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QUARANTA, Beatrice Marie Amzibel, 1930-
ANDROGYNOUS, SEX-TYPED AND UNDIFFERENTIATED
COLLEGE FRESHMEN AND SENIORS: THEIR
PROFESSIONAL COLLEGE CHOICE AND RELATED
CHARACTERISTICS.

The Ohio State University, Ph.D., 1976
Psychology, social

Xerox University Microfilms, Ann Arbor, Michigan 48106

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ANDROGYNOUS, SEX-TYPED AND UNDIFFERENTIATED COLLEGE FRESHMEN AND SENIORS: THEIR PROFESSIONAL COLLEGE CHOICE AND RELATED CHARACTERISTICS

DISSERTATION
Presented in Partial Fulfillment of the Requirements of the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

by

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ACKNOWLEDGMENTS

The writer would like to take this opportunity to thank those people who have helped in the completion of this dissertation and program.

I wish to express special gratitude to my major adviser, Dr. Claribel M. Taylor, for her assistance and understanding in the preparation of this study. To Dr. J. Robert Warmbrod who so patiently guided me through the research process, and to Dr. Ellen Hock who inspired me along the way, my sincere appreciation.

Special appreciation is expressed to Dr. Betty L. Melragon who gave freely of her time, to the judges and students who participated, and to the advisers at University College without whose assistance this study could not be completed.

To my friends and colleagues who have offered suggestions and given moral support along the way, many thanks.

To my daughter Rosalyn and my son Joseph, who accepted my re-definition of mothering during this period of time with understanding for a newer role of mother, all my love.

To Joe, whose help was without measure, who inspired, "we fear our highest possibilities" a deep felt gratitude and love is expressed.
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CHAPTER I
INTRODUCTION

A number of physical and biological differences between the sexes are obvious and universal; the psychological differences are not. The folklore that has grown up about sex differences is often inconsistent and vague. However, these differences have prescribed a stereotypic behavioral role for males and females. These stereotypic behaviors to a large extent define how males and females act out their respective lives.

The study of sex roles has been of concern to psychologists, anthropologists, sociologists, biologists and many others for a long time. The present day sex role issue is being viewed more as part of the women's liberation movement and as a reflection of the changing needs of women in defining their role in today's society. However, one cannot ignore the fact that roles of both men and women today are changing (Palme, 1972). The sex role issue is of primary concern to both men and women and begins early in the individual's life.

- Sex role is defined (Block, 1973)
  as the constellation of qualities an individual understands to characterize males and females in his culture.

The degree to which an individual regards himself as possessing
sex-typed traits (masculine or feminine) is called his sex-role identity (Kagan, 1964).

Parsons (1955) maintained that the "instrumental" role, the male role, has the primary responsibility relative to the outside world. The "expressive" role which refers to the nurturant, loving and empathetic individual, is that which must be held by the female. Parsons views both roles as necessary in order for the family to maintain itself as a viable social institution for the socialization of children and maintenance of adult needs.

Zelditch (1955) through an anthropological study concurred that in nearly every society men played "instrumental" roles and women "expressive" roles. However, in contrast to Parsons and Zelditch, Mead (1935) maintained that women in some societies were definitely practicing the "instrumental" role and men the "expressive" role, coming to the conclusion that these roles can be assigned to either sex by the specific culture.

There has been much variation in definition of what is considered masculine and feminine from one culture to another. There are also many problems involved in such definitions. Masculinity and femininity within a particular culture are assessed along many dimensions. Thus Mead (1955) has written

Our growing children are faced with another problem: How male, how female, am I? He hears men branded as feminine, women condemned as masculine, others extolled as real men and as true women. He hears types of responsiveness, fastidiousness, sensitivity, and guts, stoicism and endurance as belonging to one sex rather than the other. In his world he sees not a single model but many as he measures himself against them; so that he will judge himself against them; so that
he will judge himself and feel proud and secure, worried and inferior and uncertain, or despairing and ready to give up the task altogether (pp. 102-3).

Traditionally males and females have been designated as polarized beings. The expressive nurturing female and the instrumental providing male have been typical descriptors of the sexes in Western culture. Industrialization provided the impetus and opportunity for a changing role for women, by providing women with an opportunity to be employed outside the home (Firestone, 1971).

The feminist movement was spirited by Betty Friedan in her book *The Feminine Mystique* (Friedan, 1963), and the word "sex" in the Civil Rights Act of 1964. The women's liberation movement was always a part of a movement for rights initiated by others. Along with changes in the woman's role, changes in the male role were expected. The role of women could not be changed without altering to some degree the role of men (Udry, 1971).

Concern over the male role was apparent in a study by McKee and Sheriffs (1960) in which college men were asked to describe the ideal female of their age and college women to describe what they thought men considered the ideal female. In this study women were also asked to describe the ideal male of their age, and men to describe what they thought women considered the ideal male. The results indicated that women believe men want them to possess feminine characteristics to a greater degree than masculine characteristics. The men believe that in the eyes of women, the ideal male is one who is not everything society attributes to masculinity, but also much of what society has assigned to femininity. The data suggest that women put pressure on
men not to be less masculine but to add elements of femininity to the masculine stereotype. The pressure of the female on the male to attain some traditionally feminine characteristics as well as masculine leading to an "androgynous" individual is evident.

Palme (1972) discussed an idea embraced in Sweden in that one must aim for change which emancipates men as well as women from the restrictive effects engendered by the traditional sex roles. In order for women to be emancipated from their traditional roles men must also be emancipated. Palme stated (1972)

the aim over the long run must be that men and women should be given the same rights, obligations, and work assignments in society (p. 237).

Brenton (1966) pointed out that adhering to strict male patterns generates a considerable amount of anxiety in the adult male. These masculine stereotypes are an ever present reminder of his own need to measure up, or a possible reminder of his failure to do so. He believes men are bound in a masculine straitjacket which includes athletic prowess, strength, and logic. According to the author, a new concept of what it is to be a man has to do with the way he manages his life--the way he conducts himself as a human being in terms of his wife, his children and his friends.

Kaplan (1976) suggested androgyny as a model of mental health. This androgynous approach would counteract the deficits that have been found in sex role socialization of women. This androgynous approach allows for either sex to include in its repertoire of behaviors that which has been traditionally assigned to the other sex. For example, males could add to their repertoire of behavior nurturance and empathy; those
behaviors traditionally assigned as female. Whereas, females could express achievement, demonstrate aggressiveness; those behaviors traditionally assigned as male.

Costs of sex role stereotypes for males is the pressure on males to "succeed" in a highly competitive world of work which creates tremendous stress. The work and success ethic of our society compels males to continue to produce and participate in the economy even if they have succeeded in the eyes of their peers. Among the large number of males repetitive labor, the pressure to persist day in and day out, results from the sex role requirement that they provide for their families the best they can. Heart attacks, strokes, high-blood pressure can result from this influence. This oppression also contributes to the much higher rates of drug and alcohol abuse among males which in turn hasten death (Chafetz, 1975).

Young males suffer a number of costs in the process of establishing their masculine identity. According to Sexton (1969) as children, males outnumber females in mental institutions at a rate of two to one. Male youth comprise the vast majority of school discipline "problems", have reading and learning problems and are frequently adjudged more delinquent. Young males either conform to their sex role stereotype and become learning and school "problems" or conform to school requirements and are considered "sissy" by their peers. These constraints do not exist for girls as their sex role stereotype is consistent with the behavior rewarded in school.

Society does in fact define a host of traits as belonging almost exclusively to one or the other sex roles. This creates a dichotomy
of human types. Characteristics defining the feminine sex role are viewed as opposites to those defining the masculine sex role. However, we have observed and interacted with people of different genders who have many similarities and with people of the same gender who have many differences.

The women's liberation movement has argued that our current system of sex role differentiation serves to prevent males and females from developing to full and complete human beings. Supporters such as Bird (1968) and Rossi (1964) contend that individuals would benefit if they were not socialized to conform to outmoded standards of masculinity and femininity, but if they were taught to be "androgynous".

The societal change in the roles of men and women pressured by the employment of women and the feminist movement should be viewed as part of a larger change allowing for acceptance and practice of broadening roles by individuals (Grams and Jameson, 1973). With this societal change it would be anticipated that individuals would incorporate both masculine and feminine characteristics into their personalities and would emerge with an appropriate sex role ideal that would be compatible in more than one situation in today's society. What we are as persons, rather than as gender, should be the primary factor in determining role behavior.

Bem (1975) found that androgynous individuals of either sex are able to vary their behavior and are able to succeed at eliciting either masculine or feminine behaviors. Androgynous individuals would feel comfortable in choosing either a male or female sex typed occupation. Their behavior would not need to be consistent with an internalized
sex role standard. The androgynous individual should be able to remain sensitive to the situation and elicit whichever behavior seems most appropriate at the time regardless of whether it is appropriate for one sex or the other. Occupational choice would be based on ability and interests. According to Bem, males and females should be encouraged to be both masculine and feminine in a given situation (Bem, 1975). Thus, the androgynous individual would not be hindered by a specific range of behaviors, attitudes, and values which would be expected of an individual who attempts to pattern his behavior to that dictated by his sex and his society. The extent of androgyny in individuals can be a significant factor in sex role development and in our industrial society it can be a significant career development characteristic.

Statement of the Problem

The purpose of this study was to examine the relationship between androgynous, sex-typed and undifferentiated college freshmen and college seniors and their professional college choice. The variables of

- a. birth order,
- b. working or non-working mother and
- c. rural or urban residence

were also examined in relation to androgyny and college freshmen and seniors.

Two separate groups of college students were investigated relative to their college professional choice and degree of androgyny. The first was a group of freshman, those students just declaring a professional college choice. The second was a group of seniors, those students
nearing the end of their college education. Both males and females in each group were studied.

The variables of (a) birth order, (b) working or non-working mother and (c) rural or urban residence were chosen from those identified in research as related to masculine and feminine characteristics, career decisions and stereotypes. These above factors were therefore considered important by the investigator and were included in the study. This study is descriptive and exploratory. Suggestions for further research were drawn from the findings.

Hypotheses of the Study

1. Male college freshmen and seniors who are categorized androgynous, as measured by the Bem Sex-Role Inventory, will pursue traditional female professional choices with greater frequency than males who are categorized sex-typed male.

2. Female college freshmen and seniors who are categorized androgynous, as measured by the Bem Sex-Role Inventory, will pursue traditional male professional college choices with greater frequency than females who are categorized sex-typed female.

3. Male college freshmen and seniors who are categorized androgynous, as measured by the Bem Sex-Role Inventory, will be either a middle-born or last-born child rather than first-born with greater frequency than males who are categorized sex-typed male.

4. Female college freshmen and seniors who are categorized androgynous, as measured by the Bem Sex-Role Inventory, will be either a middle-born or last-born child rather than first-born with greater frequency than females who are categorized sex-typed female.
5. Male college freshmen and seniors who are categorized andro­
ynous, as measured by the Bem Sex-Role Inventory, will be sons of
working mothers categorized occasionally, part-time and full-time rather
than non-working mothers with greater frequency than males who are
categorized sex-typed male.

6. Female college freshmen and seniors who are categorized androg­
ynous as measured by the Bem Sex-Role Inventory, will be daughters of
working mothers categorized occasionally, part-time and full-time rather
than non-working mothers with greater frequency than females who are
categorized sex-typed female.

7. Male college freshmen and seniors who are categorized androg­
ynous as measured by the Bem Sex-Role Inventory, will tend to be from
urban communities rather than small or rural communities with greater
frequency than those males who are categorized sex-typed male.

8. Female college freshmen and seniors who are categorized androg­
ynous as measured by the Bem Sex-Role Inventory, will tend to be from
urban communities rather than small or rural communities with greater
frequency than females who are categorized sex-typed female.

Definition of Terms

The following definitions are presented to clarify the meaning of
the concepts utilized in the study.

Androgyny. A social definition of androgyny is a society with
no sex differentiation . . ."a society in which there are no stereo­
typed behavioral differences between the roles of males and females on
the basis of their sex alone" (Osofsky's, 1972). An individual
definition of androgyny states "the individual represents an integration of traits and values, both masculine and feminine" (Block, 1973). The operational definition utilized in this study is a high feminine score and high masculine score on the Bem Sex-Role Inventory (Spence, Helmreich, and Stapp, 1975).

**Masculine.** Masculine refers to the fact that males tend to be more interested in adventure, outdoors, machinery, tools, physical phenomena and physical occupations. They show greater self-assertion, aggressiveness, and fearlessness, thus they tend to act in more instrumental ways (Terman and Miles, 1936). The operational definition of masculinity or sex-typed male is represented by a high masculine score and low feminine score on the Bem Sex-Role Inventory (Spence, Helmreich, and Stapp, 1975).

**Feminine.** The feminine role is defined as a set of personality traits often described as not dominant or aggressive and more emotional and sympathetic (Komarovsky, 1963). Passivity and nurturance were central attributes of being feminine (Deutsch, 1944). The operational definition of feminine or sex-typed female is represented by a low masculine score and high feminine score on the Bem Sex-Role Inventory (Spence, Helmreich, and Stapp, 1975).

**Sex-role.** A sex-role is defined as the constellation of qualities an individual understands to characterize males and females in his culture (Block, 1973).
Limitations of the Study

The limitations of the study can be identified around the subjects involved and the procedures utilized. (1) The need to have a representative sample of males and females in the Curriculum of Academic Preference (CAP) areas designated for study was a limitation. This need was due to the relationship of the hypotheses to the sex of the student. The use of the fifth and sixth ranked feminine CAP areas chosen by the judges (Education and Art) had to be used rather than the first, second, third, or fourth areas (Home Economics, Nursing, Social Work and Dental Hygiene) because of a lack of males enrolled in these CAP areas. Therefore, sex-stereotyped professional areas that parallel each other in terms of masculinity and femininity are not included. The masculine oriented professions, (Engineering and Agriculture) ranked first and second, are considered masculine to a greater degree than the feminine oriented professions, (Education and Art) ranked fifth and sixth, are considered feminine.

(2) The freshman sample was taken from male and female students attending University College 100 orientation classes in CAP areas Engineering, Agriculture, Education and Art who volunteered to participate Winter Quarter, 1976 and a random sample of male and female freshman students enrolled in University College 100 orientation class Fall Quarter, 1975, at The Ohio State University main campus. The sample also consisted of a random selection of college seniors who applied for a degree Spring Quarter, 1976, from The Ohio State University. In order to accumulate the necessary number of freshman, 100 in each CAP area (fifty males and fifty females), it was necessary to randomly
select students enrolled in University College orientation class 100
during the Fall Quarter. Winter Quarter students tend to be those who
are transfer students, those who have dropped out of school and are
returning and those who were not accepted Fall Quarter for various
reasons. The students thus represent all types of students, those nor­
mally enrolling Fall Quarter and those enrolling and or transferring
Winter Quarter. This sample is representative of the freshman popula­
tion which is in attendance in University College 100 orientation class.
Spring Quarter enrollments are not included.

(3) Two procedures were used to gather the data. Winter Quarter
freshman students were presented the option to participate in the study.
The investigator attended the University College 100 classes, explained
the study, and requested their participation. In some classes the
investigator waited and gathered the instruments while in other classes
the University College 100 class instructor gathered the instruments
after class. Fall Quarter freshman students were contacted by mail. An
explanatory letter, the instruments used, and a self-addressed stamped
everlope were included. For those students with campus addresses
campus sites were designated where the forms could be returned. Others
returned the instruments by mail.

A mailing process was established for the college senior sample.
This group was contacted by mail based on a list of graduating seniors
Spring Quarter from the colleges participating in the study: Engin­
eering, Agriculture, Education and Art.
Summary

The statement of the problem, definition of terms, and limitations of the study were included in this chapter. In Chapter II the literature pertinent to the topic of the study is presented.
CHAPTER II

REVIEW OF LITERATURE

The research studies available concerning the relationships investigated in this study are voluminous. Therefore, this discussion will be limited to research that focuses on the purpose of this study. For clarity purposes, the review of literature was divided into five major areas. In the first area a general presentation of theoretical views of sex role development is offered. The second area concerns itself with the concept of androgyny. The third area reviews research on career choice and decisions as it relates to sex role. The fourth area concentrates on career (occupational) sex stereotypes and in the fifth area the literature on the selected characteristics included for study; birth order, working or non-working mother, and rural or urban residence are reviewed.

Theoretical Views of Sex-role Development

Socialization of a child into a sex role starts at birth and is promoted by differential treatment given to male and female infants. The child will assume the behaviors and characteristics appropriate to the male or female role. Once this role is established, it appears to be more or less fixed and irreversible. The first two years of life are seen as a critical period in sex typing (Kagan, 1964).

14
There are basically three theoretical views of sex role development. The psychoanalytic theory is proposed by Freud and Neo-Freudians such as Adler, (1969) Erikson (1968) and Fromm (1970). The social-learning theory and research have been proposed by Skinner (1967), Sears, (1965) Bandura and Walters (1959) and Mischel (1970). The cognitive-developmental theory is evident in the work of Kohlberg (1966) and Piaget (1929).

The psychoanalytical theory attributes sex role development to innate biological instincts. Freud (1938) believed that the individual is a complex of sexual drives which develop through fixed stages in the maturation of a child. At any stage these sexual drives must be restrained and restructured for acceptable expression in everyday life. Freud conceived of sexual development as progressing through the three stages in early childhood; oral, anal and genital, culminating in the Oedipus complex; and a genital stage characteristic of adult sexuality. It is the prelatency stage that, in Freudian thinking, is crucial for determining adult behaviors.

According to Freud, the "Oedipus complex" arises out of the wish or expectation of the child that the mother, who has always gratified needs in the past, will gratify these new needs. The child soon learns that parents do not respond favorably to sexual overtures. Depending on the quality of the parental responses, a boy will generally develop a fear that the parents will deprive him of the sexual organ which he so highly prizes. This is "castration anxiety" according to Freudian theory. At the same time the boy begins to identify with the sex role of his father in an effort to equal this person who possesses the larger
penis and the object of the child's fantasies, the mother. Such sex role identification elicits approval and thus reinforces the learning.

Girls tend to compare themselves unfavorably because of the lack of the more obvious appendage of the boy. This is the Freudian concept of "penis envy". In essence, girls renounce the mother for having deprived her of a penis and turn to the father in a fantasy of possessing the father's penis. This is the "Electra complex".

Freud referred to the rather defective development of the superego in females and was convinced that women lacked the most important incentive for superego formation, namely, the castration fear. A feminine identity is established only when the wish for a penis is replaced by the wish for a child. Freud associated activity with masculinity and passivity for femininity in many of his writings. As a consequence of his biological orientation, it was never very clear whether these "feminine" qualities are biologically or culturally determined.

The social-learning theory of sex role development suggests that the acquisition and performance of sex typed behaviors can be described by the same learning principles used to analyze any other aspect of an individual's behavior. The social-learning theory has emphasized concepts that deal with the importance of observational learning and cognitive processes in the learning of complex social and interpersonal behaviors (Mischel, 1966).

Imitation, identification and observational learning are key concepts for social-learning theorists. Some theorists contend that imitation causes identification while others assume that imitation is a product of identification. Bandura (1969) recommends using the terms
identification, imitation and observational learning as synonymous when referring to behavioral modifications that result from exposure to modeling stimuli.

Observational learning is held by social-learning theorists as the first operation used by the child in acquiring sex typed behavior (Mischel, 1970). Observational learning can take place without direct reinforcement to the observer. A wide range of direct and indirect imitative responses may be elicited or inhibited, both in the presence and in the absence of a model. Children learn sex roles by observing models and how models are rewarded or punished. The social-learning theory is the most traditional, best known and most widely accepted theory of sex role development (Mischel, 1970).

The cognitive-developmental theory is based on the assumption that the basic patterning of sexual attitudes is to be found neither in biological instincts nor in arbitrary cultural norms but in the child's cognitive organization of his social world along sex role dimensions.

The development of sex typing is conceived as an aspect of cognitive growth which involves basic, qualitative changes with age in the child's modes of thinking and also in his perceptions of self, his sex role, and his physical and social environment (Kohlberg, 1966).

The child's initial conception of sex role stems from (Kohlberg, 1966) important 'natural' components of patterning; i.e., aspects of sex role attitudes which are universal across cultures and family structures and which appear relatively early in the child's development. This patterning of sex role attitudes is essentially 'cognitive' in that it is rooted in the child's conceptions of physical things, the bodies of himself and of others, as he relates body concepts to his conceptions of a social order which makes functional use of sex categories in quite culturally universal ways . . . (p. 82).
Kohlberg postulates five mechanisms by which sex role concepts are directly translated into masculine-feminine values:

1. The first, an expression of Piaget's notion of assimilation, is the child's "tendency to respond to new activities and interests that are consistent with old ones."

2. Children make value judgments consistent with their self-concepts of sex role.

3. Young children tend to associate positive, self-enhancing values with sex role stereotypes and these values are motivating.

4. The child perceives his gender role as normative and hence generates judgments that conformity is morally right and deviations are morally wrong.

5. Modeling or identification is the fifth mechanism, but Kohlberg's analysis of the process is strikingly different from the psychoanalytic or learning interpretations. Sex typing is not conceived as a product of identification but rather as a consequence of identification. Boys model themselves after males because they already have masculine interests and values (Kohlberg, 1966, p. 112-129).

Since the cognitive-developmental theory of sex typing was proposed there have not been direct tests of specific hypotheses derived from theory and adequate evaluation is not possible. However, Kohlberg's stress on the critical roles of cognitive development and changes in cognitive organization seems most challenging as these occurrences were neglected in both traditional learning theory and psychoanalytic theory (Mussen, 1969).
Whichever theory prevails, it is evident that our Western culture has developed clear stereotypes for males and females. Males are seen as aggressive, competent, logical, unemotional and non-verbal. Females are seen as emotionally expressive, sensitive to other's feelings, verbal, non-aggressive, less logical and less competent. Thus, in our culture males and females are viewed and are expected to be opposites (Broverman, et.al., 1972).

**Androgyny**

Present day society is experiencing rapid change and disorganization due to a combination of social, technological and political factors. One of the changes that is occurring today is the changing role of men and women. Today's young men and women have chosen alternative life styles in an attempt to resolve present problems. Androgyny, may also be considered as a life style for today's society.

What is androgyny? Dictionaries define androgyny as meaning both male and female in one. A more useful definition offered by the Osofsky's (1972) is

>a society with no sex role differentiation . . . that is, a society in which there are no stereotyped behavioral differences between the roles of males and females on the basis of their sex alone (p. 411).

A non-sexist society, an androgynous society, would be specifically aimed for the development of both males and females to their fullest capacity without regard to stereotypic norms.

The Osofsky's (1972) point out areas which need to be altered from traditional formats before this androgynous lifestyle for men and women can prevail. First, a change is needed in the socialization process
of children. Children in society have been taught behaviors appropriate for their sex by significant individual's such as parents, teachers and other authority figures. We need to question whether our differential treatment of girls and boys is due to innate differences or societal made differences.

Second, our culture has strictly defined characteristics for masculinity and femininity. Characteristics which are encouraged in males are condemned and prohibited for females. Males have been encouraged to be verbally and physically aggressive whereas females have been discouraged from exhibiting these traits. Females, to be feminine need to be small, attractive, submissive, and domestic and inhibit signs of sexual desire. These characteristics are not universal, thus are societal norms. Third, education for women is of utmost importance. Females may come to develop skills in accordance with their abilities and may come to see achievement as not excluding homemaking and child rearing. A study by Horner (1969) indicated that females equate intellectual achievement with a loss of femininity and would be a characteristic a female would conceal.

Counseling procedures which reinforce traditional sex roles need to be changed. Traditionally, females have been encouraged to be passive and have been pointed toward female oriented pursuits, while males have been encouraged to be achievement conscious and to be independent. Guidance counselors are significant others to students and need to encourage females to take both career and marriage seriously and indicate the feasibility of pursuing both simultaneously. Females are fortunate in that an option is available to them--career or marriage or both.
Males traditionally, do not have this option, they are encouraged to have a career and to marry and have not been allowed to make a choice between the two (Osofsky's, 1972).

Changes in the patterns of socialization are needed. Equality of education for males and females, and redefinitions of masculinity and femininity will lead to increased benefits and alternatives for individuals of both sexes. Some individuals will respect their alternatives and nurture an androgynous life style while others will continue the traditional stereotypic male and female role.

One hears the question being raised, "What is happening in our society?" "Women seem to be becoming more masculine and men more feminine". Bird (1968) indicated that trends in marriage, education and employment interact to make the lives of men and women similar. Women are behaving in situations similar to men, whereas men are reacting in ways that may be considered feminine. Androgyny, a society without sex role differentiation, is the result.

Bird (1968) suggested that one of the major reasons for this change is the contraceptive pill. Women are acquiring sexual freedoms heretofore given only to males. Women can more effectively plan their children and can effectively combine marriage and career.

Women will be living lives that parallel rather than complement the lives of their husbands. The similarities between men and women are being emphasized and the differences are being discouraged. Bird (1968) pointed to signs of the future as they relate to women and the trends toward androgyny:
1. Vital statistics of birth, marriage and deaths are changing to give women more years of life during which they are not bearing or rearing children.

2. Education is a powerful influence that is working to make the lives of women more like those of men.

3. The experience of employment itself narrows the differences between male and female. Women work today not only for need but for gratification as well.

4. The growing desegregation of work is another force making woman's lives more parallel to men's.

5. The fifth trend toward androgyny is a general desegregation of the sexes. Luncheon clubs, fraternities, stag restaurants and other male dominated customs are being challenged.

These trends leading to an androgynous life are not far into the future. Longer years for women without childbirth, more education for women, more work outside the home, less segregation of the sexes are all part of a general trend to individual choice which is characteristic of the '70's. The androgynous life is probably practiced today by many although it may not be labeled as such.

Rossi (1964) in her essay asserted the claim to sex equality. She defined sex equality as

a socially androgynous conception of the roles of men and women, in which they are equal and similar in such spheres as intellectual, artistic, political and occupational interests and participation, complementary only in those spheres dictated by physiological differences between the sexes. An androgynous conception of sex roles means that each sex will cultivate some of
the characteristics usually associated with the other in traditional sex role definitions (p. 99).

The androgynous society and the equality between the sexes has been a rapid movement. Rossi (1964) cited three institutional levers for achieving sex equality and the androgynous society. First, provision for proper child care is needed to enable women to continue in their occupational involvement without the withdrawal from employment to rear children. Second, the residential pattern in the post war era has been to the suburbs. This residence pattern has limitations because of geographic distance between home and work. Third, men and women must want to participate equally with each other. Occupations need to be less sex typed to facilitate both males and females in making career decisions. Men and women need to question their motivations and their early experiences which mold their life expectations.

Bazin and Freeman (1974) view androgyny as the experience of wholeness. Androgyny unites what has been traditionally assigned to males, the masculine principle, and that which has been assigned to females, the feminine principle. The androgynous ideal would offer the experiences and feelings of both the masculine and feminine principle to every human being regardless of sex.

The androgynous vision Bazin and Freeman (1974) referred to requires a radical change in society as well as in individuals. The political, cultural and economic life of the people need a rebirth, not masculine, not feminine, but possibly a rebirth of a new human being and society.
Secor (1974) critically appraised the concept of androgyny and pointed out the bases for her apprehension. The six observations she felt were the most dangerous to her as a woman.

1. Androgyny, as the term is used in society today conjures up images of the feminized male.

2. Androgyny, as a word structurally and as a concept culturally, tends to assume femininity and masculinity as set personality structures, which can be modified, but which are set as givens.

3. The constant referral to feminine and masculine functions subtly keep one focused on genital differences and on sexual union, thus focusing on complementary sexual roles rather than on political and economic power.

4. Traditional connotations of androgyny keep people focused firmly on heterosexual pairing both as norm and as ideal.

5. The focus on marriage perpetuates a social institution that has been severely restrictive of women's options.

6. Androgyny does not relate to the large body of literature dealing with male fear of females. This fear of women, needs to be dealt with if women hope to be equals with men.

Secor (1974) concluded by stating

as writers, critics and scholars, we have a choice of what kind of image we are going to use our time and energy to explore in our work. . . . will it be Unicorn, Amazon or Androynye? (p. 169).

The writings on androgyny presented thus far have viewed androgyny as a life style based on a society without role differentiation; the major thesis being that the emancipation of women will place them
alongside men in the sphere here-to-fore considered exclusively male. The option for males, therefore is also the pursuit of equality in areas relegated in the past to females.

Farrell (1974) wrote about another movement; that which is coined "human alternatives". This movement suggested psychological freedom for all, rather than imposing a pre-set pattern for males and females. This may be called the "masculine liberation movement" which highlights liberation of males from the stereotypes of masculinity.

Farrell (1974) stated that becoming a liberated man is achieving new freedoms. It is getting in touch with the childlike parts of the personality as well as the feminine parts. Becoming a liberated man, according to Farrell (1974) is

never underestimating the complexity, the joy of pain of getting in touch with one's humanity (p. 339).

Man's involvement in breaking out of the straitjacket of sex roles is essential because of the way it confines men at the same time it confines women. The concern is to develop enough internal security in men so that both males and females can attain the psychological freedom to control their own lives.

The acceptance of this concept has tended to hide the hypotheses that (1) many individuals may be androgynous, both masculine and feminine depending on the situation and (2) strongly sex typed individuals might be seriously limited in the range of behaviors available to them (Kagan, 1964; Kohlberg, 1966).

Bem's (1975) article on sex role adaptability investigated the thesis that sex stereotypes have prevented males and females from
developing to their fullest capacity. People should no longer be conforming to outdated definitions of sex appropriate behaviors. In this study she conducted two experiments.

In her first experiment Bem (1975) tested the hypothesis that independence from social pressure was significantly masculine and that masculine and androgynous subjects would do better at stereotypic masculine behavior than feminine subjects. That is they would be more likely to express their own opinions and less likely to conform.

Nine masculine, nine androgynous and nine feminine subjects of each participated in the experiment. All were students in a psychology class at Stanford University during the Spring of 1971.

Subjects were solicited for an experiment on humor and were run in same-sex groups of four. Subjects were asked to rate 92 different cartoons, half of which were funny and half of which were unfunny. Thirty-six of these cartoons represented "critical" trials, that is, trials in which a false consensus was presented to induce conformity. As predicted, masculine and androgynous subjects conformed to the consensus less than feminine subjects. Results also indicated that masculine and androgynous subjects did not differ in amount of conformity, thus they both did well on a stereotypically masculine behavior.

The hypothesis being tested in Bem's (1975) second experiment was that feminine and androgynous subjects would do better at a stereotypic feminine task such as playing with and cuddling a kitten than masculine subjects. Sixty-six undergraduates from Stanford University served as subjects. Half were male and half were female. One-third of the subjects of each sex were masculine, one-third
feminine, and one-third androgynous. All were students of an introductory psychology course during the Winter of 1973.

The pattern of results was so different that the data were presented separately. The female sample experiment did not show support for the hypothesis whereas the male population indicated that feminine and androgynous males demonstrated greater overall involvement with the kitten than did the masculine males as predicted. The two experiments provided support for the hypothesis that androgynous subjects are more likely than non-androgynous subjects to display behavioral adaptability across situations.

A later study by Bem (1975) looked at the sex typed individual and explored the specific processes that might be responsible for his or her avoidance of cross sex behavior. Twenty-four sex typed, twenty-four androgynous and twenty-four sex reversed subjects of each sex were selected for this research on the basis of their scores on the Bem Sex-Role Inventory (Bem, 1974). All were students in an introductory psychology course at Stanford University during the Winter or Spring Quarter of 1973.

In the study it was questioned (1) whether cross-sex behavior is or is not motivationally problematic for the sex typed individual and (2) does the individual actually avoid cross-sex behaviors. It was hypothesized that sex typed individuals would actually prefer sex-appropriate activities and resist sex-inappropriate activities even in a situation where those preferences could incur some costs. The costs of this experiment were money. In validating the hypotheses it was indicated that sex typed individuals do experience the most negative
feelings when they perform cross-sex behaviors. A post-hoc comparison among males revealed that androgynous males felt better while performing cross-sexed behaviors in front of a female experimenter than did the rest of the males combined.

The results of Bem's study (1975) suggested that cross-sex behavior is problematic for sex typed individuals and that they avoid it as a result. These sex typed individuals were more likely to prefer sex appropriate activities rather than sex-inappropriate activities even when the barriers had been removed. Bem (1975) summarized her findings by first considering the androgynous male. The androgynous male shuns no behavior because of a label attached to the behavior of masculinity or femininity. His competence crosses both instrumental and expressive domains. In contrast, the feminine male, does well only in the expressive domain and the masculine male does well only in the instrumental domain.

Androgynous women function in both the instrumental and the expressive domains. The masculine women, show no particular deficiency in either domain and appear to function effectively. The feminine women do not willingly perform cross-sex behaviors and report discomfort when required to do so. When appropriate behavior is left ambiguous or unspecified the feminine women will avoid any behavior, cross-sex behavior or sex-appropriate behavior.

The above studies lend support for the hypotheses that androgynous males and females would tend to elicit cross-sex behaviors to a greater degree than masculine males and feminine females.
Career Choice, Decisions and Sex-Role

Our society has witnessed an increasing influx of women upon the employment market. In 1975, there were over thirty-three million women in the labor force (Sub-Committee Hearings on Vocational Education, 1975). Today many of the attitudes toward women workers have changed thus contributing to this trend (Yankelovich, 1972). This new liberal attitude toward working women has expanded vocational and occupational opportunities for her (Mathews, 1963; Werner, 1969).

Havighurst (1965) noted that females tended to fall into career patterns earlier in life and with less thought than males, thereby necessitating earlier guidance. Lewis (1968) stated that for many women the process of serious career planning begins not in high school or college as it does with men, but only after they (women) have reached their thirties or forties when their children are no longer full-time responsibilities. Career decisions made early in life tend to be based on short term and usually trivial factors.

Along these same lines Ginzberg et. al. (1951) noted both similarities and differences between the vocational development of men and women. While noting many similarities during his "interest" and "capacity" stages early in the tentative period (approximately ages 12-16), notable differences were observed at about age 17, that is, during the "transition" stage of this period. One factor that may in part account for these differences is the need for boys to formulate their vocational plans on the basis of their self impressions and
observations around them. Girls, on the other hand, find their career choices more tentative depending in large upon their marital future, a factor over which they have less control (Osipow, 1973).

Douvan and Kay (1962) pointed out that the self identity issue for males is primarily an occupational vocational decision; for girls it is primarily a question of "whose wife will I be?" or "what kind of family will I have?". Erikson (1968) maintained a somewhat similar position as did Chickering (1969). Having to make a vocational decision within the context of marital and familial choice, Ginzberg (1951) pointed out that work outside the home is not as central a concept for women as it is for men, and their identity is less dependent on whether or not they have a career at all.

This pattern of career and marriage raises further differences yet. Research has indicated differences in personality characteristics, vocational interests, values, aptitudes, achievement, and early life histories between women who choose marriage versus women who choose careers (Mash, 1974). In general, career oriented women have more stereotypically masculine characteristics; such as competitiveness and aggression. They value achievement and competency more so than those women who are homemaker oriented (Nagley, 1971). There emerges then a more complex interaction of variables in the career choice of women than men; factors revolving around variables of work; marriage, children and economics.

Other factors which characteristically distinguish the career choice of males and females are personality traits and occupational sex role stereotypes. In studying the responses to personality tests,
Kuhlen and Dipboye (1959) found that male education students scored high on Edward's scales of abasement, autonomy, and change. Female students in education scored high on order, affiliation and nurturance, but low on achievement.

Jurgensen (1947, 1949) when asking men and women to rank ten job factors, found that women ranked working conditions higher than men, while men ranked security, advancement and benefits higher than women. A study by Astin and Holland (1961) indicated that women were more concerned with personal relationships or co-workers, while men were more concerned with power and esteem and the opportunity to use their skill and talents.

Rapoport and Rapoport (1971) investigated a series of variables (earlier and current) that relate to married women's work-career patterns. Four early determinants were examined in relation to work career patterns. These vary from relatively 'objective' variables such as birth order, position of respondents, and father's occupation to 'subjective' variables such as mother's occupational experiences and the impression of the warmth or tension in her family relationships. These were all treated as indicators of possible early psychosocial environments which might influence the respondent and not as determinants of behavior in and of themselves.

Current determinants which were examined in questioning work-career patterns are the husband's commitment to the idea of women having careers, the perceived attitudes of one's social network in relation to the idea of women having careers, marital happiness and the combination of early and current variables. The data suggested that the later
influences are more effective in channeling behavior than are the earlier ones. It also indicated that interaction of earlier and current variables serve as a reinforcement or counteraction purely by an additive process (Rapoport and Rapoport, 1971).

Housley (1973) when questioning the development of a vocational decision was concerned whether people are mainly affected with positive seeking out activities or with avoiding unpleasant, distasteful activities. The results of the study revealed that students are more certain of their rejected vocational interests than of their accepted vocational interests. This certainty increases with grade level. Students may be seeking vocational areas that are free of vocational activities they wish to avoid.

Harmon (1970) investigated the childhood and adolescent career choices of college freshman women. Results of the 1188 woman study at the University of Wisconsin revealed that early vocational choices of college freshmen tend to be few and general. In terms of overall popularity the medical, social services and verbal fields are considered by most women with business and clerical-secretarial occupations considered by the least. From the findings it was suggested that women do not make many or varied early choices and that their later choices, although more varied, may be restricted to typical women's fields.

Astin (1970) explored the career development of women during the five-year period after high school examining the determinants of that development. Seventeen thousand women from Project Talent were subjects in this study. Results of the study indicated that post high school experiences such as educational attainment and
marital-familial status best predicted whether women would choose careers in the professions or be housewives and office workers. Of the personal variables, scholastic aptitudes and socio-economic status as well as early career choices were the best predictors.

The above studies lend support for the hypotheses that androgynous males and females would choose a professional college based on personal desireability to a greater degree than masculine males and feminine females. Females who are career oriented tend to have more stereotypic masculine behaviors thus the importance of marriage may not be as complex a variable (Nagley, 1971).

Vocational achievement in a traditionally male vocation has been the premise of identity for males in Western society (Douvan and Kay, 1962). An androgynous male should be more apt to explore non-traditional professions as he would not see the need to conform to society's stereotypes.

Career Sex Stereotypes

One of the major arguments used to justify differentiation between men's and women's jobs is that such jobs require different abilities possessed to a greater degree by one sex or the other (Lewis, 1968). Separation of the sexes in employment is evident in many areas. Data indicated that some occupations are dominated by men and others by women. In few instances do the numbers of men and women approach equal balance. Widely held beliefs that men and women are biologically and psychologically suited to different occupational roles provided the basis for this separation.
In Maccoby's and Jacklin's (1974) analysis some of the answers from research have been summarized which have emerged concerning the question of sex differences. Those differences which are myth, those differences which are supported by evidence and those differences which are still untested are listed. There are many unfounded beliefs about sex differences.

1. That girls are more social than boys
2. That girls are more suggestible than boys
3. That girls have lower self-esteem
4. That girls are better at rote-learning
5. That boys are more analytic
6. That girls are more affected by heredity; boys by environment
7. That girls lack achievement motivation
8. That girls are auditory; boys visual

Sex differences that are fairly well established are also prevalent.

1. That girls have greater verbal ability than boys
2. That boys excel in visual spatial ability
3. That boys excel in mathematical ability
4. That males are more aggressive

Sex characteristics which are still ambiguous can be found.

1. Tactile sensitivity
2. Fear, timidity and anxiety
3. Activity level
4. Competitiveness
5. Dominance
6. Compliance
7. Maternal behavior

Maccoby suggested (1974) that societies have the option of minimizing rather than maximizing sex differences through their socialization process. Social institutions and social practices are not merely reflections of the biologically inevitable.

In his statistical study of the sex ratios of census occupations from 1900 to 1960, Dr. Edward Gross, Professor of Sociology at the
University of Washington, found that men have invaded women's working territory more often than the other way around. Men are now entering nursing, teaching, secretarial and library work. Library work is an excellent example of a profession that has opened to men (Gross, 1967).

The question of sex segregation in jobs is most important for its effect on the attitudes of women toward themselves and their employment. The elimination of job segregation based on sex is another step in the greater fight for increased employment equality for women. Klein (1950) has stated

... to label some occupations masculine, others feminine means to bar people of either sex from activities for which they might accomplish success. This exclusion is done not only at the expense of individual happiness but also to the detriment of human advance (p. 3-12).

Oppenheimer (1968) acknowledged the difficulties in rigorously testing theories for sex labeling of occupations, identified major reasons for the utilization of women in certain jobs and not others. These include: labor costs, skilled cheap labor, sex-linked characteristics, pre-job training, tradition, mixed work groups and women supervisors, motivation and geographical mobility.

Oppenheimer (1968) summarized the relationship between these variables and occupations as follows:

female jobs, on the whole, exhibit characteristics which promote the attachment of the female sex label and lack characteristics which would favor the employment of male workers. For example, three major female occupations teaching, nursing and librarianship depend on skilled but cheap labor in fairly large quantities ... training required before employment and career continuity is not essential ... male professions—law, medicine, dentistry require a
great deal of time, energy and devotion. Great investment in schooling and a lifetime of overtime work is necessary. Career continuity is usually essential . . . (p. 233-234).

Hedges (1970) concluded that the high concentration of women workers in a narrow range of occupations was valid at one time, but few of these concentrations are valid today. The traditional occupations for women were the extension of work performed by women in the home to a business or industrial setting and the growth rates of these occupations permitted the hiring of women year after year. Specifications in job requirements such as lifting and carrying weights as well as the need for specialized degrees in education which few women had also contributed to the discrimination of work opportunities for women.

There has been a social prejudice against women entering specific careers. A definite social distinction exists between those careers designated "masculine" and those labeled "feminine". Careers may be so designated on the basis of either (1) the sex-ratio of the occupation; whether men or women predominate among its workers, (2) the nature of the work role itself, whether the day-to-day activities of the occupation are thought to be more compatible with approved masculine or feminine attitudes, values and skills (Standley and Soule, 1974). Women who choose high status, male-dominated professions usually have clearly made nontraditional vocational decisions.

Women who are more daring in violating the social occupational sex stereotypes will have characteristics different from their sisters employed in more traditional female occupations. Nagley (1971) found that women in male dominated occupations were more committed to their
careers, had more successfully integrated the roles of homemaker and worker, and maintained a greater distance from their parents in early development.

Kaplan and Goldman (1973) implemented role playing techniques when investigating the stereotypes of women held by college students. The investigation indicated that college students perceive a great difference between the (stereotyped) attitude of the "average" man and "average" woman toward the role of society. The average man was seen as viewing women in a more traditional manner than the average woman. The average man believed more strongly that women should not compete on equal terms with men. However, women rather than men perceive a greater difference between the sexes.

Ziegler's study (1967) used interviews with 803 Oregon high school teachers and other empirical studies to examine the effects of sex, income and teaching experiences on the outlook of secondary school teachers. It was assumed that male secondary teachers despite their great numbers would find it difficult to establish male authority in an occupational role that most of society associates with women. More than one-half of the low-income females and one-third of the males were satisfied with their positions, regardless of amount of teaching experience. While increasing income and teaching experience led to greater satisfaction among women, there is a decline over time in job satisfaction among high income male teachers. It is suggested that this dissatisfaction results from the degradation of the male ego, in that male teachers are paid on a par with females, whereas other occupations pay men more than women.
The attitudes of male and female nurses regarding their intrahospital status and their status in society were compared by Segal (1962). Results indicated that two-thirds of the males but none of the females questioned the physicians' expertise or indicated regret that they were not physicians. Fifty percent of the males and fifteen percent of the females indicated they believe that physicians think less highly of nurses than they should. Over half of the men and ten percent of the women disliked being supervised by a nurse of the opposite sex. The lower class, less-educated female nurses were more likely to think male nurses effeminate or homosexual. It was concluded that the number of male nurses will not increase until society revises it's negative attitude about men who do traditionally women's work.

The hypothesis of Shuval's (1963) study was that traditional female role patterns represented in this case by orthodox Judaism, encourage interest in sex-linked occupations. The occupations specifically considered were nursing and elementary school teaching. It is suggested that the nursing role, because of its high level of congruence with nurturant and diffuse relationship patterns, provides an acceptable alternative for an unmarried girl without deviating from the traditional female role. Teaching, with its more achievement oriented components appears to be a less acceptable alternative.

Shuval (1970) explored the effects of sex and age on professional role performance in a sample of 522 dentists in three Israeli cities. The dentists, one-third of whom were women, were interviewed concerning conditions and setting of practice; factors that influence their
decision to enter dentistry; professional interaction through journals; and perceived composition of patient population. There was evidence for traditional sex role differentiation in several aspects of dentistry. Women dentists tended to treat more children and more less-educated and lower-class patients. They also tended to be more involved with general and specialized practice. Women dentists tend to have less status than men. The female subjects worked fewer hours than men, read fewer journals, and engaged in less professional interaction with colleagues. It was suggested that these differences reflect the home and family demands made upon women dentists rather than differences in values between men and women dentists. Another point-of-view to consider is that women in a male dominated profession would be more interested in the intrinsic rather than extrinsic rewards of their work (Wolkon, 1972).

Selected Characteristics

Birth order. All the early childhood experiences are the basis of a child's self-evaluation and the foundation for a style of life. The roles of the family members and their impact upon the child is of great concern and are a major factor upon the personality of the child. Human beings react differently to the same situation. No two children born into the same family grow up in the same situation. The family environment that surrounds each child is altered.

Sutton-Smith and Rosenberg (1970) have pointed out that most of the research on ordinal position has emphasized the influence of parents on siblings and how this influence makes them differ. The emphasis in the book The Sibling is that siblings also make each other
different. Recent research on birth order or ordinal position (first-born, middle-born, last born and only child) has established that the sex status of the sibling, whether girl or boy, is also of importance. After a review of research on sibling effects the authors concluded that (Sutton-Smith, 1970)

each sibling is affected by the sex of the other sibling; and that these effects are most obvious in the case of the younger sibling. It is the second born who most faithfully reproduce in their own behavior the responses which have been modeled for them by their older siblings (p. 38).

Gandy's (1973) study of male college students was to ascertain whether there are significant birth order differences on the twenty-two Strong Vocational Interest Blank Basic Interest Scales. A total of 150 subjects comprised the sample group. This sample consisted of categories based on ordinal position and sex of sibling. Firstborn males with younger brothers (36); firstborn males with younger sisters (44); secondborn males with older brothers (36); and secondborn males with older sisters (34) made up the sample group. Subjects had to meet specifications set up by the researcher to be selected in the sample group.

Subjects received the Strong Vocational Interest Blank prior to their attendance at the University of South Carolina, 1971 Summer Orientation for freshmen. An additional questionnaire was designed to obtain the added necessary information not found on the Strong Vocational Interest Blank.

The results of this study failed to confirm the hypotheses. There were no significant birth order, sex of sibling, or interaction
effects in regard to the hypotheses. Gandy (1973) felt that it was
apparent that no meaningful relationship could be found in this study
between birth order and vocational interest. Direct relationship may
not be found between occupations and sibling roles, however, personal-
ity trends evolve from an individual's position in the family and can
influence the way he relates to others and accepts supervision (Forer,
1969). It was suggested that it is necessary to attempt to control for
perplexing variables when investigating ordinal position.

Farley et al. (1974) investigated the relationship of birth order
and achievement related characteristics of adults. The study was com-
priised of 2,268 men and women taking United States Armed Forces cor-
respondence instruction in college, high school and occupation trade
categories. A questionnaire was administered which dealt with aspects
of achievement motivation and achievement related behaviors and at-
titudes. The relationship between birth order to the motivational and
achievement related variables was not consistently strong. However,
the implication for birth order was more significant at the college
level than at the other two levels.

Adler's birth order positions are briefly described by Pepper (1964).
The only child usually is a pampered child, and if a boy, usually has
a mother complex. The only child enjoys his position as the center of
interest and is usually only interested in himself or herself. The first
child has to be first in the sense of gaining and holding superiority
over the next children. The middle child never has his parents un-
divided attention; always has a child in front of him who is more ad-
vanced. The youngest child usually has things done for him and is
usually spoiled by the family. Konig (1963) stated that the encounter between man and his whole environment is basically determined by his rank in the order of birth. The first born attempts to conquer the world; the second born tries to live in harmony with the world; and the third born is inclined to escape direct meeting with the world.

Very and Prull (1970) researched birth order, personality development and the choice of law as a profession. Of the one hundred lawyers sampled from the Greater Boston area sixty-six were first born, twenty-three were second born, eight were third born and three were the only child. The personality characteristics of lawyers appear to parallel those of firstborn individuals. The results of this study have shown that with respect to this sample a significant number of them are in fact firstborn.

Fischer, Cohen and Wells (1968) investigated birth order and expressed interest in becoming a college professor. It was hypothesized that firstborn, as compared to laterborn American college students (1) expressed greater interest in a college teaching career and (2) generally provide more altruistic reasons for their expressed interest in teaching, rather than salary or prestige. The subjects were 295 female and 201 male upperclassmen from four Eastern schools. The main findings of this study is that among liberal arts college students birth order status differentiates women's but not men's interest in becoming a college professor.

Forbes (1971) investigated research which indicated that first born children are to achieve social or intellectual eminence and fame rather than middle or last born children. Because of the clear
representation of first borns among the college population and because first borns tend to be more successful and have higher needs for achievement it seems reasonable to expect that first borns would be more likely to enter politics and more often to win elections. Of the sample of 223 candidates data were first analyzed to determine if any ordinal position was overrepresented. Results indicated that no rank was overrepresented among these candidates but proportionately more first and last born candidates won their election than did middle born.

Kammeyer (1966) explored the influences of birth order on "traditional" and "modern" attitudes toward two aspects of the feminine sex role. A random sample of 232 unmarried university women were classified on the basis of a structured questionnaire. Analysis of results indicated that first born girls are more traditional and more in agreement with their parents perceived views of the feminine role and female personality than are later born girls. First borns are also more willing to choose marriage over graduation from college and are more likely to describe themselves as religious. Findings tend to support the hypothesis that first born children tend to be "conservators of the traditional culture".

Forer (1969) like Kammeyer suggests that one's place in the family hierarchy plays a major role in life's adjustments. Certain attitudes develop from the influence of the family position. Firstborns are more apt to conform to their parents wishes because of a strict conscience or super ego. Thus, they are more apt to represent past ideals and to carry the past over into the present.
The review of literature presented has pointed out the ambiguity of findings in relation to birth order and vocational choice. However, the phenomenon of birth order has been viewed as a significant social variable and cannot be discounted. Through more carefully conducted studies, research including birth order as a variable, shall add to our knowledge of individual development.

The research presented lends support for the hypotheses that male and female androgynous students will tend to be either a middle born or last born child rather than first born child. First born children tend to have higher needs of achievement and tend to be more successful (Forbes, 1971). In our culture, this success can be attained by conforming to society's stereotypes rather than deviating from society.

First born females are more traditional and are more in agreement with their parents perceived views of the feminine role and would thus conform to society's stereotyping more readily than later born females (Kammeyer, 1966; Forer, 1969).

Working or non-working mother. The expectations of young women have expanded to include the rewards of becoming a wife and mother and gaining the status of worker by participating in the labor market (Douvan, 1963).

Douvan's (1963) work on maternal employment and its effects on children utilized data from two large national sample interview studies of adolescent boys and girls. These studies conducted at the University of Michigan were sponsored by the Boy Scouts of America and the Girl Scouts of the United States of America. Douvan's data are limited
because she defined only whether the mother was currently employed and whether she worked full-time or part-time.

From the data it was suggested that girls whose mothers work part-time are unusually developed in the area of autonomy. They think and act independently and this autonomy is encouraged by their parents. This behavior is more typical of boys than girls in our culture. Girls in the part-time as well as the full-time group of working mothers choose their own mothers as an adult ideal more often than do daughters of non-working mothers. Another set of findings indicated that girls in the full-time and part-time working mother group are developing away from traditional concepts of femininity. They score low on an index of Traditional Femininity. This group of girls (full-time and part-time working mothers) also show an orientation to traditionally masculine occupational goals more than other girls.

The part-time working mothers present a model to their daughters that is not primarily based on traditional concepts of femininity and the feminine role. They expect to achieve high status through their own efforts. The daughters of full-time working mothers are a complex of autonomy and dependency. This group of girls excel in managing and in the practical affairs of the home. However, emotionally their major commitment is to family.

Douvan (1963) concluded that the kind of woman who assumes an occupational role exerts an influence on her daughter's development through a modeling process. The girl identifies with her mother's ego characteristics and incorporates them.
Broverman et al. (1972) presented a current analysis of sex role stereotypes. They reasoned that an individual's perception of societies sex role may be influenced by one's own experiences in his family. Maternal employment status tends to be an important characteristic to the role differentiation that occurs between parents. If the father is employed outside the home and the mother is a full time homemaker their roles are clearly defined for the child. But if both parents are employed outside the home their roles are more likely to be viewed as similar. The mother has assumed the role of breadwinner which is traditionally male and the father with these circumstances will be more likely to share family related activities with the mother.

Vogel et al. (1970) examined the sex role perceptions held by male and female college students with reference to the students' mothers' employment history. One hundred and twenty students rated men in general, women in general, and themselves on an inventory of bi-polar phrases describing sex role relevant characteristics. The results indicated that both men and women with employed mothers perceive significantly smaller differences between masculine and feminine roles than do men and women with homemaker mothers. The women's perceptions of the sex roles are more strongly influenced by the mother's employment than are the men's perceptions. Maternal employment also tends to raise the estimation of one's own sex with respect to those characteristics.

Hartley (1964) also reported that the mother's employment does, in fact, influence a child's perception of sex role characteristics. Daughters of working mothers see adult men and women as sharing more in their activities than do daughters of non-working mothers.
Like Douvan, Rapoport and Rapoport (1971) included mother's occupational experience as one of the early determinants that relate to women's career patterns. There are suggestions in the literature that stated if her mother worked, a daughter is more likely to work, having had a parental role model for this kind of behavior. For women, this is the counterpart of occupational inheritance for men. Mother's occupation as a determinant was used, in this study, to include an attitudinal as well as a behavioral component. If mother worked and was very favorable about doing so or if she did not work and was unhappy about it, the chances of the married daughters with children being 'continuous' workers increase.

Tangri (1972) considered occupational role innovation among college women. In this study the relationship between daughters and more educated working mothers, more educated non-working mothers, daughters of less educated working mothers and daughters of less educated non-working mothers was questioned.

Daughters of the more educated working mothers would be high in achievement motivation, low in sex role stereotypy and take the mother as an appropriate role model. A greater number of these daughters will develop masculine interests and high levels of achievement motivation because of the facilitating factors present.

The more educated non-working mothers also present an acceptable role model for the daughter but in this case she is a non-working model. This model implies a more traditional division of labor within the home. The daughter is inclined to produce fairly high achievement concerns
based on the status of the parents, which is later redirected to her husband and later to her children.

The relationship between daughters and their less educated working mothers result in similar consequences as daughters and their more educated working mother. Less role stereotyping, greater autonomy in the daughter which contributes to the development of achievement motivation are similar consequences. Because of the mother's less prestigious position and because she is more likely to be working for financial reasons rather than for personal satisfaction make her a less attractive role model to her daughter. However, the need for status will inspire mobility aspirations in the daughter. This combination of greater autonomy and status need resembles a masculine pattern.

Daughters of less educated non-working mothers grow up in a rather conventional world, with respect to both autonomy, achievement and values. The daughter's upward mobility is seen through the traditional channels via husband and the choice of a traditional stereotyped occupation.

Tangri (1972) concluded that women who aspire to male dominated professions tend to identify not with their fathers but with educated mothers who are working in male dominated occupations. These daughters do not reject the traditional female roles of wife and mother but expect to postpone marriage and have fewer children than traditional daughters. Their commitment to their career is greater than that of women going into feminine professions even when they are in college. Their decision to continue working cannot be viewed as a default decision when other choices are unavailable.
Baruch's (1972) study of college women suggested that daughters of working mothers were less likely to assume lower competence on the part of women authors as compared to male authors. Subjects were given a number of journal articles and asked to judge the quality of the article. Half of the authors were given female names and half given male names. The daughters of working mothers were less likely to downgrade the work of women authors.

Among college students, maternal employment was found to be positively related to social equality for women. The most equalitarian philosophy was held by daughters of women in high status occupations (Meier, 1972).

There is evidence that the daughter of a working mother would have higher academic and career aspirations than the daughter of a non-working mother. Ahlmquist and Angrist (1971) found that career oriented college women were more likely to be daughters of working women. College women tended to pursue careers in less conventionally feminine areas when they were daughters of working women rather than non-working women (Tangri, 1969).

Hoffman (1974) summarized the data on maternal employment and indicated that maternal employment is associated with less traditional sex role concepts, greater approval of maternal employment and a higher evaluation of female competence.

Miller (1975) investigated the effects of maternal employment on the daughter's sex role perception, interests, and self-esteem. It was hypothesized that daughters of working mothers would have less traditional sex role perceptions and interests than daughters of non-working
mothers because of identification with the less traditional roles modeled by the working mothers. Daughters of working mothers were also thought to have higher self-esteem than daughters of non-working mothers.

A sample group of seventeen kindergarten children whose mothers had been employed for some period since the birth of their daughters were matched on ordinal position and number of siblings with a control group of seventeen kindergarten girls whose mothers had not been employed (Miller, 1975). Thirty-eight interest items and twenty-two self-esteem items were administered to each child individually. In addition, the sex roles modeled by the parents were assessed by asking the children questions about her family. Finally, the teacher of the girl rated her on a number of personal and social variables.

Daughters of working mothers saw the roles of their parents as less traditional than did daughters of non-working mothers; thus they perceived less traditional sex roles. Maternal employment had some effects on girls’ interests. Daughters of working mothers tend to be more aggressive and less passive based on their expressed interests.

Maternal employment has been posed as an important socializing agent in relation to daughter’s attitudes and disposition about employment (Riley et al., 1963). Respondents of the study tend to accept a career norm when the mother is working and less likely to accept it when she is not. The adolescent’s experience in her home with a mother who works tends to promote the belief that a career for a married woman is desirable. Through a redefinition of a woman’s work the differentiation and integration of the roles of both sexes can be accomplished.
Much of the research on the working or non-working mother has been in relation to the girls' or daughters' achievement motivation, work orientation and sex role development. The mother serves as an appropriate role model for the daughter. The Vogel et al. (1970) study included males in the sample group. Males of working mothers perceived significantly smaller differences between male and female roles than did males and females with homemaker mothers. The mothers' assuming a breadwinner role and the father assuming more of the family oriented tasks may be factors that influence his perceptions. Whatever the dynamic of having a working or non-working mother, it is a variable worthy of investigation for both males and females.

Rural or urban residence. Warner (1974) defined the idea of a rural society by saying it was a construct referring to a territorially based population aggregate. It refers specifically to the population in geographic locations where the size and density are relatively small.

Warner (1974) noted that the passing of agricultural dominance does not signify the passing of a rural society, however, it changes it in many ways. Although many have pointed to a narrowing of rural-urban differences in a technological era many other vital differences may accrue.

Bealer et al. (1965) pointed out that the meaning of "rural" has three distinctions: (1) ecological, relating to place of residence, and its associated variables; (2) occupational, denoting farming versus other occupations; and (3) sociocultural, using attitudes and behavior in rural and urban cultures. However, they stated that in many instances
these distinctions are not representative of rural society. Little help is given when selecting sociocultural characteristics which should comprise rural-urban differences.

Glenn and Alston (1967) stated that stereotypes exist concerning rural-urban attitudinal differences. The farmers tend to be more traditional, work-oriented, puritanical, prejudiced, uninformed, opposed to civil liberties and favorable to early marriage and large families than all or most classes or urban workers.

vanEs and Brown (1974) attempted to determine the relationship of rural-urban residential and occupational variables to selected sociocultural characteristics in terms of attitudes and behavior. The data were gathered through interviews with 322 subjects in an eleven county area in Western Illinois. The respondents were male, white heads of household. The independent variables used in this study were residence, occupation and socioeconomic status based on income, education and occupational prestige.

From the study it was concluded that although differences were found between "rural and urban" areas they were due to confounding variables. Residence and level of living appear to have bearing on behavior, but attitudes (the ones measured) were unrelated to either residence or level-of-living. The overall concern of the investigators was that the defining of "rural" be specified by well defined constructs along with refined research techniques.

Veevers (1973) attempted to combine three areas of specialization in sociology: demography, social psychology, and rural sociology. Veevers felt that some of the known relationships of rurality are
also known relationships of birth order and that some variance between rural and urban populations may be due to the birth order variable. This hypothesis was discussed in relation to intelligence, educational attainment and personality. Veevers (1973) suggested for future research that it would be interesting to compare rural and urban populations on varied dimensions controlling for birth order and see if the variance could be explained.

Vraa (1974) acknowledged differences between rural and urban education. Aubertime (1969) reported that rural education did not fully prepare students for the academic, social and occupational demands of our present society. Differences in several vocational interest orientations of rural youth enrolled in their freshman year of college were explored. For males, significant differences were found on the academic achievement, diversity of interest, managerial orientation and occupational level scales. Females differed on the diversity of interest scales. Vraa's study (1974) helped to identify differences between groups within the rural sub-culture.

A study by Jackson et.al. (1974) compared the post-high plans of male adolescents from rural economically deprived areas and the adequacy of father identification. The subjects were 657 male high school seniors from eighteen rural school districts which were designated as economically deprived by the United States Office of Education. The subjects were divided into two groups, low identification males and high identification males based on the independent evaluations by judges of the adequacy of the fathers. In general, the hypotheses predicting that high identification males have higher levels of aspiration,
more self-confidence and greater satisfaction were confirmed by these data. Data gave further evidence to the proposition that the strength and quality of a son's identification with his father influence his pattern of socialization and development. The father in this instance will serve as an appropriate masculine model in the development of the male child.

The research presented has viewed the rural-urban variable as one which needs to be defined by more distinct characteristics. It was suggested that the use of the variable birth order and rural-urban may arrive at some dimensions which have here-to-fore been unexplored (Veevers, 1973). Although it has been suggested that the meaning of rural has been altered due to technological growth, other vital differences may arise. The variable "rural-urban" residence is an important variable in sociology and thus was considered in this study.

Summary

From the review of related research it was evident that the sex role issue is of concern to both men and women. The socialization process has been instrumental in the sex typing of males and females and has forced individuals into pre-set molds prescribed by society. This sex typing has been costly to both sexes in innumerable ways. Occupational choice, mental health and emotional freedom are a few cited in the research.

The acceptance of androgyny by society whereby an individual can elicit behaviors appropriate to the situation and self, rather than conforming to stereotyped behavior will bring equality and freedom for both sexes.
The individual who is androgynous would be more likely to deviate from the stereotypic norms of our society. One way this deviation could be accomplished is to choose a profession or occupation which does not stereotype behaviors and attitudes.

Birth order research has revealed that firstborns tend to be "carriers of tradition". Thus, it could be anticipated that middle-born children and last-born children would be more likely to become androgynous and not conform to stereotypes as defined by society.

The review of literature on the working or non-working mother indicated a difference in sex role perceptions in relation to maternal employment. Both males and females with working mothers tended to view less difference between masculine and feminine roles than do males and females with homemaker mothers (Vogel et al., 1970). Daughters of educated working mothers tended to be low in sex role stereotypy and pursue masculine interests to a greater degree than daughters of other categories (Tangri, 1972). Thus, the individual who is androgynous would more likely pursue masculine professions to a greater degree than the individual who is sex typed and would more likely have a working mother to serve as a role model.

The stereotype of "rural" as presented in the review of literature points to the traditional, work-oriented, role conformer of our society who does not deviate. Rural residents tend to reinforce the cultural norms and would be less likely to behave and develop attitudes that would classify them as androgynous individuals.

The Bem Sex-Role Inventory was designed to measure an individual along a continuum based upon characteristics traditionally ascribed to
males and females. The basic assumption of this inventory is that many individuals hold and elicit behaviors traditionally assigned to both sexes although the behavior may not be socially sanctioned. This study identified those combined characteristics of college freshmen and seniors and the relationship of this behavior to professional college choice was investigated.

The need to identify people who have combined characteristics usually attributed to males or females has been supported in the literature. The public acknowledgment and acceptance of an "androgynous" individual and concept will be hastened if the public is enlightened through research and publications.
CHAPTER III

METHODOLOGY

The relationship between androgynous, sex-typed and undifferentiated college freshmen and college seniors and their professional college choice was explored in this study. The selected characteristics of birth order, working or non-working mother and rural or urban residence were also studied in relation to androgynous, sex-typed and undifferentiated college freshmen and college seniors. In this chapter a description of the methodology used in the study is presented. The academic programs, population, instrumentation, administration and data analysis are discussed.

Selection of Curriculum of Academic Preference Areas

Of the twenty academic programs offered to students at University College of The Ohio State University, students of four programs were selected to be a part of this study. The process of enrollment at University College includes the designation of a Curriculum of Academic Preference, or CAP area, by the enrolling student. Two of the CAP areas to be selected for investigation were those which would be chosen predominantly by females thus were considered traditional "feminine" professions. The second two CAP areas selected for investigation were those which would be chosen predominantly by males and thus
were considered traditional "masculine" professions. The selection of
the CAP areas was determined by the expert opinion of four judges who
ranked the CAP areas as traditionally male or female oriented.

The four judges were selected based on their experiences and ex-
pertise in a specific domain. A sociologist was chosen as a judge to
represent the sociological framework of role theory. A representative
from higher education who is familiar with the enrollment trends of
male and female students who enroll in the twenty college academic
programs was utilized. The third judge was an individual in job
placement who is currently aware of the requests and referrals of
jobs for males and females. A counselor was the fourth judge chosen
on the counselor's role of advising young students in relation to their
life's work. These judges were chosen by the investigator based upon
the above criteria.

Upon receipt of the rankings by the judges, the four top-ranked
masculine CAP areas and the four top-ranked feminine areas were deter-
mined based on consensus of the judges. Home Economics, Nursing, Social
Work, and Dental Hygiene were deemed to be the most feminine profes-
sions whereas Engineering, Agriculture, Veterinary Medicine, and
Administration were chosen as most masculine oriented.

However, before any further investigation could be conducted, the
CAP areas selected needed to have both a minimum of twenty-five male
students and a minimum of twenty-five female students. This number
was necessary to assure a sufficient distribution of males and females
in the CAP areas being investigated to conduct the statistical analysis.
Information as to the number of males and females enrolled in
University College 100 classes of these specific CAP areas was gained by consulting the adviser of the CAP area who also taught the University 100 class. Based on their class records it was quickly determined that Engineering and Agriculture had sufficient numbers of males and females.

It was more difficult to utilize in research the feminine oriented CAP areas because of the lack of a necessary sample of males selecting these CAP areas. After consulting with the instructors of University 100 classes for Fall Quarter, 1975 and Winter Quarter, 1976 for Home Economics, Nursing, Social Work, and Dental Hygiene, these four areas were eliminated because of the low enrollment of males. Nursing accounted for three males, Social Work seven males, Dental Hygiene one male, and Home Economics six males for both quarters being investigated. Thus, it was necessary to select the fifth and sixth ranked feminine oriented CAP areas by the judges to use in this study. These were Education and Art. In the final analysis, the four CAP areas utilized in this investigation were based on the expert opinion of four judges in combination with adequate representation of both male and female students. Engineering and Agriculture as masculine oriented CAP areas and Education and Art as traditionally feminine oriented CAP areas were investigated. A copy of the list of CAP areas to be ranked and the letter to the judges requesting their assistance are Appendix A and Appendix B.
Population and Sample

The sample for this study was drawn from male and female freshman students who designated Engineering, Agriculture, Education, or Art as their CAP area at University College of The Ohio State University. These students were enrolled in University College 100, a required orientation lecture, Fall Quarter, 1975 or Winter Quarter, 1976. College seniors who indicated they expected to graduate Spring Quarter, 1976 from the College of Engineering, College of Agriculture, College of Education and College of Art were also included in the sample.

The college freshman students enrolled Winter Quarter, 1976 were presented the information concerning the study in their University 100 classrooms. They were asked to assist the investigator by participating. This was a voluntary procedure.

Of the freshman CAP Engineering students in attendance 23 males and 2 females volunteered. Twenty-five male and 7 female students of CAP Agriculture participated. Twenty-five male and 25 female students assisted from CAP Education while 10 males and 10 females from CAP Art volunteered. The CAP Education student quota was met through the Winter Quarter population, thus it was necessary to pursue Fall Quarter students for CAP areas Engineering, Agriculture and Art.

A random selection of students' names and addresses was compiled from the advisers class list for Fall Quarter, 1975. Of the 63 CAP Engineering freshman females, 30 were mailed an introductory letter along with the Bem Sex-Role Inventory and questionnaire. Nineteen responded promptly and 2 responded after a follow-up phone call. Of the 74 CAP Agriculture female students, 34 were contacted by mail.
Fifteen responded with the first contact and 3 responded after a follow-up phone call. Fifteen of the 39 CAP Art female students responded initially while 6 out of 27 freshman male CAP Art students responded. Two freshman male CAP Art students responded after a follow-up message.

The freshman sample thus represents 23 male CAP Engineering students from Winter Quarter, 1976, 2 female CAP Engineering students Winter Quarter, and 21 female CAP Engineering students Fall Quarter, 1975 for a total of 46 CAP Engineering students.

The quota for male CAP Agriculture students was totally represented Winter Quarter, 1976. Seven female CAP Agriculture students Winter Quarter participated plus 18 from Fall Quarter. The number of freshman CAP Agriculture students totals 50.

The freshman CAP Education sample was drawn completely from the population Winter Quarter, 1976. The freshman CAP Art student sample consisted of 10 male and 10 female students from Winter Quarter and 8 male and 15 female students from Fall Quarter for a total of 43 students.

The college senior sample was selected from a list of students applying for a degree Spring Quarter, 1976. The investigator contacted the individual in charge of graduating seniors of the four colleges selected for study: Engineering, Agriculture, Education and Art for this information. A random selection of students was determined from this list. The Bem Sex-Role Inventory and questionnaire were mailed along with a letter requesting their assistance in the study.
Of the 32 male Engineering graduates contacted by mail 25 responded. Seven of the 10 female graduates in Engineering responded; six after initial contact and 1 after a follow-up call.

Of the 34 male Agriculture graduates contacted by mail 18 responded after initial contact and 1 responded after a follow-up phone call. Female graduates in Agriculture responded fully after the initial contact by mail.

Of the 35 male Education graduates contacted by mail 16 responded initially and 2 responded after a follow-up phone call. Fifteen of the 35 female Education graduates responded initially while 2 responded after a follow-up phone call.

Of the 33 male Art graduates contacted by mail 9 responded. Five responded after a follow-up phone call. Fifteen of the 39 female Art graduates responded to the mailing and 2 responded after a follow-up phone call.

The sample for this study is represented by 127 college freshmen Winter Quarter, 1976 (25 from Engineering, 32 from Agriculture, 50 from Education and 20 from Art), contacted in the classroom; 62 college freshmen Fall Quarter, 1975 (21 from Engineering, 18 from Agriculture, 23 from Art) contacted by mail. This includes 142 college seniors Spring Quarter, 1976 contacted by mail. Thirty-two are Engineering graduates, 44 Agriculture graduates, 35 Education graduates and 31 Art graduates. The total sample for this study was 334 college students.
Instrumentation

The student's androgyny score was determined by administering the Bem Sex-Role Inventory. The Bem Sex-Role Inventory contains a number of features that distinguish it from other commonly used masculinity-femininity scales (Bem, 1974). It includes both a masculinity scale and a femininity scale, each of which contains twenty personality characteristics. These personality characteristics were selected as masculine or feminine on the basis of sex-typed social desirability and not on the basis of differential endorsements by males and females. The Bem Sex-Role Inventory characterizes a person as masculine, feminine or androgynous as a function of the difference between his or her endorsement of masculine and feminine personality characteristics. A person is thus sex-typed, whether masculine or feminine, to the extent that the difference score is high and androgynous to the extent that the difference score is low.

The Bem Sex-Role Inventory (Bem, 1974) asks a person to indicate on a seven point scale how well each of the sixty masculine, feminine and neutral personality characteristics describes himself or herself. The scale ranges from 1 (never or almost never true) to 7 (always or almost always true) and is labeled at each point. On the basis of these responses, each person receives three major scores: a masculinity score, a femininity score and an androgyny score.

The masculinity and femininity scores indicate the extent to which a person endorses masculine and feminine personality characteristics as self-descriptive. The androgyny score reflects the relative amounts of masculinity and femininity that the person includes in his
or her self-description, and, as such it best characterizes the nature of the person's total sex role orientation.

Bem (1974) stated that during the Winter and Spring of 1973 the Bem Sex-Role Inventory was administered to 444 male and 279 female students in an introductory psychology class at Stanford University. It was also administered to an additional 117 male and 77 female paid volunteers at Foothill Junior College. The data from this sample provided the normative data for the Bem Sex-Role Inventory and for all future analyses.

To estimate the internal consistency of the Bem Sex-Role Inventory, coefficient alpha was computed separately for the masculinity and femininity scores for the subjects in each of the two normative samples. Because the reliability of the androgyny t ratio could not be calculated directly, coefficient alpha was computed for the highly correlated androgyny difference score. The reliability score was +.85 for the Stanford sample and +.86 for the Foothill sample (Bem, 1974).

The Bem Sex-Role Inventory was administered for a second time to twenty-eight males and twenty-eight females from the Stanford normative sample. The second administration took place approximately four weeks after the first. Product moment correlations were computed between the first and second administrations for the masculinity and femininity and androgyny scores. All scores proved to be highly reliable over the four week interval (Masculinity r = +.90; Femininity r = +.90; Androgyny r = +.93) (Bem, 1974).
Criticisms of Bem's computation of the androgyny score have been noted in the literature by Spence, Helmreich and Stapp (1975) and Strahan (1975). Spence, Helmreich and Stapp (1975) suggest dividing the subjects at the median on both the masculinity and femininity scale and classifying the subjects into one of the four resulting categories. These four categories are defined as Masculine, (high masculine, low feminine); Feminine, (high feminine, low masculine); Androgynous, (high masculine, high feminine); or Undifferentiated, (low masculine, low feminine). This classification provides for the distinction between those individuals who score high in both masculine and feminine scales and those individuals who score low in both.

Bem (1976) agrees, on the basis of the evidence available, that the Bem Sex-Role Inventory be scored to yield four distinct categories of subjects, masculine, feminine, androgynous and undifferentiated. The term "androgynous" ought to be reserved for those individuals who score high in both masculinity and femininity. This change in scoring serves to strengthen the findings reported through the use of the Bem Sex-Role Inventory to date (Bem, 1976).

In this study the Bem Sex-Role Inventory was scored to yield four distinct categories of subjects, masculine, feminine, androgynous and undifferentiated. For clarity, the categories utilized by Fitzgerald (1975) are implemented:

- H.H. = high masculine, high feminine (androgynous)
- H.L. = high masculine, low feminine (sex-typed male)
- L.H. = low masculine, high feminine (sex-typed female)
- L.L. = low masculine, low feminine (undifferentiated)
The categories androgynous, sex-typed male, sex-typed female and undifferentiated are all included in the tables in Chapter IV since the study was exploratory. However, the hypotheses included only a comparison between androgynous and sex-typed college freshmen and seniors.

A questionnaire designed by the investigator was administered, along with the Bem Sex-Role Inventory, to gain information concerning the selected characteristics of the students utilized in the study: birth order, working or non-working mother and rural or urban residence. A trial testing of the Bem Sex-Role Inventory and questionnaire was conducted with college students at a small liberal-arts college. Questions and problems relating to either the Bem Sex-Role Inventory or questionnaire were noted by the investigator and clarified when possible.

Birth order of the student was determined by the listing of sex and age of brothers and sisters. A breakdown of community by size, farm or open country determined the rural, small community or urban residence variable (vanEs and Brown, 1974).

The mother's employment history was described as: mother worked full-time, mother worked part-time, mother worked occasionally, mother never worked (Miller, 1975). If circumstances of the student did not parallel the above categories an additional category of "other" was available.

The mother's employment history was then broken down into time periods to facilitate the students recall of this information. These time periods represented the different levels of the students education. Thus, it divided into elementary school, junior high school
and senior high school. The student then reported the degree to which
his mother was employed outside the home and when this occurred in his
development based on school divisions.

**Administration of the Instruments**

After determining the academic programs from which to draw the
samples (Engineering, Agriculture, Education and Art) it was necessary
to contact the adviser of that specific academic program who also
taught the University College 100 orientation lecture. Access to the
University College 100 classroom Winter Quarter, 1976 was determined
by mutual agreement between the instructor and the investigator. The
Bem Sex-Role Inventory and questionnaire developed by the investigator
were administered to all students in attendance at the time. The
investigator informed the students that their involvement with the
study was completely voluntary.

The proposed number of respondents (twenty-five males and twenty-
five females) in each academic program was not met, thus a random
selection of students enrolled Fall Quarter, 1975, based on the in-
structor's enrollment records was necessary. This Fall Quarter sample
was necessary in all academic programs except education where a suf-
cient number of Winter Quarter students was available. Education
was the only program during Winter Quarter 1976 that had two orienta-
tion lecture classes, taught by two advisers. The other programs had
only one orientation lecture class taught by one adviser. This is
because of the low enrollment of students Winter Quarter, 1976 as
compared to the high enrollment Fall Quarter, 1975.
The Bem Sex-Role Inventory and questionnaire were mailed along with a letter requesting the students' assistance. Appendix C, D and E are samples of each. A follow-up contact was made by phone to those students who did not respond to the mailed request.

Data Analysis

The data were gathered using the Bem Sex-Role Inventory and questionnaire designed by the investigator. The data were coded by hand and punched onto IBM cards. A summary table of frequency and percentages was developed for all groups, freshman, senior, male, female and CAP area. These data were presented to describe the samples.

The data were then subjected to the chi square analysis using the Crosstabs procedure in SPSS (Statistical Package For The Social Sciences). The formula for the chi square test of significance is:

$$\chi^2 = \sum \frac{(0-E)^2}{E}$$

The significance of differences were then examined against the hypotheses and a statement of support or non support was made for each. Where differences reached the level of significance data were subjected to visual examination to determine categories where the differences existed. Particular attention was paid to those categories included in the hypotheses.

In this chapter the methodology for the study was described. A description of the findings, and a discussion of the results will be presented in Chapter IV.
CHAPTER IV
FINDINGS AND DISCUSSION

Introduction

In this study the relationship of degree of androgy (androgyous, sex-typed and undifferentiated) of college freshmen and seniors, and their professional college choice and the variables of birth order, working or non-working mother and rural or urban residence was investigated. Male and female students enrolled in Curriculum of Academic Preference (CAP) or in the professional colleges of Engineering, Agriculture, Education and Art were studied. Eight hypotheses were investigated.

The results of the study are presented in this chapter. An analysis of the data is presented in relation to each hypothesis. The chi square statistic was used for the data analysis. The .05 level of confidence was used in making decisions of the acceptance or rejection of the hypotheses.

The findings are presented in tables and discussed following each table. A brief summary of the results as they related to the hypotheses is presented at the end of the chapter.

Sex-Role Category and College Choice Data

Table 1 provides the frequency and percentage of male and female students in each sex role category by college professional choice by
TABLE 1

FREQUENCY AND PERCENT OF FOUR SEX-ROLE CATEGORIES BY SEX AND CAP AREA FOR FRESHMAN AND SENIOR STUDENTS

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year (freshman and senior). These data show that of the 168 males, 54 per cent were freshman and 46 per cent were seniors. From these data the testing of Hypotheses 1 and 2 were accomplished.

The freshman male group consisted of 25.3 per cent Engineering students; 27.5 per cent Agriculture students; 27.5 per cent Education students and 19.8 per cent Art students. The senior male group consisted of 32.5 per cent Engineering students; 24.7 per cent Agriculture students; 24.7 per cent Education students and 18.2 per cent Art students.

Of the male freshmen 34 per cent fell into the Undifferentiated group, 11 per cent into the Sex-typed Female group, 35 per cent into the Sex-typed Male group and 20 per cent into the Androgynous group. A majority of the freshman males appear to be Undifferentiated or Sex-typed Male.

Of the seniors, 34 per cent were Undifferentiated, 13 per cent were Sex-typed Female, 34 per cent were Sex-typed Male and 19 per cent...
cent were Androgynous. The senior males also tend to be either Undifferentiated or Sex-typed Male.

When combined, freshman and senior males are grouped with 33 per cent Undifferentiated, 12 per cent Sex-typed Female, 34 per cent Sex-typed Male, and 20 per cent Androgynous. Thus, the total male sample appears to be either Undifferentiated or Sex-typed Male. This compares with the similar grouping percentages when freshman and senior males are considered separately.

The freshman female group consisted of 23.5 per cent Engineering students, 25.5 per cent Agriculture students, 25.5 per cent Education students and 25.5 per cent Art students. The senior female group consisted of 10.3 per cent Engineering students, 36.8 per cent Agriculture students, 26.5 per cent Education students and 26.5 per cent Art students.

Freshman females can be identified in terms of 20 per cent Undifferentiated, 40 per cent Sex-typed Female, 15 per cent Sex-typed Male and 25 per cent Androgynous.

Female seniors were grouped similarly to freshman females with 21 per cent Undifferentiated, 24 per cent Sex-typed Female, 12 per cent Sex-typed Male and 34 per cent Androgynous.

For both freshman and senior females 20 per cent were Undifferentiated, 38 per cent were Sex-typed Female, 14 per cent were Sex-typed Male and 30 per cent were Androgynous. The highest percentage of females in this study were categorized Sex-typed Female while the highest percentage of males were categorized Sex-typed Male. However, females tended to be more evenly divided between Undifferentiated
and Androgynous than were males. Males in this study were less likely to be Androgynous.

The data of the chi square analysis of sex-role categories and professional choice for freshman males are presented in Table 2 and senior males in Table 3. These tables address Hypothesis 1.

Findings in Relation to Hypotheses

Hypothesis 1. Male college freshmen and seniors who are categorized androgynous, as measured by the Bem Sex-Role Inventory will pursue traditional female professional college choices with greater frequency than males who are categorized sex-typed male.

Table 2 presents the data from the chi square analysis for freshman males. Table 2 reveals a chi square of 9.16, with 9 degrees of freedom. This chi square does not reach significance at the .05 level of confidence. The data in Table 2 reveal that the hypothesis is not supported for freshman males.

Table 3 provides the same data for senior males. Table 3 shows that when the sex-role category is examined by professional college choice, a chi square of 5.65, with 9 degrees of freedom is revealed. This does not reach the .05 level of significance. The hypothesis for senior males is not supported. Selection of professional college choice does not appear to be related to sex-role category for college freshman and senior males.

The data of the chi square analysis of sex-role categories and professional college choice for freshman females is presented in Table 4 and for senior females in Table 5. These tables address Hypothesis 2.
TABLE 2

CHI-SQUARE ANALYSIS OF FOUR SEX-ROLE CATEGORIES AND PROFESSIONAL COLLEGE CHOICE FOR FRESHMAN MALES

<table>
<thead>
<tr>
<th>PROFESSIONAL COLLEGE CHOICE</th>
<th>SEX-ROLE CATEGORY</th>
<th>UNDIFFERENTIATED</th>
<th>SEX-TYPED FEMALE</th>
<th>SEX-TYPED MALE</th>
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</table>

Chi-square = 9.16  df = 9  p = .42
### TABLE 3

**CHI-SQUARE ANALYSIS OF FOUR SEX-ROLE CATEGORIES AND PROFESSIONAL COLLEGE CHOICE FOR SENIOR MALES**

<table>
<thead>
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<tr>
<td>Z</td>
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</table>

Chi-square = 5.65  
\( df = 9 \)  
\( p = .77 \)
Hypothesis 2. Female college freshmen and seniors who are categorized androgynous, as measured by the Bem Sex-Role Inventory will pursue traditional male professional college choices with greater frequency than females who are categorized sex-typed female.

Table 4 presents the data from the chi square analysis for freshman females. Table 4 reveals a chi square of 19.67 with 9 degrees of freedom. This chi square does reach significance at the .02 level of confidence. The data in Table 4 reveal that the hypothesis is not supported, however. Further examination of the data reveal that androgynous females do not pursue male professional choices but that a greater percentage of sex-typed females are found in the two masculine oriented professional college choices Engineering and Agriculture.

Table 5 provides similar data for senior females. Table 5 indicates that when the sex-role category is examined by professional college choice, a chi square of 8.53 with 9 degrees of freedom is revealed. This does not reach the .05 level of significance. The data in Table 5 reveals that the hypothesis is not supported for senior females.

The data of the chi square analysis of sex-role categories and birth order for freshman males is presented in Table 6 and for senior males in Table 7. These tables address Hypothesis 3.
<table>
<thead>
<tr>
<th>PROFESSIONAL COLLEGE CHOICE</th>
<th>SEX-ROLE CATEGORY</th>
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<th>SEX-TYPED FEMALE</th>
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Chi-square = 19.67  df = 9  p = .02
TABLE 5
CHI-SQUARE ANALYSIS OF FOUR SEX-ROLE CATEGORIES AND PROFESSIONAL COLLEGE CHOICE FOR SENIOR FEMALES

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Chi-square = 8.52  df = 9  p = .48
Hypothesis 3. Male college freshmen and seniors who are categorized androgynous, as measured by the Bem Sex-Role Inventory will be either a middle-born or last-born child rather than first-born with greater frequency than males who are categorized sex-typed male.

Table 6 presents the data from the chi square analysis for freshman males. Table 6 reveals a chi square of 0.81 with 3 degrees of freedom. This chi square does not reach significance at the .05 level of confidence. The data in Table 6 reveal that the hypothesis is not supported for freshman males.

Table 7 provides similar data for senior males. Table 7 indicates that when the sex-role category is examined by birth order a chi square of 4.38 with 3 degrees of freedom is revealed. This does not reach the .05 level of significance. The hypothesis for senior males is not accepted.

The data of the chi square analysis of sex-role categories and birth order for freshman females is presented in Table 8 and for senior females in Table 9. These tables address Hypothesis 4.

Hypothesis 4. Female college freshmen and seniors who are categorized androgynous, as measured by the Bem Sex-Role Inventory will be either a middle-born or last-born rather than first-born child with greater frequency than females who are categorized sex-typed female.

Table 8 presents the data from the chi square analysis for freshman females. Table 8 reveals a chi square of 7.60 with 3 degrees of freedom. This chi square does reach significance at the .05 level of confidence. However, further examination of the data reveals that what is hypothesized is not supported by the percentages that are indicated in Table 8.
TABLE 6

CHI-SQUARE ANALYSIS OF FOUR SEX-ROLE CATEGORIES AND BIRTH ORDER FOR FRESHMAN MALES

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<td>z 100</td>
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Chi-square = .80     df = 3     p = .84
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<th>SEX-TYPED MALE</th>
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Chi-square = 4.38  df = 3  p = .22
Table 9 indicates that when the sex-role category is examined by birth order for senior females a chi square of 4.34 with 3 degrees of freedom is revealed. This does not reach the .05 level of confidence. The data in Table 9 reveal that the hypothesis is not supported for senior females.

The data of the chi square analysis of sex-role categories and working or non-working mother for freshman males is presented in Table 10 and for senior males in Table 11. These tables address Hypothesis 5.

Hypothesis 5. Male college freshmen and seniors who are categorized androgynous, as measured by the Bem Sex-Role Inventory, will be sons of working mothers categorized occasionally, part-time and full-time rather than non-working mothers with greater frequency than males who are categorized sex-typed males.

Table 10 presents the data from the chi square analysis for freshman males. Table 10 reveals a chi square of 6.15 with 9 degrees of freedom. This chi square does not reach significance at the .05 level of confidence. The data in Table 10 reveal that the hypothesis is not supported for freshman males.

Table 11 presents similar data for senior males. Table 11 indicates that when the sex-role category is examined by working mothers—occasionally, part-time, full-time—or non-working mothers a chi square of 7.16 with 9 degrees of freedom is revealed. This does not reach significance at the .05 level of confidence. The data in Table 11 reveal that the hypothesis is not supported for senior males.

The data of the chi square analysis of sex-role categories and working—occasionally, part-time, full-time—or non-working mother for freshman females is presented in Table 12 and for senior females in Table 13. These tables address Hypothesis 6.
TABLE 8

CHI-SQUARE ANALYSIS OF FOUR SEX-ROLE CATEGORIES AND BIRTH ORDER FOR FRESHMAN FEMALES

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<th>BIRTH ORDER</th>
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</tr>
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<td>MALE</td>
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<td>27</td>
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Chi-square = 7.60  df = 3  p = .05
TABLE 9  
CHI-SQUARE ANALYSIS OF FOUR SEX-ROLE CATEGORIES  
AND BIRTH ORDER FOR SENIOR FEMALES

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<td>100</td>
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</table>

Chi-square = 4.33  
df = 3  
p = .22
TABLE 10

CHI-SQUARE ANALYSIS OF FOUR SEX-ROLE CATEGORIES AND WORKING MOTHERS CATEGORIZED OCCASIONALLY, PART-TIME, AND FULL-TIME OR NON-WORKING MOTHER FOR FRESHMAN MALES

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<tbody>
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<td>TOTAL</td>
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Chi-square = 6.15  df = 9  p = .73
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<td>10</td>
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</table>

Chi-square = 7.16  df = 9  p = .62
Hypothesis 6. Female college freshmen and seniors who are categorized androgynous as measured by the Bem Sex-Role Inventory, will be daughters of working mothers categorized occasionally, part-time and full-time rather than non-working mothers with greater frequency than females who are categorized sex-typed female.

Table 12 presents the data from the chi square analysis for freshman females. Table 12 reveals a chi square of 4.82 with 9 degrees of freedom. This chi square does not reach significance at the .05 level of confidence. The data in Table 12 reveal that the hypothesis is not supported for freshman females.

Table 13 provides similar data for senior females. Table 13 indicates that when the sex-role category is examined by working mother--occasionally, part-time, full-time--or non-working mother a chi square of 12.33 with 9 degrees of freedom is shown. This chi square does not reach significance at the .05 level of confidence. The data in Table 13 reveals that the hypothesis for senior females is not accepted.

Hypothesis 7. Male college freshmen and seniors who are categorized androgynous, as measured by the Bem Sex-Role Inventory will tend to be from urban communities rather than small or rural communities with greater frequency than those males who are categorized sex-typed male.

Table 14 presents the data from the chi square analysis for freshman males. Table 14 reveals a chi square of 3.32 with 3 degrees of freedom. This chi square does not reach significance at the .05 level of confidence. The data in Table 14 reveal that the hypothesis is not supported for freshman males.

Table 15 provides similar data for senior males. Table 15 indicates that when the sex-typed category is examined by residence a chi square of 4.35 with 6 degrees of freedom is revealed. This does not reach
### TABLE 12

CHI-SQUARE ANALYSIS OF FOUR SEX-ROLE CATEGORIES AND WORKING MOTHERS CATEGORIZED OCCASIONALLY, PART-TIME, AND FULL-TIME OR NON-WORKING MOTHER FOR FRESHMAN FEMALES

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<td>ANDROGYNOUS</td>
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<td>11</td>
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<td>44</td>
<td>45</td>
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<td>1</td>
<td>2</td>
<td>11</td>
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<td></td>
<td>Z 21</td>
<td>10</td>
<td>7</td>
<td>8</td>
<td>11</td>
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<td>3</td>
<td>6</td>
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<td>20</td>
<td>24</td>
<td>22</td>
</tr>
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<td>5</td>
<td>6</td>
<td>21</td>
</tr>
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<td></td>
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Chi-square = 4.81  \( df = 9 \)  \( p = .85 \)
### TABLE 13

**Chi-square Analysis of Four Sex-Role Categories and Working Mothers Categorized Occasionally, Part-Time, and Full-Time or Non-Working Mother for Senior Females**

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<th>Work Status</th>
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<th>Sex-Typed Male</th>
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Chi-square = 21.32  df = 9  p = .20
### TABLE 14

**CHI-SQUARE ANALYSIS OF FOUR SEX-ROLE CATEGORIES AND RURAL, SMALL COMMUNITY OR URBAN RESIDENCE FOR FRESHMAN MALES**

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<th>SEX-TYPED FEMALE</th>
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<td>11</td>
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<td>30</td>
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<td>39</td>
<td>33</td>
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Chi-square = 3.32  
\[df = 6\]  
\[p = .76\]
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<td>RURAL</td>
<td>N 5</td>
<td>1</td>
<td>9</td>
<td>6</td>
<td></td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>% 19</td>
<td>10</td>
<td>35</td>
<td>40</td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>SMALL COMMUNITY</td>
<td>N 9</td>
<td>4</td>
<td>8</td>
<td>4</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>% 35</td>
<td>40</td>
<td>30</td>
<td>27</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>URBAN</td>
<td>N 12</td>
<td>5</td>
<td>9</td>
<td>5</td>
<td></td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>% 46</td>
<td>50</td>
<td>35</td>
<td>33</td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>TOTAL</td>
<td>N 26</td>
<td>10</td>
<td>26</td>
<td>15</td>
<td></td>
<td>77</td>
</tr>
<tr>
<td></td>
<td>% 100</td>
<td>100</td>
<td>100</td>
<td>100</td>
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</tr>
</tbody>
</table>

Chi-square = 4.35  df = 6  p = .63
the .05 level of confidence. The data in Table 15 reveals that the hypothesis is not supported for senior males.

The data of the chi-square analysis of sex-role categories and rural, small-community or urban residence for freshman females is presented in Table 16 and for senior females in Table 17. These tables address themselves to Hypothesis 8.

**Hypothesis 8.** Female college freshmen and seniors who are categorized androgynous as measured by the 8em Sex-Role Inventory, will tend to be from urban communities rather than small or rural communities with greater frequency than females who are categorized sex-typed female.

Table 16 presents the data from the chi square analysis for freshman females. Table 16 reveals a chi square of 4.35 with 6 degrees of freedom. This chi square does not reach significance at the .05 level of confidence. The data in Table 16 reveal that the hypothesis is not supported for freshman females.

Table 17 provides similar data for senior females. Table 17 indicates that when the sex-role category is examined with rural, small community, or urban residence a chi square of 11.36 with 6 degrees of freedom is revealed. This does not reach significance at the .05 level of confidence. The data in Table 17 reveal that the hypothesis is not supported for senior females. The data in Table 17 reveal that the hypothesis is reaching significance at the .07 level of confidence. Further examination of the data points out that what is hypothesized is not supported by the percentages that are indicated in Table 17. Table 17 reveals that a greater percentage of sex-typed females rather than androgynous designated urban residence.
TABLE 16

CHI-SQUARE ANALYSIS OF FOUR SEX-ROLE CATEGORIES AND RURAL, SMALL COMMUNITY OR URBAN RESIDENCE FOR FRESHMAN FEMALES

<table>
<thead>
<tr>
<th>RESIDENCE</th>
<th>SEX-ROLE CATEGORY</th>
<th>N</th>
<th>( \bar{N} )</th>
<th>( N )</th>
<th>( \bar{N} )</th>
<th>( N )</th>
<th>( \bar{N} )</th>
<th>( N )</th>
<th>( \bar{N} )</th>
<th>( N )</th>
<th>( \bar{N} )</th>
<th>( N )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UNDIFFERENTIATED</td>
<td>8</td>
<td>42</td>
<td>15</td>
<td>32</td>
<td>6</td>
<td>6</td>
<td>3</td>
<td>5</td>
<td>9</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>RURAL</td>
<td>SEX-TYPED FEMALE</td>
<td>6</td>
<td>15</td>
<td>20</td>
<td>41</td>
<td>16</td>
<td>16</td>
<td>5</td>
<td>4</td>
<td>13</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>SEX-TYPED MALE</td>
<td>3</td>
<td>20</td>
<td>12</td>
<td>33</td>
<td>33</td>
<td>33</td>
<td>3</td>
<td>9</td>
<td>36</td>
<td>20</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>ANDROGYNOUS</td>
<td>3</td>
<td>12</td>
<td>20</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>3</td>
<td>9</td>
<td>37</td>
<td>20</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>37</td>
<td>37</td>
<td>37</td>
<td>3</td>
<td>9</td>
<td>98</td>
<td>37</td>
<td>37</td>
</tr>
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</table>

Chi-square = 7.87  df = 6  p = .25
<table>
<thead>
<tr>
<th>RESIDENCE</th>
<th>SEX-ROLE CATEGORY</th>
<th>UNDIFFERENTIATED</th>
<th>SEX-TYPED FEMALE</th>
<th>SEX-TYPED MALE</th>
<th>ANDROGYNOUS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>RURAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>7</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>50</td>
<td>17</td>
<td>0</td>
<td>22</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>SMALL COMMUNITY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>6</td>
<td>8</td>
<td>4</td>
<td>9</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>43</td>
<td>35</td>
<td>50</td>
<td>39</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>URBAN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>1</td>
<td>11</td>
<td>4</td>
<td>9</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>7</td>
<td>48</td>
<td>50</td>
<td>39</td>
<td>37</td>
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</tr>
<tr>
<td>TOTAL</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>14</td>
<td>23</td>
<td>8</td>
<td>23</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Chi-square = 11.36, df = 6, p = .07
Discussion of Findings

A number of findings were accrued from the data and generally not supportive of the hypotheses. From the analysis of data, androgynous males do not select traditionally feminine professional programs with greater frequency than the sex-typed masculine male. There were 11 sex-typed male freshman who selected Education (ranked feminine) as well as 11 sex-typed male freshman who selected Engineering (ranked masculine).

Although the chi square analysis proved significant at the .02 level of confidence for freshman females, further examination of the data reveal that what is hypothesized is not supported by the percentages indicated. These tables reveal that a greater percentage of sex-typed females rather than androgynous females, are found in the masculine dominated college choice of Agriculture. The nine sex-typed female students selecting Engineering and eight sex-typed female students selecting Agriculture and the six androgynous females selecting either Engineering or Agriculture indicated that both androgynous and sex-typed freshman females are selecting male oriented occupations. Even more so a total of 25 freshman females categorized undifferentiated and sex-typed male also selected male-oriented professions.

This finding is in keeping with one of the problems encountered early in the investigation. While it was possible to find sufficient numbers of females in largely masculine oriented professional programs such as Engineering and Agriculture, an insufficient number of males were available in the first four feminine ranked professional programs Nursing, Home Economics, Social Work and Dental Hygiene to allow statistical analysis. Not until the fifth group, Education, were
sufficient numbers of males identified. Apparently females are more flexible in their choice of careers accepting more readily those which are either masculine or feminine in orientation than do males.

The relationship between birth order and androgyny was not significant except for the freshman female group. This group reached significance at the .05 level of confidence. More androgynous and undifferentiated freshman females were first-born than were sex-typed male or female. More sex-typed freshman females rather than androgynous were middle and last-born children. The freshman female who is categorized sex-typed male is more frequently a middle and last-born child rather than first-born. This does not support the premise that first-borns are "conservators of the culture" and tend to conform at least for freshman females (Kammeyer, 1966). Forer (1969), as does Kammeyer, suggests that first-borns are more apt to conform to their parents wishes and represent past ideals which they carry over into the present. If the androgynous freshman female is considered more open to behavior or perceptions which are different from the prevailing stereotypes perhaps the lack of family press found on the oldest child may have been a factor.

Farley et.al. (1974) implies from the findings that the relationship between birth order and achievement related characteristics of adults was not strong. However, the relationship between birth order and achievement was more significant at the college level than at the high school or occupational trade level. Forbes (1971) suggested that first-borns tend to have higher needs of achievement. In our society, success can be attained by conforming to traditional sex-role stereotypes rather than deviating from society.
The relationship between working mother—occasionally, part-time, full-time—or non-working mother and androgyny was not significant for any group. The current research data supports the premise that non-stereotypic individuals and non-stereotypic behaviors would emerge from children of mothers who are employed outside the home. It was further suggested that girls' perceptions of sex-roles are more strongly influenced by mothers employment than are boys' perceptions (Vogel et al., 1970). The model of a working mother has an influence on her daughters' development. The girl identifies with her mother's characteristics and incorporates them (Douvan, 1963). Miller (1975) reported that daughters of working mothers perceived less traditional sex roles than daughters of non-working mothers. Hoffman (1974) further substantiates the premise that maternal employment is associated with less traditional sex-role concepts and a greater evaluation of female competence. Women who aspire to male dominated professions tend to identify with educated mothers who are in male dominated occupations (Tangri, 1972).

The research literature cited above indicates that maternal employment would be significantly related to a daughters' higher self-esteem, less sex-role discrimination, greater work role innovation and higher personal aspirations. This would be more characteristic for girls than for boys. However, the hypotheses of the study which tested this premise were not supported.

The relationship between rural, small community and urban residence and androgyny approached significance reaching the .07 level of confidence for the senior female group. Although the percentage of
androgynous senior females in urban communities is lower than the sex-typed female, 39 to 48, the data indicate a greater number of androgynous senior females designating urban rather than rural residence, 9 to 5.

The lack of significance at the .05 level for all groups would lead to questioning the existing belief that more traditional and work-oriented therefore masculine and feminine stereotyped individuals reside in rural areas (Glenn and Alston, 1967).

With the lack of significant findings for the eight hypotheses it is possible that other factors may have been operating such as validity of the instrument used. Does the Bem Sex-Role Inventory measure what it purports to measure? Does it get at the concept of androgyny? The interpretation of findings is based upon how students perceive themselves at the time they complete the questionnaire. This factor may also reflect the findings of the study.
CHAPTER V

SUMMARY, IMPLICATIONS AND RECOMMENDATIONS

The purpose of this study was to examine the relationship between androgynous, sex-typed and undifferentiated college freshmen and college seniors and their college professional choice. The variables of birth order, working or non-working mother and rural or urban residence were also examined in relation to the androgynous male and female college freshman and college senior. The study was descriptive and exploratory and an attempt was made to verify the eight hypotheses generated to serve as a basis for further study.

The sample selected for the study consisted of 192 college freshmen and 142 college seniors of The Ohio State University enrolled during Autumn, Winter and Spring Quarters, 1975-1976. These 334 students were selected from the University College CAP areas and from the Colleges of Engineering, Agriculture, Education and Art.

The Bem Sex-Role Inventory was administered to determine the student's androgyny score. This inventory contains both a masculinity scale and a femininity scale, each containing twenty personality characteristics. These characteristics were selected as masculine or feminine on the basis of sex-typed social desirability. An individual is characterized as masculine, feminine, or androgynous based on the difference score between his or her endorsement of masculine and
feminine personality characteristics. A difference score that is high indicates a sex-typed individual whether masculine or feminine. A difference score that is low indicates an androgynous individual (Bem, 1974).

An alternative method of scoring as suggested by Bem (1976) was used in this study. Subjects were divided at the median on both the masculinity and femininity scales and classified into four categories. The four categories suggested were Masculine, (high masculine, low feminine); Feminine, (high feminine, low masculine); Androgynous, (high masculine, high feminine); or Undifferentiated (low masculine, low feminine). This alternative method of scoring was suggested based on the criticisms of the computation of the androgyny score noted in the literature by Spence, Helmreich and Stapp (1975) and Strahan (1975). Classifying the subjects into one of four categories would give a more accurate representation of the androgynous individual.

A questionnaire designed by the investigator to gain information concerning the selected characteristics of the students utilized was administered along with the Bem Sex-Role Inventory. Questions leading to clarification of birth order, working mother—occasionally, part-time, full-time—or non-working mother and rural, small community or urban residence comprised the questionnaire. The data from these instruments were coded by hand and punched onto IBM cards. The data were subjected to chi square analysis using Crosstabs procedure in SPSS, Statistical Package For The Social Sciences. The .05 level of confidence was applied.
From the analysis of data it was determined that androgynous males do not select traditionally feminine professional programs with greater frequency than the sex-typed male. Similar non-significant relationships occurred for androgynous females except for freshman females. The relationship between androgyny and traditionally masculine professional programs proved significant at the .02 level of confidence for the freshman female group. However, freshman females who were categorized Sex-typed Female were found to select masculine areas to a greater extent than do Androgynous freshman females.

The relationship between birth order and androgyny was not significant except for the freshman female group. Further investigation of the data revealed that freshman females who were Sex-typed Female were either middle-born or last-born child to a greater extent than Androgynous freshman females. This does not support the hypothesis. Within the Sex-typed Female group more females were categorized middle and later born rather than first-born.

The relationship between a working or non-working mother was not significantly related to androgyny. No significant relationship was found to exist between androgyny and the fact of maternal employment for any group.

The relationship between rural or urban residence and androgyny was not significant at the .05 level for either males or females. A difference appeared across all groups, but it only approached significance. There tended to be more Sex-typed senior Females in urban settings than Androgynous senior females. However, a greater difference appeared in the fewer number of Sex-typed Male seniors in rural settings.
and Undifferentiated seniors in urban settings. The difference was not significant therefore, it could be concluded that urban or rural residence is not a factor in a college student's androgyny level.

Implications of the Study

Implications drawn from the study were viewed as they apply to the categorization of sex-role, professional college choice and related characteristics.

One implication evolves from the introductory phase of this investigation. It was necessary to have a representative sample of male and female students in each CAP area designated for study. The needed quota of twenty-five males and twenty-five females in each CAP area required the use of the fifth and sixth ranked feminine CAP areas, Education and Art rather than the first, second, third or fourth; Home Economics, Nursing, Social Work and Dental Hygiene because of a lack of males enrolled in these programs. From analysis of the two masculine oriented occupations, Engineering and Agriculture, and the four original feminine oriented occupations, males are evidently limiting their options for a wide range of careers to a greater extent than are females. Perhaps the stereotypic behaviors which impact on the career choices are more limiting to males than to females. Perhaps, also, males may well be "victims" of a male professional bias.

It is apparent that females, more so than males, are seeking out professions traditionally considered opposite sex-dominated. This is true not only for the Androgynous females, who are considered high masculine and high feminine, but also for the Sex-typed Female considered low masculine, high feminine. One antecedent of this
behavior and attitude change for women is the equal rights movement. If this "equal rights" concept is accepted for males by males we would assume men would consider the female dominated occupations as an alternative for them. This was not evident from this sample population. If males continue to identify primarily with those positive characteristics of masculinity which offer prestige and self-esteem, with specific careers, society may be faced with an abundance of both male and female professionals in masculine oriented professions. The stereotype of females in the traditionally feminine professions will remain, however.

A second implication can be drawn from the findings related to Hypotheses 1 and 2. Freshman females who are categorized Sex-typed Females tend to enter male dominated occupations in greater proportion than androgynous freshman females. However, this is not true for senior Sex-typed Females. One implication may be that the orientation of the occupational training, the relationship and interaction with predominantly male students tends to alter the female sex-role perception over time, particularly that of four years of college. The result is that fewer Sex-typed Females are found preparing for these careers over the four year period and in the senior year the females are less female oriented.

With an approximate four year age difference between the groups, a different kind of career development is represented on the part of females. The freshman female may well be the product of a "different" society and reflect significantly different career alternatives as well as career self-concept.
A third implication can be drawn from the findings of the data for Hypotheses 3 and 4. The predicted relationship between androgyny and birth order holds true for freshman females only. Whatever dynamics are operating would seem to have both a sex and perhaps an age difference. Younger females appear to be responding sooner to the influence of less sex-stereotype influences. If indeed the predicted pattern of finding androgynous individuals more often in a birth order position other than first-born is now or will be the case, then perhaps the first group to reveal this trend would be girls, and more specifically younger ones. The findings here tend to reinforce the implication of younger females being different from either males or older females. A caution here is that the categorization of age is being drawn from the freshman and senior differentiation. The age difference was not specifically identified merely implied. It is possible that the difference between the freshman and senior female could be one of four years of college experience rather than age.

Further implications can be drawn from the complexity of the birth order variable. Many dimensions of birth order such as sibling composition, age span between siblings, size of family are a few that were not considered. Another factor which further influences implications drawn, relates to the fact that first-born males did not tend to be androgynous. Perhaps the first-born stereotype is more male oriented—achievement, prominence, and other such characteristics—or that the male stereotype and first-born stereotype are associated with the career success orientation signifying progress in today's society.
A fourth implication can be drawn from the findings of the data for Hypotheses 5 and 6. No significant relationship was found between androgyny and working mother—occasionally, part-time, full-time—or non-working mother. A comparatively large number of mothers were reported by the subjects to have never worked. Two groups appeared to have a reasonable explanation based upon the sample used. One is the agriculture group whereby the mother would be expected to play a more active home role and, in fact, make an economic contribution to the family by working on the premises. A second group would be the professional's wife who tends to play a more active homemaking role and tends not to feel the economic pressure to work. In either case the implication here is clear that for this particular group the hypotheses supported by the literature are not upheld and the condition of the working mother needs to be much more fully explored.

A fifth implication can be drawn about the impact of urban settings on females. More Androgynous senior females tended to be found in urban settings revealing, perhaps, the impact of the more complex stimuli of urban settings on reducing stereotypic sex role definition. However, if we also looked at the sex-typed female we would find the same dynamic working. For senior females, at least, there would appear to be more opportunities and perhaps more models to follow which would reduce the influence of sex bias found more likely in rural settings. This tendency warrants further consideration.

A more valid interpretation would be that the typical rural-urban differentiation would not apply to this highly specialized group of college students. Typically those citizens from rural areas who enter
the professions move from the area; those who enter the trades or semi and unskilled careers stay within the geographic locale. This is true of agriculture careers as well; the exception being those who farm family land. The fact of rural-urban differentiation may exist coincidental with the lack of differentiation of those who enter a profession requiring college education and training.

A sixth implication of the study can be extracted from the nature of the sample itself. These were college students aspiring to professional careers. Recent theories of career development indicate that higher level professions tend to be more differentiated in terms of their "personality" requisites than do lower level unskilled type occupations. Thus, while personality assessment may be useful in differentiating career position in the professions, it is not in the lower level occupational groups. On the other hand this very difference between the levels of occupation may well point to an existence of stronger stereotypes in the lower socioeconomic levels. It would seem important to examine these same variables at the lower socioeconomic levels, using a sample of students aspiring to semi-skilled or unskilled occupations.

Perhaps males tend to have strong stereotypic influence on them at all levels, while females in some instances at least are able to break free from them in the groups studied. Males at all socioeconomic levels seemingly must deal with stereotypic sex-role influences in career choice typically found at lower socioeconomic levels for both males and females.
A general implication from the study centers around the comparative lack of significant findings for the eight hypotheses. The impact of androgyne on career choice is more complex than it appears at first. There are differences based on the sex role categories but these are not similar in nature across males and females or, more significantly, across years in college. The impact of the particular sex type on each sex differs. The impact of four years of professional education also results in differences. If these exist in more or less mobile fields of professions, then it could certainly be postulated that it would be even more so at the more rigid stereotypic levels. Sex-role typing and subsequent professional and occupational decisions for males and females seems worthy of further study. However, such research needs to have a more specific focus, include a wider range of population and more open to atypical patterns of relationship. One other factor may have been operating in relation to the lack of significance in the findings. The validity of the instrument used to measure androgyne needs to be questioned. To what extent does it measure the concept of androgyne?

Recommendations for Future Study

This study was an exploratory attempt to examine the relationship between androgynous, sex-typed and undifferentiated college freshmen and seniors and their professional college choice. Recommendations evolving from the findings can be made for future studies of this nature.
It is recommended that:

(1) Further study be conducted which would more adequately represent the same degree of high masculine-oriented and feminine-oriented professions. In this study the first and second ranked masculine group and the fifth and sixth ranked feminine group were used.

(2) A similar study be conducted using non-college students or workers in non-professional occupations.

(3) Questionnaires and/or inventories measuring different sex-role stereotypes and/or masculinity and femininity should be administered along with the Bem Sex-Role Inventory.

(4) Longitudinal studies tracing freshman students through career exploration and commitment into senior year and then into the professional field should be conducted. This would explain both career development over time and age.

(5) Further investigation into the stereotype of an occupation is necessary. Viewpoints of students, advisers, counselors and those in the field may differ as to the perception of the career field being masculine or feminine.

(6) Further investigation be made of males to determine their apparent reluctance to enter non-masculine careers in order to describe more fully the nature of impact of career sex-role stereotype in males specifically.

(7) The influence of such career guidance activities as educational and occupational information, counseling on sex stereotype and career decisions and testing should be examined.

(8) Further study of the instrument needs to be conducted including factorial analyses.
APPENDIX A

CURRICULUM OF ACADEMIC PREFERENCE LIST
The following is a list of CAP areas from which a student chooses his professional goals upon enrollment as a freshman at The Ohio State University.

Of the 19 CAP areas listed below please rank ten of these from highest to lowest for those professional areas you consider to be typically masculine. Also, rank ten of these 19 CAP areas from highest to lowest for those professional areas you consider to be typically feminine.

I am looking for the two top-ranked areas considered masculine and the two top-ranked areas considered feminine by the judges. From this ranking (2 - feminine and 2 - masculine) I will draw my sample group.

(Rank - 10 - lowest to 1 - highest)

<table>
<thead>
<tr>
<th>M - Masculine</th>
<th>F - Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADM - Administration</td>
<td></td>
</tr>
<tr>
<td>AGR - Agriculture</td>
<td></td>
</tr>
<tr>
<td>AHR - Architecture</td>
<td></td>
</tr>
<tr>
<td>AMP - Allied Medical Professions</td>
<td></td>
</tr>
<tr>
<td>ART - Art</td>
<td></td>
</tr>
<tr>
<td>ASC - Art &amp; Sciences</td>
<td></td>
</tr>
<tr>
<td>DEN - Dentistry</td>
<td></td>
</tr>
<tr>
<td>DHY - Dental Hygiene</td>
<td></td>
</tr>
<tr>
<td>EDU - Education</td>
<td></td>
</tr>
<tr>
<td>ENG - Engineering</td>
<td></td>
</tr>
<tr>
<td>HEC - Home Economics</td>
<td></td>
</tr>
<tr>
<td>MED - Medicine</td>
<td></td>
</tr>
<tr>
<td>MUS - Music</td>
<td></td>
</tr>
<tr>
<td>NRE - Natural Resources</td>
<td></td>
</tr>
<tr>
<td>NUR - Nursing</td>
<td></td>
</tr>
<tr>
<td>OPT - Optometry</td>
<td></td>
</tr>
<tr>
<td>PHR - Pharmacy</td>
<td></td>
</tr>
<tr>
<td>SWK - Social Work</td>
<td></td>
</tr>
<tr>
<td>VME - Veterinary Medicine</td>
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</tr>
</tbody>
</table>
APPENDIX B

LETTER TO JUDGES
Ms. Virginia Gordon, Supervisor
University College
1050 Carmack Road
Columbus, Ohio 43210

Dear Ms. Gordon:

I am conducting a study relative to masculinity, femininity and androgyny and selection of college professional choice along with selected related characteristics with college freshmen and college seniors.

I am in the beginning stage of research gathering and before I can administer the Bem Sex-Role Questionnaire I need to have four judges rank the Curriculum of Academic Preference, or better known as CAP areas, which students select when freshmen at University College of The Ohio State University. Your name was given to me by Dr. Betty Melragon as a counselor whose role is advising young students in relation to their life's work.

I would certainly appreciate your aiding me in this stage of research. Attached is a list of CAP areas available to freshmen students and instructions for you. Thank you again for your prompt attention to this matter. If you have any questions in regard to this request, you can call me at 451-2569 after 5:00 P.M.

Sincerely yours,

(Ms.) Beatrice M. Quaranta

BMQ:jv
enc.
APPENDIX C

BEM SEX-ROLE INVENTORY
Full Name ________________________________ (Please print)

Sex: ___________________ Age: _______ School: __________________________

Year in School: _______________ Occupation: ____________________________

**TELEPHONE: ____________________ (If you have no phone, please give us some way of contacting you, e.g., your address)

On the back you will be shown a large number of personality characteristics. We would like you to use those characteristics in order to describe yourself. That is, we would like you to indicate, on a scale from 1 to 7, how true of you these various characteristics are. Please do not leave any characteristic unmarked.

Example: sly

Mark a 1 if it is NEVER OR ALMOST NEVER TRUE that you are sly.
Mark a 2 if it is USUALLY NOT TRUE that you are sly.
Mark a 3 if it is SOMETIMES BUT INFREQUENTLY TRUE that you are sly.
Mark a 4 if it is OCCASIONALLY TRUE that you are sly.
Mark a 5 if it is OFTEN TRUE that you are sly.
Mark a 6 if it is USUALLY TRUE that you are sly.
Mark a 7 if it is ALWAYS OR ALMOST ALWAYS TRUE that you are sly.

Thus, if you feel it is sometimes but infrequently true that you are "sly", never or almost never true that you are "malicious", always or almost always true that you are "irresponsible", and often true that you are "carefree", then you would rate these characteristics as follows:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sly</td>
<td>3</td>
</tr>
<tr>
<td>Malicious</td>
<td>1</td>
</tr>
<tr>
<td>Irresponsible</td>
<td>7</td>
</tr>
<tr>
<td>Carefree</td>
<td>5</td>
</tr>
</tbody>
</table>
## Describe Yourself

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NEVER OR</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ALMOST NEVER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TRUE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NOT TRUE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>USUALLY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>INFREQUENTLY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FALSE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

| **Self reliant** | **Reliable** | **Warm** |
| **Yielding**     | **Analytical** | **Warm** |
| **Helpful**      | **Sympathetic** | **Solemn** |
| **Defends own beliefs** | **Jealous** | **Willing to take a stand** |
| **Cheerful**     | **Has leadership abilities** | **Tender** |
| **Moody**        | **Sensitive to the needs of others** | **Friendly** |
| **Independent**  | **Truthful** | **Aggressive** |
| **Shy**          | **Willing to take risks** | **Greedy** |
| **Conscientious**| **Understanding** | **Inefficient** |
| **Athletic**     | **Secretive** | **Acts as a leader** |
| **Affectionate** | **Makes decisions easily** | **Childlike** |
| **Theatrical**   | **Compassionate** | **Adaptable** |
| **Assertive**    | **Sincere** | **Individualistic** |
| **Flatterable**  | **Self-sufficient** | **Does not use harsh language** |
| **Happy**        | **Eager to soothe hurt feelings** | **Unsystematic** |
| **Strong personality** | **Conceited** | **Competitive** |
| **Loyal**        | **Dominant** | **Loves children** |
| **Unpredictable**| **Soft-spoken** | **Tactful** |
| **Forceful**     | **Likable** | **Ambitious** |
| **Feminine**     | **Masculine** | **Gentle** |
| **Conventional** |               | **Conventional** |
APPENDIX D

QUESTIONNAIRE
QUESTIONNAIRE

This questionnaire will supplement the inventory of personal characteristics you have just completed. The information received will be used by the investigator in relation to college freshmen and college seniors and professional college choice. All information received will be strictly confidential. I certainly appreciate your spending a few minutes to complete this questionnaire for me. Thank you.

Bea Quaranta

1. Do you have any brothers or sisters either living at home or away from home?

   yes ______   no ______

2. If you answered yes to Number 1 would you please state their age and sex?

   Age   Sex

   (example) 15 female

3. Which of the following best describes the community in which you were reared?

   Farm or open country

   Town or city of:

   Less than 500 population

   500 - 1,999

   2,000 - 9,999

   10,000 - 49,999

   50,000 - 249,999

   250,000 - 499,999

   500,000 - 999,999

   More than 1 million
4. Which of the following categories best describes your mother's employment history?

<table>
<thead>
<tr>
<th>Your School Divisions</th>
<th>Elementary</th>
<th>Junior</th>
<th>High</th>
<th>High School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother worked full-time (35-40 hrs. weekly)</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>Mother worked part-time (less than 35 hrs.)</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>Mother worked occasionally</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>Mother never worked</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>___</td>
</tr>
</tbody>
</table>
Dear [Name],

Through the process of random selection, your name appeared for participation in a research study utilizing freshman students enrolled fall and winter quarters, 1976, at University College. This study involves the relationship between personality characteristics of students and variables such as birth order, working or non-working mother, and rural or urban residence in regard to college professional choice.

Attached are two forms:
(a) a questionnaire listing personality characteristics for you to rank as you see yourself
(b) a questionnaire designed by the researcher to acquire information based on the above variables.

This is voluntary, but I do hope you will be sufficiently interested in this study to complete the questionnaires. I encourage you to participate in this study. I have had the cooperation of your adviser, [Adviser's Name], and hope you will be as helpful.

The completion of these forms takes very little time, approximately 10-15 minutes after reading this letter. I have enclosed an envelope for your convenience. If you have a campus address this envelope can be dropped off at:

- 315 Ramseyer Hall - North Campus
- 257 Arps Hall - North Campus
- 315 Campbell Hall - South Campus
- University College Adviser - West Campus

I would appreciate your completing these forms by [Date].

If you have any further questions in regard to this request, please call me at 451-2569 (Columbus phone) after 5:00 P.M. and I will be happy to answer any questions you may have.

Thank you so much for taking the time to assist me in this research study, I certainly appreciate it.

Sincerely,

Beatrice M. Quaranta,
Graduate Student
School of Home Economics
The Ohio State University

Enc.
BIBLIOGRAPHY


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Deutsch, Helen. The psychology of women (2 vols.). New York: Grune and Stratton, 1944.


