes, values, and aspirations of female college students planning to enter the traditional female occupations of teaching and occupational therapy and of students planning to enter scientific fields. Items on the questionnaire covered four areas: marriage, motherhood, homemaking, and educational and professional roles. The results confirmed the expectation that students in the feminine curriculums of occupational therapy and education have more traditional attitudes while students in science curriculums express more liberal attitudes.

Astin and Myint (1971) conducted research to determine personal characteristics, educational experiences, and personal and intellectual characteristics of women that predict outcomes five years after high school. Using multiple-discriminant analysis they determined that high school women who score high on scholastic aptitudes, especially on mathematical ability, who plan to pursue higher education, and who aspire to an advanced degree usually choose fields that require greater career commitment. Of other personal variables, scholastic aptitudes, particularly those related to mathematics, socioeconomic status, and early career choice were the best predictors.

Herman and Sedlacek (1974) conducted a study among female students to ascertain variables influencing choice of career. College education majors more often indicated that their parents' ideas of success were important determinants of their career choice whereas science majors

were less likely to agree. Science majors were more committed to maintaining a career. Science majors felt that they got less advice from their parents and less sympathy and affection than did the education majors.

Wolfson (1976) found that it was possible to predict female vocational pattern from data that accrued during the five years after entering college.

> College major, number of years spent in college, graduation or nongraduation from college, attendance in graduate school, and a vocational or liberal arts major were the variables that predicted vocational pattern (p. 122).

The AWS was deemed appropriate for use with the sample of junior and senior level college women since recent data were available on similar populations. Additionally, data were available on both college students and their parents. The classifications of Traditional and Pioneer majors were chosen to provide contrast in this exploratory inquiry into attitudes daughters attribute to their fathers. Major areas of study have been shown to be indicative of eventual career behavior among women college graduates.

Chapter Summary

Five areas of research relative to the career development of women have been discussed in this chapter. Included were: career development, parental influence, environmental influences, individual factors, and the measurement of attitudes toward women.

Little research has been done toward a career theory for women or toward appropriate adaptations of existing theoretical foundations. Super's (1957) theory of career development provides a theoretical

structure through which two important aspects of possible differentiation between the sexes may be scrutinized and compared in terms of career behavior: vocational patterns and self-concept as it relates to sex role definition. Research findings indicate that social factors operate differently upon females and males in the development of career. Also, developmental tasks and decision making processes relative to developmental tasks may be different for the sexes.

A social learning process for acquiring appropriate sex role behaviors has implications for the self-concept development aspect of career theory. Parental influence in career development has been reported and some research conclusions indicate that parental influence does operate in female career behavior. Along with the home and family, additional social environmental influences have been observed in the career development of women. School experiences and the stereotyping of occupations has different effects upon girls than boys. The selection of curriculum, especially in secondary school, and expectations females hold for themselves influence career decision making.

Research findings concerning individual factors of abilities, interests, and motivational aspects of female career development suggest that the nature of activities and behaviors permitted females from early childhood may relate to cognitive styles, interest patterns, and autonomy needed for the development of analytic abilities required for a broad range of potential occupations and higher education curriculums. Motivation based on internal standards and goals rather than standards from environmental sources may not usually be encouraged in females and characteristically produces a non-traditional life-span pattern.

Research using the Attitudes Toward Women Scale (AWS) devised by Spence and Helmreich (1972) was reported. Selection of this instrument was deemed appropriate for investigation with the sample of junior and senior level college women who were selected through classification in either Traditional or Pioneer major choice.

CHAPTER III

METHODS AND PROCEDURES

This chapter includes a discussion of the instruments used to assess attitudes and to collect demographic data for this study. The methodology, procedures for sample selection, data collection, and the statistical treatment of the data are also reported. The chapter concludes with a summary.

Instrumentation

The Attitudes Toward Women Scale

The Attitudes Toward Women Scale (AWS) was designed by Spence and Helmreich (1972) to measure attitudes toward the rights and roles of women in contemporary society (Appendix A). In developing the AWS the authors were seeking to fill a void among instruments in female research for gathering "empirical data about current attitudes, as opposed to speculative assumptions" (p. 2). The Kirkpatrick Belief-Pattern Scale for Measuring Attitudes Toward Feminism (Kirkpatrick, 1936) served as a foundation for the AWS. Attention was given in developing the new scale to the inclusion of items describing roles and patterns of conduct in areas of activity in which men and women could participate equally, aiming essentially at elective behaviors. Few items referring to the legal status of women are included, setting this instrument apart from other

contemporary instruments which solicit opinions about women in relation to "rights of women" (e.g., abortion).

The AWS is a product of several revisions and statistical analyses prior to its 1972 form (Spence and Helmreich, 1972). Items were dropped, rewritten, or retained according to statistical analyses performed on each sex separately. Procedures included factor analyses and item analyses. Retained were items which discriminate among subgroups on item analyses, items which are not redundant in content, and items which appear as a factor for either sex in a factor analysis.

The AWS consists of 55 items each of which is a declarative statement (Spence and Helmreich, 1972). Four response alternatives are possible: (1) Agree Strongly, (2) Agree Mildly, (3) Disagree Mildly, and (4) Disagree Strongly. Each item receives a score of zero to three, with zero representing choice of the alternative reflecting the most traditional, conservative attitude, and with three indicating the alternative reflecting the most liberal attitude. The specific alternative given a zero score is varied from item to item. A score is obtained by summing the values for the individual items, with the range of possible scores being from 0 to 165.

Spence and Helmreich (1972) categorized the items into six groups according to their content. The groups and number of items in each content area are as follows:

> I. Vocational, Educational, and Intellectual Roles (N = 17), II. Freedom and Independence (N = 4), III. Dating, Courtship, and Etiquette (N = 7), IV. Drinking, Swearing, and Dirty Jokes (N = 3), Obligations (N = 17) (p. 6).

Normative Data. In developing norms, the AWS was administered to 420 men and 529 women at the University of Texas at Austin during the

fall semester of 1971 and to 293 men and 239 women during the spring semester of 1972. Spence and Helmreich (1972) report that data indicates that the distributions for the two semesters are particularly similar for women. Grouped frequency distributions exhibit a slight positive skew towards the liberal end of the scale. The mean score for men is slightly lower (i.e., more traditional) than that for women. The authors report the magnitude of the mean difference between men and women is less impressive than the amount of overlap between the scores.

Parent data were also collected by Spence and Helmreich (1972) in anticipation of generational differences. Data were obtained from same sex parents of college men and women in the norming groups. Of the parents, 292 mothers and 232 fathers responded. Scores for the older group tended to be lower (i.e., more traditional) than those of the students. Differences between sexes in the parent generation were smaller than for the younger group. Comparisons were made and results reported of mothers' and fathers' responses to individual items which show significant differences between parents. Pearson correlation coefficients were computed between sets of scores of same sex children and parents showing modest magnitudes of .34 for father-son (N = 98) and .29 for mother-daughter (N = 129). "Both of these values are significantly different from zero ($p < .01$)" (Spence and Helmreich, 1972, p. 10).

Validity. In order to determine the validity of the AWS for inquiring about daughter perceptions of father attitudes, a pilot study was conducted. A total of 90 women students were asked to respond to the items as they thought their fathers would respond. The students' fathers were mailed the AWS and were also asked to respond (Appendix B). Fifty-three usable pairs of scores were obtained from these 90 female students

attending the Oklahoma State University 1977 summer session and their fathers. None of these women were in majors which were included in the study sample. The mean score of daughter perceptions was 83.36 (SD = 19.17) and the mean score for the father scores was 85.64 (SD = 17.41). Results of the Pearson correlation were $r = 0.679$ ($N = 53$, $p < .001$).

Reliability. Spence and Helmreich (1972, p. 6) report that the stability of score distributions in two administrations of the test to students in successive semesters "suggests, indirectly, that a reliable phenomena is being tapped." Responses to the AWS gathered in this study were analyzed using Cronbach's Alpha estimate of internal consistency (Cronbach, 1951). This statistical procedure for the 55 item AWS yielded a reliability coefficient of 0.936.

Demographic Questionnaire

In order to gain information about family background in relation to daughter career decision making, a demographic questionnaire accompanied the AWS (Appendix C). Subjects were asked to report number of years of education completed by each parent, occupation of each parent as well as a brief job description. Additional information concerning number of years the mother had worked and daughter anticipated occupation and life plan preferences were requested. Daughters were also asked to identify from among a list of nine role titles, one person who had most influenced her choice of major.

Socio-economic position was calculated from information about the number of years of education completed by the father as well as occupational title and brief job description for him. The Two Factor Index of Social Position (Hollingshead, 1957) was used to estimate the

socio-economic background of subjects in the study. The two factors of this index are occupation and education. Determination of social position required (1) the precise occupational role of the head of the household and (2) the amount of formal schooling that person had received.

Occupational and Educational Scales devised by Hollingshead (1957) were used to assign each father an occupational value ranging from one to seven according to job title and description provided and an educational value ranging from one to seven according to indicated education years completed. The factors of occupation and education were combined by multiplying each scale value by its appropriate weight, seven for occupation and four for education and then adding these products to yield an Index of Social Position Score.

The Index scores may be arranged on a continuum ranging from a low of 11 to a high of 77. The continuum may be divided into groups of scores. Hollingshead (1957) identified meaningful breaks within the continuum for assigning individual scores into I to V class units as follows:

Social Class	Range of Computed Scores
I	11 to 17
II	18 to 27
III	28 to 43
IV	44 to 60
V	61 to 77

Vocational Patterns of mothers and daughters were identified by determining (1) participation level of the mother's occupation or daughter's planned occupation and (2) number of years the mother has

worked. Choice by the daughter on the questionnaire item indicating commitment to career plans in relation to marriage was used to determine daughter pattern. Participation level was established by identifying occupations in which fewer than 40 percent of the participants are female according to Employment and Earnings (U. S. Dept. of Labor, 1977). Daughter career plans were estimated from indicated occupations intended and responses to the statement:

In my life I expect to:

(A) establish a career and not marry.

(B) establish a career and plan a marriage which will not interfere with that career.

(C) marry and establish a career after my husband establishes a career.

(D) pursue a career until my husband finishes his education or gets settled in a career.

(E) marry and work a while but not establish a career.

A Mild Vocational Pattern by the mother was indicated by fewer than eight years working in an occupation in which at least 60 percent of the participants are female. This pattern was judged to be the plan of the daughters who chose responses C, D, or E and a 60 percent female occupation or response D or E and a 40 percent female occupation.

A Moderate Vocational Pattern by the mother was indicated by a work span of eight years or more in a 60 percent female occupation or multiple entry into an occupation in which no more than 40 percent of the participants are women. Daughters were judged to be planning a Moderate Vocational Pattern if they were entering a 60 percent female occupation and chose items A or B or a 40 percent female occupation and chose item C.

An Unusual Vocational Pattern by a mother was indicated by a work span of 12 or more years in an occupation in which no more than 40 percent of the participants are female. A daughter was judged to be planning an Unusual Vocational Pattern if she was planning to enter a 40 percent female occupation and chose items A or B.

In order to determine the Significant Career Other, subjects were asked to indicate from a list of nine role titles, one person who they identified as influencing their choice of major. A "no person" choice was also available.

Methodology

Subjects

The subjects for this investigation were 217 junior and senior level female students enrolled at the Oklahoma State University who had selected college majors which could be classified as either Traditional or Pioneer during the fall semester of 1977. Traditional majors were those in which at least 70 percent of the graduates were female, according to information from Earned Degrees Conferred (U. S. Dept. of Health, Education, and Welfare, 1975). Pioneer majors were those in which at least 70 percent of the graduates were male. Using this classification procedure, 19 Oklahoma State University degree programs were identified as Traditional majors and 82 as Pioneer majors. The number and percent of these majors by College or Division are described in Table I. Majors were selected from four year degree plans appearing in the Oklahoma State University publication, Undergraduate Programs and Requirements, 1977-78.

TABLE I

NUMBER AND PERCENT OF TRADITIONAL AND PIONEER MAJOR DEGREE PLANS OFFERED BY COLLEGE OR DIVISION

College or Division	Majors Offered	Traditional Majors	Traditional Percent	Pioneer Majors	Pioneer Percent	Total Majors Traditional and Pioneer	Percent Majors Traditional and Pioneer
College of Arts and Sciences	103	5	5	13	13	18	17
Division of Agriculture	41	0	0	27	66	27	66
College of Business Administration	16	3	14	12	75	15	94
College of Education	19	4	21	6	32	10	53
Division of Engineering	23	0	0	23	100	23	100
Division of Home Economics	9	7	78	1	14	8	88
University Total	211	19	9	82	39	101	48

The subjects were selected through computer processing supervised by the Oklahoma State University Office of Administrative Systems using the following steps:

1. It was determined that there was a population of 2,669 junior and senior level women students with birthdays since 1953. Each woman in this population was identified with a major classified as Traditional or Pioneer in the fall 1977 enrollment process.
2. A tally of women in the Traditional major group was 1,530. The tally of women in the Pioneer group was 1,139.
3. Another tally was conducted to ascertain the number of Traditional women and the number of Pioneer women each College or Division contributed to each respective group.
4. That number served to determine the percentage each College or Division contributed to the total Traditional or the total Pioneer group.
5. That percentage served to determine the number of women to be randomly selected from each College or Division for the sample list.
6. Since data were to be collected by mail, it was necessary to randomly select more names for the sample test than the study required. Not all names selected provided mailing addresses. Of 206 Traditionals, 184 had sufficient information for mailing. The Pioneer total of 211 names drawn, provided 200 subjects with sufficient mailing information.

Table II provides a description of the number and percent of Traditional and Pioneer women selected to represent each College or Division.

TABLE II

NUMBER AND PERCENT OF TRADITIONAL AND PIONEER WOMEN RANDOMLY SELECTED TO REPRESENT EACH COLLEGE OR DIVISION

College or Division	Traditional Women Majors	Percent of all Traditionals	Selected to Traditional Sample	Pioneer Women Majors	Percent of all Pioneers	Selected to Pioneer Sample
College of Arts and Sciences	123	8	16	114	10	21
Division of Agriculture	0	0	0	164	14	30
College of Business Administration	122	8	16	645	57	122
College of Education	581	38	79	10	1	1
Division of Engineering	0	0	0	174	15	32
Division of Home Economics	704	46	95	32	3	5
Totals	1,530	100	206	1,139	100	211

Data Collection

In October, 1977, a total of 184 Traditional majors and 200 Pioneer majors were mailed a letter requesting their participation in the study (Appendix D). Accompanying the letter was the AWS, the demographic questionnaire, and an addressed, stamped return envelope. By the deadline date for returning the questionnaire, 112 Traditionals and 114 Pioneers had returned completed questionnaires. Of these, 109 Traditional and 112 Pioneer questionnaires were judged to be usable. This represented an acceptable overall return rate of 59 percent.

Three Traditional questionnaires and two Pioneer questionnaires were eliminated because of changes in major or death of a parent. In order to match the 109 usable Traditional major questionnaires, three Pioneer questionnaires were selected out by means of random selection. One computer card was lost in the keypunch process making the final Pioneer group total 108 and the sample total 217. Information concerning the data collection process is shown in Table II.

Statistical Procedures

This study sought to examine if certain significant differences occur between groups of women students who may be classified as Traditional or Pioneer according to college major. A primary research question was concerned with the examination of differences which may occur between the Traditional and Pioneer groups on a measure of perceived father attitudes toward roles of women. The AWS was selected as the measurement instrument and the t-test was chosen for examination of the data (Popham, 1967). Normal distribution on the AWS responses is assumed

TABLE III

REPORT OF DATA COLLECTION PROCESS FOR TRADITIONAL AND PIONEER WOMEN

Collection Process	Traditional Sample	Traditional Sample Percent	Pioneer Sample	Pioneer Sample Percent	Total Sample Number	Total Sample Percent
Randomly Selected	211	-	206	-	417	-
Addresses Not Available	27	-	6	-	33	-
Mailed Questionnaires	184	100	200	100	384	100
Returned--Not Delivered	19	10	14	7	33	9
Returned--Completed	112	61	114	57	226	59
Usable Questionnaires	109	59	112	56	221	56
Randomly Selected Out	0	0	3	1	3	1
Lost in Processing	0	0	1	0	1	0
Final Study Sample	109	59	108	54	217	57

among the population sampled and the sample was randomly selected to represent the population. According to Popham (1967), the t-test was appropriate for testing the hypothesis. An alpha level of $p < .05$ was set for decisions on all hypotheses.

Other variables investigated which met requirements for use of the t-test were educational level of father and mother and the socio-economic position of the family. Individual scores on a continuum were calculated for use of the Two-Factor Index of Social Position (Hollingshead, 1957) rendering it appropriate for the t-test.

Pearson correlations between the variables--AWS, father education, mother education, socio-economic position and group classification (i.e., Traditional or Pioneer)--were calculated and are reported. According to Popham (1967), the strength of the correlations is underestimated since there is no linearity in the classification of Traditional and Pioneer groups. The correlations were reported in order to examine patterns in relationships that occurred.

The x^2 Test for k Independent Samples (Siegel, 1956) was chosen to investigate vocational patterns reported for mothers and vocational patterns planned by daughters. Frequencies were reported for three possible patterns--Mild, Moderate, and Unusual. Each subject was assigned by definition to one of three categories. According to Siegel (1956) the x^2 test indicates whether the proportions or frequencies in the categories are independent of the sample Traditional and Pioneer groups.

Examination of the frequency of choice of each of 10 possible Significant Career Others was used to determine proportionate choice of each alternative by Traditionals and Pioneers. A difference between

proportions (Guilford and Fruchter, 1973) was then calculated using the following formula:

$$\bar{P}_e = \frac{N_1 P_1 + N_2 P_2}{N_1 + N_2}$$

where:

P_1 = the proportion of Traditionals selecting the alternative

P_2 = the proportion of Pioneers selecting the alternative

N_1 = 109 Traditionals

N_2 = 108 Pioneers.

Significance of the difference in proportion was determined by the following formula:

$$\bar{z} = \frac{P_1 - P_2}{\bar{P}_e \bar{q}_e \frac{N_1 + N_2}{N_1 N_2}}$$

where $\bar{q}_e = 1 - \bar{P}_e$.

The difference between proportions and the significance of that difference were calculated by hand. All other calculations were computed at the University Computer Center using programs available through Statistical Package for the Social Sciences (1975).

Summary

The attitudes perceived by daughters to be held by their fathers were assessed on the Attitudes Toward Women Scale (AWS) (Spence and Helmreich, 1972). An estimate of internal consistency was determined for the AWS for this administration of the scale. Validity of the

instrument for assessing perceived attitudes was estimated through a pilot study. Demographic data included parent education and occupational information, daughter career plans and identification of Significant Career Other. Computerized sample selection procedures and data collection were described. Statistical treatment procedures of the data were identified.

CHAPTER IV

RESULTS

This chapter presents the results of the data collected for investigation of the hypotheses stated in Chapter I. Data concerning each hypothesis are presented first. The chapter concludes with a summary of the results.

Research Data

Hypothesis I

The primary research hypothesis of this study predicted that there would be no difference in perceived father-held attitudes toward roles of women between daughters choosing Traditional majors and daughters choosing Pioneer majors. Daughters were asked to respond to the Attitudes Toward Women Scale (AWS) as each believed her father would respond, thus yielding a perceived attitudes measure. The perceived attitude score means and standard deviations obtained on the AWS are reported in Table IV. The mean for 108 Pioneers of 85.80, SD = 22.17 was significantly higher than the mean for 109 Traditionals which was 71.30, SD = 18.38 ($t = -5.25$, $df = 215$, $p < .001$). Thus, the hypothesis was rejected. Daughters choosing Pioneer majors scored significantly higher on the AWS when reporting perceived father attitudes than daughters choosing Traditional majors.

TABLE IV

A COMPARISON OF MEANS, STANDARD DEVIATIONS, AND t-STATISTIC BETWEEN TRADITIONAL AND PIONEER WOMEN

Variable	Group	Mean	SD	t-Value
Attitudes Toward Women Scale	Traditional	71.30	18.38	-5.25**
	Pioneer	85.80	22.17	
Father Education	Traditional	14.16	3.17	-3.72**
	Pioneer	15.69	2.88	
Mother Education	Traditional	13.52	2.23	-1.98*
	Pioneer	14.12	2.22	
Socio-Economic Position	Traditional	31.75	14.91	4.55**
	Pioneer	23.70	10.79	

**t = p < .001.
*t = p < .05.
N Traditional = 109.
N Pioneer = 108.

The finding that Traditional women perceive different paternal attitudes toward the roles of women than do Pioneers merits further comment. The AWS scoring continuum identifies lower scores as more "conservative" and higher scores as more "liberal" in terms of attitudes toward roles of women. Among this sample of junior and senior level women students, results indicate that Traditional majors perceive their fathers to hold attitudes toward women which are more conservative than those attitudes perceived by Pioneer majors to be held by their fathers. Therefore, it can be reported that in terms of daughter perceptions measured by the AWS, fathers of Traditional women are more conservative than are fathers of Pioneer women in attitudes toward roles of women.

Hypothesis I_a

Other differences between the Traditional and Pioneer women related to parent background were also investigated and are reported in Table IV. Results of father education level show the Pioneer father mean of 15.69 years, SD = 2.88 to be significantly higher than the Traditional father mean of 14.16 years, SD = 3.17 ($t = -3.72$, $df = 215$, $p < .001$). Therefore, Hypothesis I_a stating that there is no difference between the educational levels attained by fathers of daughters in the Traditional and Pioneer groups was rejected. Fathers of daughters choosing Pioneer majors have attained significantly ($p < .001$) more years of education than have fathers of women choosing Traditional majors.

Hypothesis I_b

Results of examination of differences in mother education are also shown in Table IV. Pioneer mother education of 14.12 years, SD = 2.22 was significantly higher than Traditional mother mean of 13.52 years, SD = 2.23 ($t = -1.98$, $df = 215$, $p < .05$). Therefore, Hypothesis I_b stating that there was no difference between the educational levels attained by mothers of daughters in the Traditional and Pioneer groups was rejected. Mothers of daughters choosing Pioneer majors have attained significantly ($p < .05$) more years of education than have mothers of daughters choosing Traditional majors.

Hypothesis I_c

Daughters were asked to report for their fathers the number of years of education completed, occupation, and a brief job description.

From this information an estimate of family socio-economic position was calculated. On this measure, lower numerical scores indicate higher socio-economic position. Results of differences between Traditional and Pioneer family position estimates are shown in Table IV. Pioneer family mean was 23.70, SD = 10.79, and Traditional family mean was 31.75, SD = 14.90 ($t = 4.55$, $df = 215$, $p < .001$). Therefore, the hypothesis stating no difference between the socio-economic position of families of Traditionals and families of Pioneers was rejected. Families of daughters choosing Pioneer majors have significantly ($p < .001$) higher socio-economic position than families of daughters choosing Traditional majors.

Relationship Patterns

Data obtained on subjects classified into dichotomous groups produce an underestimated coefficient when using the Pearson correlation test (Popham, 1967). Although subjects for this study were classified into Traditional and Pioneer groups, AWS and family data were submitted to the Pearson correlation test in order to gain an overall picture of relationship patterns. Results are reported in Table V. Relationships are modest but significant for all variables. Least significant was mother education in relation to the sample of Traditional and Pioneer major groups. The strong correlation of father education to socio-economic position was confounded since father education was a factor in the calculation of the socio-economic position variable.

The relationship of the AWS responses to the sample groups, $r = .34$ ($p < .001$) was the strongest coefficient reported for the Traditional

TABLE V

PEARSON CORRELATION COEFFICIENTS AND PROBABILITY LEVELS FOR AWS AND FAMILY VARIABLES FOR TRADITIONAL AND PIONEER WOMEN

	Attitudes Toward Women Scale	Father Education	Mother Education	Socio-Economic Position	Group Classification
Attitudes Toward Women Scale					
r	1.00	.28	.28	-.30	.34
p	.001	.001	.001	.001	.001
Father Education					
r	.28	1.00	.52	-.85	.25
p	.001	.001	.001	.001	.001
Mother Education					
r	.28	.52	1.00	-.47	.13
p	.001	.001	.001	.001	.025
Socio-Economic Position					
r	-.30	-.85	-.47	1.00	-.30
p	.001	.001	.001	.001	.001
Group Classification					
r	.34	.25	.13	.30	1.00
p	.001	.001	.025	.001	.001

N = 217

and Pioneer major groups. Other family variables produced somewhat weaker but significant coefficients. Mother education reflected stronger relationship with father variables than with the daughter variables. Father education indicated $r = .25$ ($p < .001$) in relation to the daughter membership in either a Traditional or Pioneer group while mother's relationship on the same variable produced $r = .13$ ($p < .025$).

In summary, the Pearson correlation results indicated that the daughter's perceived father attitude toward women was more highly related to her classification in a Traditional or Pioneer major group than to other family variables. Father education was more highly related to daughter classification in these major groups than was mother education. In this sample of Traditional and Pioneer women majors, differences in perceived father attitude and in other aspects of family background were observed. Results indicated that these two groups were significantly different in relation to perceived paternal sex role attitudes, parent educational attainment, family socio-economic position, as well as choice of educational plan. Quite likely educational choices such as academic major may reflect this combination of social influences upon a woman student.

Hypothesis II

Mother occupation and work history provided information for investigating vocational patterns of mothers in relation to Traditional and Pioneer daughter groups. Data reported in Table VI indicate that there was no relationship between the vocational patterns of mothers of daughters choosing Traditional majors and mothers of daughters choosing Pioneer majors ($x^2 = .55$, $df = 2$, $p < .75$). Therefore, Hypothesis II

stating that there is no relationship between vocational patterns of mothers of daughters choosing Traditional majors and mothers of daughters choosing Pioneer majors was not rejected.

TABLE VI

CHI-SQUARE RESULTS AND FREQUENCY REPORTS FOR MOTHER VOCATIONAL PATTERN BY TRADITIONAL OR PIONEER GROUP

Group	Mild Pattern	Moderate Pattern	Unusual Pattern	Row Totals
Traditional	67	39	3	109
Pioneer	70	34	4	108
Column Totals	137	73	7	217

Chi-square = 0.546, df = 2, $p < .76$.

Mothers of the two groups indicated very similar vocational patterns. Well over half, 137 of the 217 subject mothers, had not worked or had fewer than eight years in an occupation that was female dominated. Only seven of the 217 mothers had experienced an Unusual Vocational Pattern in which they had worked more than 12 years in an occupation that was male dominated. Of these seven women, two were college faculty, two were in computer science occupations, one was a real estate broker, one was an independent insurance agent, and another was a telephone company switchman. All were college graduates except one whose highest

educational level attained was stated as high school. Three had attained the doctorate, and one a master's degree.

Hypothesis III

Data reported in Table VII indicate that there was a relationship between vocational patterns planned by daughters choosing Pioneer majors (x^2 = 109.93, df = 2, $p < .001$). Therefore, Hypothesis III stating that there is no relationship between vocational patterns planned by daughters choosing Traditional majors and daughters choosing Pioneer majors was rejected. Significantly more Pioneers ($p < .001$) were planning Unusual Vocational Patterns while more Traditionals were choosing Mild Vocational Patterns. Although mothers of the daughters in the sample had similar vocational patterns, daughters were planning vocational patterns which were different for Traditional majors than for Pioneer majors.

TABLE VII

CHI-SQUARE RESULTS AND FREQUENCY REPORTS FOR DAUGHTER PLANNED VOCATIONAL PATTERNS BY TRADITIONAL AND PIONEER GROUP

Group	Mild Pattern	Moderate Pattern	Unusual Pattern	Row Totals
Traditional	59	48	2	109
Pioneer	11	23	74	108
Column Totals	70	71	76	217

Chi-square = 109.925, df = 2, $p < .001$.

Examination of the data about daughter planned vocational pattern indicate that major departures from mother-type patterns are intended by Pioneer daughters. Only 11 of the 108 Pioneers indicated plans for a Mild Vocational Pattern which includes few or no work years. Seventy-four Pioneers plan Unusual Vocational Patterns which require intention to work 12 or more years in an occupation which is dominated by males.

While few Pioneers indicated plans for a Mild Vocational Pattern, 59 of the 109 Traditionals plan to work few years or no years. The nature of many majors in the Traditional group foretell fewer individuals in the Unusual Vocational Pattern since that classification requires that women enter a male dominated occupation. Traditional women falling into that category indicated plans for professional schools.

Hypothesis IV

Each subject was asked to identify from a list of role titles a person who most influenced her choice of a major. The results are summarized in Table VIII and indicate that there were differences in the Significant Career Others reported by the Traditional and Pioneer groups. Hypothesis IV stating that there are no differences in reported Significant Career Others between women choosing Traditional majors and those choosing Pioneer majors was rejected for six of the 10 alternatives offered. The six role choices which were chosen with significant ($p < .001$) difference between Traditional and Pioneer majors were Employer, Father, High School or College Counselor, Boy Friend or Girl Friend, Mother, and No Person. The four role choices which were not chosen with significant difference were Brother or Sister, Relative or Acquaintance, Professional Person in the Field, and Teacher.

TABLE VIII

DIFFERENCE OF PROPORTION IN CHOICES OF SIGNIFICANT CAREER OTHER BETWEEN TRADITIONAL AND PIONEER WOMEN

	Traditional Frequency	Traditional Percent	Pioneer Frequency	Pioneer Percent	z-Values
Boy Friend or Girl Friend	8	7.3	5	4.6	3.71*
Brother or Sister	2	1.8	2	1.9	-0.595
Employer	1	0.9	9	8.3	-13.60*
Father	8	7.3	27	25.0	-8.47*
Mother	15	13.8	4	3.7	9.12*
High School or College Counselor	2	1.8	6	5.6	-8.98*
Relative or Acquaintance	6	5.5	5	4.6	1.42
Professional in the Field	12	11.0	12	11.1	-0.07
Teacher	8	7.3	9	8.3	-1.02
No Person	47	43.1	28	25.9	3.77*
No Response	0	0.0	1	0.9	0.0
Total	109	100.0	108	100.0	

*$p < .001$, two-tail.

Pioneers reported significantly more often ($p < .001$) that they were influenced by an Employer, Father and High School or College Counselor. Traditionals reported more influence from Boy Friend or Girl Friend, Mother, and chose the No Person alternative significantly ($p < .001$) more often than Pioneers.

The No Person alternative accounted for 43 percent of the Traditional and 25.9 percent of the Pioneer responses whereas the Counselor alternative was 1.8 percent and 5.6 percent for those groups respectively. Traditionals indicated less counseling or reality checking from outside sources than did Pioneers. The Employer alternative choice by Pioneers may indicate more work experience in jobs related to the chosen career field or indicate encouraging relationships with employing persons.

Summary of the Results

Data have been reported for this investigation of the relationship of daughter choice of academic major to attitudes she perceives her father to hold about the roles of women. Results indicated significant differences between Traditional and Pioneer groups of women students on measures of attitudes perceived to be held by fathers, parental education, and socio-economic position of family. No relationship was found between vocational patterns of mothers and Traditional and Pioneer groups of daughters, but a significant relationship existed between daughter-planned vocational pattern and Traditional and Pioneer groups. Some choices of Significant Career Other were significantly different between the two groups of women students.

The consistency of differences between the groups suggests that a combination of influences operate to differentiate Traditionals from Pioneers. Within this combination of influences, variables involving father provide stronger indications of differentiation than do those involving mother. Mothers of the two groups seem more similar than fathers. Fathers of the Pioneers have significantly more liberal attitudes toward the roles of women, have more years of education, provide higher family socio-economic position and are more often chosen by daughters as Significant Career Other. Mothers of Pioneers are different from Traditional mothers in that they are not chosen as Significant Career Other and they have attained higher educational levels.

Planned vocational patterns of Pioneer daughters are significantly different from those planned by Traditional daughters and are notably different from mother patterns. Most women responding to the questionnaire intend to maintain a career and also marry.

The distribution of the study population of 1,530 Traditionals and 1,139 Pioneers indicates that junior and senior level college women do distribute themselves normally over a continuum of degree plan offerings which can be described as female dominated at one extreme and male dominated at the other. Women investigated in this study have made academic major choices which placed them at the opposite ends of the continuum. The results of the study indicate that Traditional and Pioneer women students are different from one another in relation to the variables examined.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study was designed to answer the following question: Do perceived father attitudes and mother vocational pattern influence a daughter's choice of college academic major? The following hypotheses were tested:

I--There is a difference in perceived father-held attitudes toward roles of women between daughters choosing Traditional majors and daughters choosing Pioneer majors.

I_a--There is no difference between the educational levels achieved by fathers of daughters choosing Traditional majors and fathers of daughters choosing Pioneer majors.

I_b--There is no difference between educational levels achieved by mothers of daughters choosing Traditional majors and mothers of daughters choosing Pioneer majors.

I_c--There is no difference between socio-economic position of families of daughters choosing Traditional majors and families of daughters choosing Pioneer majors.

II--There is no relationship between the Vocational Patterns of mothers of daughters choosing Traditional majors and mothers of daughters choosing Pioneer majors.

III--There is no relationship between Vocational Patterns planned by daughters choosing Traditional majors and daughters choosing Pioneer majors.

IV--There is no difference in reported Significant Career Other between women choosing Traditional majors and women choosing Pioneer majors.

In the fall of 1977 it was determined that there were 19 academic major degree plans which could be classified as Traditional and 82 which could be classified as Pioneer for women students at Oklahoma State University. For selection of a sample, it was determined that there were 1,530 women who could be classified in Traditional academic majors and 1,139 women who could be classified in Pioneer academic majors. After determining the percentage each College or Division contributed to each group, a sample of 384 women was randomly drawn to represent proportionately each College or Division in each group. The selected sample included 184 Traditional and 200 Pioneer women. The final study included 109 Traditional and 108 Pioneer women.

Data were collected in the fall of 1977 by means of a mailing process. Each subject was mailed the Attitudes Toward Women Scale (AWS) (Spence and Helmreich, 1972) and a demographic questionnaire requesting information about parent educational level, parent occupations, mother work history, daughter career and life plans, and role title of person most influencing choice of major. A letter accompanied the instruments instructing the women to respond to the AWS items as they believed their father would respond.

The t-test was chosen to determine differences between groups on the AWS perceived attitude scores, parent education levels, and family

socio-economic position. Relationships to vocational patterns of mothers work history and daughter plans were determined by the x^2 test for independent samples. Differences in proportions were determined for role title choices identifying Significant Career Other. Pearson correlation coefficients were calculated between these variables: AWS, father education, mother education, family socio-economic position, and daughter classification into Traditional or Pioneer group. The level of significance for all statistical treatments was set at the .05 level.

Within the limits and findings of the study the following results were reported:

1. There was a significant difference in perceived father-held attitudes toward the roles of women between daughters choosing Traditional majors and daughters choosing Pioneer majors ($t = -5.25$, $p < .001$). Perceived attitudes towards the roles of women held by fathers of Pioneer majors were more liberal than attitudes perceived to be held by fathers of Traditional majors.
2. There was a significant difference between educational levels achieved by fathers of daughters choosing Traditional majors and fathers of daughters choosing Pioneer majors ($t = -3.72$, $p < .001$). Fathers of Pioneer majors have attained more years of education than have fathers of Traditional majors.
3. There was a significant difference between educational levels attained by mothers of daughters choosing Traditional majors and mothers of daughters choosing Pioneer majors ($t = -1.48$, $p < .05$). Mothers of Pioneer majors had attained more years of education than mothers of Traditional majors.

4. There was a significant difference between socio-economic position of families of daughters choosing Traditional majors and families of daughters choosing Pioneer majors ($t = 4.55$, $p < .001$). Families of Pioneer majors were identified with higher social position than are families of Traditional majors.
5. A significant relationship was not found between vocational patterns of mothers of daughters choosing Traditional majors and mothers of daughters choosing Pioneer majors ($p < .75$). The vocational patterns of the mothers of the two groups were similar.
6. A significant relationship ($p < .001$) was found between the vocational patterns planned by daughters choosing Traditional majors and vocational patterns planned by daughters choosing Pioneer majors. More Pioneer majors were planning Unusual Vocational Patterns while more Traditional majors were planning Mild Vocational Patterns.
7. There was a significant difference between women choosing Traditional majors and women choosing Pioneer majors on six alternative choices of Significant Career Other. There was no significant difference between the women on four alternative choices. Traditionals chose significantly ($p < .001$) more often: No Person, Mother, and Boy Friend or Girl Friend. Pioneers chose significantly ($p < .001$) more often: Father, Employer, and High School or College Counselor. There was no significant difference between Traditional and Pioneer choices of Brother or Sister, Relative or Acquaintance, Professional in the Field, and Teacher.

Conclusions

The data reflect differences between women choosing Traditional and Pioneer majors in relation to the variables investigated in this study. On the basis of the results, some conclusions have been reached and are reported in this section.

1. Results indicated that perceived attitudes towards the roles of women held by fathers of daughters choosing Pioneer majors are more liberal than are attitudes perceived to be held by fathers of Traditional majors. The more liberal score on the AWS suggests perceived acceptance of a broader range of behaviors for women. Recalling observations of several researchers, especially Rossi (1972a), Maccoby (1966), Bardwick (1971), regarding the acceptance by parents of diverse behaviors without definition of sex appropriateness, it follows that women who demonstrate willingness to venture into traditionally male areas of study have selected from a broad range of potential academic majors. Since there are 82 Pioneer academic majors and 19 Traditional academic majors, Traditional women students do seem as a group to be exhibiting a remarkably narrow range of choices.

The mean score achieved on the AWS for the perceived Pioneer father attitudes appears similar to scores reported for father responses and perception responses in the summer pilot study which included women from majors which could not be classified as Traditional or Pioneer. This mean score is also similar to other parent scores available from uses of the AWS (Spence and Helmreich, 1972). The Traditional father mean was more conservative than had been expected. It may be that the attitudes perceived by Traditional daughters to be held by their fathers may

illuminate effectively the influence of father attitudes and other social environmental influences operating in a daughter's career decision making process. Research has more often focused on antecedents to Pioneer or innovative female career behavior.

2. The number of years of education attained was significantly greater for fathers of Pioneers than for fathers of Traditionals. The Pioneer father group included more professional fathers and more fathers in occupations which are the same as the daughter's major or in occupational clusters related to the daughter's academic major choice. For example, many accounting majors had fathers who were accountants or were in business careers.

In this sample, a number of Pioneer women may have received career guidance from their fathers and may have experienced something of a career mentor relationship with the father. The father with more educational background seemed to be serving as an educational adviser for his daughter. A well educated father seems to be an influence for daughters in career planning. This is similar to findings by other researchers: Helson (1972), Kinnane and Bannon (1964), Nagely (1971) and Oliver (1975). The effectiveness of the father-mentor also was observed and considered important in the career development of the successful business women studied by Hennig and Jardim (1977).

3. Mothers of women choosing Pioneer majors had attained significantly greater number of years of education than mothers of women choosing Traditional majors. The mother education variable, however, was not as strongly related to daughter choice of major as it was to father variables of educational level and socio-economic position.

The mean number of years of education completed was lower for both groups of mothers than for fathers. It is not difficult, then, to understand why young adults, when they marry and plan for one partner to work while the other goes to graduate or advanced schooling, usually assume that the male should attain the greater education. The same assumption easily operates for graduate school faculties, peers of the couple, parents of the couple, and the society in general.

4. For this sample, the socio-economic position of families of women choosing Pioneer majors was determined to be significantly higher than the socio-economic position of families of daughters choosing Traditional majors. This calculation reflects the greater number of professional and managerial level fathers that were identified with the Pioneer group. Concern, therefore, is raised about the sources and availability of guidance and career counseling for women. There appears to be a need to focus particular attention on the career counseling needs of young women who have not experienced parental guidance or other guidance about the range of potential offerings available in higher education. Apparently women students who receive more family and counselor help are more likely to consider a broader range of areas of study. If typically the higher socio-economic position women students are moving away from the Traditional majors, then educators may be witnessing the career liberation of middle class women and not the career liberation of educated women in general.

5. Vocational Patterns of mothers of daughters of Traditional and Pioneer majors were similar. Most mothers had worked before children were born and had re-entered the work force when children were older. College educated mothers usually had worked more years than those with

less education. These mothers as a group reflect woman's career as a secondary concern to home and family.

6. Daughter-planned Vocational Patterns were not similar for Traditional and Pioneer majors although almost all women in the sample indicated plans to combine marriage, family, and career. Few Pioneers identified marriage and family as a primary intention although several Traditionals did. Generally, most women in the Pioneer group indicated that they plan marriage, family, and career with almost equal attention. While it is not known, it is reasonable to propose that most eventual marriage partners of these women will plan marriage, family, and career but with primary attention given to career. It may be that if marriage and family demands eventually require that it become necessary to make one partner's career primary over the other, that the career behavior planned by the upper division college women in this sample will be altered and marriage and family will become more important.

7. When asked to identify from a list of role titles, the person who most influenced their choice of major, Pioneers significantly more often chose Father, Employer, and High School or College Counselor. Traditionals more often chose No Person, Mother, or Boy Friend or Girl Friend. Therefore, Traditional women may need more attention from counselors in expanding their career horizons. Apparently Traditional women have less experience with opportunity for work world reality checking. Or, perhaps Traditionals state that they have made an educational/career choice quickly and early and are not exposed to additional career information and decision making processes by counselors or interested others. Therefore, for lack of better information, they may choose the most convenient plan.

Recommendations

Since this study is an initial investigation into an influence related to the career development of women, several recommendations are generated.

Future Research

1. A similar study involving a sample representative of all academic majors would yield information regarding the nature of the father attitudes perceived by daughters over a greater population of university women.

2. Career decision making studies involving college women students need to be longitudinal in nature to examine actual career behavior in relation to plan or intention.

3. The study of the influence of father attitudes on the careers of daughters should be extended beyond women pursuing degrees in higher education to women in working situations requiring other than a college education.

4. The added knowledge of daughter's own attitudes toward the roles of women would be helpful in this study. A different data collection procedure might allow for collection of both daughter perceived father attitudes and daughter held attitudes.

5. Further investigation of the Traditional group in terms of exposure to career decision making processes should yield valuable information for career educators and counselors for improved counseling of this group.

Implications for Student Personnel and Guidance

1. Counselors apparently are recognized as helpful by women entering Pioneer areas of study but not by women entering Traditional areas of study. It may be that Traditionals are not as visible or as inquiring as Pioneers. With attention given to the innovative career woman which is currently a necessary activity, the Traditional student may be overlooked, although her needs for long range planning may be as great.

2. Counselor concern with the educational experiences of young boys and girls could facilitate attention to the need for both sexes for opportunity to experience a broad range of appropriate behaviors and coeducational activities. Career education and guidance programs from early grades can encourage an awareness among students of the appropriateness of a broad range of occupational options for females and males. Such programs can also facilitate the valuing of abilities and competencies held by individuals without attaching sex appropriate typing to certain skills. The need for career counseling for females through the entire educational experience appears increasingly important. If women continue to work more years outside the home and female career patterns reflect entry into a greater variety of occupations, career educators and counselors need to plan for examination of traditional attitudes in decision making.

3. The school counselor may be able to bring educator and parent attention to the need for creative intellectual questioning which seems to be far more vital for females than traditional attention to answering correctly in the classroom. If females are being inhibited in their

intellectual development by differential treatment in the classroom, serious effort needs to be applied to designing new ways of stimulating creative mental growth and assessing individual students.

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APPENDIXES

APPENDIX A

ATTITUDES TOWARD WOMEN SCALE

ATTITUDES TOWARD WOMEN

The statements listed below describe attitudes toward the role of women in society which different people have. There are no right or wrong answers, only opinions. You are asked to choose the response that you think your father would choose: (a) Agree Strongly, (b) Agree Mildly, (c) Disagree Mildly, or (d) Disagree Strongly.

(a) Agree Strongly = AS
(b) Agree Mildly = AM
(c) Disagree Mildly = DM
(d) Disagree Strongly = DS

1. Women have an obligation to be faithful to their husbands.

AS AM DM DS

2. Swearing and obscenity is more repulsive in the speech of a woman than a man.

AS AM DM DS

3. The satisfaction of her husband's sexual desires is a fundamental obligation of every wife.

AS AM DM DS

4. Divorced men should help support their children but should not be required to pay alimony if their wives are capable of working.

AS AM DM DS

5. Under ordinary circumstances, men should be expected to pay all the expenses while they're out on a date.

AS AM DM DS

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

AS AM DM DS

7. It is all right for wives to have an occasional, casual, extra-marital affair.

AS AM DM DS

8. Special attentions like standing up for a woman who comes into a room or giving her a seat on a crowded bus are outmoded and should be discontinued.

AS AM DM DS

9. Vocational and professional schools should admit the best qualified students, independent of sex.

AS AM DM DS

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

AS AM DM DS

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

AS AM DM DS

12. Husbands and wives should be equal partners in planning the family budget.

AS AM DM DS

13. Men should continue to show courtesies to women such as holding open the door or helping them on with their coats.

AS AM DM DS

14. Women should claim alimony not as persons incapable of self-support but only when there are children to provide for or when the burden of starting life anew after the divorce is obviously heavier for the wife.

AS AM DM DS

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

AS AM DM DS

16. The initiative in dating should come from the man.

AS AM DM DS

17. 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.

AS AM DM DS

18. It is insulting to women to have the "obey" clause remain in the marriage service.

AS AM DM DS

19. There should be a strict merit system in job appointment and promotion without regard to sex.

AS AM DM DS

20. A woman should be as free as a man to propose marriage.

AS AM DM DS

21. Parental authority and responsibility for discipline of the children should be equally divided be between husband and wife.

AS AM DM DS

22. Women should worry less about their rights and more about becoming good wives and mothers.

AS AM DM DS

23. Women earning as much as their dates should bear equally the expense when they go out together.

AS AM DM DS

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

AS AM DM DS

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

AS AM DM DS

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

AS AM DM DS

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

AS AM DM DS

28. It is childish for a woman to assert herself by retaining her maiden name after marriage.

AS AM DM DS

29. Society should regard the services rendered by the women workers as valuable as those of men.

AS AM DM DS

30. It is only fair that male workers should receive more pay than women even for identical work.

AS AM DM DS

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

AS AM DM DS

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

AS AM DM DS

33. Women should demand money for household and personal expenses as a right rather than as a gift.

AS AM DM DS

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

AS AM DM DS

35. Wifely submission is an outworn virtue.

AS AM DM DS

36. There are some professions and types of businesses that are more suitable for men than women.

AS AM DM DS

37. Women should be concerned with their duties of childrearing and housetending, rather than with desires for professional and business careers.

AS AM DM DS

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

AS AM DM DS

39. A wife should make every effort to minimize irritation and inconvenience to the male head of the family.

AS AM DM DS

40. There should be no greater barrier to an unmarried woman having sex with a casual acquaintance than having dinner with him.

AS AM DM DS

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

AS AM DM DS

42. Women should take the passive role in courtship.

AS AM DM DS

43. On the average, women should be regarded as less capable of contribution to economic production than are men.

AS AM DM DS

44. The intellectual equality of woman with man is perfectly obvious.

AS AM DM DS

45. Women should have full control of their persons and give or withhold sex intimacy as they choose.

AS AM DM DS

46. The husband has in general no obligation to inform his wife of his financial plans.

AS AM DM DS

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

AS AM DM DS

48. Women with children should not work outside the home if they don't have to financially.

AS AM DM DS

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

AS AM DM DS

50. The relative amounts of time and energy to be devoted to household duties on the one hand and to a career on the other should be determined by personal desires and interests rather than by sex.

AS AM DM DS

51. As head of the household, the husband should have more responsibility for the family's financial plans than his wife.

AS AM DM DS

52. If both husband and wife agree that sexual fidelity isn't important, there's no reason why both shouldn't have extramarital affairs if they want to.

AS AM DM DS

53. The husband should be regarded as the legal representative of the family group in all matters of law.

AS AM DM DS

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

AS AM DM DS

55. Most women need and want the kind of protection and support that men have traditionally given them.

AS AM DM DS

APPENDIX B

COVER LETTER OF INSTRUCTIONS TO FATHERS AND DAUGHTERS IN THE PILOT STUDY

Date: June 27, 1977

To: OSU Upper Division Women Students and Their Fathers

From: Martha Jordan, Doctoral Student, Applied Behavioral Studies in Education

Subject: Validation of the Attitudes Toward Women Scale

During the fall semester of 1977, a research study will be undertaken through the Department of Applied Behavioral Studies at Oklahoma State University which will contribute to better understanding the educational and career decisions made by educated women. A portion of this study will use the Attitudes Toward Women Scale (AWS) which reflects current attitudes of individuals about appropriate behavior for females in our society. This summer reports of perceived paternal attitudes are needed from junior and senior women students who are 23 years of age or younger along with their father's reported attitudes.

While neither daughter nor father will be included as subjects in the fall study, help from both of you this summer would contribute substantially to determining the value of the AWS for the study. Questionnaires will not be identified with individuals. They will be identified as father-daughter pairs only by number. Each daughter and each father is asked to respond to the questionnaire independently.

Daughters are asked to:

1. complete the AWS questionnaire by selecting from the given alternatives the response you think your father would choose.

2. return the completed AWS to your teacher or in the stamped, addressed envelope by August 1, 1977.

3. send a copy of the AWS to your father for his opinion responses.

Fathers are asked to:

1. complete the AWS questionnaire by selecting a response from the given alternatives which best reflects your opinion.

2. return your completed AWS in the stamped, addressed envelope by August 1, 1977.

Thank you very much for your help with this research project.

APPENDIX C

DEMOGRAPHIC QUESTIONNAIRE

INDIVIDUAL QUESTIONNAIRE

Part II

Please provide the following information about yourself and your family. These responses are your own, of course, and not your father's as in Part I. Please place your response in the space provided.

About Father

_____ 1. In the space at the left, please indicate the number of years of education completed by your father. (Count 1st grade as 1, etc.)

2. Father's occupation or job title:

_____

3. Briefly describe your father's work.

About Mother

_____ 4. In the space at the left, please indicate the number of years of education completed by your mother. (Count 1st grade as 1, etc.)

5. Mother's occupation or job title:

_____

6. Briefly describe your mother's work.

_____ 7. Mother has worked at employment outside the home:

(A) none at all
(B) less than 8 years
(C) 8 years but less than 12
(D) 12 years or more

8. What is your major? _____

9. What occupation do you expect to enter?

_____

____ 10. Compete this statement with a choice from below and indicate the proper letter in the space at the left.

In my life plan I expect to:

(A) establish a career and not marry.
(B) establish a career and plan a marriage which will not interfere with that career.
(C) marry and establish a career after my husband establishes a career.
(D) pursue a career until my husband finishes his education or gets settled in a career.
(E) marry and work a while but not establish a career.

____ 11. From the following list identify the person who most influenced your choice of major.

(A) Boy friend or girl friend
(B) Brother or sister
(C) Employer
(D) Father
(E) Mother
(F) High school or college counselor
(G) Relative or acquaintance
(H) Professional person in the field
(I) Teacher
(J) No person

OVER PLEASE FOR PART III

Part III

Thank you very much for your help. You may be curious about the study and its results. If you would like to have a summary of the findings, please request them by leaving your name and address with the Applied Behavioral Studies office, OSU extension 6036. They will be ready for mailing about March 1, 1978.

The study of educated women is increasingly important. It is also fascinating, neglected, and full of surprises. Researchers are only beginning to inquire into important concerns of women. If you have any comments you wish to make about this study, please feel free to comment here.

APPENDIX D

COVER LETTER OF INSTRUCTIONS TO SUBJECTS OF THE STUDY

October, 1977

To: Upper Division OSU Women Students

From: Martha L. Jordan, Doctoral Candidate, Applied Behavioral Studies in Education

Subject: A Research Project: Career and Educational Decisions of Women

Your assistance is requested in a research study which seeks to improve career counseling and educational decision making by women. This study includes upper division OSU women in various majors and will contribute to the better understanding of career and educational needs of women.

There are three parts to the questionnaire and it will probably take about 20 minutes of your time. If you care to, and have more time, your comments on ideas which the questions raise for you would be welcome at the end of the questionnaire.

While you have been selected from among others, the information you return will in no way be personally identified with you. The purpose of the study is to learn more about women and careers in general and not to learn specifically about individuals. Your taking the time to complete and return the questionnaire will be a contribution toward a better understanding of educated women.

Read the instructions carefully. They are a little different than you might expect. While it might be interesting to talk with friends or parents about the survey, please answer all questions with your own independent responses and return it in the envelope provided by _____, 1977.

INSTRUCTIONS: Please Respond to Every Item from Among the Available Responses. (A space for comments is provided at the end of the questionnaire.)

Part I

The Attitudes Toward Women Scale. Please respond to the items as you think your FATHER would.

Part II

Some information about yourself and your family.

Part III

Some information for you.

VITA

Martha L. Jordan

Candidate for the Degree of

Doctor of Education

Thesis: A STUDY OF PERCEIVED PARENTAL INFLUENCE TOWARD DAUGHTER CHOICE OF COLLEGE ACADEMIC MAJOR

Major Field: Student Personnel and Guidance

Biographical:

Personal Data: Born in Salina, Kansas, the daughter of Pauline and Joseph E. Morton; married to James G. Jordan, 1957; children: James, David, Scott, Ann.

Education: Attended public schools, Wichita, Kansas. Graduated from Wichita North High School in May, 1951; received Bachelor of Arts degree with major in sociology from the University of Kansas, Lawrence, Kansas, in May, 1955; received the Master of Science degree in Education from Oklahoma State University in May, 1974; completed the requirements for the Doctor of Education degree at Oklahoma State University in May, 1978.

Professional Experience: Employed as graduate teaching assistant, College of Education, Oklahoma State University, 1974-1976; employed as Academic Counselor, Sociology Department, Oklahoma State University, 1976-1977; employed as Counselor-Career Specialist, University Counseling Service, Oklahoma State University, November, 1977, to the present.

Professional Organizations: Phi Kappa Phi, Phi Delta Kappa, American Personnel and Guidance Association, American College Personnel Association, Oklahoma Personnel and Guidance Association.