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THE RELATIONSHIPS BETWEEN COLLEGE WOMEN'S SEX ROLE IDENTITIES AND SELF-ESTEEM, AND THEIR PERCEPTIONS OF THEIR PARENTS' SEX ROLE IDENTITIES, SELF-ESTEEM, AND THE QUALITY OF THE PARENT-DAUGHTER RELATIONSHIP

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of the requirements for

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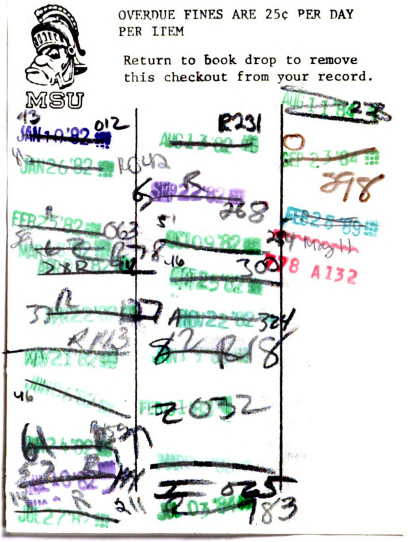
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THE RELATIONSHIPS BETWEEN COLLEGE WOMEN'S SEX ROLE IDENTITIES AND SELF-ESTEEM AND THEIR PERCEPTIONS OF THEIR PARENTS' SEX ROLE IDENTITIES, SELF-ESTEEM AND THE QUALITY OF THE PARENT-DAUGHTER RELATIONSHIP

By

Elizabeth Monroe-Cook

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ABSTRACT

THE RELATIONSHIPS BETWEEN COLLEGE WOMEN'S SEX ROLE IDENTITIES AND SELF-ESTEEM AND THEIR PERCEPTIONS OF THEIR PARENTS' SEX ROLE IDENTITIES, SELF-ESTEEM AND THE QUALITY OF THE PARENT-DAUGHTER RELATIONSHIP

By

Elizabeth Monroe-Cook

The problem addressed in the study concerned the definition of sex role identity for college women and some of the variables associated with their perceptions of sex role identity. A descriptive and analytic study was conducted on the relationships between college women's sex role identity and self-esteem, perceptions of each parent's self-esteem, cognitive involvement, warmth-versus-rejection, and each parent's sex role identity. The relationships between subjects' self-esteem and their perceptions of parents' self-esteem, cognitive involvement, warmth-versus-rejection, and each parent's sex role identity were also investigated. The college women in the study (N = 93) were divided into two samples of 96 and 97 respectively for the purpose of conducting a cross-validation of the instruments' reliability and the replication of the analysis of data. The women ranged in age from 17 to 26 years, and were divided evenly across the four academic years.

The women who volunteered for the study responded to a questionnaire consisting of the Bem Sex Role Inventory (BSRI, Bem, 1974) for self, mother and father; the Rosenberg Self-Esteem Inventory (RSEI, Rosenberg, 1965) for self, mother and father; the

Parent Behavior Form (PBF, Worell & Worell, 1974 manual) for mother and father; and the Family Information Questionnaire (FIQ) about their relationships with their parents and their feelings about them. Essential to the concept of sex role identity as investigated in the study is the idea that masculinity and femininity are independent domains within the individual, and are thus measured separately by the BSRI. On the basis of their scores on the separate masculine and feminine scales on the BSRI, subjects were placed into one of the following four categories:

Androgynous	-	Above the median on both the masculine and feminine scales.
Feminine	-	Above the median on the feminine scale, but below the median on the masculine scale.
Masculine	-	Above the median on the masculine scale, but below the median on the feminine scale.
Undifferentiated	-	Below the median on both the masculine and feminine scales.

A large number of hypotheses were tested through the use of one-way analysis of variance, Pearson product-moment correlation, and Chi-square analysis. Prior to the analysis, extensive work was done on the reliability of the instruments. Because the cross-validation was conducted, the probability of a Type I error is .0025 (alpha for the independent samples was .05). The conclusions which have been emphasized are those based on significant results in both samples.

Androgynous women in both sample groups did report higher levels of self-esteem than the other three sex role categories, and Undifferentiated women reported lower levels of self-esteem than the other three groups of women. Inconsistent results were obtained about the relationship between the daughters' sex role identities and their perceptions of their parents' self-esteem. However, in both groups there was a positive relationship between the self-esteem the women reported for themselves and the self-esteem they reported for each of their parents. There was also a positive relationship between the daughters' self-esteem and their mothers' cognitive involvement and between self-esteem and mothers' warmth-versus-rejection. Inconsistent results were obtained across both sample groups on fathers' cognitive involvement and warmth-versus-rejection. Androgynous daughters also reported higher levels of maternal warmth-versus-rejection than Feminine, Masculine, or Undifferentiated women. In the last groups of hypotheses it was found that Androgynous women in both samples did report Androgynous mothers in higher proportions than the other groups, and that Undifferentiated women reported Undifferentiated mothers more frequently than the other three sex role categories. Inconsistent Chi-square results were obtained for fathers' sex role identities and subjects' sex role identities in the two sample groups for all four of the sex role categories. Feminine women and Masculine women did not report consistently about their mothers in the two sample groups either. The differences between the two sample groups offer a challenge for future research on the correlates of sex role identity in college women.

To Josephine and Michael, my parents,
and in grateful memory to Bill Kell

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CHAPTER I

THE PROBLEM

The contemporary women's movement has had profound effects on the theoretical and applied aspects of psychology. Among these effects has been the large amount of thought and research which has gone into the restrictions and strengths of the socially-defined feminine role. The benefits and limitations of the masculine role have also received considerable scrutiny. Furthermore, far fewer psychologists now view stereotypically-feminine women and stereotypically-masculine men as the best or only candidates for good mental health in American culture.

Changing Definitions of Sex Roles

One of the first major tasks confronted by psychologists attempting to add understanding and flexibility to their attitudes about women's and men's behavior was the identification of the components of sex roles. The complexity of the task has been enormous for several reasons. First of all, psychologists and researchers are subjective participants in the processes which they are trying to objectify. Therefore, in the attempt to move away from the restrictions of the traditional views of men and women, and of masculinity and femininity, it is difficult to know what new restrictions have been included in psychologists' thinking. Second, there has been a great deal of confusion about the meaning of the phrase "sex role" and about which

behaviors or attributes have been described by this phrase. Also, the roles being studied have been changing as they are studied. That which was stereotypic 10 years ago may no longer operate in current society.

Despite these difficulties, there has been increasing agreement that both constructive and destructive elements of sex roles exist, and agreement that some of the assumptions about sex roles merit change. Some of the changes will be reviewed extensively in Chapter II, Review of the Literature.

Acquiring, Maintaining, and Changing Sex Roles

In addition to the questions asked by psychologists about the components of male and female sex roles and the values placed on sex roles, there have been many questions asked about how these sex roles are acquired, maintained, and changed. A large amount of research has been done on the possibility of biological causes for men's and women's behavior and attitudes, but little agreement has been reached.

There has been agreement that culture has a profound impact on individual role behavior. However, little consistent evidence has been produced about the specific social or psychological components of sex role acquisition, maintenance, or change. Although the fact that people's attitudes may not always coincide with their behavior has been noted frequently, it cannot be assumed that it is not valid to study attitudes about sex roles because it is also widely assumed that attitudes and belief systems predispose people to certain behaviors. In addition, cognition is considered to be central to the process of development by some theorists (e.g., Kohlberg, 1966).

Purpose of the Study

The purpose of the present study was to examine the relationships which may exist between college women's sex role identities and their self-esteem, their perceptions of their parents' sex role identities, and self-esteem, and their perceptions of their parents' behavior toward them.

Need for the Study

Information about the attitudes people have about their own and others' behaviors and characteristics is essential for the understanding of sex roles in American culture.

Rationale for Studying College Women

College women were chosen as the subjects for this study in part because they represent a group of women making the transition from lives under the direct influence of their parents to lives completely independent of parents. For college students, the transition has been seen as more gradual than it is for their non-college peers, which may make the process of the change easier to observe. The transitional phase has been of great interest because of the information it may afford about those elements of parents' behavior which take on particular importance for the daughter as she achieves her separateness from her parents.

Late adolescence has been a period worth studying for many other reasons. Supposedly American culture extends adolescence, and there is not as much information as is needed about the reality of life in the

extension, or its implications. Nor is there much information about extended adolescence and sex roles as they will be defined in the current study.

Perhaps most importantly, women were chosen as the subjects of the present study because of the need for information about the psychology of women.

While direct implications for change may not have been included in this study, it was assumed that information and insight about the relationship between certain facets of a woman's experiences and her image of herself may lead to change. A belief in the impact of insight on personal change is central to much of psychology, and is reflected in the study presented here as well. The hope behind the study was that information about women's reactions to socialization, by parents in particular, would allow women to examine the effects of socialization, extend those which are constructive, and modify those which are not for themselves. The information contained in this study may also be of interest to those who are involved in the socialization of young women. Some of these people, concerned about their impact on girls and women, may find ideas which would be useful in their attempts to equip them with social and personal skills needed for a world which presents many complexities, not the least of which is the role conflicts it holds for women. Lastly, it was hoped that psychologists would see this information as useful in their research on women, and in their attempts to help women in the clinical setting.

Sex Role Identity and Self-Esteem

There has been increasing interest in the relationship between sex role identity and self-esteem (e.g., Spence, Helmreich, & Stapp, 1975; Bem, 1977). The current study also included the variable of self-esteem, with the idea of investigating the relationship between self-esteem and parental variables, as well as the relationship between self-esteem and sex role identity.

Perceptions of Parents' Sex Role Identities and Self-Esteem

At the time of the development of the current study, no study using the newer measures of masculinity and femininity (to be described later) had also asked subjects to report on their parents' sex role identities and self-esteem. Nonetheless, these reports about parents were thought to be possible indicators of important factors in the daughters' sex role identities and self-esteem. Given the assumed process of learning from and imitating one's parents at different stages of life, it seemed important to know what the daughter believes she has learned and has seen in her parents' behavior. The daughters' perceptions of parents' self-esteem was considered as an element of the cognitive and emotional processes which may affect their own self-esteem.

Perceptions of Parents' Behavior Toward Daughters

It is quite possible that the daughter's perceptions of how she has been treated by her parents can be as influential as how she was actually treated on the daughter's behavior. In fact, perceptual or

phenomenological psychologists such as Snygg and Combs argue that the individual's behavior depends on his or her perceptions of situations and of themselves, not on the so-called "objective realities." Psychoanalytic theory argues the importance of introjects on individual behavior, and cognitive theorists emphasize perceptual organization. Combs and Snygg (1959) have said,

> People do not behave according to the facts as <u>others</u> see them. They behave according to the facts as <u>they</u> see them. What governs behavior from the point of view of the individual himself are his unique perceptions of himself and the world in which he lives, the meanings things have for him. (p. 17)

Therefore, because of the desire to know something about the relationships between the parents' behavior and the daughters' behavior, the daughters were asked to describe their parents' behavior. The women in the present study have also described two particular aspects of their self images: their self-esteem or self-worth, and their sex role identity.

Research Hypotheses

General research hypotheses were formulated for the current study, which resulted in the production of several specific hypotheses. The general hypotheses will be presented in the following section, and the specific, testable hypotheses will be found in Chapter III, Design of the Study.

Sex Role Identity and Self-Esteem

Young women who report relatively high degrees of both masculinity and femininity were hypothesized to report the highest levels of self-esteem. Those women reporting relatively low degrees of both

masculinity and femininity were hypothesized to report the lowest levels of self-esteem. These hypotheses are in keeping with the findings of earlier studies (e.g., Spence, Helmreich & Stapp, 1975; Bem, 1977).

Sex Role Identity and Perceptions of Parents' Self-Esteem

A projection was made that women rating themselves as high in masculinity and high in femininity will also report high levels of self-esteem for each of their parents. Included in this hypothesis is the assumption that if subjects see their parents having positive self images, it is related in some manner to the daughter's having an expanded self image. Women reporting the lowest relative levels of masculinity and femininity were predicted to report the lowest levels of parental self-esteem.

Self-Esteem and Perceptions of Parents' Self-Esteem

Positive relationships between the daughter's self-esteem and the levels of self-esteem she ascribes to each of her parents were expected. If it is assumed that the daughters' reports reflect the reality of the parents' self-esteem, many different interpretations could be used with these hypotheses. For example, parents with high self-esteem may react more constructively to their children than do parents with low self-esteem, resulting in a daughter's having a high level of self-esteem. Another possibility is that daughters imitate the self-esteem statements of their parents. However, the position taken in the present study was the former, not the latter.

Self-Esteem and Perceptions of Parents' Behavior Toward Daughter

In these hypotheses two aspects of parental behavior were emphasized: warmth and cognitive involvement. The prediction made in this study was that there would be direct, positive relationships between self-esteem and the degree of warmth from each parent. Again, these hypotheses relied on the rather basic notion that if the daughter reported positive, constructive behavior from her parents, she would also report high self-esteem.

Sex Role Identity and Perceptions of Parents' Behavior Toward Daughter

As in the previous section, these hypotheses emphasized cognitive involvement and warmth from each parent, as perceived by the daughter. It was projected that both warmth and cognitive involvement would be reported to be high from the parents of those daughters who reported high levels of both masculinity and femininity. Similarly, it was hypothesized that daughters reporting low levels of both masculinity and femininity would also report low levels of warmth and cognitive involvement from each of their parents. In past research (Kelly & Worell, 1977) there has been evidence to indicate that cognitive involvement from mother and father are influential in the daughters' reports of sex role identity.

Sex Role Identity and Perceptions of Parents' Sex Role Identities

In this section of hypotheses, a differentiation between mother and father was proposed. First a general hypothesis was formulated that

there would be similarity across all the groups of daughters and mothers. For example, if a daughter reported high levels of both masculinity and femininity, it was hypothesized that she would report her mother to have similarly high levels of both masculinity and femininity. If a daughter reported high levels of femininity but not masculinity it was suggested that she would report the same for her mother. With reports of their fathers' identities, however, it was suggested that a counterbalancing would occur, e.g., if a daughter reported high levels of femininity but not masculinity, that she would report her father as having a high level of masculinity, but not femininity. However, high levels of both masculinity and femininity in the daughter or low levels of both were proposed to be related to her perceiving the same in her father. These hypotheses have been summarized in Table 1.1.

TABLE 1.1

SUMMARY OF HYPOTHESES ABOUT SUBJECTS' SEX ROLE IDENTITIES, AND PERCEPTIONS OF PARENTS' SEX ROLE IDENTITIES

If	Then	
Daughter's Reports for Self	Daughter's Reports for Mother	Daughter's Reports for Father
High Femininity High Masculinity	High Femininity High Masculinity	High Femininity High Masculinity
High Femininity Low Masculinity	High Femininity Low Masculinity	Low Femininity High Masculinity
Low Femininity High Masculinity	Low Femininity High Masculinity	High Femininity Low Masculinity
Low Femininity Low Masculinity	Low Femininity Low Masculinity	Low Femininity Low Masculinity

Reliance on some traditional views about the development of masculinity and femininity has influenced some of the hypotheses, e.g., the expectation that the daughter would report similarity to the same-sex parent.

Theoretical Constructs and Empirical Bases for Study

No one theory was drawn upon for the design of the study presented here, nor was it the purpose of this study to investigate a facet of a particular theory. However, there are several constructs from a few theoretical areas which are relevant to the discussion of the acquisition of sex roles, and the maintenance of sex role identity. In addition, many pieces of empirical evidence have been used in the design of the study. The theoretical and empirical elements will be discussed briefly in this section and explored more fully in Chapter II, Review of the Literature.

Roles

Out of the field of social psychology, role theory has had a significant influence on the area of sex role studies, and on the ideas presented in the current study. For example, many of the sources which are cited here have used the ideas of Parsons and Bales (1955), who have defined some major aspects of masculinity and femininity.

Attitudes

Attitudes are considered to be predispositions to behavior by social psychologists. Researchers rely on subjects' reports to understand attitudes, even though recognition is given to the fact that attitudes may not always be related to behavior. The current study also relied on subjects' reports about themselves and others as valid measures of attitudes.

Cognition and Development

Basic to the cognitive-developmental view is the idea that individual thought is an active determinant of role perceptions. Cognitive-developmental theorists (e.g., Kohlberg, 1966) also posit a developmental process, saying that individual role concepts do change with age, depending on both cognitive and social development. Kohlberg (1966), drawing on the work of Piaget, states: "Sex role concepts and attitudes change with age in universal ways because of universal age changes in basic modes of cognitive organization" (p. 83). The present study includes acceptance of the importance of cognition in sex role identity, and the importance of the "experience-linked changes" cited by Kohlberg (1966), especially in women's experiences with their parents.

Identification

While the psychobiological emphasis of much of analytic theory did not particularly influence the present study, the ideas presented by analysts about identification will be discussed. Identification is a concept frequently cited in discussions of sex role identity. Object relations theory, for example, includes many ideas about intrapsychic events and intrapsychic development in the context of the environment, particularly early relationships. The importance of the internal experience of external events in psychodynamic theory was the main reason for its inclusion in the thinking behind the present study.

Dualism

One of the major elements of Jung's theory is his dualistic concept of many facets of human nature. Jung's idea that masculinity and

femininity both occur in the personality regardless of gender has been drawn on for the current study, and by others who will be cited in this study.

Empirical Evidence

The majority of the studies cited are recent; they were completed within the last five or 10 years. The reason for restricting the search for evidence to the last 10 years is the fact that the measures of femininity and masculinity which assume them to be independent principles are themselves so recent. In the current study a construct of sex role identity is being investigated which includes elements of femininity, masculinity, and androgyny. Among the studies cited (and described in Chapter II) are those which operationalize the masculinity and femininity to be viewed as separate principles. The studies include those investigating the development of the new measures of masculinity and femininity, changes in sex role identities, and variables which seem to be related to sex role identity.

Definition of Terms

For the present study sex roles were defined as the expectations American society holds for women's and men's behavior (Bem, 1974). The discussion of sex roles in this study did not include the idea that they are those behaviors which differentiated women from men. Rather than differentiating women from men, sex roles defined which characteristics the culture expects from women, and from men.

A specific meaning for sex role identity was defined for use in the current study: sex role identity is the degree to which individuals

regard themselves as masculine and feminine, according to the societal norms for these roles (Kagan, 1964). Sex role identity is distinct from sexual identity or sexual preference, terms which refer to the individual's view of self as heterosexual, homosexual, or bisexual. Sex role identity is also different from sex role preference (Lynn, 1959; Biller, 1971), which is how people think they would like to be with regard to cultural ideals for masculinity and femininity. Sex role adoption is distinguished from identity because adoption represents the degree to which others would define an individual as masculine and feminine according to societal values (Donelson, 1977).

In the research hypotheses about parents' behavior toward their daughters the two elements which were emphasized were warmth and cognitive involvement (Worell & Worell, Note 1; Kelly & Worell, 1976). Warmth refers to interpersonal caring, interest, and non-rejecting behavior. Cognitive involvement refers to the parents' interest in and encouragement of the child's intellectual competence and curiosity.

In the current study self-esteem was defined as general feelings of worth and value, a favorable opinion of self (Rosenberg, 1965). This definition was used for both the daughters' perceptions of themselves and of their parents.

Limitations of the Study

The study presented here did not include biological aspects of sex roles or sex role identity. As was noted, there has not been much agreement about the effects of biological factors, and the current study will add nothing to the discussion of these factors. Only those

elements which are obviously a part of the socialization process, or of the individual's reactions to the socialization process, were included whether or not biology could also be assumed to be a factor.

Because the subjects of this study were all women, male-female differences will not be addressed, nor will they be assumed to exist along all the dimensions of the study without further information. On the other side, no assumption was made that the results of this study could automatically be applied to male college students. The generalizations made in the study have been confined to college women.

No direct observations of behavior were made in the study; all of the data analyzed were perceptions reported by the subjects. This limitation is particularly important in the discussion of parents' self-esteem and behavior toward their daughters because it must be noted that the daughters' descriptions may or may not reflect actual behaviors accurately.

Women raised primarily in single-parent families have not been included in the current study. Differences between single-parent and two-parent families are assumed to exist, but are not addressed. Therefore, the generalizations of the present study must be confined to women raised in two-parent families.

Overview of Remaining Chapters

In Chapter II, relevant literature will be offered, including information from some of the theoretical and hypothetical areas deemed to be most salient for the current study. In the main, however, empirical information from studies directly related to the one

presented here will be presented. The information will be organized chiefly along the thematic lines of the general hypotheses.

Chapter III will be dedicated to the details of the design and implementation of this study. The sample used for the study will be described, a brief introduction to the study's instruments will be given, and the testable hypotheses will be presented. The plan for analysis of data will be shown, including some of the features of the statistics used. The rationale for conducting a cross-validation study will be introduced.

In Chapter IV a detailed explanation of the instruments used for this study will be found. The reliabilities of the instruments for these samples will be included, with information about whether or not removing some items from the instruments improved their reliabilities. A separate chapter on instrumentation has been included because of the large amount of information to be presented, and the fact that instrumentation is not simply a matter of design nor analysis.

The results of the analysis of data will be found in Chapter V, including the results of a survey given to subjects which was not part of the formal hypotheses, but which offers some interesting information about the subjects' feelings about their relationships with their parents. Because this was a cross-validation study, the results of the statistical analysis will be presented in the following manner: Hypothesis tested, results from the first sample (validation group), results from the second sample (cross-validation group). This particular format was intended to make the comparisons between the

validation and cross-validation groups easier for the reader to follow. The results of the survey will be reported in both narrative and tabular form.

The conclusions drawn on the basis of the instrumentation, analysis, and survey results, and a discussion of alternative explanations will be found in Chapter VI. Research completed since the design of the current study will be drawn into the discussion, and suggestions for future research will be explored.

CHAPTER II

REVIEW OF THE LITERATURE

Several distinct areas of study are relevant to the development and implementation of the current study, and will be summarized in the chapter which follows. The first of these areas is the definition of masculinity and femininity. There are a multitude of definitions of masculinity and femininity, and little agreement about which elements of the human personality are described by these terms. The concepts may be viewed philosophically, sociologically, anthropologically, and psychologically. In the present study both psychological and sociological viewpoints were used. In the following chapter, two major approaches to the concepts of masculinity and femininity--the bipolar approach and the independent approach--will be discussed. These concepts are central to the investigation of sex role identity, and, therefore, to the current study.

Another area of study which will be reviewed is self-esteem, particularly as it pertains to sex role identity. Self-esteem is, of course, the subject of much psychological research, and to review even a portion of the general research would be an enormous task. Therefore, the current review will be restricted to the studies which investigated self-esteem as a personality correlate of sex role identity based on the construct of masculinity and femininity as independent principles.

Some of the theoretical and empirical vantages on the acquisition of sex role identity will also be reviewed. The particular focus will be parental variables in the socialization process. Analytic and cognitive-developmental theory (i.e., Kohlberg) will be discussed, and a study (Kelly & Worell, 1976) which was particularly germane to the development of the current study will be presented.

Finally, a discussion of the implications of some of the literature for the hypotheses of this study will be found.

Sex Role Identity

As noted in Chapter I, sex role identity has been defined as the degree to which the individual sees himself or herself as masculine and feminine (Kagan, 1964). While many writers use this particular definition, there are a number of different views about the source(s) of sex role identity. There are also different views about what "masculine" and "feminine" are.

Masculinity and Femininity as Bipolar Concepts

Traditionally, masculinity and femininity have been viewed as bipolar concepts when studied empirically. Thus, masculinity represented one end of the continuum and femininity the other. Individuals were labeled as masculine or feminine, but not both. This approach is also called the unidimensional view of masculinity and femininity. Test scales such as the Strong Vocational Interest Blank's MF Scale (1936), the Terman and Miles Attitude-Interest Analysis M-F Test (1936), and the Minnesota Multiphasic Personality Inventory's Mf scale (1943)

were designed to place an individual on the continuum between masculinity and femininity. Those individuals who scored in the middle, or in cross-sex fashion, were often considered deviant. Sex role identity has sometimes been confounded with sexual preference or orientation as well. As Spence and Helmreich (1978) say, "The governing criterion for inclusion of items has been their capacity to distinguish between men and women and also, in some instances, between homosexuals and heterosexuals" (p. 18). Most of the tests used in the past assumed that a positive score on a masculine trait automatically earned a negative score on a feminine trait. This ipsitive view dominated psychological studies for years, and resulted in a restricted view of the nature of humans. Constantinople (1973) pointed out that there were many problems with these measures, not the least of which is their reverse logic, e.g., if A is masculinity, not-A is femininity, and vice versa. Another problem is the assumption that a unitary trait with two contrasting ends is being measured (see Figure 2.1).

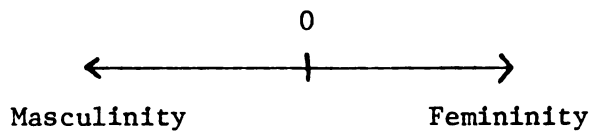

Fig. 2.1. Masculinity and femininity as bipolar constructs

Parsons and Bales (1955) proposed a theoretical model in which masculinity was described as "instrumental" behavior, that is, behavior designed to accomplish goals through initiative and independence. The feminine orientation was described as "expressive," designed to

please others and facilitate harmony and understanding. Johnson (1963) used Parsons's and Bales's definitions and argued that the instrumental position precludes the expressive because to be instrumental the individual ". . . must resist pressures to become affectively involved in the immediate interactional situation" (p. 321). Johnson also argued that the instrumental orientation can be seen as the "disciplined pursuit of goals that transcend the situation" (p. 321). Thus, in Johnson's formulation, the assumption was found that a person must be primarily instrumental or primarily expressive. Not included was the idea that while people may have to choose one mode over the other for a given situation, their choice of modes may change with changing situations. Over time, then, people would have ample opportunity to respond out of both modes, depending on the assessments they make of individual situations.

Dualistic Concepts of Masculinity and Femininity

The idea that over time the two dimensions called masculinity and femininity can be expressed by the same individual was presented by Bakan (1966), who used definitions similar to those of Parsons and Bales:

> I have adopted the terms 'agency' and 'communion' to characterize two fundamental modalities in the existence of living forms, agency for the existence of an organism as an individual, and communion for the participation of the individual in some larger organism of which the individual is a part. (p. 15)

In a chapter on human sexuality, Bakan assigned these terms to masculinity and femininity, saying, "I propose . . . that what we have been referring to as agency is more characteristically masculine and what we have been

referring to as communion is more characteristically feminine" (p. 110). Within the individual, agency and communion can be co-existing domains; thus, masculinity and femininity can co-exist. However, one may be more dominant than the other in any given individual. Bakan continues,

> For in the male and in the female we have instances of differentiation of function, especially with respect to their roles in reproduction. If we think of agency and communion as two major functions associated with all living substance, then, although agency is greater in the male and communion greater in the female, agency and communion nonetheless characterize both. (p. 152)

Bakan's position echoes that of Jung, whose description of _anima_ as femininity and _animus_ as masculinity is one of the better-known dualistic concepts. Jung also uses Eros to label the feminine principle and Logos for the masculine principle. Jung says that each individual has both dimensions, and that for women the anima is more dominant (conscious), with the animus as unconscious, submerged closer to the core of the psyche. For men Jung postulates the opposite: the animus is expressed outwardly, and the anima is unconscious, or latent. Jung emphasizes the importance for the individual of balancing the two dimensions. Jung has been criticized by some for the fact that he does not seem to place equal emphasis on development for men and for women through the use of the latent dimensions. For example, Singer (1976), quoting the following from Jung, "'Just as a man brings forth his work as a complete creation out of his feminine nature, so the inner masculine side of a woman brings forth creative seeds which have the power to fertilize the feminine side of the man'" (p. 47), goes on to say herself,

> Although Jung asserts that both men and women draw their creative energies from the unconscious, there is a subtle--or perhaps not so subtle--difference. The man's anima helps _him_ to produce his

> creative work. The woman's animus is supposed to inseminate the man's anima, which thereupon inspires him to produce his creative work. Fortunate, but rare indeed, is the woman whose active animus is furthered by the tender nurturing of a man's anima. (p. 47)

Caught up in the patriarchal emphasis of psychoanalysis or not, Jung (1951) does say,

> The recognition of the anima gives rise, in a man, to a triad, one third of which is transcendent: the masculine subject, the opposing feminine subject, and the transcendent anima. With a woman the situation is reversed. (p. 161)

In Jung's psychology, transcendence is central to growth and fulfillment. One of his biographers (Campbell, 1971) points out that Jung thought that the psychological goal of life should be to know all parts of oneself, not to suppress or repress any side. Speaking of Jung, Campbell (1971) says, "And he terms that faculty of the psyche . . . gaining release from the claims of but one or the other of any pair-of-opposites, the Transcendent Function" (p. xxviii).

The emphasis placed by Jung on the existence of both masculinity and femininity within each individual and the need for integration of the two is the feature of his work which was used in this study, and not the emphasis on the belief in the inherent, instinctive nature of the two dimensions. As Donelson (1977) states,

> Jung does seem to assume the association of femininity with femaleness and masculinity with maleness (biopsychological equivalence). However, the kinds of personality attributes he assumes to be feminine or masculine do match well with contemporary role stereotypes. Perhaps more important, his views about the necessity of development of both kinds of characteristics are supported by research and modern conceptions of androgyny.[1] . . . (p. 27)

The "modern conceptions of androgyny" will be discussed shortly.

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[1]From the Greek, andro = male, gyn = female.

The dualistic notion of masculinity and femininity has had credence, and has existed for a much longer time than what the empirical use of bipolar measures of masculinity and femininity might suggest. Examples from mythology, religion, classical literature, and philosophy, of the co-existence of masculinity and femininity within the individual, the integrative principle of androgyny, are easy to observe (Heilbrun, 1964; Singer, 1976), and richly rewarding to investigate. For both women and men much of the potential wasted by our culture's devaluation of that which is feminine can be fulfilled through rediscovery of the positive aspects of femininity. Because the over-valuation of that which is masculine has had destructive results, the rediscovery of the positive aspects of masculinity--in a more balanced perspective--will be necessary as well.

Masculinity and Femininity as Independent Concepts

Since Constantinople's 1973 critique, research has been conducted on the variety of characteristics or behaviors which can be labeled feminine or masculine without the assumption of bipolarity (Bem, 1974; Spence, Helmreich & Stapp, 1975; Heilbrun, 1976; and Berzins, Welling & Wetter, 1978). The basic themes of instrumental, agentic characteristics and behavior for masculinity and expressive, communal characteristics and behavior for femininity are found in all of these researchers' work. These studies support Constantinople's idea that masculinity-femininity is not a unitary trait. Rather, they are modes of being and behaving which are separate from one another, yet related. If allowed to score themselves separately for each domain, subjects will report

varying degrees of stereotypic feminine characteristics and varying degrees of stereotypic masculine characteristics. The developers of these new tests argue for the measurement of femininity and masculinity as independent domains (see Figure 2.2).

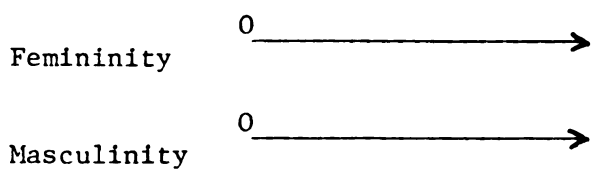

Fig. 2.2. Masculinity and femininity as independent constructs

Studying the concepts of femininity and masculinity as independent dimensions has encouraged a broader view of emotional health and offered the challenge to re-evaluate earlier data. For example, those subjects scoring comparatively high on both masculine and feminine scales have been labeled "Androgynous" and have been reported to exhibit a higher level of situationally-appropriate behaviors than role-restricted behaviors has come from Bem (1974; 1975; with Lenney, 1976). Apparently it is not necessary nor sound to assume that psychological health is limited to adherence to cultural norms, even though there is social pressure to adhere to certain gender-related roles.

In fact, it is possible that a high degree of conformity to societal sex roles may hinder women's psychological well-being. For example, Heilbrun (1965) reported that he found a high level of identification with (perceived similarity to) high-feminine mothers among college women he had categorized as "maladjusted" because of

their seeking psychological help. The traditional feminine role imposes a lot of restrictions, and is often defined by characteristics which are not as valued in American culture as those ascribed to the masculine role (McKee & Sherriffs, 1957; Rosenkrantz, et al., 1968; Broverman, et al., 1972; Spence & Helmreich, 1972; Deaux, 1976). Her review of the literature has led Donelson (1977) to conclude:

> Boys in our culture initially have more pressure for role behavior than do girls, but more freedom than girls within the role toward which they are pressured. Girls are less rigidly sex-typed than boys, but females suffer more for adhering to sex roles than do males. (p. 121)

The penalties associated with roles may be different, but are apparent for both sexes.

Measures of Masculinity and Femininity Assuming Independence

Four instruments have been designed recently to measure femininity and masculinity as orthogonal dimensions. Familiarity with these measures is important for understanding the hypotheses and procedures of this study. The first of these new measures is the Bem Sex Role Inventory (BSRI) developed by Sandra L. Bem (1974). The BSRI is a 60-item instrument; 20 adjectives were selected as positively-valued masculine characteristics, 20 adjectives were selected as positively-valued feminine characteristics, and 20 adjectives are not gender-related items but were used as a social desirability scale in the development of the BSRI. Bem began with a pool of 400 adjectives--200 were either masculine or feminine in tone, and 200 were neutral--and had two samples of judges (100 in all) "rate the desirability in

American society of each of the approximately 400 items" (p. 157). Half the judges were male and half were female. An individual judge rated all 400 items either on their desirability for men or for women. Bem explained the criteria for inclusion of an item in the following manner:

> A personality characteristic qualified as masculine if it was independently judged by both males and females in both samples to be significantly more desirable for a man than for a woman ($p < .05$). Similarly, a personality characteristic qualified as feminine if it was independently judged by both males and females in both samples to be significantly more desirable for a woman than a man. . . . ($p < .05$)
>
> A personality characteristic qualified as neutral with respect to sex . . . a) if it was independently judged by both males and females to be no more desirable for one sex than for the other ($t < 1.2$, $p > .2$) and b) if male and female judges did not differ significantly in their overall desirability judgements of that trait ($t < 1.2$, $p > .2$). (p. 157)

When Bem first used the inventory, she employed three categories in her scoring procedures: "Masculine," subjects scoring significantly higher on the masculine scale than on the feminine scale; "Feminine," subjects scoring significantly higher on the feminine scale than on the masculine scale; and "Androgynous," subjects scoring about equally on both the masculine and feminine scales. Criticism of the method by which an individual was labeled androgynous mounted (Spence, Helmreich & Stapp, 1975; Strahan, 1975; Baucom, 1976; and Berzins, Welling & Wetter, 1978), and Bem revised the scoring process to include a fourth category, "Undifferentiated," which represents those people who score about equally on the masculine and feminine scales, but also score low on both. In Bem's current work, "Androgynous" represents subjects whose scores on each of the scales are about equally high (see Table 2.1).

Bem, conceding to the criticism offered, added the idea that the degree to which both feminine and masculine characteristics are endorsed is important.

TABLE 2.1

SCORING CATEGORIES FOR MEASURES OF FEMININITY AND MASCULINITY AS INDEPENDENT DOMAINS

Masculinity	Femininity	
	High (Above Median)	Low (Below Median)
High (Above Median)	Androgynous	Masculine
Low (Below Median	Feminine	Undifferentiated (Indeterminate)

The 60 items of the BSRI are given to subjects with instructions to rate themselves on each of the adjectives using a seven-point scale, ranging from 1, "Never or almost never true of me," to 7, "Always or almost always true of me." The scores for the Feminine scale items, and for the Masculine scale items are added to derive the Feminine score and the Masculine score. Because half of the Social Desirability scale items are negative characteristics, their scores are reversed before they are added to the other item scores for this scale.

Spence, Helmreich, and Stapp (1974, 1975) were the first to use four scoring categories in their 55-item Personal Attributes Questionnaire (PAQ):

1. High-feminine, low-masculine
2. Low-feminine, high-masculine
3. High-feminine, high-masculine
4. Low-feminine, low-masculine

Low and high ratings are determined by whether or not the subject scores above the median or below the median on each scale. (In recent studies, Bem has also used the median split technique.) The PAQ includes 18 items considered ideal for all people, but more typical of women; 23 items considered ideal for all people, but more typical of men; and 15 items considered "gender-specific"[2] only. Each of the items is bipolar, for example:

Not at all independent	A . . B . . C . . D . . E	Very independent

Subjects choose the letter which indicates where they think they fall on the scale. The items were chosen from the Sex Role Stereotype Questionnaire developed by Rosenkrantz, Vogel, Bee, Broverman, and Broverman (1968).

Using items from the Personality Research Form (PRF), Berzins, Welling, and Wetter (1978) developed the PRF ANDRO scale of 56 items. The original pool of 64 items they used was chosen on a "rational-intuitive" basis, consistent with themes found in Bem's Masculine and Feminine scales. Later, the items were narrowed down, and validated by psychometric research. For example, 177 judges were given the PRF items and asked to rate them on a seven-point scale ("not at all desirable" to "extremely desirable") in response to the question,

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[2]In 1977 Spence and Helmreich reported that they now call these gender-specific items "Masculinity-Femininity" because this scale is bipolar in nature, in contrast to the separate Masculinity and Femininity scales.

"In American society how desirable is it for a MAN (alternately WOMAN) to mark this item TRUE?" (p. 128). Half the judges rated the items for men, and half for women; analysis of variance showed all 56 of the final items to be significant in the predicted direction. The PRF items are statements which are marked true or false by subjects. The PRF ANDRO is scored in the same way the the PAQ and BSRI are scored, and was designed to parallel the function of the BSRI, using standard personality test items.

Heilbrun (1976) has developed a scale using items from Gough's and Heilbrun's Adjective Check List (ACL; 1965). Heilbrun intended to present a scale which would be similar to the BSRI, PAQ, and PRF ANDRO in measuring masculinity and femininity as independent. However, the basis for selection of the 54 items of the Masculinity-Femininity scale hindered this intention. As Heilbrun reports it,

> The Masculinity-Femininity Scale was derived by identifying those adjectives that discriminated between college males identified with masculine fathers and college females identified with feminine mothers (Cosentino & Heilbrun, 1964). This approach to scale development sought to compile items that distinguished between two extreme criterion groups differing not only in terms of biological maleness/femaleness but also in terms of psychological masculinity/femininity. (p. 184)

Although he has said that masculinity and femininity have been shown to vary independently in his instrument because the correlations between the Masculinity and Femininity scales are low, Heilbrun has not developed his instrument using a dualistic concept of masculinity and femininity. Echoing Constantinople's (1973) criticism of earlier studies and measures, Kelly and Worell (1977) say that in Heilbrun's instrument a problem occurs because,

> . . . gender differences in <u>frequency</u> of adjective endorsement was a criterion for item inclusion. This would seem to reintroduce the question of whether this scale is assessing psychological

> sex roles in the same manner as conceived by Bem and Spence et al. or whether it confounds gender differences in item endorsement in the bipolar manner. . . . (p. 1106)

In addition, Heilbrun's use of the concept of identification (e.g., "college females identified with feminine mothers") is subject to controversy because of the disagreement about its definition among researchers.

Kelly and Worell (1977) have summarized and reviewed these measures and the efforts to validate them. They point out that the validation studies that have been conducted using the new measures of masculinity and femininity can be placed into three categories: "(a) personality correlates to sex role style, (b) parental and autobiographical variables related to sex role adoption, and (c) behavioral differences among sex-typed and androgynous individuals" (p. 1107). Using the categories suggested by Kelly and Worell, the hypotheses presented in this study can be divided into those addressing "personality correlates" (i.e., self-esteem in the current study), and those addressing "parental and autobiographical variables" (parents' self-esteem, sex role identities, and behavior toward daughters in this study).

Self-Esteem and Sex Role Identity

Spence, Helmreich, and Stapp (1975) used the Texas Social Behavior Inventory (TSBI) to measure subjects' self-esteem as related to their scores on the PAQ. The TSBI is described by Spence, Helmreich, and Stapp as an instrument "designed to determine individuals' self-confidence and competence in interpersonal situations and is generally described as a measure of social self-esteem" (1975, p. 31). These

researchers found very high positive relationships between masculinity and self-esteem and between femininity and self-esteem in both sexes. They also found that androgynous subjects reported the highest self-esteem; with subjects reporting high-masculine, low-feminine next; then subjects reporting high-feminine, low-masculine; and last, subjects with low-masculine, low-feminine. The descending order of categories and self-esteem presented above held for both sexes. Spence, Helmreich, and Stapp (1975), suggesting that perhaps endorsing both masculine and feminine characteristics results in higher self-esteem, state the following:

> The data suggest that androgyny, conceived of as the possession of a high degree of both masculinity and femininity, may lead to the most socially desirable consequences, the absolute strengths of both components influencing attitudinal and behavioral outcomes for the individual. (p. 35)

Of course, it is possible to argue the relationship between androgyny and self-esteem in the opposite direction as well, i.e., to say that high levels of self-esteem would encourage some individuals to perform in situationally-appropriate ways, even if they had to cross sex-role boundaries to do so. Perhaps high levels of self-confidence would insulate the individual against anxiety about endorsing cross-sex characteristics. Without further information, it is appropriate to conclude that there is a relationship between androgyny and self-esteem, but not to conclude that one precedes the other, or causes the other.

In a 1977 study, Bem used the Texas Social Behavior Inventory with the BSRI to evaluate the relationship of self-esteem with her newly modified sex role categories. She found the predicted relationship between androgyny and self-esteem, and, in fact, had findings

similar to Spence, Helmreich, and Stapp (1975), "with feminine and undifferentiated subjects low in self-esteem and masculine and androgynous subjects high in self-esteem" (Bem, 1977, p. 200). However, unlike Spence et al., Bem did not find rank order patterns of self-esteem for the four sex role categories for both men and women. For women, but not for men, self-esteem was positively related to both masculinity and femininity, using multiple regression analysis. In Bem's sample, self-esteem was positively related to masculinity but not to femininity for men. So the rank order of the four sex role categories along the continuum of self-esteem did not hold for men in Bem's study, although it did hold for the women. Kelly and Worell (1977) suggest in their critique that "high self-esteem is related mainly to the presence of masculine-typed behavior capabilities and minimally to the presence of feminine-typed characteristics" (p. 1108). While this suggestion is congruent with evidence that American society evaluates masculine characteristics more positively than it does feminine characteristics, it is not congruent with the findings of Spence et al., nor with Bem's findings about women, sex role identity and self-esteem. In the current study, the self-esteem and sex role identity question has been pursued again, but a shorter self-esteem inventory than the one used by Spence et al., and by Bem has been used: The Rosenberg Self-Esteem Inventory (RSEI, Rosenberg, 1965).

Parental Variables and Sex Role Identity

Prior to the 1970's extensive work had been done, especially with young children, on the effects of parents' behavior upon the development of measures of masculinity and femininity as independent

domains, however, not much research has been done on parental variables. Before describing the one known study of orthogonal measures and parental variables, a short review of some relevant ideas about socialization will be presented.

Traditional Analytic Views

The socialization process is known to include, at least, the effects of parents, other adults, schools, peers, media, and experience. The traditional view, derived from Freud, of the effects of the parents on sex role identity has been that people learn the "appropriate," i.e., same-sex, sex role identities through the assumed process of identification with the same-sex parent. This identification is thought to take place at an early age for the individual, as part of the resolution of the Oedipal conflict. The young girl, who was originally attached primarily to her mother is thought to focus her attention on her father as a sexual object. Finding out that she cannot replace her mother in her father's affections (if all goes well for the successful resolution of the Oedipal conflict) the young girl supposedly returns her attention to the relationship with her mother by identifying with her, i.e., taking on characteristics similar to her mother's. The part of this process which is assumed to be motivated by the daughter's feared loss of mother is called anaclitic identification. The part which is motivated by the daughter's fear of punishment by mother for her rivalry for father is called defensive identification or identification with the aggressor. Some writers emphasize anaclitic identification for girls and defensive identification for boys.

Whether anaclitic or defensive, or both, this identification is said to begin taking place early in life (3 - 5 years). Erikson (1963), in his presentation on stages of development describes "Identity vs. Role Confusion," a stage said to coincide with puberty and adolescence of the individual. Some authors (e.g., Newman and Newman, 1975) have said that this period involves a recapitulation of sex role identity issues. The difference between the sex role identity task at adolescence and at an early age has been presented by Newman and Newman (1975) in the following way:

> Several critical experiences occur between early school age and later adolescence which result in a reconceptualization and consolidation of the sex-role identity. First, the child engages in close same-sex peer relationships. These friendships teach the child about the possibility of intimacy among equals. They also expose him to peer norms for appropriate sex-role behavior. During the stage of early adolescence, the impact of the peer group expands to communicate expectations about heterosexual relationships as well as same-sex friendships. Early adolescence also brings the onset of physical changes which the child must incorporate into his or her sex-role identity. (p. 223)

The adolescent is thought to be engaging in a great deal of experimentation along the path of identity formation--"psychosocial moratorium" in Erikson's terms (1959). The product of this experimentation, or the resolution of the crisis of this life stage is the development of a secure identity which is said to include the choice of the appropriate sexual role (vs. "Bisexual Confusion").

More Recent Analytic Views

Also within psychoanalytic tradition are the ego psychologists and object relations theorists, but their views of development and personality sometimes lead to slightly different conclusions about

sex role identity. First of all, some of these writers do not place as heavy an emphasis upon biopsychological determinism as do the classic Freudian theorists. Ego psychologists do not negate the biological component of personality development, but they include additional elements. In her overview of psychoanalytic theory, Chodorow (1978) describes some of these differences:

> Ego psychology begins with an acceptance of Freud's drive theory. . . It adds a concern with another inborn faculty--the 'system ego'--a combination of functions or 'apparatuses' (perception, memory, cognition) in the first instance independent of drives and of psychological conflict. (p.45)

However, object relations theorists de-emphasize the biological somewhat, and emphasize the social influences upon development, expanding the ideas of the "cultural school" psychoanalysts such as Horney, Fromm and Thompson. Chodorow, acknowledging the acceptance of the importance of sexuality especially in early development by object relations theorists, also says,

> However, object-relations theory is distinguished from the instinctual determinists by its different conception of the role of drives with respect to the formation and expression of sexuality. Object-relations theorists argue that the child's social relational experience from earliest infancy is determining for psychological growth. (p. 47)

Thus the quality and variety of relationships with others, e.g., with the parents, can be seen to influence the individual's development, and sex role identity can be seen as the result of psychodynamic factors within relationships. Sex role identity according to the tenets of object relations theory would not be the simple result of the resolution of the Oedipal conflict as found in traditional

Freudian theory, but the result of psychophysiology, the "ego apparatuses" of the ego psychologists and the "person, self, subject in relationship, with conscious and unconscious motives and intentions" (Chodorow, 1978, p. 49).

Thus, an active cognitive role of the individual in his or her own development is one of the features of the newer psychoanalytic traditions. However, cognitive processes are central to the developmental view of sex role identity as set forth by Kohlberg (1966).

Cognitive-Developmental Theory

The role of individual cognition in development is at the core of Kohlberg's (1966) ideas about sex role attitudes. Kohlberg separates his ideas from those of the analytic tradition because he says that he refutes the idea of sex role identity as the result of biological instinct. Kohlberg also differs from the analysts in his perception of the role of identification. In simple terms, the analytic tradition seems to say that identification leads to sex role identity, and the cognitive-developmental idea is that sex role identity leads to identification. Kohlberg might say that first the child establishes the fact that she is female, then she looks to the environment to find out how to be and act as a female. She may "identify" with mother because mother provides information or behavior which when copied confirms the child's desire to be effective and good, or because she sees mother as similar to how she sees herself. Freudians would cite instinct, sexual drives, and dependency, and behaviorists would cite reinforcement and

modeling, but Kohlberg says that the individual's struggle for mastery and a positive self-image is the motivation behind identification with one's parent.

Kohlberg does include observational learning or modeling in his theory, but does not agree with many other facets of the behavioral view because they imply that the individual is the passive subject, shaped only by external forces. While including observational learning Kohlberg (1966) points out that,

> this learning is cognitive in the sense that it is selective and internally organized by relational schemata rather than directly reflecting associations of events in the outer world. In regard to sex-role these schemata that bind events together include concepts of the body, the physical and social world, and general categories of relationship. . . . (p. 83)

Kohlberg's ideas are derived from the work of Piaget, and many elements run parallel to Piaget's theory. For example, Piaget's theory addresses the changes in cognitive processes about the physical world which are related to age. Kohlberg's ideas address the changes in the individual's cognitive organization of the social world which accompany age changes. Kohlberg cites research on children which provides evidence that they develop an idea of "having an unchangeable sexual identity conceptions of the invariable identity of physical objects" (p. 83), an element of Piaget's theory of cognitive development.

The role of parents is their part in the child's social world, as objects of observational learning, as objects of identification, and as sources of information for the child's cognitive organization of sex role identity. Kohlberg says that, "many research findings seem to indicate that parent attitudes differentially stimulate or retard the

development of many basic sex-role attitudes, rather than teaching them directly through reinforcement or identification" (p. 84). The belief that the parents' attitudes do have an effect on their child's sex role identity was reflected in the planning of the current study, although it has college-age women as its subjects. While Kohlberg's work is directed primarily at early development, a logical extension of many of his principles can be made to late adolescence, during which cognitive development and experience of the environment are still taking place. One of the extensions which was made in the present study was the importance of knowing something about the parents' attitudes because of their potential effect on the daughter's sex role identity.

Independent Measures of Masculinity and Femininity and Parental Variables

Two researchers (Kelly & Worell, 1976) recently conducted a study which included the principle of measuring masculinity and femininity as separate dimensions in an investigation of parental behavior as related to sex role identity. They used social learning as their theoretical base and assumed that Androgynous subjects would have modeled after both of their parents. Kelly and Worell employed the PRF ANDRO (Berzins, Welling, & Wetter, 1978) as their measure of sex role identity and the Parent Behavior Form (PBF, Worell & Worell, Note 1) as their measure of the parents' behavior toward their children.

The PBF (which will also be discussed in Chapter IV) is an instrument composed of 15 scales of nine items each, of which 13 are used in the analysis of the behavior of each parent. The items are short descriptive statements, which subjects are asked to mark as

"like," "somewhat like," or "not like" their parents at the time the subjects were 16 years old. The 13 scales used for the analysis of Kelly's and Worell's study were: Warmth, Active Involvement, Egalitarianism, Cognitive Independence, Cognitive Curiosity, Cognitive Competence, Lax Control, Conformity, Achievement Control, Strict Control, Punitive Control, Hostile Control, and Rejection. The 13 scales have been grouped, on the basis of factor analysis, into three factors. The first is Warmth-versus-Rejection, the second factor is Control, and the third is Cognitive Involvement. The factors are formed through the process of adding (and sometimes subtracting) the scores of the scales found to relate to the factor. Their study included both male and female college undergraduates, but only the results for the women subjects will be discussed in the current review. On the basis of the PRF ANDRO scores, subjects were divided into the four sex role categories noted earlier: Androgynous, Masculine-typed, Feminine-typed, and Indeterminate. Analysis of variance was used to investigate the differences among the four categories for the PBF's scales on each parent and followed by least significant difference analysis (see Table 2.2) "to determine which individual sex role categories differed from one another where significant parent scale differences across all categories occurred" (p. 846). Both Androgynous and Masculine-typed women reported receiving high levels of cognitive and achievement encouragement from their parents, and Indeterminate women reported the least encouragement. In addition, Androgynous women reported the highest levels of maternal encouragement for Cognitive Curiosity and were higher than Masculine-typed women on maternal

TABLE 2.2

RESULTS OF KELLY'S AND WORELL'S 1976 LEAST SIGNIFICANT DIFFERENCE ANALYSIS, SEX ROLE CATEGORY BY PARENTS, WOMEN SUBJECTS

FACTOR	ANDROGYNOUS (A)		MASCULINE (M)		FEMININE (F)		INDETERMINATE (I)	
Scale	Mother	Father	Mother	Father	Mother	Father	Mother	Father
WARMTH VS. REJECTION								
+ Warmth (WR)	>I*	>I*					<A*	<A*
+ Active Involvement (AI)	>M* >I*	>I*	<F**		>M**		<A*	<A*
+ Egalitarianism (EG)	>I*	>I*					<A*	<A*
+ Cognitive Independence (CI)	>I*	>I*					<A*	<A*
- Hostile Control (HC)	>I*	>I*					<A*	<A*
- Rejection (RJ)	>I*	>I*					<A*	<A*
CONTROL								
+ Strict Control (SC)	>I*	>I*					<A*	<A*
+ Punitive Control (PC)	>I*	>I*					<A*	<A*
+ Conformity (CO)	>I*	>I*					<A*	<A*
- Lax Control (LC)	>I*	<M* >I*	>F* >I*	>F* >I* >A*	<M*	<M*	<A* <M*	<M*
COGNITIVE INVOLVEMENT								
+ Cognitive Curiosity (CU)	>M** >F* >I*	>I*	>I*	>F** >I*	>I*	<M** >I*	<A* <F* <M*	<A* <F* <M*
+ Cognitive Competence (CC)	>I*	>I*	>I*	>F** >I*	>I**	<M** >I**	<A* <F** <M*	<A* <F** <M*
+ Cognitive Independence (CI)	>I*	>I*	>I*	>I*	>I*	>I*	<A* <F* <M*	<A* <F* <M*
+ Achievement Control (AC)	>I*	>I*	>I*	>I*	>I*	>I*	<A* <F** <M*	<A* <F* <M*

* $p < .01$

** $p < .05$

Active Involvement (a Warmth-versus-Rejection scale). Indeterminate women reported lower levels of almost every scale for both parents than the other sex role groups. Masculine-typed women were found to report higher levels of encouragement from their fathers for Cognitive Curiosity and Cognitive Competence than Feminine-typed women, but lower levels of maternal Active Involvement than Feminine-typed women.

In their discussion of the results, Kelly and Worell (1976) suggest that their findings are:

> consistent with a social learning theory of sex role acquisition. . . the presence of parents who model and reinforce cross-typed characteristics is related to non-traditional roles in children. The likelihood of an androgynous orientation is especially enhanced when the same-sex parents exhibit cross-typed characteristics. (p. 849)

Their statement may be questioned, however, because their findings are not necessarily inconsistent with other views, e.g., the cognitive-developmental, or even the analytic view. In addition, their evidence for parents' behaving in a cross-typed manner is derived indirectly. For example, if mothers did encourage cognitive achievement, that was assumed to be cross-typed behavior--which, in fact, it may be-- but it would have been better to have measured the parents' sex role identities directly before drawing such a conclusion.

Nonetheless, the study conducted by Kelly and Worell demonstrated the value of examining parental correlates of sex role identity with the use of the new measures of masculinity and femininity. Important differences did seem to exist between Androgynous individuals and Indeterminate individuals in particular, in the behaviors they reported for their parents. Differences between Masculine-typed and Feminine-typed women, and between those two categories and the others, were fewer in

number, but provoke many ideas for other research projects on sex role identity and parental variables.

Discussion of the Literature

In the sections which follow, an attempt will be made to present the elements, drawn from the literature, which have been used in the design of the current study, particularly in the formulation of the hypotheses.

Sex Role Identity

Because of the literature on the dualistic nature of masculinity and femininity (i.e., Bakan, 1966; Jung, 1951), it was assumed that people have both feminine and masculine characteristics in their personalities, regardless of their gender. One may be more dominant than the other, or both may exist at relatively high levels (androgyny), or both may be equally undifferentiated, as explained by Spence, Helmreich, and Stapp (1975). One of the assumptions of the current study was that the feminine and masculine principles can be measured separately, in accord with the work of Bem (1974), Spence, Helmreich, and Stapp (1975), Berzins, Welling, and Wetter (1978), and Heilbrun (1976). On the basis of the measures, subjects could then be assigned to one of four categories, Androgynous, Feminine, Masculine, or Undifferentiated. On the basis of previous research (e.g., Bem, 1975, 1977; Lenney, 1976; Kelly & Worell, 1976; Spence, Helmreich, & Stapp, 1975) it was also assumed that correlates of sex role identity could be found, including other aspects of the personality--for example, self-esteem--and environmental factors, for example, parental variables.

Self-Esteem, Sex Role Identity, and Parental Variables

Because of Bem's (1977) study and Spence's, Helmreich's, and Stapp's (1975) study, it seemed appropriate to assume that a relationship would be found between sex role identity and self-esteem, even with the use of a self-esteem instrument different from that used by those researchers. However, in the current study it was not assumed that sex role identity causes self-esteem, nor vice versa. Given Kohlberg's (1966) ideas about the motivational power of building and preserving a positive self-image, self-esteem seemed to be a complex part of a cognitive organization which was exchanging impacts with the environment. In other words, the individual's self-esteem affects those around her, who in turn, affect her self-esteem. Because the same can be said of sex role identity it seems likely that the relationship between self-esteem and sex role identity is a symmetrical relationship, "which assumes that neither variable is due to the other" (Rosenberg, 1968, p. 3), or they may be two variables in a reciprocal relationship. Rosenberg (1968) says,

> The reciprocal type of relationship . . . is symmetrical in the sense that one cannot say which variable is cause and which effect, which independent and which dependent. . . . it is asymmetrical in the sense that each variable is continuously affecting the other. (p. 9)

As symmetrical relationship variables, sex role identity and self-esteem may be linked because they are both indicators of yet another variable, e.g., general self-image, or they may be linked because they are both the results of (or affected by) a third, causal variable. The latter notion, that sex role identity and self-esteem may be related because

they are the results of other variables, is a major reason for the investigation in the present study of the effects of parental variables on sex role identity and self-esteem. Four variables were chosen: the first was the level of self-esteem reported for each parent by the daughter; the second was the sex role identity reported for each parent by the daughter; the third was the encouragement of her cognitive accomplishment from each parent; the fourth was the warmth (versus rejection) she perceived from each parent. All of these variables can be used by those who espouse identification, modeling, or cognitive-developmental theories in their descriptions of sex role identity. However, in the current study, a certain primacy was given to the cognitive-developmental view because of its assumption of the proactive role of the individual. The cognitive-developmental view seems closely related to the phenomenologists' belief in the motivational value of perception and cognitive organization, also included in the present study.

Assumptions for Hypotheses

Several assumptions were made in formulating the hypotheses for the current study:

1. The women's perceptions of a positive parental environment would be related to positive self images, particularly high self-esteem and reports of Androgynous rather than Undifferentiated identities.
2. The women's perceptions of their own sex role identities would be traditional if their perceptions of their parents' sex role identities were that they were also traditional. The social-world information they obtained from their parents would interact

with other sources, e.g., the traditions of the general culture, peers, the women's sense of behaving appropriately.

3. The women's perceptions of their own sex role identities would be nontraditional (i.e., Androgynous, Masculine) if their perceptions of their parents' sex role identities were that they were also nontraditional. The social-world information they received from their parents would interact with their own self-esteem, which is higher than the traditional group, and with the presumed intrinsic rewards of masculine characteristics.
4. Androgynous women would be most easily distinguished from the Undifferentiated women on all of the variables included in the study. Androgyny would be related to a psychologically rich background, and Undifferentiation to a psychologically poor background.
5. Androgynous women would not differ as radically from Masculine women on variables having a masculine tenor, e.g., parental cognitive involvement, self-esteem, because these have higher cultural value too.
6. Masculine women would be more likely than the other groups to report Masculine mothers and Feminine fathers because of the even stronger impact on the maintenance of her own nontraditional stance these parental stances would have.

Summary

Bipolar views of femininity and masculinity have limited empirical studies for many years. Recently, researchers have begun using measures which allow masculinity and femininity to vary independently, reflecting dualistic notions found in other literature, e.g., Jung. As the new measures began to be used, a resurgence in the study of the correlates also occurred. In this chapter, the new measures of masculinity and femininity have been explained. Studies relating sex role identity and self-esteem have been reviewed. Parental correlates of sex role identity were discussed in light of both traditional and newer analytic views, and of Kohlberg's cognitive-developmental view. A study of parental correlates of sex role identity was reviewed which indicates a relationship with cognitive involvement, warmth, and control. Lastly, several assumptions relevant to the development of the study's hypotheses have been presented.

CHAPTER III

DESIGN OF THE STUDY

The study presented here was descriptive in nature. It was a survey project, with questions designed to investigate the perceptions of college women about their own behavior and the behavior of their parents. Specifically, the behaviors in question were categorized into sex role, self-esteem, and parental behavior toward their daughters. The analysis of this information was designed to illuminate the relationships among these young women's perceptions.

Sample

The subjects in the study were all undergraduate students at Michigan State University during Spring and Summer terms of 1978. A total of 193 women participated, although they were later randomly divided into two samples for the purpose of cross-validation. The women ranged in age from 18 to 26 years, with a mean age of 20 years. The distribution of subjects across the four academic years was fairly even: 40 (21% of the total) were freshmen, 59 (30%) were sophomores, 50 (26%) were juniors, and 44 (22%) were seniors. The 185 (95.95%) subjects who gave their gradepoint averages had a mean of 2.998 on a 4.0 scale. All but 10 of the subjects were residing in University housing. The remaining 10 subjects were living in communities close to the University.

Seven of the women (3.6%) were only children, 45 (23.3%) were first-born children, and 48 (24.9%) were the youngest children in their families. Because the instructions to the potential volunteers said that the study was limited to those women who had been raised by two parents until their early adolescence, whether or not these were their biological parents, it was not surprising that nearly all (185, 95.85%) of the sample indicated that their family situation when they were living at home was best described by the following phrase: "Mother and father living together, both responsible for the children." Five subjects checked the phrase "Mother and father divorced, mother remarried, she and stepfather responsible for the children." One subject checked "Father died, mother remarried, she and stepfather responsible for the children," one checked "Mother died, father remarried, he and stepmother responsible for the children," and one checked "Guardians other than parents responsible for the children."

In Appendix A the academic majors indicated by the subjects can be found. A broad range of majors was represented, including both traditional and innovative majors for women.

Subjects were randomly divided into two samples for the purpose of cross-validation. It is worth noting that when the subjects were divided into the two smaller samples, the general sample characteristics did not change, i.e.,load in any particular direction (see Table 3.1). For example, the mean ages remained at about 20 years, GPA stayed at approximately 3.0, and the four academic years were fairly evenly represented.

TABLE 3.1

COMPARISON OF SOME OF THE CHARACTERISTICS OF THE TWO SAMPLES

SAMPLE	n	Mean Age	Mean GPA (4.0 max)	Year in School[a]			
				1	2	3	4
Validation Group	96	19.9	2.96	21	30	27	18
Cross-Validation Group	97	20.1	3.03	19	29	23	26

[a]Numbers indicate the total subjects in each of the four academic years.

Measures

Detailed information on the instrumentation of this study will be found in Chapter IV. Extensive work was done on the reliabilities of the instruments for the current samples, including the cross-validation of the effectiveness of eliminating some of the items of the instruments. Four different measures were used: the Bem Sex Role Inventory (BSRI, 60 items), the Rosenberg Self-Esteem Inventory (RSEI, 10 items), the Parent Behavior Form (PBF, 135 items), and the Family Information Questionnaire (FIQ, 23 items) developed for this study. Subjects answered the BSRI and the RSEI three times, for themselves, their mothers, and their fathers. They answered the PBF twice, once for mother, and once for father. The FIQ was answered once. Most subjects took an hour to an hour and a half to fill out the 503-item booklet.

Procedures for Obtaining Subjects' Participation and Consent

Subjects' participation was sought through two methods. Contacts with students were made with the permission and cooperation of the Residence Hall Programs Office at Michigan State University and advisory staff personnel in the residence halls, particularly through the cooperation of Resident Assistants living on the individual floors. Approximately a third of the total sample (62 subjects) received a written notice (see Appendix B) containing a short description of the study, with an invitation to attend a meeting in their residence hall at which they would fill out the research instruments. The remaining subjects were approached either by their Resident Assistant or by the researcher herself. Those approached by the Resident Assistant were given both verbal and written information (see Appendix B) about the study. This group numbered 90 subjects, or about half of the total sample. Subjects approached by the researcher, individually or in a classroom setting, received only verbal information, and constituted 21% of the total sample (41 subjects). No matter which method of approach was used, if a subject agreed to fill out a questionnaire packet, she first was asked to complete a "Participant Consent Form" (see Appendix C). The consent form was approved by the University Committee on Research Involving Human Subjects as having the information and protections required for the ethical implementation of the research project. All of the subjects in the study signed the consent form prior to their participation.

Procedures for the Collection of Data

As noted earlier, some of the subjects in the study completed the questionnaires at a meeting, and some completed them on their own time. While it would have been preferable to have had all the subjects fill out the questionnaires at the meetings--because the researcher was in attendance at these--concessions to the preferences of individual Resident Assistants for conducting the research on their floors had to be made. In order to accomodate the Resident Assistants, and to standardize research conditions as much as possible, the following steps were taken:

1. All subjects were carefully instructed to not discuss the research while any of them were completing the questionnaires.
2. All subjects were carefully instructed to respond to as much of the questionnaire as they could in one sitting.
3. Subjects at the meetings could (and did) direct their questions to the researcher; subjects completing the questionnaires on their own time had access to the researcher by telephone, or could receive information from their Resident Assistants.

Design Features

The general design of this study was descriptive; the intent was to describe the relationships between variables revealed by the questionnaires. One benefit of conducting a descriptive study is flexibility, and the inclusion of a variety of sources for information about a complex area of study. In addition, it is not necessary to

define cause and effect in the descriptive or analytic mode. Offering a description of relationships may lead to research studies which attempt a cause-and-effect explanation, but the current study did not address causes.

The present study was a survey study of women's reports of their perceptions of themselves and of their parents. It can be assumed that symmetrical, reciprocal, or asymmetrical relationships between variables can be effectively investigated by the use of a survey (Rosenberg, 1968). As noted in Chapter II, it was assumed that at least two of the variables could be assigned to either a symmetrical or a reciprocal relationship. The discussion of the type of relationships examined by this survey will be continued in Chapter VI.

The second major design feature of this study is that it employed a cross-validation model. The original sample was randomly divided into two smaller samples, and the analysis done on each half separately and sequentially. Because the women received their pre-numbered questionnaires in random fashion, the sample was divided on the basis of placing every other questionnaire into the appropriate smaller-sample group. As stated in the earlier "Sample" section, the general characteristics of the two samples were assumed to be similar; no particular characteristic was more heavily represented in either group.

The rationale behind the use of the cross-validation model for the analysis was maintaining the alpha at a reasonable level for the number of tests desired for this study, and obtaining information about the stability of the variables over separate, but similar, groups.

The chance of finding a significant result by chance--a Type I error--is increased by conducting a large number of tests on the same data pool. By using the replication model it was possible to compare the first set of results with the second set of results. Results which were significant in both cases will be emphasized; results which were significant in only one case call for more caution in interpretation. By conducting the analysis on two samples, it was possible to multiply the two alpha levels, because the samples were independent. The alpha level established for this study was .05, therefore , the overall Type I error = .0025, if the hypotheses were confirmed in both samples. In addition, the use of two samples allowed for more rigid testing of the reliability of the study's instruments, described in Chapter V.

Hypotheses

The hypotheses formulated for this study included the following dependent variables: subjects' reports of their self-esteem; subjects' perceptions of the self-esteem of each of their parents; subjects' reports of parental cognitive involvement factors and of parental warmth-versus-rejection factors; subjects' reports of the sex role behavior of each of their parents; and subjects' reports of the degree of similarity they have to each of their parents. In most of the hypotheses the independent variable was the subjects' sex role classifications using the scores on the Bem Sex Role Inventory. In some of the hypotheses, however, the independent variable was the subjects' levels of self-esteem, measured by the Rosenberg Self-Esteem Inventory. As often as possible, through review of the literature and logical formulation,

an attempt has been made to offer a prediction for a particular direction. However, no attempt has been made to present all the possible combinations or relationships among the study's variables. The null and alternate hypotheses which were tested in this study are presented in the following sections.

Sex Role and Self-Esteem

H_0: No difference will exist among the four groups of subjects established by scores on the Bem Sex Role Inventory in their scores on the Rosenberg Self-Esteem Inventory.

H_{1a}: Subjects classified as Androgynous by their scores on the Bem Sex Role Inventory will score higher on the Rosenberg Self-Esteem Inventory than subjects classified as Feminine, Masculine, or Undifferentiated.

H_{1b}: Subjects classified as Undifferentiated by their scores on the Bem Sex Role Inventory will score lower on the Rosenberg Self-Esteem Inventory than subjects classified as Androgynous, Feminine, or Masculine.

H_{1c}: Subjects classified as Masculine by their scores on the Bem Sex Role Inventory will score higher on the Rosenberg Self-Esteem Inventory than subjects classified as Feminine.

Sex Role and Mother's Self-Esteem

H_0: No difference will exist among the four groups of subjects established by scores on the Bem Sex Role Inventory in the self-esteem scores they ascribe to their mothers on the Rosenberg Self-Esteem Inventory.

H_{1a}: Subjects classified as Androgynous by their scores on the Bem Sex Role Inventory will report higher levels of self-esteem on the Rosenberg Self-Esteem Inventory for their mothers than subjects classified as Feminine, Masculine, or Undifferentiated.

H_{1b}: Subjects classified as Undifferentiated by their scores on the Bem Sex Role Inventory will report lower levels of self-esteem on the Rosenberg Self-Esteem Inventory for their mothers than subjects classified as Androgynous, Feminine, or Masculine.

Sex Role and Father's Self-Esteem

H_0: No difference will exist among the four groups of subjects established by scores on the Bem Sex Role Inventory in the self-esteem scores they ascribe to their fathers on the Rosenberg Self-Esteem Inventory.

H_{1a}: Subjects classified as Androgynous by their scores on the Bem Sex Role Inventory will report higher levels of self-esteem on the Rosenberg Self-Esteem Inventory for their fathers than subjects classified as Feminine, Masculine, or Undifferentiated.

H_{1b}: Subjects classified as Undifferentiated by their scores on the Bem Sex Role Inventory will report lower levels of self-esteem on the Rosenberg Self-Esteem Inventory for their fathers than subjects classified as Androgynous, Feminine, or Masculine.

Subjects' Self-Esteem and Perceived Maternal Self-Esteem

H_0: No relationship will be found between subjects' self-esteem scores on the Rosenberg Self-Esteem Inventory and the self-esteem scores they ascribe to their mothers on the Rosenberg Self-Esteem Inventory.

H_0: A positive relationship will be found between subjects' self-esteem scores on the Rosenberg Self-Esteem Inventory and the self-esteem scores they ascribe to their mothers on the Rosenberg Self-Esteem Inventory.

Subjects' Self-Esteem and Perceived Paternal Self-Esteem

H_0: No relationship will be found between subjects' self-esteem scores on the Rosenberg Self-Esteem Inventory and the self-esteem scores they ascribe to their fathers on the Rosenberg Self-Esteem Inventory.

H_1: A positive relationship will be found between subjects' self-esteem scores on the Rosenberg Self-Esteem Inventory and the self-esteem scores they ascribe to their fathers on the Rosenberg Self-Esteem Inventory.

Self-Esteem and Mother's Cognitive Involvement

H_0: No relationship will be found between subjects' self-esteem scores on the Rosenberg Self-Esteem Inventory and the scores they ascribe to their mothers on the Parent Behavior Form's Cognitive Involvement Factor.

H_1: A positive relationship will be found between subjects' self-esteem scores on the Rosenberg Self-Esteem Inventory and the scores they ascribe to their mothers on the Parent Behavior Form's Cognitive Involvement Factor.

Self-Esteem and Father's Cognitive Involvement

H_0: No relationship will be found between subjects' self-esteem scores on the Rosenberg Self-Esteem Inventory and the scores they ascribe to their fathers on the Parent Behavior Form's Cognitive Involvement Factor.

H_1: A positive relationship will be found between subjects' self-esteem scores on the Rosenberg Self-Esteem Inventory and the scores they ascribe to their fathers on the Parent Behavior Form's Cognitive Involvement Factor.

Self-Esteem and Mother's Warmth-versus-Rejection

H_0: No relationship will be found between subjects' self-esteem scores on the Rosenberg Self-Esteem Inventory and the scores they ascribe to their mothers on the Parent Behavior Form's Warmth-versus-Rejection Factor.

H_1: A positive relationship will be found between subjects' self-esteem scores on the Rosenberg Self-Esteem Inventory and the scores they ascribe to their mothers on the Parent Behavior Form's Warmth-versus-Rejection Factor.

Self-Esteem and Father's Warmth-versus-Rejection

H_0: No relationship will be found between subjects' self-esteem scores on the Rosenberg Self-Esteem Inventory and the scores they ascribe to their fathers on the Parent Behavior Form's Warmth-versus-Rejection Factor.

H_1: A positive relationship will be found between subjects' self-esteem scores on the Rosenberg Self-Esteem Inventory and the scores they ascribe to their fathers on the Parent Bheavior Form's Warmth-versus-Rejection Factor.

Sex Role and Mother's Cognitive Involvement

H_0: No difference will exist among the four groups of subjects established by scores on the Bem Sex Role Inventory in the scores they ascribe to their mothers on the Parent Behavior Form's Cognitive Involvement Factor.

H_{1a}: Subjects classified as Androgynous by their scores on the Bem Sex Role Inventory will report higher levels of Cognitive Involvement on the Parent Behavior Form for their mothers than subjects classified as Feminine or Undifferentiated.

H_{1b}: Subjects classified as Undifferentiated by their scores on the Bem Sex Role Inventory will report lower levels of Cognitive Involvement on the Parent Behavior Form for their mothers than subjects classified as Androgynous, Feminine, or Masculine.

H_0: There will be no difference between subjects classified as Androgynous and subjects classified as Masculine in the scores they ascribe to their mothers on the Parent Behavior Form's Cognitive Involvment Factor.

Sex Role and Father's
Cognitive Involvement

H_0: No difference will exist among the four groups of subjects established by scores on the Bem Sex Role Inventory in the scores they ascribe to their fathers on the Parent Behavior Form's Cognitive Involvement Factor.

H_{1a}: Subjects classified as Androgynous by their scores on the Bem Sex Role Inventory will report higher levels of Cognitive Involvement on the Parent Behavior Form for their fathers than subjects classified as Feminine or Undifferentiated.

H_{1b}: Subjects classified as Undifferentiated by their scores on the Bem Sex Role Inventory will report lower levels of Cognitive Involvement on the Parent Behavior Form for their fathers than subjects classified as Androgynous, Feminine, or Masculine.

H_0: There will be no difference between subjects classified as Androgynous and subjects classified as Masculine in the scores they ascribe to their fathers on the Parent Behavior Form's Cognitive Involvement Factor.

Sex Role and Mother's
Warmth-versus-Rejection

H_0: No difference will exist among the four groups of subjects established by scores on the Bem Sex Role Inventory in the scores they ascribe to their mothers on the Parent Behavior Form's Warmth-versus-Rejection Factor.

H_{1a}: Subjects classified as Androgynous by their scores on the Bem Sex Role Inventory will report higher levels of the Warmth-versus-Rejection Factor on the Parent Behavior Form for their mothers than subjects classified as Feminine, Masculine, or Undifferentiated.

H_{1b}: Subjects classified as Undifferentiated by their scores on the Bem Sex Role Inventory will report lower levels of the Warmth-versus-Rejection Factor on the Parent Behavior Form for their mothers than subjects classified as Androgynous, Feminine, or Masculine.

Sex Role and Father's Warmth-versus-Rejection

H_0: No difference will exist among the four groups of subjects established by scores on the Bem Sex Role Inventory in the scores they ascribe to their fathers on the Parent Behavior Form's Warmth-versus-Rejection Factor.

H_{1a}: Subjects classified as Androgynous by their scores on the Bem Sex Role Inventory will report higher levels of the Warmth-versus-Rejection Factor on the Parent Behavior Form for their fathers than subjects classified as Feminine, Masculine, or Undifferentiated.

H_{1b}: Subjects classified as Undifferentiated by their scores on the Bem Sex Role Inventory will report lower levels of the Warmth-versus-Rejection Factor on the Parent Behavior Form for their fathers than subjects classified as Androgynous, Feminine, or Masculine.

Sex Role for Self and Perceived Sex Role for Mother

H_0: No relationship will exist between the subjects' categories scored on the Bem Sex Role Inventory and their mothers' categories scored on the Bem Sex Role Inventory according to the subjects' reports.

H_{1a}: Subjects classified as Androgynous by their scores on the Bem Sex Role Inventory will report mothers classified as Androgynous on the Bem Sex Role Inventory more frequently than subjects classified as Feminine, Masculine, or Undifferentiated.

H_{1b}: Subjects classified as Feminine by their scores on the Bem Sex Role Inventory will report mothers classified as Feminine on the Bem Sex Role Inventory more frequently than subjects classified as Androgynous, Masculine, or Undifferentiated.

H_{1c}: Subjects classified as Masculine by their scores on the Bem Sex Role Inventory will report mothers classified as Masculine on the Bem Sex Role Inventory more frequently than subjects classified as Androgynous, Feminine, or Undifferentiated.

H_{1d}: Subjects classified as Undifferentiated by their scores on the Bem Sex Role Inventory will report mothers classified as Undifferentiated on the Bem Sex Role Inventory more frequently than subjects classified as Androgynous, Feminine, or Masculine.

Sex Role for Self and
Perceived Sex Role
for Father

H_0: No relationship will exist between the subjects' categories scored on the Bem Sex Role Inventory and their fathers' categories scored on the Bem Sex Role Inventory according to subjects' reports.

H_{1a}: Subjects classified as Androgynous by their scores on the Bem Sex Role Inventory will report fathers classified as Androgynous on the Bem Sex Role Inventory more frequently than subjects classified as Feminine, Masculine, or Undifferentiated.

H_{1b}: Subjects classified as Feminine by their scores on the Bem Sex Role Inventory will report fathers classified as Masculine on the Bem Sex Role Inventory more frequently than subjects classified as Androgynous, Masculine, or Undifferentiated.

H_{1c}: Subjects classified as Masculine by their scores on the Bem Sex Role Inventory will report fathers classified as Feminine on the Bem Sex Role Inventory more frequently than subjects classified as Androgynous, Feminine, or Undifferentiated.

H_{1d}: Subjects classified as Undifferentiated by their scores on the Bem Sex Role Inventory will report fathers classified as Undifferentiated on the Bem Sex Role Inventory more frequently than subjects classified as Androgynous, Masculine, or Feminine.

Analysis of the Data

Some of the variables in this study were discrete in nature and some were interval variables. Statistical techniques were chosen on the basis of the type of variable, the questions asked in the hypotheses, and the size of the samples. Three different types of statistics were used to analyze the study's data and are described in the following sections.

Tests of Relationship

Pearson product-moment correlation was used in one section for those hypotheses which predicted relationships among interval variables such as subjects' self-esteem and perceptions of parents' behaviors. Six such hypotheses were tested, with subjects' self-esteem as the outcome variable, and their perceptions of each parent's self-esteem, their perceptions of each parent's warmth, and of each parent's cognitive involvement as the predictor variables.

Chi-square analysis was used for those hypotheses which predicted relationships between the discrete variables, i.e., the sex role categories of the daughters and the sex role categories of the parents established by the subjects' perceptions using the Bem Sex Role Inventory. This technique, testing for the statistical independence of two variables, was applied to eight hypotheses in this study, all using the subjects' sex role categories as one variable and each parent's sex role category as the other variable.

Analysis of Variance

A series of one-way analyses of variance followed by *t* tests of planned comparisons was used for those hypotheses aimed at differences among the four sex role groups of subjects established by their scores on the Bem Sex Role Inventory. Seventeen of the study's hypotheses were tested in this manner, with the subjects' sex role categories as the independent variable and subjects' self-esteem, parents' self-esteem, parents' cognitive involvement, and parents' warmth as the separate dependent variables (measured through the subjects' perceptions).

To meet the assumption of independence within groups, subjects were required to complete the questionnaires without interacting with one another. The comparison groups are independent of one another as well because, for example, someone placed into the Androgynous category by virtue of her scores on the Bem Sex Role Inventory cannot also be placed into one Masculine category. Thus, each subject is placed into one and only one category, independent of the other categories.

The samples analyzed here are assumed to be normal, meeting one of the assumptions for analysis of variance. The sample sizes of 96 and 97 are sufficiently large to conclude that the distributions of scores approach normality (by the Central Limit Theorem), even though the samples were not randomly drawn from the population of Michigan State University's undergraduate women.

Because there were not equal cell sizes in the four subgroups of subjects' sex role category, the assumption of homogeneity of variance across groups had to be assured in another manner. As a

rule of thumb, the population value can be assumed to be approached by having an n of subjects in each cell which is ten times the number of dependent variables. Because all the analyses of variance in the present study were univariate in nature and were therefore done with only one dependent variable, the desired minimum number of subjects per cell was 10. The smallest cell size in this study was 15, which exceeded this value. Therefore, it was held, although tentatively, that the variances found in these samples should approximate the values found in the population. The fact that this study had unequal cell sizes should not have provided variance values which were at odds with the underlying assumption of a homogeneity of variance.

Summary

A sample of 193 undergraduate women at Michigan State University in a variety of majors was drawn for this study. These volunteer subjects were randomly divided into two groups for the purpose of cross-validating the analysis of the first group's responses with the analysis of the second group. The study was primarily descriptive, with analytic features--the set of hypotheses being tested. The hypotheses were divided into seven categories: sex role and self-esteem; subjects' self-esteem and perceived parental self-esteem; self-esteem and parents' cognitive involvement; self-esteem and parents' warmth; sex role and parents' cognitive involvement; sex role and parents' warmth; and subjects' sex roles and perceived parental sex roles. Both the null and research hypotheses were included in this chapter. Three statistical

techniques were used to analyze the data. The Pearson product-moment correlation and Chi-square analysis were included as measures of the relationships between variables. One-way analysis of variance was used to test the hypotheses which predicted differences among the groups established by scores on the Bem Sex Role Inventory.

CHAPTER IV

INSTRUMENTATION

In this chapter the instruments used in the current study are described, the manner in which they were used in the study is outlined, and the reliabilities of each are presented. Because the cross-validation model was used there was the opportunity to modify the scales in an attempt to strengthen their reliability. The effort required to establish the reliabilities of the instruments for this particular sample was seen as beneficial for the following reasons:

1. Although the Bem Sex Role Inventory (BSRI) as a self-report measure has been used frequently, and Bem herself has reported very good scale reliabilities, the study presented here required subjects to use the Bem to report on others' behavior (parents) as well as their own. The modified use of the BSRI seemed to justify further work on the instrument's reliability.
2. The Parent Behavior Form (PBF) has not been used frequently, although Worell and Worell (see Note 1) have reported good reliabilities for the PBF. In the current study, however, the instructions for completing the instrument were modified enough to warrant a check on its reliability with this sample.

Cross Validation

On the Bem Sex Role Inventory and Parent Behavior Form a general hypothesis was made that by eliminating some of the less reliable

items--determined by the reliability procedures on the validation group--the reliabilities of the scales of these instruments could be improved for the cross-validation group. For example, if three items of the BSRI Femininity Scale were shown to have low item-total correlations and the reliability would increase if these items were removed for the validation group, it was predicted that the reliability for the cross-validation group would also increase if these items were removed. In order to test the prediction the following steps were taken:

1. The reliabilities for all the scales of the BSRI and PBF were computed for the validation group.
2. Using the criteria for elimination (see Figure 4.1) described in the next section, items were chosen to be eliminated for the next step.
3. The reliabilities for all the modified scales of the BSRI and PBF were computed for the cross-validation.
4. The reliabilities for the modified scales of the cross-validation group were compared to the reliabilities for the total scales of the validation group.
5. If the reliability of the modified scale in the cross-validation group was <u>not</u> higher than the reliability of the total scale in the validation group, reliability on the total scale was computed for the cross-validation group.

Thus, the analyses of the two sample groups were done using slightly different versions of the same scales in some instances. That is, if the modified scale was actually more reliable in the cross-validation

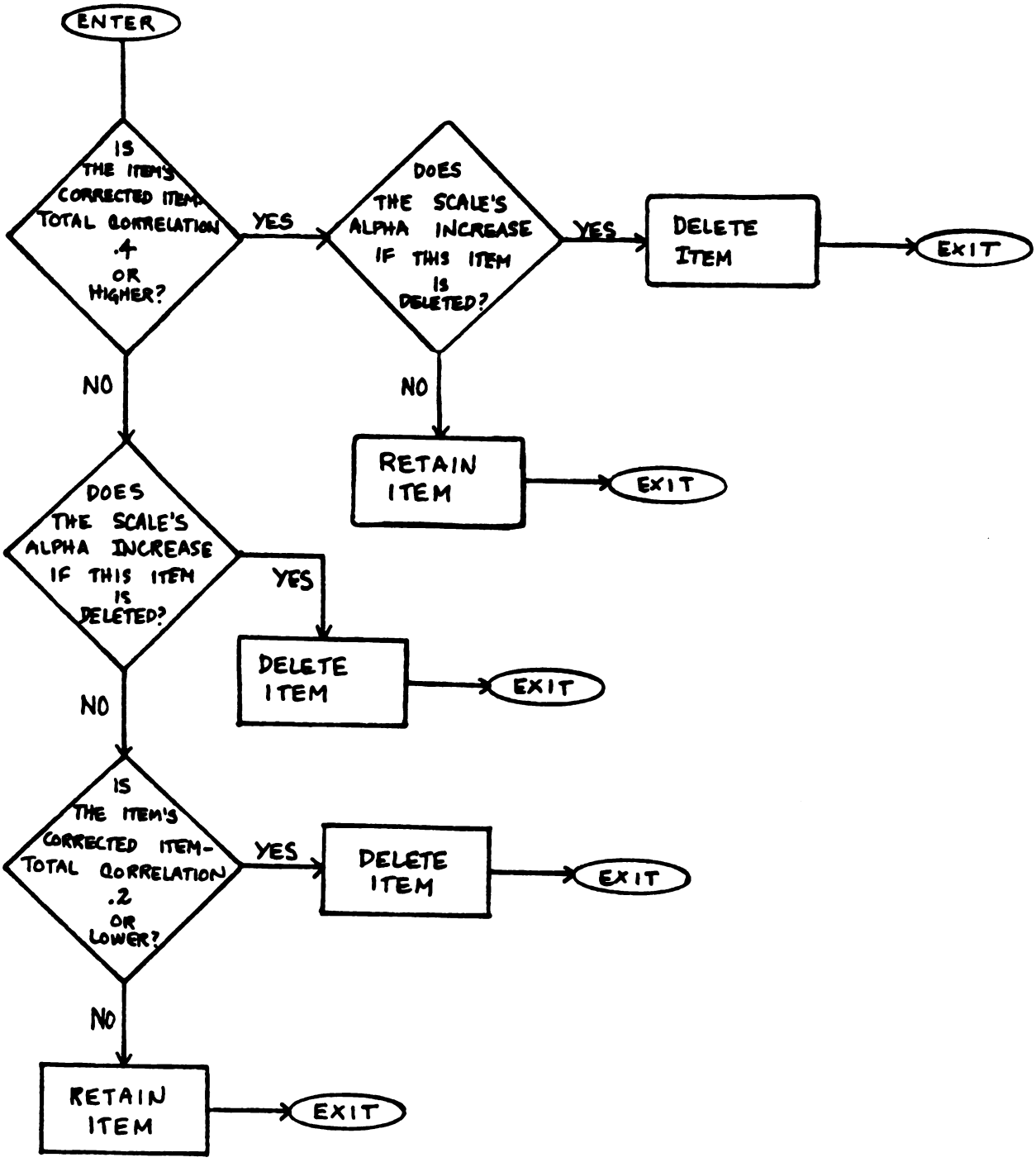

Fig. 4.1. Decision Model for the Elimination of Individual Scale Items

group, it was used to analyze the cross-validation group's data. If not, then the data from both the validation and the cross-validation groups were analyzed using the full scales (see Figure 4.2).

Criteria for Eliminating Scale Items

Two statistics computed in the Statistical Package for the Social Sciences (Nie, et al., 1970) program called Reliability were used in the process of eliminating items: "Corrected item-total correlation," and "Alpha if item deleted." More emphasis was placed on the latter than the former, however, because reliability of a scale depends on its length as well as the strength of its individual items. Therefore, even if the corrected item-total correlation was low, removing the item would cause the alpha for the scale to decrease in some instances. As might be expected, the decrease occurred more frequently in the shorter scales, i.e., nine items, than in the longer scales, i.e., 20 items. In general, a corrected item-total correlation of .4 or higher and a decrease in alpha if the item were to be deleted was cause for retaining an item (see Figure 4.1). If an item had a corrected item-total correlation lower than .4 and the scale's alpha would increase if that item were deleted, it was marked for elimination in the cross-validation froup. In cases in which the scale alpha would <u>increase</u> if the item were deleted, but the corrected item-total correlation was higher than .4, the item was still eliminated. In cases in which the corrected item-total correlation was below .4 but the scale's alpha would <u>decrease</u> if the item were deleted, the item was retained, unless the corrected item-total correlation was

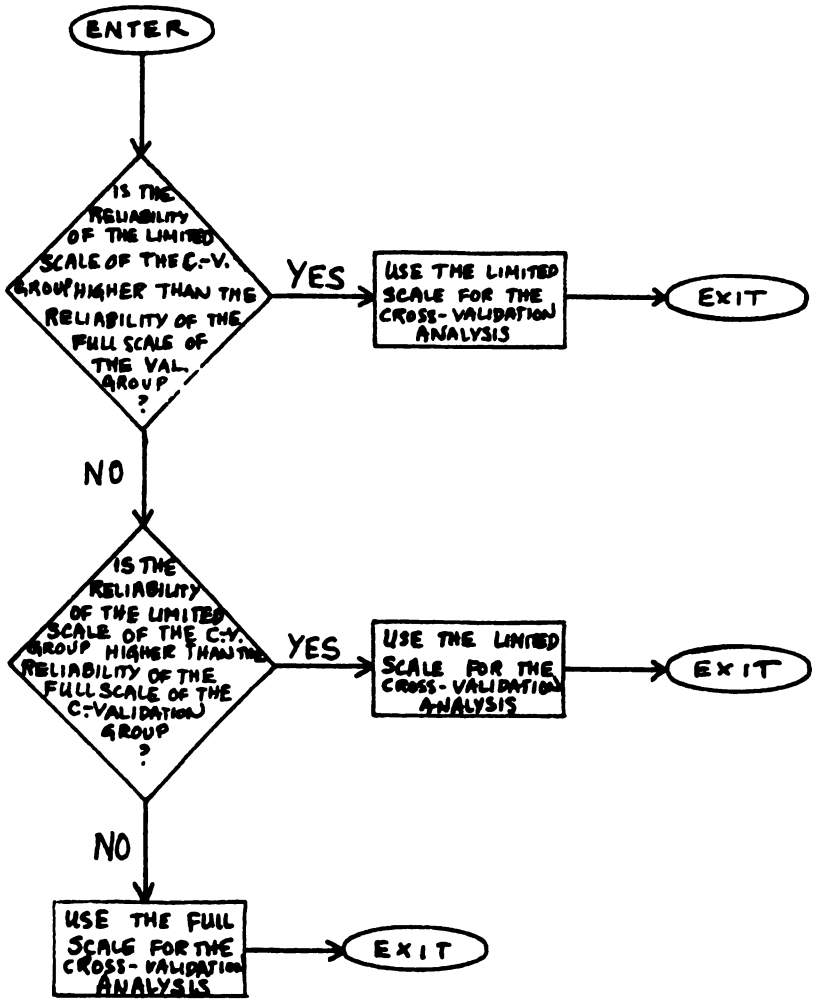

Fig. 4.2. Decision Model for Choice of Scale to Use in Cross-Validation Group Analysis

very low--.2 or less. The scale items, their corrected item-total correlations and "alpha if item deleted" are presented in Appendix D for both the Bem Sex Role Inventory and the Parent Behavior Form, and both sample groups.

Presentation of Instruments to Subjects

Subjects filled out the questionnaire in the following order:

1. Demographic Information Sheet
2. Family Information Questionnaire
3. Bem Sex Role Inventory for Self
4. Rosenberg Self Esteem Inventory for Self
5. Parent Behavior Form for [First Parent]
6. Bem Sex Role Inventory for [First Parent]
7. Rosenberg Self Esteem Inventory for [First Parent]
8. Parent Behavior Form for [Second Parent]
9. Bem Sex Role Inventory for [Second Parent]
10. Rosenberg Self Esteem Inventory for [Second Parent]

The fatigue factor on this questionnaire probably was substantial, given that there were 503 items, requiring greater than an hour to complete. To offset this factor half of the subjects filled out the PBF, BSRI, and RSEI for their mothers first and their fathers second; the second half of the subjects received questionnaires in which the measures on father were first and measures on mother were second. The two sequence patterns were represented in equal proportion in the two sample groups used for analysis.

Bem Sex Role Inventory (BSRI)

The BSRI as it was presented to the subjects for rating themselves and each of their parents can be found in Appendix E. As noted in Chapter II this instrument is composed of 60 items: 20 feminine stereotype adjectives, 20 masculine stereotype adjectives, and 20 gender-neutral adjectives (ten positive, ten negative). In the study described here, the 20 gender-neutral items were not used in the analysis. Bem has used these items as a Social Desirability scale, and these items were retained in this study for their balancing effect in the instrument. The items were presented to subjects in a balanced format, using a repeating sequence of masculine, feminine, and gender-neutral items. Subjects rated themselves and each of their parents using a seven-point scale for each adjective or adjectival phrase (see Appendix E). Subjects used a computer scoring sheet to mark their ratings, a format with which nearly all Michigan State University students are familiar.

Bem Sex Role Inventory Scale Reliabilities

With the exception of a few items, the BSRI scales were highly reliable for the subjects' descriptions of themselves and each of their parents. The high reliability is consistent with earlier findings about the internal consistency of the BSRI scales. Bem (1974) reported reliability in two separate samples of .86 and .86 for the Masculinity scale and .80 and .82 for the Femininity scale. Appendix D contains the list of items for the Masculine and Feminine scales, with the corresponding "Corrected item-total correlations" and "Alpha if item deleted." Tables 4.1 and 4.2 contain lists of the Masculine and Feminine scale items and indicate

TABLE 4.1

BEM SEX ROLE INVENTORY MASCULINE ITEMS,
SAMPLE RELIABILITY SUMMARY

ITEM	SUBJECT OF SCALE		
	Self	Mother	Father
Self-reliant	*	*	
Defends own beliefs	*	*	*
Independent	*	*	*
Athletic			
Assertive	*	*	*
Strong personality	*	*	*
Forceful	*	*	*
Analytical		*	*
Has leadership abilities	*	*	*
Willing to take risks	*	*	*
Makes decisions easily		*	*
Self-sufficient	*	*	*
Dominant	*	*	*
Masculine			*
Willing to take a stand	*	*	*
Aggressive	*	*	*
Acts as a leader	*	*	*
Individualistic	*	*	*
Competitive	*	*	*
Ambitious	*	*	*

*Indicates acceptable reliability level.

TABLE 4.2

BEM SEX ROLE INVENTORY FEMININE ITEMS,
SAMPLE RELIABILITY SUMMARY

ITEM	SUBJECT OF SCALE		
	Self	Mother	Father
Yielding	*	*	*
Cheerful	*	*	*
Shy			
Affectionate	*	*	*
Flatterable		*	
Loyal	*	*	*
Feminine	*	*	
Sympathetic	*	*	*
Sensitive to the needs of others	*	*	*
Understanding	*	*	*
Compassionate	*	*	*
Eager to soothe hurt feelings	*	*	*
Soft-spoken			
Warm	*	*	*
Tender	*	*	*
Gullible			
Childlike			
Does not use harsh language			
Loves children	*	*	*
Gentle	*	*	*

* Indicates acceptable reliability level.

whether a particular item was eliminated for the process of testing for an increase in reliability in the cross-validation group.

As can be seen in Table 4.1, one item in the Masculine scale, "Athletic," had low enough item-total correlations for Self, Mother, and Father that it was predicted that all three Masculine scales in the cross-validation group would be more reliable than the validation group if this item were removed. Other items were found to be unreliable, but only "Athletic" was unreliable for all three, Self, Mother, and Father. Not too surprisingly, "Masculine" was not reliable when subjects were describing themselves or their mothers. In general there were more items with low reliability in the Masculine scale when the women were describing themselves than when they were describing their parents.

In the Feminine scale for the validation group, five items had low reliability for the group for Self, Mother, and Father: "Shy," "Soft-spoken," "Gullible," "Childlike," "Does not use harsh language" (Table 4.2). "Feminine" was not reliable when subjects were describing their fathers, and "Flatterable" was not reliable when subjects were describing themselves and their fathers.

Medians of the Masculine and Feminine Scales

In the analysis of the data obtained through the Bem Sex Role Inventory the median-split technique as described in Chapter II was used to define the categories of the variable, "sex role." That is, "Androgynous" includes subjects scoring above the median on both scales, "Undifferentiated" includes subjects scoring below the median on

both scales, and the two sex-typed categories ("Masculine" and "Feminine") include subjects scoring above the median on one but not the other of the scales. Rather than assume that the medians found in subjects' reports of themselves would be similar to both their reports of their mothers and their reports of their fathers, separate medians were computed for Self, Mother, and Father on the BSRI. These medians were also computed separately for the validation and cross-validation groups, and can be found in Table 4.3. As can be seen in this table, the medians for the cross-validation group were computed for the scales using both the full number of items and the limited number of items (the limitations suggested by the validation group's scale reliabilities.)

Results of Eliminating Items

In the reliabilities obtained for the Masculine and Feminine scales for Self, Mother, and Father on the BSRI for the cross-validation group's subjects, only the Masculine scale for Father failed to improve in its reliability by the elimination of the predicted items. The reliability for this scale remained essentially the same--.91--for the cross-validation group whether or not the predicted items ("Self-reliant" and "Athletic") were removed. The means, standard deviations and reliabilities for the two scales, and both half samples can be found in Table 4.4.

TABLE 4.3

BEM SEX ROLE INVENTORY SCALE MEDIANS
BASED ON COLLEGE WOMEN'S RESPONSES

SAMPLE INDIVIDUAL	FEMININE SCALE Minimum Score	FEMININE SCALE Maximum Score	FEMININE SCALE Median	MASCULINE SCALE Minimum Score	MASCULINE SCALE Maximum Score	MASCULINE SCALE Median
VALIDATION GROUP*						
Self	20	140	103.5	20	140	95.4
Mother	20	140	103.5	20	140	92.5
Father	20	140	87.0	20	140	114.3
CROSS VALIDATION GROUP** (all items)						
Self	20	140	102.3	20	140	96.1
Mother	20	140	102.0	20	140	94.0
Father	20	140	87.6	20	140	107.8
CROSS VALIDATION GROUP** (limited items)						
Self	14	98	79.5	16	112	80.2
Mother	15	105	84.5	18	126	89.2
Father	13	91	65.6	18	126	97.0

* n = 96
**n = 97

TABLE 4.4

MEANS, STANDARD DEVIATIONS, AND RELIABILITIES FOR
THE MASCULINE AND FEMININE SCALES OF
THE BEM SEX ROLE INVENTORY

SAMPLE INDIVIDUAL	FEMININE SCALE				MASCULINE SCALE			
	Number of Items	M	SD	Reliability*	Number of Items	M	SD	Reliability*
VALIDATION GROUP								
Self	20	102.65	10.85	.81	20	95.15	15.21	.89
Mother	20	100.96	15.44	.90	20	94.12	19.25	.89
Father	20	85.16	16.17	.93	20	114.47	16.50	.92
CROSS-VALIDATION GROUP (all items)								
Self	20	102.24	9.01	.74	20	95.39	15.79	.89
Mother	20	100.79	13.12	.87	20	91.14	15.81	.88
Father	20	86.75	14.11	.84	20	105.70	17.30	.91**
CROSS-VALIDATION GROUP (limited items)								
Self	14	78.68	7.24	.79**	16	79.26	13.54	.90**
Mother	15	83.47	12.13	.92**	18	86.53	15.39	.89**
Father	13	65.02	12.64	.92**	18	95.44	15.99	.91

* Standardized item alpha.
**Scale used in analysis of second half sample data (see Figure 4.2).

The computation of two sets of reliabilities on the BSRI scales was done only on the cross-validation group data. It was assumed that because the criteria for elimination included the "Alpha if item deleted" statistic computed on the validation group data, the scale for the validation group would improve if the items showing an increase in alpha-if-deleted were removed. In general, it can be said that the prediction that the scales' reliabilities would improve through the elimination of certain items was supported because this was true in five of the six cases. The support found for this prediction is meaningful, but not critical because, as can be seen in Table 4.4, the reliabilities for all of the scales were high in the beginning. But the information may have meaning for modification of the BSRI in future studies.

Parent Behavior Form (PBF)

The PBF is composed of 135 items, all short statements, which are divided into 15 scales of nine items each. Subjects filled out the entire form twice, once for Mother and once for Father, and Appendix F contains sample copies of the PBF. The items were presented to subjects in balanced fashion with a repeating sequence of items from the first through fifteenth scales. Subjects rated each parent on each item using a three point sacle (see Appendix F) and a computer scoring sheet. In earlier studies subjects were asked to report on their parents' behavior at the time that the subjects could remember being 16. In the current study, however, subjects were not asked to recall an earlier age, but to describe their parents in general.

Only nine of the PBF's original 15 scales were used in the analysis of data in the current study. All 15 scales were given to the women of this study to preserve the balance of the instrument. The nine scales chosen for use in analysis were those reported by Kelly (1975) to compose a factor of warmth-versus-rejection and a factor of parental cognitive involvement. The nine scales used in the current study are: Warmth (WR), Active Involvement (AI), Egalitarianism (EG), Cognitive Independence (CI), Cognitive Curiosity (CU), Cognitive Competence (CC), Achievement Control (AC), Hostile Control (HC), and Rejection (RJ). The warmth-versus-rejection factor (WVR) is formed by adding the scores from Warmth, Active Involvement, Egalitarianism, and Cognitive Independence scales and by subtracting the scores from the Hostile Control and Rejection scales. The parental-cognitive-involvement factor (COG) is formed by adding the scores from the Cognitive Independence, Cognitive Competence, Cognitive Curiosity, and Achievement Control scales. One scale, Cognitive Independence, is found in both factors. A third factor, parental control, was found by Kelly (1975) but was not used in the current study. Table 4.5 is a summary of the scales of which the two factors used in the analysis of data are composed.

TABLE 4.5

SUMMARY OF PARENT BEHAVIOR FORM SCALES WHICH FORM THE FACTORS OF WARMTH-VERSUS-REJECTION AND PARENTAL COGNITIVE INVOLVEMENT USED IN THE ANALYSIS OF DATA

FACTOR	WEIGHT	SCALES
WARMTH VS. REJECTION (WVR)	+	Warmth (WR)
	+	Active Involvement (AI)
	+	Egalitarianism (EG)
	+	Cognitive Independence (CI)
	-	Hostile Control (HC)
	-	Rejection (RJ)
PARENTAL COGNITIVE INVOLVEMENT (COG)	+	Cognitive Independence (CI)
	+	Cognitive Competence (CC)
	+	Cognitive Curiosity (CU)
	+	Achievement Control (AC)

Parent Behavior Form
Scale Reliabilities

Six of the nine scales completed by the women of this study for each of their parents were highly reliable (R > .80) for both parents. Three scales, Cognitive Competence, Achievement Control, and Rejection had reliabilities (standardized item alpha) which were below .80. The lowest was a standardized item alpha of .58 in the validation sample's Achievement Control scale for Mother (see Table 4.6). After computing the reliabilities of the PBF scales for the validation group only four of the nine scales were predicted to increase in reliability through removal of items. Two of the scales were predicted to show an increase for both Mother and Father, and two were predicted to increase for Father only. Appendix D contains the list of the scales and their

TABLE 4.6

MEANS, STANDARD DEVIATIONS AND RELIABILITIES FOR THE PARENT BEHAVIOR FORM'S SCALES, MOTHER AND FATHER

SCALE	MOTHER										FATHER									
	VALIDATION GROUP (9 Items)			CROSS-VALIDATION GROUP (9 Items)			CROSS-VALIDATION GROUP (Limited Items)				VALIDATION GROUP (9 Items)			CROSS-VALIDATION GROUP (9 Items)			CROSS-VALIDATION GROUP (Limited Items)			
	M	SD	Rel.*	M	SD	Rel.*	#Items	M	SD	Rel.*	M	SD	Rel.*	M	SD	Rel.*	#Items	M	SD	Rel.*
WARMTH	23.04	4.37	.91	23.21	3.85	.88	8	20.87	3.38	.86	21.27	4.81	.91	21.18	4.48	.89	8	18.74	4.16	.89
ACTIVE INVOLVEMENT	21.39	4.59	.88	21.56	4.78	.89	8	19.44	4.37	.90	19.08	5.14	.90	19.18	4.82	.88	7	15.09	3.98	.86
EGALI-TARIANISM	23.01	3.95	.87	23.17	3.39	.81		----			21.45	4.45	.87	21.99	3.86	.83		----		
COGNITIVE INDEPENDENCE	22.19	4.04	.86	22.60	3.79	.86		----			21.59	4.41	.88	22.28	3.82	.83		----		
COGNITIVE CURIOSITY	18.89	4.58	.85	19.90	4.48	.83		----			19.16	4.43	.81	20.47	4.23	.80	8	18.35	3.76	.78
COGNITIVE COMPETENCE	18.68	3.62	.67	20.07	3.97	.74		----			18.09	4.01	.76	18.62	4.11	.75		----		
ACHIEVEMENT CONTROL	14.24	2.95	.58	14.88	4.01	.78		----			14.99	3.36	.67	15.05	4.13	.79		----		
HOSTILE CONTROL	12.21	4.10	.89	12.47	3.86	.87		----			11.58	3.44	.84	11.92	3.88	.88	8	10.72	3.56	.87
REJECTION	11.11	2.50	.74	11.41	2.93	.79		----			11.26	2.93	.77	11.40	3.10	.82		----		

*Standardized Item Alpha.

items and their corresponding "Corrected item-total correlations" and "Alpha if item deleted." Because the scales consist of nine items each, eliminating items was not as likely to increase alpha for the PBF as it was with the BSRI. As noted earlier, the alpha is dependent on both the length of a scale as well as the strength of its items.

Results of Eliminating Items

In the computation of reliabilities for the PBF scales for the cross-validation group, only the Active Involvement scale for Mother showed an increase through the elimination of an item. The reliability of the Warmth scale for Father remained essentially the same (.89) when computed with the full nine or the predicted eight items. The remainder of the scales showed a decrease in reliability if items were eliminated. The means, standard deviations, and reliabilities of the nine PBF scales used in the study for both samples groups are presented in Table 4.6.

For the analysis of the cross-validation group's data, only those PBF scales which had a reliability of .80 or higher were used. In addition, the scales which had decreased in reliability if items were removed were used with the full number of items (see Figure 4.2). The two factors were thus modified slightly. In the analysis of cross validation group data, the warmth-versus-rejection factor (WVR) included Warmth, Egalitarianism, and Cognitive Independence, minus Hostile Control for Mother. Eight items of the Active Involvement scale were also added to the WVR factor for Mother. In the cross-validation analysis the WVR factor for Father included the Active

Involvement, Egalitarianism, and Cognitive Independence scales, minus Hostile Control and Rejection, with eight items of the Warmth scale also added. For both Mother and Father the parental cognitive involvement factor (COG) included the Cognitive Independence and Cognitive Curiosity scales. In sum, six of the nine PBF scales used in the current study were found to be highly reliable (R > .80), and the remaining three scales can be characterized as moderately reliable in both samples groups.

The Rosenberg Self-Esteem Inventory (RSEI)

The RSEI consists of 10 sentences to which the women responded using a four point scale. The subjects completed the RSEI once for themselves, and once for each of their parents. The pronouns in the instrument's statements were changed accordingly, because Rosenberg's original version was all first-person statements. Appendix G contains the three versions as the women received them. Five of the RSEI items are scored as high self-esteem if marked 3 or 4, whereas the other five statements, if marked 3 or 4 it would indicate low self-esteem. Initially, Rosenberg (1965) used a Guttman technique to score the inventory. However, it was decided that for the current study the items would be scored separately and a check done on the instrument's reliability with that method of scoring.

Because half of the items are negative, and half are positive, the women's actual scores had to be recoded during the analysis so that they would be unidirectional, and so that high scores would indicate

high self-esteem. After completing the recoding process, the reliabilities were computed and found to be acceptable for all three versions of the RSEI administered to the subjects of this study. None of the standardized item alphas fell below .85. Table 4.7 presents the means, standard deviation, and reliabilities for both half samples, and the Self, Mother, and Father versions of the RSEI.

TABLE 4.7

MEANS, STANDARD DEVIATIONS, AND RELIABILITIES OF THE ROSENBERG SELF-ESTEEM INVENTORY FOR SELF, MOTHER, AND FATHER, VALIDATION AND CROSS-VALIDATION GROUPS

SAMPLE INDIVIDUAL	M	SD	Reliability*
VALIDATION GROUP			
Self	32.06	4.57	.88
Mother	32.72	5.56	.85
Father	33.07	5.73	.91
CROSS-VALIDATION GROUP			
Self	31.83	4.59	.85
Mother	31.74	6.08	.89
Father	33.41	5.96	.89

*Standardized item alpha.

Summary

Extensive work was done to establish sample reliabilities on the three major instruments used in the current study. The three instruments, the Bem Sex Role Inventory (BSRI), the Parent Behavior

Form (PBF), and the Rosenberg Self-Esteem Inventory (RSEI) were examined separately for the validation and cross-validation samples. The results from the first group were used to predict improvement in the second group's reliabilities through elimination of items in the BSRI and PBF which were not correlating well enough with the other scale items. The length of the scales was also considered in the elimination of items. No items were eleminated from the RSEI.

The two scales used from the BSRI were Masculinity and Femininity. Data was obtained for Self, Mother, and Father from each woman in the study. All of the scales except Masculinity for Father improved in the cross-validation group reliabilities through the elimination of a few items. The improved scales were used in the analysis of the cross-validation group's data. The reliability figures of all of the scales were high (none below .80) prior to the elimination of any items, indicating the strength of the BSRI as a whole.

Nine of the Parent Behavior Form's 15 scales were used in the present study. The scales used were those which had been described in earlier research as the components of a warmth-versus-rejection factor and a parental cognitive involvement factor. Only four of the nine scales were predicted to make any improvement in this study through the elimination of items, and only one of these four did, in fact, improve for the cross-validation group. Six of the nine PBF scales were highly reliable for the current sample and three were moderately reliable. If a scale's standardized item alpha was not at least .80 in the cross-validation group, it was not used in the analysis of the cross-validation group's data.

The Rosenberg Self-Esteem Inventory, which contains 10 items, was found to be highly reliable for both the validation and cross-validation groups. Each item was scored separately, rather than in clusters, and the items were recoded in order to have high scores represent high self-esteem. The summary of information about the findings on the three instruments used in the current study are presented in Table 4.8.

TABLE 4.8

SUMMARY OF INSTRUMENTATION FINDINGS, BEM SEX ROLE INVENTORY (BSRI), PARENT BEHAVIOR FORM (PBF), AND ROSENBERG SELF-ESTEEM INVENTORY (RSEI)

INSTRUMENT SCALE SUBJECT OF SCALE	Was the validation group α .80 or higher?	Were items chosen for elimination because of validation group's results?	Did item elimination increase scale's α for the cross-validation group?	Was the cross-validation group α .80 or higher?	Which scale was used in the analysis of cross-validation group data?
BSRI					
FEMININITY					
Self	yes	yes	yes	no (.79)	modified
Mother	yes	yes	yes	yes	modified
Father	yes	yes	yes	yes	modified
MASCULINITY					
Self	yes	yes	yes	yes	modified
Mother	yes	yes	yes	yes	modified
Father	yes	yes	no	yes	full
PBF (Factor)					
WARMTH (WVR)					
Mother	yes	yes	no	yes	full
Father	yes	yes	some	yes	modified
ACTIVE INVOLVEMENT (WVR)					
Mother	yes	yes	yes	yes	modified
Father	yes	yes	no	yes	full
EGALITARIANISM (WVR)					
Mother	yes	no	--	yes	full
Father	yes	no	--	yes	full
COGNITIVE INDEPENDENCE (COG, WVR)					
Mother	yes	no	--	yes	full
Father	yes	no	--	yes	full
COGNITIVE CURIOSITY (COG)					
Mother	yes	no	--	yes	full
Father	yes	yes	no	yes	full
COGNITIVE COMPETENCE (COG)					
Mother	no (.67)	no	--	no (.74)	not used
Father	no (.76)	no	--	no (.75)	not used
ACHIEVEMENT CONTROL (COG)					
Mother	no (.58)	no	--	no (.78)	not used
Father	no (.67)	no	--	no (.79)	not used
HOSTILE CONTROL (WVR)					
Mother	yes	no	--	yes	full
Father	yes	yes	no	yes	full
REJECTION (WVR)					
Mother	no (.74)	no	--	no (.79)	not used
Father	no (.77)	no	--	yes	full
RSEI					
Self	yes	no	--	yes	full
Mother	yes	no	--	yes	full
Father	yes	no	--	yes	full

CHAPTER V

RESULTS OF THE ANALYSIS

In the chapter which follows, the hypotheses which were formulated for the study will be restated, in full and symbolic form. Following each hypothesis the results of the statistical tests which were conducted will be presented, with validation and cross-validation groups shown separately. The format of presenting both samples' results together was chosen to aid the reader's understanding of the general cross-validation results. The hypotheses and results will be organized according to the variables studied, as presented in Chapter III, Design of the Study. The null hypothesis will be presented first, and in those cases in which analysis of variance and t tests of contrasts were used, the analysis of variance table will be presented following the null hypothesis. The results of all the hypotheses are summarized in Table 5.1. Finally, the results of the survey (the Family Information Questionnaire, FIQ) given to the women about their relationships with their parents will be presented.

Sex Role and Self-Esteem

A set of hypotheses were formulated about the relationship between the sex role category assigned to the women subjects on the basis of the Bem Sex Role Inventory (BSRI) and the degree of self-esteem they reported. The following null hypothesis was tested:

TABLE 5.1

SUMMARY OF RESULTS OF STUDY OF COLLEGE WOMEN'S SEX ROLE IDENTITY, SELF-ESTEEM, AND PERCEPTIONS OF PARENTS

SYMBOLIC HYPOTHESES	RESULTS	
	Validation Group	Cross-Validation Group
H_0: $SE_A = SE_F = SE_M = SE_U$	$F = 6.38^*$	$F = 5.35^*$
H_{1a}: $SE_A > SE_F, SE_M, SE_U$	$\underline{t} = 2.298^*$	$\underline{t} = 3.134^*$
H_{1b}: $SE_U < SE_A, SE_F, SE_M$	$\underline{t} = 3.165^*$	$\underline{t} = 3.047^*$
H_{1c}: $SE_M > SE_F$	$\underline{t} = 2.541^*$	$\underline{t} = 1.007$
H_0: $SEM_A = SEM_F = SEM_M = SEM_U$	$F = 3.38^*$	$F = 3.53^*$
H_{1a}: $SEM_A > SEM_F, SEM_M, SEM_U$	$\underline{t} = 3.017^*$	$\underline{t} = 1.253$
H_{1b}: $SEM_U < SEM_A, SEM_F, SEM_M$	$\underline{t} = -.325$	$\underline{t} = 3.180^*$
H_0: $SEF_A = SEF_F = SEF_M = SEF_U$	$F = 3.70^*$	$F = 2.04$
H_{1a}: $SEF_A > SEF_F, SEF_M, SEF_U$	$\underline{t} = 3.112^*$	--
H_{1b}: $SEF_U < SEF_A, SEF_F, SEF_M$	$\underline{t} = 1.578$	--
H_0: No relationship between SE & SEM H_1 : Positive relationship between SE and SEM	$r = .23^*$	$r = .24^*$
H_0: No relationship between SE & SEF H_1 : Positive relationship between SE and SEF	$r = .28^*$	$r = .21^*$
H_0: No relationship between SE & COGM H_1 : Positive relationship between SE and COGM	$r = .19^*$	$r = .35^*$

TABLE 5.1--Continued

SYMBOLIC HYPOTHESES	RESULTS: Validation Group	RESULTS: Cross-Validation Group
H_0: No relationship between SE & COGF H_1: Positive relationship between SE and COGF	r = .09	r = .21*
H_0: No relationship between SE & WVRM H_1: Positive relationship between SE and WVRM	r = .31*	r = .33*
H_0: No relationship between SE & WVRF H_1: Positive relationship between SE and WVRF	r = .14	r = .28*
H_0: $COGM_A = COGM_F = COGM_M = COGM_U$	F = 1.31	F = 3.59*
H_{1a}: $COGM_A > COGM_F, COGM_U$	--	$\underline{t}$ = 2.531*
H_{1b}: $COGM_U < COGM_A, COGM_F, COGM_U$	--	$\underline{t}$ = 1.219
H_0: $COGM_A = COGM_M$	--	$\underline{t}$ = 2.092*
H_0: $COGF_A = COGF_F = COGF_M = COGF_U$	F = 3.00*	F = .58
H_{1a}: $COGF_A > COGF_F, COGF_U$	$\underline{t}$ = 2.485*	--
H_{1b}: $COGF_U < COGF_A, COGF_M, COGF_F$	$\underline{t}$ = 2.256*	--
H_0: $COGM_A = COGF_M$	$\underline{t}$ = .150	--
H_0: $WVRM_A = WVRM_F = WVRM_M = WVRM_U$	F = 3.02*	F = 2.74*
H_{1a}: $WVRM_A > WVRM_F, WVRM_M, WVRM_U$	$\underline{t}$ = 2.655*	$\underline{t}$ = 2.396*
H_{1b}: $WVRM_U < WVRM_A, WVRM_F, WVRM_M$	$\underline{t}$ = 1.461	$\underline{t}$ = 1.631

TABLE 5.1--Continued

SYMBOLIC HYPOTHESES	RESULTS	
	Validation Group	Cross-Validation Group
H_0: $WVRF_A = WVRF_F = WVRF_M = WVRF_U$	$F = 1.46$	$F = 3.86^*$
H_{1a}: $WVRF_A > WVRF_F, WVRF_M, WVRF_U$	--	$t = 1.714$
H_{1b}: $WVRF_U < WVRF_A, WVRF_F, WVRF_M$	--	$t = .538$
H_0: No relationship between SRS and SRM	$\chi^2 = 38.42^*$	$\chi^2 = 31.33^*$
H_{1a}: Androgynous Ss report Androgynous mothers	$\chi^2 = 21.03^*$	$\chi^2 = 6.19^*$
H_{1b}: Feminine Ss report Feminine mothers	$\chi^2 = 6.17^*$	$\chi^2 = 2.59$
H_{1c}: Masculine Ss report Masculine mothers	$\chi^2 = 2.32$	$\chi^2 = .05$
H_{1d}: Undifferentiated Ss report Undifferentiated mothers	$\chi^2 = 5.00^*$	$\chi^2 = 16.01^*$
H_0: No relationship between SRS and SRF	$\chi^2 = 23.85^*$	$\chi^2 = 14.80$
H_{1a}: Androgynous Ss report Androgynous fathers	$\chi^2 = 9.97^*$	$\chi^2 = .70$
H_{1b}: Feminine Ss report Masculine fathers	$\chi^2 = .30$	$\chi^2 = .19$
H_{1c}: Masculine Ss report Feminine fathers	$\chi^2 = 1.36$	$\chi^2 = 4.93^{*a}$
H_{1d}: Undifferentiated Ss report Undifferentiated fathers	$\chi^2 = 5.89^*$	$\chi^2 = 2.76$

* $p < .05$

[a] Opposite of the predicted direction.

NOTE: A = Androgynous, F = Feminine, M = Masculine, U = Undifferentiated; SE = Self-Esteem, Self; SEM = Self-Esteem, Mother; SEF = Self-Esteem, Father; COGM = Cognitive Involvement, Mother; COGF = Cognitive Involvement, Father; WVRM = Warmth-vs.-Rejection, Mother; WVRF = Warmth-vs.-Rejection, Father; SRS = Sex Role, Self; SRM = Sex Role, Mother; and SRF = Sex Role, Father.

H_0: No difference will exist among the four groups of subjects [Androgynous (A), Feminine (F), Masculine (M), and Undifferentiated (U)] established by their scores on the BSRI in their scores on the Rosenberg Self-Esteem (SE) Inventory (RSEI).

Stated symbolically:

H_0: $SE_A = SE_F = SE_M = SE_U$

In both the validation and cross-validation groups, the analysis of variance (Table 5.2) produced values which allowed for the rejection of the null hypothesis, and the pursuit of the planned comparisons for the alternate hypotheses. The validation group had an F of 6.38, and the cross-validation group's F was 5.35, both significant at the $p < .05$ level.

TABLE 5.2

ANALYSIS OF VARIANCE OF THE ROSENBERG SELF-ESTEEM INVENTORY SCORES FOR SELF FOR THE FOUR BEM SEX ROLE INVENTORY CATEGORIES OF COLLEGE WOMEN SUBJECTS, VALIDATION AND CROSS-VALIDATION GROUPS

SAMPLE GROUP SOURCE	DF	SS	MS	F
VALIDATION GROUP				
Sex Role Category	3	345.67	115.22	6.38*
Within-groups	82	1482.15	18.08	
Total	85	1827.82		
CROSS-VALIDATION GROUP				
Sex Role Category	3	303.13	101.04	5.35*
Within-groups	83	1568.94	18.90	
Total	86	1872.07		

*$p < .05$

The first of the a priori contrasts tested by the t statistic was conducted for the following alternate hypothesis:

H_{1a}: Subjects classified as Androgynous by their scores on the BSRI will score higher on the RSEI than subjects classified as Feminine, Masculine or Undifferentiated.

The symbolic statement is:

H_{1a}: $SE_A > SE_F, SE_M, SE_U$

In both the validation and cross-validation samples, the comparison of group means yielded significant differences in the predicted direction. In the validation group, $t = 2.298$ ($p < .05$, one-tailed), and in the cross-validation group, $t = 3.134$ ($p < .05$, one-tailed).

The next contrast was planned on the basis of the following hypothesis:

H_{1b}: Subjects classified as Undifferentiated by their scores on the BSRI will score lower on the RSEI than subjects classified as Androgynous, Feminine, or Masculine.

Stated symbolically:

H_{1b}: $SE_U < SE_A, SE_F, SE_M$

In both sample groups, the women categorized as Undifferentiated scored significantly lower on self-esteem than the other three BSRI categories. The validation sample produced at t value of 3.165 ($p < .05$, one-tailed), and the cross-validation group had $t = 3.047$ ($p < .05$, one-tailed).

The last hypothesis which was tested for subjects' sex role and subjects' self-esteem was:

H_{1c}: Subjects classified as Masculine by their scores on the BSRI will score higher on the RSEI than subjects classified as Feminine.

In symbolic form:

H_{1c}: $SE_M > SE_F$

For the validation group, comparison of the means of these two categories of subjects did yield a significant result ($t = 2.541$, $p < .05$, one-tailed). However, the t test of the same contrast in the cross-validation group was not significant at the predicted level ($t = 1.007$). Therefore, the significant finding in the validation group may be spurious.

Sex Role and Parents Self-Esteem

Another set of hypotheses which were tested in this study were formulated around predictions of the women's reports of their parent's self-esteem on the basis of the subjects' own sex role categories.

Sex Role and Mothers' Self-Esteem

The first of the null hypotheses about parents was:

H_0: No difference will exist among the four groups of subjects established by scores on the BSRI in the Self-Esteem scores (SEM) they ascribe to their mothers on the RSEI.

In both sample groups, the analysis of variance (Table 5.3) of the means of the four groups of subjects produced by BSRI scores generated significant values. In the validation group, the null hypothesis was rejected because of the F value of 3.38 ($p < .05$), and in the cross-validation sample, the sex role groups were assumed to be different because $F = 3.53$ ($p < .05$).

TABLE 5.3

ANALYSIS OF VARIANCE OF THE ROSENBERG SELF-ESTEEM INVENTORY SCORES FOR MOTHER FOR THE FOUR BEM SEX ROLE INVENTORY CATEGORIES OF COLLEGE WOMEN SUBJECTS, VALIDATION AND CROSS-VALIDATION GROUPS

SAMPLE GROUP SOURCE	df	SS	MS	F
VALIDATION GROUP				
Sex Role Category	3	293.73	97.91	3.38*
Within-groups	84	2434.26	28.98	
Total	87	2727.99		
CROSS-VALIDATION GROUP				
Sex Role Category	3	375.17	125.06	3.53*
Within-groups	84	2978.27	35.46	
Total	87	3353.44		

*$p < .05$

Planned contrasts were also tested to compare subjects' reports of their mothers' self-esteem on the basis of the subjects' own sex role categories. The first alternate hypothesis was:

H_{1a}: Subjects classified as Androgynous by their scores on the BSRI will report higher levels of self-esteem on the RSEI for their mothers than subjects classified as Feminine, Masculine, or Undifferentiated.

Stated symbolically:

H_{1a}: $SEM_A > SEM_F, SEM_M, SEM_U$

In the validation sample, the comparison of group means indicated that Androgynous subjects reported higher self-esteem for their mothers than the other three groups ($t = 3.017$, $p < .05$, one-tailed). However, the cross-validation group did not produce the same results when group

means were compared (t = 1.253), therefore, the Androgynous category cannot be said to report higher maternal self-esteem than the other three sex role categories for the cross-validation sample.

Another hypothesis formulated about sex role category and maternal self-esteem was:

H_{1b}: Subjects classified as Undifferentiated by their scores on the BSRI will report lower levels of self-esteem on the RSEI for their mothers than subjects classified as Androgynous, Feminine, or Masculine.

The symbolic form is:

H_{1b}: $SEM_U < SEM_A, SEM_F, SEM_M$

In the validation sample the test of the contrast did not show that Undifferentiated subjects reported lower self-esteem for their mothers than the other three categories (t = -.325). However, in the cross-validation sample the t value obtained was significant (t = 3.180, $p < .05$, one-tailed), indicating that the Undifferentiated subjects reported significantly lower levels of maternal self-esteem than the other three sex role categories.

Sex Role and
Fathers' Self-Esteem

Similar to the hypotheses about subjects' self-esteem and their mothers' self-esteem were the following hypotheses about the women's self-esteem and their reports of their fathers' self-esteem. The null hypothesis was:

H_0: No difference will exist among the four groups of subjects

established by scores on the BSRI in the self-esteem (SEF) scores they ascribe to their fathers on the RSEI.

Stated in symbolic form:

$$H_0: SEF_A = SEF_F = SEF_M = SEF_U$$

Through the results of the analysis of variance (Table 5.4) the four sex role groups of the validation group have been shown to be different ($F = 3.70$, $p < .05$). The four groups were not shown to be significantly different in the cross-validation group subjects' reports of paternal self-esteem ($F = 2.04$).

TABLE 5.4

ANALYSIS OF VARIANCE OF THE ROSENBERG SELF-ESTEEM INVENTORY SCORES FOR FATHER FOR THE FOUR BEM SEX ROLE INVENTORY CATEGORIES OF COLLEGE WOMEN, VALIDATION AND CROSS-VALIDATION GROUPS

SAMPLE GROUP SOURCE	df	SS	MS	F
VALIDATION GROUP				
Sex Role Category	3	336.78	112.29	3.70*
Within-groups	85	2581.85	30.38	
Total	88	2918.72		
CROSS VALIDATION GROUP				
Sex Role Category	3	218.87	72.96	2.04*
Within-groups	81	2899.91	35.80	
Total	84	3118.78		

*$p < .05$

Because the analysis of variance of father's self-esteem by sex role category was not significant for the cross-validation sample, the t tests of the predicted contrasts are not relevant. In the validation group, the first alternate hypothesis to be tested for these two variables was:

H_{1a}: Subjects classified as Androgynous by their scores on the BSRI will report higher levels of self-esteem on the RSEI for their fathers than subjects classified as Feminine, Masculine, or Undifferentiated.

In symbolic form:

H_{1a}: $SEF_A > SEF_F, SEF_M, SEF_U$

The t test comparing group means did produce a significant value ($t = 3.112$, $p < .05$, one-tailed), indicating that in the validation group, the Androgynous women reported higher levels of self-esteem for their fathers than the other three sex role categories.

The next alternate hypothesis which was tested for the validation group was:

H_{1b}: Subjects classified as Undifferentiated by their scores on the BSRI will report lower levels of self-esteem on the RSEI for their fathers than subjects classified as Androgynous, Feminine, or Masculine.

Stating the hypothesis symbolically:

H_{1b}: $SEF_U < SEF_A, SEF_F, SEF_U$

When the above contrast was tested, the value obtained was not significant ($t = 1.578$). Therefore, neither the validation nor the cross-validation group offered evidence that Undifferentiated subjects would be more likely to report low levels of paternal self-esteem than the Androgynous, Feminine, or Masculine college women.

Subjects' Self-Esteem and Other Parental Variables

A series of hypotheses was tested about the women's self-esteem as affected by parental variables other than sex role. The results of the tests of correlation are shown in Table 5.5, and will be discussed individually in the following sections.

Subjects' Self-Esteem and Perceived Parental Self-Esteem

Two null and alternate hypotheses were tested about the relationship between the women's views of their own self-esteem and their views of each of their parents' self-esteem using the Pearson product-moment correlation statistic. The first of these two sets of hypotheses was:

H_0: No relationship will be found between subjects' self-esteem scores on the RSEI and the self-esteem scores they ascribe to their mothers on the RSEI.

H_1: A positive relationship will be found between subjects' self-esteem scores on the RSEI, and the self-esteem scores they ascribe to their mothers on the RSEI.

In both the validation and the cross-validation groups, the value obtained was significant in the predicted direction. In the validation group $r = .23$ ($p < .05$, $n = 82$), and in the cross-validation group, $r = .24$ ($p < .05$, $n = 86$), indicating a positive relationship between the women's reports of self-esteem and their reports of mother's self-esteem.

TABLE 5.5

SUMMARY OF CORRELATIONS BETWEEN SUBJECTS' SELF-ESTEEM AND PARENTAL VARIABLES OTHER THAN SEX ROLE, VALIDATION AND CROSS-VALIDATION GROUPS

DEPENDENT VARIABLE INDEPENDENT VARIABLE	VALIDATION GROUP n	VALIDATION GROUP r	CROSS-VALIDATION GROUP n	CROSS-VALIDATION GROUP r
Subjects' Self-Esteem				
Mother's Self-Esteem	82	.23*	86	.24*
Father's Self-Esteem	85	.28*	83	.21*
Mother's Cognitive Involvement	84	.19*	88	.35*
Father's Cognitive Involvement	86	.09	89	.21*
Mother's Warmth-versus-Rejection	84	.31*	89	.33*
Father's Warmth-versus-Rejection	86	.14	88	.28*

*$p < .05$.

The second set of hypotheses which were tested were:

H_0: No relationship will be found between subjects' self-esteem scores on the RSEI and the self-esteem scores they ascribe to their fathers on the RSEI.

H_1: A positive relationship will be found between subjects' self-esteem scores on teh RSEI and the self-esteem scores they ascribe to their fathers on the RSEI.

Again, in both the validation and the cross-validation groups, the test of relationship produced significant results. The validation group had $r = .28$ ($p < .05$, $n = 85$), and the cross-validation group

produced r = .21 ($p < .05$, n = 83). Thus, the predicted positive relationship between subjects' self-esteem and their reports of their fathers' self-esteem received support in both sample groups.

Self-Esteem and
Parents' Cognitive Involvement

The following two sets of hypotheses were formulated about the relationship between the subjects' self-esteem and their perceptions of their parents' involvement with, and encouragement of, their cognitive development. The statistical tests were performed on the data obtained from the Rosenberg Self-Esteem Inventory (RSEI) for self and the Parent Behavior Form (PBF) for mother and for father.

The first set of hypotheses, tested with the Pearson product-moment correlation, were:

H_0: No relationship will be found between subjects' self-esteem scores on the RSEI and the scores they ascribe to their mothers on the PBF's Cognitive Involvement Factor.

H_1: A positive relationship will be found between subjects' self-esteem scores on the RSEI and the scores they ascribe to their mothers on the PBF's Cognitive Involvement Factor.

The correlation between the self-esteem reported by the women and their reports of their mothers' cognitive involvement was positive and significant in both the validation and cross-validation groups. In the validation group, r = .19 ($p < .05$, n = 84), and in the cross-validation group r = .35 ($p < .05$, n = 88), indicating support for the expected relationship between the subjects' self-esteem and their perceptions of their mothers' cognitive involvement.

The following set of hypotheses was formulated about the women's self-esteem and their fathers' cognitive involvement:

H_0: No relationship will be found between subjects' self-esteem scores on the RSEI and the scores they ascribe to their fathers on the PBF's Cognitive Involvement Factor.

H_1: A positive relationship will be found between subjects' self-esteem scores on the RSEI and the scores they ascribe to their fathers on the PBF's Cognitive Involvement Factor.

The value obtained for the Pearson product-moment correlation in the validation group was not sufficiently large ($r = .09$, $n = 86$) to permit the rejection of the null hypothesis. However, in the cross-validation group, the correlation between the subjects' self-esteem and their perceptions of their fathers cognitive involvement was significant, $r = .21$ ($p < .05$, $n = 89$).

Self-Esteem and Parents' Warmth-versus-Rejection

The following set of hypotheses concern the relationship between the subject's self-esteem and their perceptions of the warmth, contrasted with rejection, they received from their mothers:

H_0: No relationship will be found between subjects' self-esteem scores on the RSEI and the scores they ascribe to their mothers on the PBF's Warmth-versus-Rejection Factor.

H_1: A positive relationship will be found between subjects' self-esteem scores on the RSEI and the scores they ascribe to their fathers on the PBF's Warmth-versus-Rejection Factor.

The Pearson product-moment correlation for both the validation and cross-validation groups indicated a positive, significant relationship

between the women's self-esteem and the warmth they perceived from their mothers. In the validation group, $r = .31$ ($p < .05$, $n = 84$), and in the cross-validation group, $r = .33$ ($p < .05$, $n = 89$).

Mixed results were obtained when a similar set of hypotheses were tested about subjects' perceptions of fathers' Warmth-versus-Rejection. The null and alternate hypotheses were:

H_0: No relationship will be found between subjects' self-esteem scores on the RSEI and the scores they ascribe to their fathers on the PBF's Warmth-versus Rejection Factor.

H_1: A positive relationship will be found between subjects' self-esteem scores on the RSEI and the scores they ascribe to their fathers on the PBF's Warmth-versus-Rejection Factor.

For the test of the hypothesis in the validation group the correlation coefficient was not sufficiently large ($r = .14$, $n = 86$) to permit the rejection of the null hypothesis. However, in the cross-validation group, the Pearson product-moment test produced a value of $r = .28$ ($p < .05$, $n = 88$), indicating a positive relationship between subjects' self-esteem and father's warmth-versus-rejection for that group.

Sex Role and Parents' Cognitive Involvement

The following group of hypotheses were designed to test the relationship between the sex role categories into which subjects were placed using the BSRI and their reports concerning each parent's level of cognitive involvement.

Sex Role and Mother's Cognitive Involvement

The following null hypothesis was tested about the college women and their mothers:

H_0: No difference will exist among the four groups of subjects established by scores on the BSRI in the scores they ascribe to their mothers on the PBF's Cognitive Involvement (COGM) Factor.

In symbolic form:

H_0: $COGM_A = COGM_F = COGM_M = COGM_U$

Analysis of variance (Table 5.6) of the hypothesis produced significant results only in the cross-validation sample. The F value in the validation group was 1.31, which is not sufficiently high to allow for the rejection of the null hypothesis, or for the testing of the a priori contrasts. Nonetheless, in the cross-validation group, the F value of 3.59 was significant ($p < .05$), indicating differences among the four sex role categories in their reports of maternal cognitive involvement.

TABLE 5.6

ANALYSIS OF VARIANCE OF THE PARENT BEHAVIOR FORM'S COGNITIVE INVOLVEMENT FACTOR SCORES FOR MOTHER FOR THE FOUR BEM SEX ROLE INVENTORY CATEGORIES, VALIDATION AND CROSS-VALIDATION GROUPS

SAMPLE GROUP SOURCE	df	SS	MS	F
VALIDATION GROUP				
Sex Role Category	3	463.53	154.51	1.31
Within-groups	85	10388.13	118.05	
Total	88	10851.66		
CROSS-VALIDATION GROUP				
Sex Role Category	3	615.07	205.02	3.59*
Within-groups	86	4509.34	57.09	
Total	89	5524.41		

*p <.05

The first of the alternate hypotheses about sex role and maternal cognitive involvement which was tested was;

H_{1a}: Subjects classified as Androgynous by their scores on the BSRI will report higher levels of Cognitive Involvement on the PBF for their mothers than subjects classified as Feminine or Undifferentiated.

Stated in symbolic form:

H_{1a}: $COGM_A > COGM_F, \quad COGM_U$

Because the analysis of variance did not produce a significant value for the test of the general null hypothesis in the validation group, the contrast of the alternate hypothesis was tested by the t statistic only for the cross-validation group. In the cross-validation group, a t of 2.531 ($p < .05$, one-tailed) was found, confirming the predicted difference between the Androgynous and the Feminine and Undifferentiated categories in their reports of maternal cognitive involvement.

The second of the alternate hypotheses was:

H_{1b}: Subjects classified as Undifferentiated by their scores on the BSRI will report lower levels of Cognitive Involvement on the PBF for their mothers than subjects classified as Androgynous, Feminine, or Masculine.

Stated symbolically:

H_{1b}: $COGM_U < COGM_A, \quad COGM_F, \quad COGM_M$

The result of the t test of the contrast was significant for the cross-validation group, with a t value of 2.531 ($p < .05$, one-tailed). The contrast was not tested for the validation group, as noted earlier, because the analysis of variance did not produce a significant F value.

The Androgynous and Masculine categories were not expected to differ in their reports of their parents' cognitive involvement because of the assumption that such involvement could be predicted for either sex role style equally well. Therefore, a second null hypothesis was constructed for sex role and parental cognitive involvement concerning only the Androgynous and Masculine subjects. For mother's cognitive involvement, the null hypothesis was:

H_0: There will be no difference between subjects classified as Androgynous and subjects classified as Masculine on the BSRI in the scores they ascribe to their mothers on the PBF's Cognitive Involvement Factor.

In symbolic form:

H_0: $COGM_A = COGM_M$

Because it was expected a priori that a t test of the group means would not produce a value high enough to warrant the rejection of the null hypothesis, no directional alternate hypothesis was formulated. In the validation group, the analysis of variance (Table 5.6) revealed that significant differences did not exist among the four sex role category groups. Therefore, the t value of .789 which resulted from the comparison of the Androgynous and Masculine groups was anticipated. The null hypothesis about these two groups could not be rejected. The general statement which can be made is that in the validation group, the Androgynous and Masculine categories did not report significantly different levels of cognitive involvement from their mothers, nor were these two categories significantly different than the Feminine or Undifferentiated women in their reports of maternal cognitive involvement.

The results were different for the cross-validation group, however. The t test of the Androgynous and Masculine group means produced a value of 2.092 ($p < .05$, two-tailed), indicating that the Androgynous and Masculine groups had reported different levels of cognitive involvement for their mothers (the Androgynous group mean was higher than the Masculine group mean). The expectation that the null hypothesis would not be rejected was not met.

Sex Role and Father's Cognitive Involvement

The following hypotheses were tested about the relationship between the women's sex role categories on the BSRI and their reports of their father's cognitive involvement, measured by the PBF. The null hypothesis was:

H_0: No difference will exist among the four groups of subjects established by scores on the BSRI in the scores they ascribe to their fathers on the PBF's Cognitive Involvement Factor.

In symbolic form, the hypothesis was:

H_0: $COGF_A = COGF_F = COGF_M = COGF_U$

Inconsistent results were obtained from the two sample groups when the one-way analysis of variance (Table 5.7) was conducted for the test of the null hypothesis. In the validation group the null hypothesis was rejected because of $F = 3.00$ ($p < .05$). However, in the cross-validation group, the F value was low, .58, which meant that the null hypothesis could not be rejected, and that testing the a priori contrasts in that group would not be valid.

TABLE 5.7

ANALYSIS OF VARIANCE OF THE PARENT BEHAVIOR FORM'S COGNITIVE INVOLVEMENT FACTOR SCORES FOR FATHER FOR THE FOUR BEM SEX ROLE INVENTORY CATEGORIES, VALIDATION AND CROSS-VALIDATION GROUPS

SAMPLE GROUP SOURCE	df	SS	MS	F
VALIDATION GROUP				
Sex Role Category	3	1184.13	394.71	3.00*
Within-groups	89	11724.34	131.73	
Total	92	12908.47		
CROSS-VALIDATION GROUP				
Sex Role Category	3	96.30	32.10	.58
Within-groups	87	4832.89	55.55	
Total	90	4929.19		

*$p < .05$

The a priori contrasts, based on the alternate hypotheses, were tested for the validation group. The first of these was:

H_1: Subjects classified as Androgynous by their scores on the BSRI will report higher levels of Cognitive Involvement on the PBF for their fathers than subjects classified as Feminine or Undifferentiated.

Stated symbolically:

H_1: $COGF_A > COGF_F, \quad COGF_U$

For the validation group, Androgynous subjects were found to report higher levels of paternal cognitive involvement than the Feminine and Undifferentiated categories ($t = 2.485$, $p < .05$, one-tailed).

The second of the alternate hypotheses about sex role and father's cognitive involvement was:

H_{1b}: Subjects classified as Undifferentiated by their scores on the BSRI will report lower levels of Cognitive Involvement on the PBF for their fathers than subjects classified as Androgynous, Feminine, or Masculine.

In symbolic form:

H_{1b}: $COGF_U < COGF_A,\ COGF_F,\ COGF_M$

The t test of the hypothesis produced a value of 2.256, which is significant ($p < .05$, one-tailed). Therefore, the Undifferentiated category of the validation group did report lower levels of paternal cognitive involvement than the other three sex role categories.

As was done with the subjects' reports of their mothers' cognitive involvement, a separate, specific null hypothesis was formulated about the Androgynous and Masculine women's reports of their faters' cognitive involvement. The null hypothesis was:

H_0: There will be no difference between subjects classified as Androgynous and subjects classified as Masculine on the BSRI in the scores they ascribe to their fathers on the PBF's Cognitive Involvement Factor.

Symbolically stated:

H_0: $COGF_A = COGF_M$

Again, because it was expected that the null hypothesis would not be rejected, no alternate hypothesis was written predicting a difference between the two groups.

The *t* test in the validation group produced the expected result: *t* = .150. The low value indicated that the Androgynous and Masculine subjects could not be said to be reporting different levels of cognitive involvement from their fathers. In addition, because the earlier null hypothesis that the four sex role groups were not different in their reports of paternal cognitive involvement had been rejected, it can be said that while the Androgynous and Masculine women do not differ from one another, they were different from the Feminine and Undifferentiated categories, in the validation group.

In contrast, the null hypothesis that the four sex role categories would not differ in their reports of paternal cognitive involvement had not been rejected for the cross-validation group. Therefore, it seemed likely that the Androgynous and Masculine group means would not be significantly different. The *t* value of .898 confirmed that the null hypothesis about the Androgynous and Masculine subjects should not be rejected, but unlike the validation group, it is not possible to say that the Androgynous and Masculine groups were different from the Feminine and Undifferentiated groups in the cross-validation sample.

Sex Role and Parents' Warmth-versus-Rejection

The hypotheses which follow concern differences among the four sex role categories in the women's reports of their parents' warmth-versus-rejection on the PBF.

Sex Role and Mother's Warmth-versus-Rejection

The first null hypothesis concerned the women's sex role and the level of warmth-versus-rejection they reported for their mothers:

H_0: No difference will exist among the four groups of subjects established by scores on the BSRI in the scores they ascribe to their mothers on the PBF's Warmth-versus-Rejection Factor.

In its symbolic form:

H_0: $WVRM_A = WVRM_F = WVRM_M = WVRM_U$

When the analysis of variance (Table 5.8) was conducted, significant values were obtained for both the validation sample ($F = 3.02$, $p < .05$) and the cross-validation sample ($F = 2.74$, $p < .05$). The results indicate that differences among the four sex role categories do exist in their reports of mother's warmth-versus-rejection.

TABLE 5.8

ANALYSIS OF VARIANCE OF THE PARENT BEHAVIOR FORM'S WARMTH-VERSUS-REJECTION FACTOR SCORES FOR MOTHER FOR THE FOUR BEM SEX ROLE INVENTORY CATEGORIES, VALIDATION AND CROSS-VALIDATION GROUPS

SAMPLE GROUP SOURCE	df	SS	MS	F
VALIDATION GROUP				
Sex Role Category	3	3484.90	1161.63	3.02*
Within-groups	88	33814.76	384.26	
Total	91	37299.65		
CROSS-VALIDATION GROUP				
Sex Role Category	3	2163.97	721.32	2.74*
Within-groups	87	22884.60	263.04	
Total	90	25048.57		

*$p < .05$

The first of the planned contrasts which was tested by the t statistic concerned the following alternate hypothesis:

H_{1a}: Subjects classified as Androgynous by their scores on the BSRI will report higher levels of the Warmth-versus-Rejection Factor on the PBF for their mothers than subjects classified as Feminine, Masculine, or Undifferentiated.

Stated symbolically:

H_{1a}: $WVRM_A > WVRM_F, \quad WVRM_M, \quad WVRM_U$

In the validation group the value of t which was obtained was 2.655, which is significant ($p < .05$, one-tailed). A significant value was also obtained in the cross-validation group, $t = 2.396$ ($p < .05$, one-tailed). Therefore, the Androgynous category in both sample groups did report higher levels of maternal warmth-versus-rejection than the Feminine, Masculine, or Undifferentiated categories.

The second of the alternate hypotheses about sex role category and mother's warmth-versus-rejection was:

H_{1b}: Subjects classified as Undifferentiated by their scores on the BSRI will report lower levels of the Warmth-versus-Rejection Factor on the PBF for their mothers than subjects classified as Androgynous, Feminine, or Masculine.

In symbolic form:

H_{1b}: $WVRM_U < WVRM_A, \quad WVRM_F, \quad WVRM_M$

In neither the validation nor the cross-validation groups was the t test of this particular contrast significant. The value obtained for the validation sample was $t = 1.461$, and the value in the cross-validation sample was $t = 1.631$, indicating that the Undifferentiated

women did not report significantly lower levels of maternal warmth-versus-rejection than the other three sex role categories.

Sex Role and Father's Warmth- versus-Rejection

The null hypothesis which was tested by one-way analysis of variance was:

H_0: No difference will exist among the four groups of subjects established by scores on the BSRI in the scores they ascribe to their fathers on the PBF's Warmth-versus-Rejection Factor.

Stating the hypothesis symbolically, it is:

H_0: $WVRF_A = WVRF_F = WVRF_M = WVRF_U$

The F value obtained through the analysis of variance (Table 5.9) for the validation group was not significant ($F = 1.46$). Therefore, the null hypothesis was not rejected and the planned contrasts derived from the alternate hypotheses which follow were not carried out for the validation group. However, the analysis of variance in the cross-validation group resulted in $F = 3.86$, which was significant ($p < .05$), indicating differences among the four sex role categories in the levels of paternal warmth-versus-rejection they reported.

The first of the alternate hypotheses, tested by the *t* statistic for the cross-validation group alone, was:

H_{1a}: Subjects classified as Androgynous by their scores on the BSRI will report higher levels of the Warmth-versus-Rejection Factor on the PBF for their fathers than subjects classified as Feminine, Masculine, or Undifferentiated.

Stated symbolically:

H_{1a}: $WVRF_A > WVRF_F, \ WVRF_M, \ WVRF_U$

TABLE 5.9

ANALYSIS OF VARIANCE OF THE PARENT BEHAVIOR FORM'S WARMTH-VERSUS-REJECTION FACTOR SCORES FOR FATHER FOR THE FOUR BEM SEX ROLE INVENTORY CATEGORIES, VALIDATION AND CROSS-VALIDATION GROUPS

SAMPLE GROUP SOURCE	df	SS	MS	F
VALIDATION GROUP				
Sex Role Category	3	2116.97	705.66	1.46
Within-groups	89	43099.16	484.26	
Total	92	45216.13		
CROSS-VALIDATION GROUP				
Sex Role Category	3	3710.29	1236.76	3.86*
Within-groups	86	27576.21	320.65	
Total	89	31286.50		

*$p < .05$

The alternate hypothesis about Androgynous subjects and paternal warmth-versus-rejection was not supported by the results of the *t* test in the cross-validation group ($t = 1.714$).

The second alternate hypothesis--again, tested only for the cross-validation group--was:

H_{1b}: Subjects classified as Undifferentiated by their scores on the BSRI will report lower levels of the Warmth-versus-Rejection Factor on the PBF for their fathers than subjects classified as Androgynous, Feminine, or Masculine.

In symbolic form:

H_{1b}: $WVRF_U < WVRF_A, \ WVRF_F, \ WVRF_M$

The hypothesis stated above also failed to receive support when the planned contrast was tested (t = .512) for the cross-validation group.

The hypotheses about sex role and paternal warmth-versus-rejection were not supported in either of the sample groups. There were not significant differences among the four sex role categories in the validation group. Differences in the level of paternal warmth-versus-rejection among the four sex role categories were found in the cross-validation group, but not in the predicted directions.

A summary of the results of all the analyses of variance can be found in Appendix H, in addition to a table containing the group means for the four sex role categories for the analysis of variance and planned comparions reported in the previous sections.

Subjects' Sex Roles and Perceived Parental Sex Roles

The relationship between the subjects' reports of their own sex role behaviors and those of each of their parents was also studied. As stated earlier, each woman completed the BSRI for herself, her mother, and her father. To test the hypotheses about these data, which were nominal in nature, the Chi-square statistic was chosen. The results of these analyses will be reported separately for the women's mothers and fathers in the following sections.

Subjects' Sex Roles and Perceptions of Mothers' Sex Roles

A general null hypothesis was formulated about the subjects' self-reports and their reports about their mothers on the BSRI:

H_0: No relationship will exist between the subjects' (sex role) categories scored on the BSRI and their mothers' (sex role) categories scored on the BSRI according to the subjects' reports.

A 4 x 4 contingency table (Chi-square) was computed to test the null hypothesis (Table 5.10). In the validation group, $\chi^2 = 38.42$ ($p < .05$, 9 d.f.), and in the cross-validation group, $\chi^2 = 31.33$ ($p < .05$, 9 d.f.), indicating that in both samples the subjects' reports about their mothers' behavior on the BSRI was related to their reports about themselves on the BSRI.

TABLE 5.10

THE 4 x 4 CONTINGENCY TABLES (FREQUENCIES) FOR MOTHERS' SEX ROLE CATEGORIES BY COLLEGE WOMEN'S SEX ROLE CATEGORIES, VALIDATION AND CROSS-VALIDATION GROUPS

		MOTHERS			
		A	F	M	U
		VALIDATION GROUP			
COLLEGE WOMEN	A	16	6	5	1
	F	2	9	2	6
	M	2	2	7	5
	U	2	4	9	12
		$\chi^2 = 38.42$, $p < .05$			
		CROSS-VALIDATION GROUP			
COLLEGE WOMEN	A	12	7	3	2
	F	7	8	4	3
	M	6	3	5	6
	U	1	2	7	16
		$\chi^2 = 31.33$, $p < .05$			

NOTE: A = Androgynous, F = Feminine, M = Masculine, and U = Undifferentiated.

In order to test the specific alternate hypotheses about the relationship between the subjects' reports for themselves and for their mothers, a series of 2 x 2 contingency tables had to be constructed by collapsing categories in sequence, and re-computing the Chi-square value for each table so constructed. Because the expected cell frequencies sometimes fell below five, the Yates correction for continuity was applied. All of the Chi-square values reported for 2 x 2 contingency tables (d.f. = 1) are thus corrected Chi-square figures. The results of this process have been summarized in Table 5.11 and will be discussed, one hypothesis at a time, in the following section.

The first of the alternate hypotheses which suggested a relationship between subjects' sex roles and mothers' sex roles was:

H_{1a}: Subjects classified as Androgynous by their scores on the BSRI will report mothers classified as Androgynous on the BSRI more frequently than subjects classified as Feminine, Masculine, or Undifferentiated.

The hypothesis received support in both the validation and cross-validation groups. For the validation group the corrected $\chi^2 = 21.03$ ($p < .05$), and for the cross-validation group, $\chi^2 = 6.19$ ($p < .05$). Androgynous women did report Androgynous mothers more frequently than the other three sex role groups.

The second alternate hypothesis was:

H_{1b}: Subjects classified as Feminine by their scores on the BSRI will report mothers classified as Feminine on the BSRI more frequently than subjects classified as Androgynous, Masculine, or Undifferentiated.

TABLE 5.11

SUMMARY OF 2 x 2 CONTINGENCY TABLES (FREQUENCIES) FOR MOTHERS' SEX ROLE CATEGORIES BY COLLEGE WOMEN'S SEX ROLE CATEGORIES ON THE BEM SEX ROLE INVENTORY, VALIDATION AND CROSS-VALIDATION GROUPS

		MOTHERS											
		A	F,M,U		F	A,M,U		M	A,F,U		U	A,F,M	
VALIDATION GROUP*													
COLLEGE WOMEN	A	16	12		9	10		7	9		12	15	
	F,M,U	6	56		12	59		16	58		12	51	
		χ^2=21.03			χ^2= 6.17			χ^2= 2.32			χ^2= 5.00		
		p < .05			p < .05						p < .05		
CROSS-VALIDATION GROUP*													
COLLEGE WOMEN	A	12	12		8	14		5	15		16	10	
	F,M,U	14	54		12	58		14	58		11	55	
		χ^2= 6.19			χ^2= 2.59			χ^2= .05			χ^2=16.01		
		p < .05									p < .05		

*Corrected Chi-square values

NOTE: A = Androgynous, F = Feminine, M = Masculine, and U = Undifferentiated.

The Chi-square value obtained for the 2 x 2 contingency table for the validation group was significant ($\chi^2 = 6.17$, $p < .05$). However, the cross-validation group did not produce a significant value ($\chi^2 = 2.59$). Therefore, the alternate hypothesis about Feminine subjects' reporting Feminine mothers produced mixed results and conclusions must be drawn more tentatively.

The third of the alternate hypotheses about the daughters' and mothers' sex roles was:

H_{1c}: Subjects classified as Masculine by their scores on the BSRI will report mothers classified as Masculine on the BSRI more frequently than subjects classified as Androgynous, Feminine, or Undifferentiated.

Neither the validation nor the cross-validation group produced a significant value when the corrected Chi-square was computed. In the validation group, $\chi^2 = 2.32$, and in the cross-validation group, $\chi^2 = .05$, indicating that no significant relationship existed between Masculine subjects and their reports of Masculine mothers.

The last of the alternate hypotheses was;

H_{1d}: Subjects classified as Undifferentiated by their scores on on the Bem Sex Role Inventory will report mothers classified as Undifferentiated more frequently than subjects classified as Androgynous, Feminine, or Masculine.

When the 2 x 2 contingency tables were established, the corrected Chi-square values were significant for both samples. The validation group revealed a $\chi^2 = 5.00$ ($p < .05$), and the cross-validation group revealed $\chi^2 = 16.01$ ($p < .05$). Undifferentiated subjects did report

Undifferentiated mothers with a frequency significantly higher than the other three sex role groups.

Subjects' Sex Roles and Perceptions of Fathers' Sex Roles

The general null hypothesis which was tested for the relationship between subjects' sex roles and their fathers' sex roles was;

H_0: No relationship will exist between the subjects' (sex role) categories scored on the BSRI and their fathers' (sex role) categories scored on the BSRI according to the subjects' reports.

A 4 x 4 contingency table was constructed and the Chi-square value obtained for both sample groups (Table 5.12). For the validation group group, $\chi^2 = 23.85$ ($p < .05$, 9 d.f.), indicating that the daughters' and fathers' sex roles were not statistically independent. However, in the cross-validation group the null hypothesis was not rejected because $\chi^2 = 14.80$.

As with the hypotheses about mothers' sex role, a series of 2 x 2 contingency tables (Table 5.13) were constructed by collapsing categories to test the specific alternate hypotheses, and corrected Chi-square was computed. The 2 x 2 contingency tables were used for both sample groups, despite the fact that the null hypothesis had not been rejected in the cross-validation group, because it was postulated that information about specific relationships still might be obtained for the cross-validation sample.

The first of the alternate hypotheses about the subjects' reports of their own and fathers' sex roles was:

TABLE 5.12

THE 4 x 4 CONTINGENCY TABLES (FREQUENCIES) FOR FATHERS' SEX ROLE CATEGORIES BY COLLEGE WOMEN'S SEX ROLE CATEGORIES, VALIDATION AND CROSS-VALIDATION GROUPS

		MOTHERS			
		A	F	M	U
		VALIDATION GROUP			
COLLEGE WOMEN	A	13	5	7	2
	F	3	6	6	3
	M	5	2	5	6
	U	1	9	5	12
		$\chi^2 = 23.85$, $p < .05$			
		CROSS-VALIDATION GROUP			
COLLEGE WOMEN	A	9	4	5	4
	F	7	7	3	5
	M	8	0	6	6
	U	4	7	3	11
		$\chi^2 = 14.80$			

NOTE: A = Androgynous, F = Feminine, M = Masculine, and U = Undifferentiated.

TABLE 5.13

SUMMARY OF 2 x 2 CONTINGENCY TABLES (FREQUENCIES) FOR FATHER'S SEX ROLE CATEGORIES BY COLLEGE WOMEN'S SEX ROLE CATEGORIES ON THE BEM SEX ROLE INVENTORY, VALIDATION AND CROSS-VALIDATION GROUPS

		FATHERS											
		A	F,M,U		M	A,F,U		F	A,M,U		U	A,F,M	
VALIDATION GROUP*													
COLLEGE WOMEN	A	13	14	F	6	12	M	2	16	U	12	15	
	F,M,U	9	54	A,M,U	17	55	A,F,U	20	52	A,F,M	11	52	
		χ^2= 9.97			χ^2= .30			χ^2= 1.36			χ^2= 5.89		
		p < .05									p < .05		
CROSS-VALIDATION GROUP*													
COLLEGE WOMEN	A	9	13	F	3	19	M	0	20	U	11	14	
	F,M,U	19	48	A,M,U	14	53	A,F,U	18	51	A,F,M	15	49	
		χ^2= .70			χ^2= .19			χ^2= 4.93**			χ^2= 2.76		
								p < .05					

* Corrected Chi-square values

**Opposite of predicted direction

NOTE: A = Androgynous, F = Feminine, M = Masculine, and U = Undifferentiated.

H_{1a}: Subjects classified as Androgynous by their scores on the BSRI will report fathers classified as Androgynous on the BSRI more frequently than subjects classified as Masculine, Feminine, or Undifferentiated.

The Chi-square value obtained in the validation group was 9.97 ($p < .05$) indicating that Androgynous women did report Androgynous fathers in proportionately greater numbers than the other three categories in this sample. However, the result of the Chi-square analysis of the 2 x 2 contingency table in the cross-validation group was not significant ($\chi^2 = .70$), revealing another unstable finding for the general cross-validation.

The second alternate hypothesis about the college women's sex roles and fathers' sex roles was:

H_{1b}: Subjects classified as Feminine by their scores on the BSRI will report fathers classified as Masculine on the BSRI more frequently than subjects classified as Androgynous, Masculine, or Undifferentiated.

The 2 x 2 contingency tables did not produce a significant χ^2 in either sample. The Chi-square value derived from the validation group was .30, and $\chi^2 = .19$ in the cross-validation group. Thus, little support for the idea that Feminine daughters would report traditional, counterbalanced Masculine fathers in higher proportion than the other sex role categories was found.

The third of the alternate hypotheses to be tested in the 2 x 2 contingency table format was:

H_{1c}: Subjects classified as Masculine by their scores on the BSRI will report fathers classified as Feminine on the BSRI more frequently than subjects classified as Androgynous, Feminine, or Undifferentiated.

This hypothesis also failed to receive support from the Chi-square analysis of either sample. The value obtained in the validation group was $\chi^2 = 1.36$. In the cross-validation group, $\chi^2 = 4.93$, which is a significant value ($p < .05$), but the 2 x 2 table showed the largest frequencies in the diagonal opposite to that predicted (see Table 5.13). Therefore no statistical relationship was found between Masculine women's reports of themselves and of Feminine fathers.

The last of the alternate hypotheses about the relationship between the women's sex roles and their fathers' sex roles was:

H_{1d}: Subjects classified as Undifferentiated by their scores on the BSRI will report fathers classified as Undifferentiated on the BSRI more frequently than subjects classified as Androgynous, Feminine, or Masculine.

In the Chi-square analysis of the validation group, support for the hypothesis was found, $\chi^2 = 5.89$ ($p < .05$). However, the value obtained in the cross-validation group was $\chi^2 = 2.76$, indicating that Undifferentiated daughters in that group did not report Undifferentiated fathers in greater proportion than expected by chance.

As noted earlier, the summary of the results of all of the hypotheses can be found in Table 5.1.

Family Information Questionnaire (FIQ)

A brief questionnaire (23 items) was given to the women of the present study which asked them direct questions about their feelings about their parents and their relationship with each parent. While the responses to the questions were not analyzed as part of they hypotheses proposed for the present study, they did provide information about the sample, and may provide a stimulus for part of the discussion in Chapter VI, and future research.

The FIQ as it was presented to the subjects can be found in Appendix I and the results of the survey are summarized in Table 5.14, but they will be discussed individually in the following sections. Because the FIQ was not intended to be part of the cross-validation design, the results are presented for the total sample (n = 193).

Closeness and Perceived Similarity to Parents

When asked about their closeness to their mothers contrasted with their fathers, more than half (54.4%) of the women said that they were either "closer" or "a lot closer" to their mothers than to their fathers. A third of the sample (33.2%) said that they were about equally close to their mothers and fathers, while the remaining 12.4% said they were "closer" or "a lot closer" to their fathers.

The women were asked to describe their similarity to their mothers or fathers or both. Approximately one third (32.1%) said that they were "more like" or "much more like" their mothers than their fathers, a third (35.2%) said that they were like both parents, and

TABLE 5.14

COLLEGE WOMEN'S RESPONSES TO FAMILY INFORMATION QUESTIONNAIRE
(N = 193)

QUESTION	f	%
IN GENERAL, I AM . . .		
a lot closer to my mother than to my father.	33	17.1
closer to my mother than to my father.	72	37.3
about equally close to my mother & my father.	64	33.2
closer to my father than to my mother.	21	10.9
a lot closer to my father than to my mother.	3	1.5
I BELIEVE THAT I AM . . .		
much more like my mother than my father.	18	9.3
more like my mother than my father.	44	22.8
like both my mother & father, about equally.	68	35.2
more like my father than my mother.	54	28.0
much more like my father than my mother.	9	4.7
I WOULD RATHER DISCUSS A MAJOR DECISION WITH. . .		
my mother.	122	63.2
my father.	67	34.7
neither*	1	.5
both*	2	1.1
[Blank]	1	.5
I WOULD RATHER GET FINANCIAL ADVICE FROM . . .		
my mother.	57	29.5
my father.	136	70.5
I WOULD RATHER GET EMOTIONAL SUPPORT FROM. . .		
my mother.	149	77.2
my father.	41	21.2
both*	2	1.1
[Blank]	1	.5
I AM MORE LIKELY TO GET EMOTIONAL SUPPORT FROM. . .		
my mother.	140	72.5
my father.	48	24.9
both*	4	2.1
[Blank]	1	.5

TABLE 5.14--Continued

QUESTION	f	%
I MISSED NOT GETTING EMOTIONAL SUPPORT FROM . . .		
my mother.	47	24.4
my father.	124	64.2
both*	7	3.6
neither*	3	1.6
[Blank]	12	6.2
WHEN I WAS GROWING UP, I SPENT MORE TIME WITH . . .		
my mother.	164	85.0
my father.	23	11.9
both*	1	.5
[Blank]	5	2.6
WHEN I WAS GROWING UP, I MISSED NOT SPENDING MORE TIME WITH. . .		
my mother.	10	5.2
my father.	95	49.2
neither my mother nor my father.	83	43.0
both*	2	1.0
[Blank]	3	1.6
MY RELATIONSHIP WITH MY MOTHER HAS . . .		
been fairly stable.	107	55.4
changed a lot over the years.	86	44.6
MY RELATIONSHIP WITH MY FATHER HAS . . .		
been fairly stable	113	58.5
changed a lot over the years	80	41.5
DESCRIBE THE GENERAL QUALITY OF YOUR RELATIONSHIP WITH YOUR MOTHER:		
Very Poor	1	.5
Poor	2	1.0
Fair	27	14.0
Good	69	35.8
Very Good	94	48.7
DESCRIBE THE GENERAL QUALITY OF YOUR RELATIONSHIP WITH YOUR FATHER:		
Very Poor	2	1.1
Poor	7	3.6
Fair	35	18.1
Good	90	46.6
Very Good	58	30.1
[Blank]	1	.5

TABLE 5.14--Continued

QUESTION	f	%
DESCRIBE THE DEGREE OF WARMTH YOU FEEL TOWARD YOUR MOTHER:		
Very Low	3	1.6
Low	5	2.6
Moderate	30	15.5
High	54	28.0
Very High	101	52.3
DESCRIBE THE DEGREE OF WARMTH YOU FEEL TOWARD YOUR FATHER:		
Very Low	1	.5
Low	10	5.2
Moderate	32	16.6
High	64	33.2
Very High	85	44.0
[Blank]	1	.5
DESCRIBE THE DEGREE OF RESPECT YOU FEEL TOWARD YOUR MOTHER:		
Very Low	2	1.1
Low	6	3.1
Moderate	30	15.5
High	65	33.7
Very High	90	46.6
DESCRIBE THE DEGREE OF RESPECT YOU FEEL TOWARD YOUR FATHER:		
Very Low	4	2.1
Low	5	2.6
Moderate	28	14.5
High	50	25.9
Very High	106	54.9
DESCRIBE THE DEGREE OF TRUST YOU FEEL TOWARD YOUR MOTHER:		
Very Low	1	.5
Low	8	4.2
Moderate	29	15.0
High	54	28.0
Very High	101	52.3

TABLE 5.14--Continued

QUESTION	f	%
DESCRIBE THE DEGREE OF TRUST YOU FEEL TOWARD YOUR FATHER:		
Very Low	2	1.0
Low	5	2.6
Moderate	23	11.9
High	64	33.2
Very High	98	50.8
[Blank]	1	.5
DESCRIBE THE INTENSITY (e.g., the amount of emotion you feel) OF YOUR RELATIONSHIP WITH YOUR MOTHER:		
Not at all intense	2	1.0
Little intensity	11	5.7
Average intensity	53	27.5
Intense	74	38.4
Very Intense	51	26.4
[Blank]	2	1.0
DESCRIBE THE INTENSITY (e.g., the amount of emotion you feel) OF YOUR RELATIONSHIP WITH YOUR FATHER:		
Not at all intense	4	2.0
Little intensity	14	7.3
Average intensity	70	36.3
Intense	51	26.4
Very Intense	53	27.5
[Blank]	1	.5
DESCRIBE THE DEGREE TO WHICH YOU ARE SIMILAR TO YOUR MOTHER:		
Very dissimilar	1	.5
Dissimilar	19	9.8
Neutral	36	18.7
Similar	108	56.0
Very similar	28	14.5
[Blank]	1	.5

TABLE 5.14--Continued

QUESTION	f	%
DESCRIBE THE DEGREE TO WHICH YOU ARE SIMILAR TO YOUR FATHER:		
Very dissimilar	2	1.0
Dissimilar	14	7.3
Neutral	38	19.7
Similar	103	53.4
Very similar	35	18.1
[Blank]	1	.5

* Responses written in by subjects in lieu of the choices presented to them.

a third (32.7%) said they were "more like" or "much more like" their fathers than their mothers. Because the women did not have the option to say that they were unlike both parents, it should be assumed that the group who said they were like both, about equally, may include those who think they are unlike both parents, about equally, but had no other foil in this question to better represent their opinions.

However, the last two questions of the survey asked the women about their similarity to parents separately, and allowed for a "dissimilar" response. About the same proportion occurred for mother and for father. "Similar" or "Very similar" to mother was chosen by more than two-thirds (70.5%) of the women, and 71.5% said they are "Similar" or "Very similar" to their fathers. Only 10.3% of the sample said they are "Dissimilar" or "Very dissimilar" to their mothers, and 8.3% chose the "Dissimilar" or "Very dissimilar" response when asked about their fathers.

Preferences for Help from Parents

The college women were asked to make a choice about the parent with whom they would rather "discuss a major decision," and nearly two-thirds (63.2%) specified "mother." However, perhaps reflecting cultural stereotypes about, or male-female differences in financial skills, more than two-thirds (70.5%) of the sample said that they would rather get financial advice from their fathers. Another response which seemed to reflect a cultural norm (about women as nurturant) was that more than three-fourths (77.2%) of the women said they would rather get emotional support from their mothers.

Emotional Support from Parents

In addition to stating their preferences for emotional support. the women responded to a question about who they thought was more likely to give them emotional support. Again, mother was the prominent figure, with nearly three-fourths (72.5%) of the sample saying she was more likely to give them emotional support.

Given the other responses citing mother's support, it was consistent that almost two-thirds (64.2%) of the subjects would say that they "missed not getting emotional support" from their fathers contrasted to their mothers. However, this question seemed to be the most confusing, or the most conflict-provoking, because it resulted in the largest number of "write-in" or blank responses--11.4%. One-fourth (24.4%) of the subjects said they "missed not getting emotional support" from their mothers in contrast to their fathers.

Quantity of Time with Parents

It was postulated that the amount of time the daughter spent with her parents, or would like to have spent, would appear to be related to their reponses to the other questions. When asked with whom they actually spent more time growing up, 85% of the women reported that it was with their mothers. When asked whether and with whom they "missed not spending more time" while growing up, half (49.2%) the women said "father," nearly half (43%) said "neither," and only 5.2% said "mother." This particular question cannot be balanced against the earlier questions as easily, however, because it did not ask for a choice between mother and father. Subjects could avoid a choice.

Stability of Relationship with Parents

The majority of the sample (55.4%) felt that their relationships with their mothers had been "fairly stable" as opposed to changing a lot over time (44.6%). Similar percentages occurred in subjects' reports about their relationships with their fathers, with 58.5% saying that they were "fairly stable," 41.5% saying their relationships had "changed a lot over the years."

Quality of Relationship with Parents

The women in the sample reported positive "general quality" for their relationships with their mothers; 84.5% said that their relationships were "Good" or "Very Good." Only three women (1.5%) said that the general quality of their relationships with mother was "Poor" or "Very Poor," and 14% of the sample marked "Fair." The women's reports of the "general quality" of their relationships with their fathers were not as strongly positive as for mother, but were still quite positive. "Good" or "Very Good" was marked by three-fourths, 76.7%, of the women; 18.1% said "Fair," and only 4.7% said "Poor" or "Very Poor."

Warmth Toward Parents

When subjects were asked separately about the degree of warmth they felt toward each parent, mothers and fathers seemed to receive almost equally high ratings. For their mothers, the large majority (80.3%) of the women said they felt "High" or "Very High" degrees

of warmth. For their fathers, 77.2% of the women claimed "High" or "Very High" degrees of warmth.

Respect for Parents

When asked to describe the degree of respect they felt toward their mothers, 80.3% of the subjects marked "High" or "Very High" and only 4.2% said "Low" or "Very Low." The women also reported high levels of respect for their fathers, with 80.8% of the women saying "High" or "Very High" and only a few (4.7%) saying "Low" or "Very Low".

Trust toward Parents

The women gave positive reports about their degree of trust for each parent as well. The large majority (80.3% for mothers, 84.0% for fathers) marked "High" or "Very High" for the degree of trust they felt. Only 4.7% said they felt "Low" or "Very Low" amounts of trust for their mothers. For father, "Low" or "Very Low" degrees of trust were reported in just 3.6% of the cases.

Intensity of the Relationship with Each Parent

The women were asked to describe the intensity of their relationships with each of their parents, and intensity was said to include the "amount of emotion" they felt. However, the intensity was not defined as positive or negative. Nearly two-thirds (64.8%) of the sample said their relationships with mother were either "Intense" or "Very Intense." Less intensity was reported for their relationships

with father than with mother; the relationship with father was reported as "Intense" or "Very intense" by 53.9% of the women. Perhaps the fact that they spent less time with their fathers affected their reports of intensity. Nonetheless, given their responses to the dimensions such as warmth, respect, and trust, it might be hypothesized that the subjects are reporting positive feelings of intensity when asked about their relationships with both parents.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Summary of the Study

The problem addressed in the present study concerned the definition of sex role identity for college women and some of the variables associated with their perceptions of sex role identity. The original sample consisted of 193 undergraduate women at Michigan State University, representing the four academic years nearly equally. The group was randomly divided into two samples (of 96 and 97 women respectively) for the purpose of conducting a cross-validation analysis. The women responded to a questionnaire consisting of the Bem Sex Role Inventory (BSRI) for self, mother, and father; the Rosenberg Self-Esteem Inventory (RSEI) for self, mother, and father; the Parent Behavior Form (PBF) for mother and father; and the Family Information Questionnaire (FIQ) about their relationships with their parents and their feelings about them.

New Measures of Sex Role Identity

A shift from bipolar measures of femininity and masculinity to orthogonal measures of femininity and masculinity was reported in Chapter II. The newer measures allow for an acceptance of dualistic ideas about masculinity and femininity, i.e., that both can exist in given individuals to varying degrees. For the present study the Bem Sex Role Inventory (Bem, 1974) was chosen (60 items), but the scoring

process reflected changes suggested by the work of Spence, Helmreich, and Stapp (1975). Four categories result from subjects' scores on the Masculine and Feminine scales as determined by the median-split technique. The four categories are:

1. Androgynous - high feminine and high masculine
2. Feminine - high feminine and low masculine
3. Masculine - low feminine and high masculine
4. Undifferentiated - low feminine and low masculine

Correlates of Sex Role Identity

Studies which investigated some of the hypothesized correlates of sex role identity using the orthogonal measures have been reviewed. The studies presented here focused on self-esteem and parental variables. Self-esteem has been shown to relate positively to androgyny with consistence, and to be lowest for those who are undifferentiated. However, inconsistent results have been reported for the relationship of self-esteem with masculine typing or feminine typing. In the current study it was assumed that self-esteem and sex role identity are most likely reciprocally related, perhaps symmetrically related. Looking for relationships between these two and other variables was another of the tasks undertaken in the current study.

The parental correlates presented by Kelly and Worell (1976) were reviewed. These included cognitive involvement, warmth-versus-rejection, and control. Cognitive involvement seemed to differentiate the sex role categories most frequently, with warmth and control having lesser, but nonetheless interesting, effects. In addition, the

the theorized process of identification was discussed as one of the explanations for the impact of parents on sex role identity. Kohlberg's (1966) cognitive-developmental theory of sex role identity, with its emphasis on the proactive role of the child's cognition in the process of establishing a sex role identity, was also presented.

In the current study the parental variables chosen for investigation were cognitive involvement and warmth-versus-rejection, measured via the daughter's perceptions. The women's perceptions of their parents' sex role identities were also included, rather than assume their sex role identities through indirect measures, or on the basis of their gender.

Hypotheses

Rather than repeat the hypotheses in their long form, a summary of the symbolic hypotheses and their results has been given in Table 6.1.

Cross-Validation and Instrumentation

A cross-validation model was used, in which the original sample was randomly divided in half. The work of establishing instrument reliabilities for the BSRI and PBF was conducted in a manner which tested the idea that the reliabilities of the second (cross-validation) sample's scales would improve with the removal of items which had been identified as unreliable in the first (validation) sample. In general, this prediction was confirmed for the BSRI; in addition, both the

TABLE 6.1

SUMMARY OF HYPOTHESES AND RESULTS OF ANALYSIS OF COLLEGE WOMEN'S SEX ROLES, SELF-ESTEEM, AND PERCEPTIONS OF PARENTS

SYMBOLIC HYPOTHESES	Both Groups ($p<.0025$)	RESULTS: Validation Group ($p < .05$)	RESULTS: Cross-Validation Group ($p < .05$)
H_0: $SE_A = SE_F = SE_M = SE_U$	*	Reject H_0	Reject H_0
H_{1a}: $SE_A > SE_F, SE_M, SE_U$	*	Confirmed	Confirmed
H_{1b}: $SE_U < SE_A, SE_F, SE_M$	*	Confirmed	Confirmed
H_{1c}: $SE_M > SE_F$		Confirmed	--
H_0: $SEM_A = SEM_F = SEM_M = SEM_U$	*	Reject H_0	Reject H_0
H_{1a}: $SEM_A > SEM_F, SEM_M, SEM_U$		Confirmed	--
H_{1b}: $SEM_U < SEM_A, SEM_F, SEM_M$		--	Confirmed
H_0: $SEF_A = SEF_F = SEF_M = SEF_U$		Reject H_0	Failed to reject...
H_{1a}: $SEF_A > SEF_F, SEF_M, SEF_U$		Confirmed	--
H_{1b}: $SEF_U < SEF_A, SEF_F, SEF_M$		--	--
H_0: No relationship between SE and SEM	*	Reject H_0	Reject H_0
H_1: Positive relationship between SE and SEM	*	Confirmed	Confirmed
H_0: No relationship between SE and SEF	*	Reject H_0	Reject H_0
H_1: Positive relationship between SE and SEF	*	Confirmed	Confirmed
H_0: No relationship between SE and COGM	*	Reject H_0	Reject H_0
H_1: Positive relationship between SE and COGM	*	Confirmed	Confirmed

TABLE 6.1--Continued

SYMBOLIC HYPOTHESES		RESULTS	
	Both Groups ($p<.0025$)	Validation Group ($p < .05$)	Cross-Validation Group ($p < .05$)
H_0: No relationship between SE and COGF		Failed to reject...	Reject H_0
H_1: Positive relationship between SE and COGF		--	Confirmed
H_0: No relationship between SE and WVRM	*	Reject H_0	Reject H_0
H_1: Positive relationship between SE and WVRM	*	Confirmed	Confirmed
H_0: No relationship between SE and WVRF		Failed to reject...	Reject H_0
H_1: Positive relationship between SE and WVRF		--	Confirmed
H_0: $COGM_A = COGM_F = COGM_M = COGM_U$		Failed to reject...	Reject H_0
H_{1a}: $COGM_A > COGM_F, COGM_U$		--	Confirmed
H_{1b}: $COGM_U < COGM_A, COGM_F, COGM_U$		--	Confirmed
H_0: $COGM_A = COGM_M$		--	Failed to reject...
H_0: $COGF_A = COGF_F = COGF_M = COGF_U$		Reject H_0	Failed to reject...
H_{1a}: $COGF_A > COGF_F, COGF_U$		Confirmed	--
H_{1b}: $COGF_U < COGF_A, COGF_F, COGF_U$		Confirmed	--
H_0: $COGF_A = COGF_M$		Failed to reject...	--
H_0: $WVRM_A = WVRM_M = WVRM_F = WVRM_U$	*	Reject H_0	Reject H_0
H_{1a}: $WVRM_A > WVRM_F, WVRM_M, WVRM_U$	*	Confirmed	Confirmed
H_{1b}: $WVRM_U < WVRM_A, WVRM_F, WVRM_M$		--	--

TABLE 6.1--Continued

SYMBOLIC HYPOTHESES		RESULTS: Both Groups ($p<.0025$)	Validation Group ($p < .05$)	Cross-Validation Group ($p < .05$)
H_0:	$WVRF_A = WVRF_F = WVRF_M = WVRF_U$		Failed to reject...	Reject H_0
H_{1a}:	$WVRF_A > WVRF_F, WVRF_M, WVRF_U$		--	--
H_{1b}:	$WVRF_U < WVRF_A, WVRF_F, WVRF_M$		--	--
H_0:	No relationship between SRS and SRM	*	Reject H_0	Reject H_0
H_{1a}:	Androgynous Ss report Androgynous mothers	*	Confirmed	Confirmed
H_{1b}:	Feminine Ss report Feminine mothers		Confirmed	--
H_{1c}:	Masculine Ss report Masculine mothers		--	Confirmed
H_{1d}:	Undifferentiated Ss report Undifferentiated mothers	*	Confirmed	Confirmed
H_0:	No relationship between SRS and SRF		Reject H_0	Failed to reject...
H_{1a}:	Androgynous Ss report Androgynous fathers		Confirmed	--
H_{1b}:	Feminine Ss report Masculine fathers		--	--
H_{1c}:	Masculine Ss report Feminine fathers		--	--**
H_{1d}:	Undifferentiated Ss report Undifferentiated fathers		Confirmed	--

*Significant in both sample groups.

**Significant in the direction opposite of that predicted.

NOTE: A = Androgynous, F = Feminine, M = Masculine, U = Undifferentiated; SE = Self-Esteem, Self; SEM = Self-Esteem, Mother; SEF = Self-Esteem, Father; COGM = Cognitive Involvement, Mother; COGF = Cognitive Involvement, Father; WVRM = Warmth-vs.-Rejection, Mother; WVRF = Warmth-vs.-Rejection, Father; SRS = Sex Role, Self; SRM = Sex Role, Mother; and SRF = Sex Role, Father.

BSRI and the PBF were in an acceptable range of reliability prior to the removal of any of their items.

Two other benefits were derived from the cross-validation model. The first was the assurance that the likelihood of making a Type I error (i.e., of falsely rejecting the null hypothesis) did not become inordinately large because of conducting a large number of tests on the same data pool. Second, it became easier to identify just which variables were unstable over the two sample groups, and thus would be more likely to be unstable in the population, if not accounted for by the unreliability of instruments.

Analysis of the Data

Three different statistical techniques were used to test the hypotheses. They were chosen for their applicability to the type of variable (discrete or continuous) and for their ability to answer the questions contained in the hypotheses. Analysis of variance and *t* tests of *a priori* contrasts were used to test those hypotheses with sex role category as the dependent variable, and variables such as self-esteem as independent variables. Pearson product-moment correlation was used to test the hypotheses about relationships between continuous variables. For the hypotheses about relationships between the women's sex role categories and their parents' sex role categories, Chi-square analysis was employed.

Conclusions

The following conclusions (1 - 9) have been derived from the results which were significant ($p < .0025$) in both the validation (V) and cross-validation (CV) groups.

1. Reports of self-esteem did differ according to the sex role categories to which the college women were assigned on the basis of their BSRI scores.
   a. Androgynous college women seemed to have higher levels of self-esteem than those women who were sex-typed, or who reported restricted masculinity and femininity. Another way of stating the conclusion is that college women reporting high levels of self-esteem also reported high levels of masculine characteristics and high levels of feminine characteristics.
   b. Undifferentiated college women reported lower levels of self-esteem than those who were sex-typed or who reported masculinity and femininity in proportionately high degrees. Alternately, those women who reported low levels of self-esteem also reported lower levels of masculine characteristics or feminine characteristics.
2. The women in the four sex role categories did differ from one another in the amount of self-esteem they reported for mothers. The direction of the differences was not consistent over the two sample groups, however.
3. There was a positive relationship of moderate strength ($r_V = .23$, $r_{CV} = .24$) between the women's self-esteem and the self-esteem they reported for their mothers.
4. There was a positive relationship of moderate strength ($r_V = .28$, $r_{CV} = .21$) between the women's self-esteem and the self-esteem they reported for their fathers.

5. There was a positive relationship of low to moderate strength (r_V = .19, r_{CV} = .35) between the women's self-esteem and the cognitive involvement they perceived for their mothers.
6. There was a positive relationship of moderate strength (r_V = .31, r_{CV} = .33) between the women's self-esteem and the warmth-versus-rejection they perceived for their mothers.
7. Reports of mothers' warmth-versus-rejection did differ according to the sex role category to which the women were assigned.
   a. Androgynous women seemed to have perceived their mothers as warmer and less rejecting than women who were classified as Feminine, Masculine, or Undifferentiated.
8. Androgynous college women reported Androgynous mothers in significantly higher proportions than what could be expected by chance.
9. Undifferentiated college women reported Undifferentiated mothers in significantly higher proportions than what could be expected by chance.

The following conclusions (10 - 11) have been derived from the results of the tests of hypotheses which were significant in only one of the sample groups.

10. Of the 10 hypotheses which were rejected (nulls) or confirmed (alternates) in the validation group, but not in the cross-validation group, seven involved some measure of the women's fathers.
11. Of the 10 hypotheses which were rejected or confirmed in the cross-validation group, but not in the validation group, half involved some measure of their mothers and half involved some measure of their fathers.

The following conclusions (12 - 19) are based on those hypotheses which failed to be rejected or were not confirmed in either the validation or cross-validation groups.

12. Undifferentiated women did not report significantly lower levels of self-esteem for their fathers than the Androgynous, Feminine, or Masculine women.
13. Undifferentiated women did not report significantly lower levels of warmth-versus-rejection from their mothers than the other three sex role categories.
14. Androgynous women did not report significantly higher levels of warmth-versus-rejection from their fathers than the other three sex role categories.

15. Undifferentiated women did not report significantly lower levels of warmth-versus rejection from their fathers than Androgynous, Feminine, or Masculine women.
16. Masculine women did not report Masculine mothers in proportions greater than that expected by chance.
17. Feminine women did not report Masculine fathers in proportions greater than that expected by chance.
18. Masculine women did not report Feminine fathers in proportions greater than that expected by chance. In the cross-validation group not only did they fail to report father's sex role in the predicted direction, but they also reported significantly fewer Feminine fathers than that expected by chance.
19. The hypotheses suggesting a counterbalance between father's sex role and daughter's sex role failed to be supported. A better argument could be made for father-daughter similarity than for counterbalance.

Discussion of Results

In the following sections, some of the findings will be discussed in light of earlier findings. Relevant theory will be re-introduced, and some alternative ideas will be presented.

Sex Role Identity and Self-Esteem

As predicted by the results of previous studies by Bem (1977) and Spence, Helmreich, and Stapp (1975), a relationship between the the women's sex role identities and their self-esteem was found in

the current study. As Bem, and Spence and associates have found, Androgynous women had the highest level of self-esteem and Undifferentiated women had the lowest level of self-esteem. Spence, Helmreich, and Stapp (1975) reported a clear rank order for their women subjects, which meant that in addition to the distinction between Androgynous and Undifferentiated women, Masculine women reported significantly higher levels of self-esteem than did Feminine women. Bem (1977) did not find a rank ordering of the same magnitude between Masculine and Feminine women, although her Masculine group mean on self-esteem was slightly larger than her Feminine group mean. In addition, people (e.g., Kelly & Worell, 1977) do seem to believe that higher self-esteem is logically related to masculine characteristics because American culture values that which is masculine more than that which is feminine. Extending this thought further, it may be said that for women, even the supposed deviation of having cross-sex characteristics would be offset by the cultural valuation of masculine characteristics. However, the results of the present study do not make the issue of Masculine-typed and Feminine-typed women's self-esteem any clearer. In the validation sample the Masculine women did report higher self-esteem than the Feminine women, but in the cross-validation sample this distinction was not found between the two subgroups. Women who are significantly sex-typed may be so for different enough reasons that predicting consistent differences between the two sex-typed groups would be extremely difficult. The phenomenon of sex-typing may be capricious as it is currently measured, or other factors may be contributing which have not been adequately incorporated into the current study or previous studies.

Relationship between Sex Role and Self-Esteem as Affected by Other Variables

Whether or not the distinction between Masculine-typed and Feminine-typed women were found in both sample groups, the question concerning the nature of the relationship between sex role identity and self-esteem still had to be addressed. In Chapter II, it was indicated that the relationship between sex role identity and self-esteem could be reciprocal (i.e., affect one another with alternating impact) or could be symmetrical. Spence, Helmreich, and Stapp (1975) said: "The correlations between positive relationship with self-esteem suggest that the two factors may function in an additive way to determine an individual's self-concept and behaviors" (p. 35). Knowing that there was likely to be a relationship between self-esteem and sex role identity, it was also considered important in the current study to investigate the possibility of other variables which would affect self-esteem and sex role identity, implying that the relationship between the two was, in part, due to being "caused" by the others.

A few consistent results were obtained of a variable's being related to both self-esteem and sex role identity in this study. Mother's self-esteem did differentiate among the sex role groups, and was positively related to the daughter's self-esteem in both the validation and cross-validation groups. Mother's warmth-versus-rejection did differentiate between the sex role categories, with Androgynous women reporting higher levels than the other three categories, and maternal warmth-versus rejection was positively related to daughter's

self-esteem in both sample groups. Mother is more influential--or at least her impact is clearer to the daughter--in the relationship between sex role and self-esteem than is father. In the current sample, the greater influence may be due to the fact that the women spend more time with their mothers when growing up, as they reported in the FIQ. Or, mother's greater influence may be due to same-sex similarity, as posited by social learning theory and cognitive-developmental theory. Or, mother may have had a greater influence because of the daughter's preference for mother's emotional support and her having received more emotional support from mother than from father (FIQ results). The effect may also be due to a confluence of these and other variables as well.

Subjects' Self-Esteem and Perceptions of Parents' Self-Esteem

Father's and mother's self-esteem were both positively related to daughter's self-esteem. In one sense daughters learn their self-esteem from their parents. However, this result may also be due to leniency error, the tendency of the daughter to rate those closely related to her higher on any dimension. Following Kohlberg's (1966) thought, though, that the driving force behind much of individual development is competence and a positive self image, it can also be assumed that the daughter's self-esteem is enhanced as her perceptions of how to derive self-esteem become more sophisticated, and affected by the amount of constructive information she receives. High levels of parental self-esteem could be a rich source of constructive information for the daughter about how to conduct herself to achieve the same.

Other Parental Variables

The variables of parents' cognitive involvement and warmth-versus-rejection (Kelly & Worell, 1976) were not related to the women's sex role categories consistently across the validation and cross-validation groups. Significant results in the validation group not confirmed by the cross-validation groups are more difficult to interpret than the reverse situation because theoretically the PBF and BSRI have been strengthened for the cross-validation group. If the results in the validation groups were significant, using instruments which supposedly introduce more error than in the cross-validation group, it seemed logical that the tests would be significant using instruments which supposedly introduce less error. Other factors must be called upon to account for the inconsistency. For example, the PBF and BSRI may not have been improved sufficiently through the removal of items to reduce the amount of error introduced in the cross-validation analysis. Another of the possible explanations is that the variables under consideration (e.g., daughter's sex role, parents' cognitive involvement, and parents' warmth-versus-rejection) may not have been measured validly, or may represent unstable features of the population. Were it not for the fact that both the BSRI and PBF were involved in results which were significant in the validation, group, but not the cross-validation group, it would have been easier to attribute significant results in the cross-validation group, but not the validation group, to the improvement of scale reliabilities through the elimination of a few items. However, it is not possible

make the assumption that the instruments were improved; therefore, the questions about validity and variables' stability are introduced again.

In short, the results of the current study did not confirm Kelly's and Worell's findings, and several possibilities exist as explanations, for example:

1. The BSRI used in the current study and the PRF ANDRO used by Kelly and Worell may measure different sex role variables.
2. Using the PBF factors as opposed to individual PBF scales may have changed the nature of the variables actually measured (although it should have increased reliability by increasing the length of the scale).
3. Unlike Kelly's and Worell's subjects, the women in the current study were not asked to describe their parents as they were when the women were 16 years old.

Androgynous-Undifferentiated Differences

The Androgynous category of women and the Undifferentiated category of women differed from one another most consistently, as expected. Self-esteem, mother's self-esteem, and mother's warmth-versus-rejection were the three variables in which the Androgynous group was higher than the Undifferentiated group in both samples (see Appendix I). Father's self-esteem, mother's cognitive involvement and father's cognitive involvement were the three variables for which Androgynous women reported higher levels than the Undifferentiated women in one or the other of the two sample groups (see Appendix I).

No other subset of sex role categories evidenced such consistent differences, leading to the speculation that the Androgynous and Undifferentiated categories include a broad and stable cross-section of variables, while the Masculine and Feminine categories are indicative of a narrower and less stable set of variables.

Androgynous and Undifferentiated women may be more easily distinguished by parental variables, because the Androgynous person's "enhanced" functioning would be more likely if she had positive, constructive experiences with her parents, and more likely to be associated with parents because the culture does not teach androgyny for women. Undifferentiated women's constricted functioning might be based on deprivation, especially with parents, and because of the deprivation these women may not be capable of incorporating more positive experiences with people other than their parents. There is a great deal of information from the culture about being a feminine-typed woman. It is more difficult to know what is associated with being feminine-typed, however, because that individual could be drawing from her parents or may be drawing from the culture and her peers, and repressing or suppressing her instrumentality to maintain close relationships. Masculine-typed women occasionally reported low parental warmth in the current sample, leading to the idea that they might be suppressing the expressive domain because of psychological pain associated with it, and turning to the masculine domain for their mastery and self-worth. It becomes quite clear that studies need to be done on multiple variables which lead to sex role identity as well as on personality variables correlated with sex role identity.

Measuring Sex Role Identity

Although the orthogonal measures of masculinity and femininity have added an important dimension to the study of sex role identity, some of the phenomena associated with sex role identity may be obscured for now because the categories being used are still gross measures of extremely complex variables. If there were a way to incorporate Bem's early notion of scoring the balance between masculinity and femininity, and Spence's and associates' idea about the comparative degree of masculinity and femininity, it might be possible to use samller categories, and make finer distinctions among subjects.

Sex Role and Perceptions of Parents' Sex Roles

Because the subjects did report similarity to their mothers, modeling, identification and cognitive-development processes can all be argued. The impact of the tendency for the women to also report similarity to their fathers, however, is to highlight cognitive-developmental theory because both the social learning construct of modeling and the construct of identification emphasize same-sex factors. With cognitive-developmental theory, competence, mastery and self-esteem are the goals, and the basic premise is that the daughter identifies with the person or persons who help her to achieve those goals. While Kohlberg (1966) did indicate a belief in the impact of the same-sex parent, a combination of his theory and the dualistic view of masculinity and femininity leads to the idea that mother or or father or both could be helpful sources of information and encouragement of daughter's competence and self-esteem.

Literature Introduced Since the Development of the Current Study

The research and writings on the subject of sex role identity, especially the dualistic concept of masculinity and femininity, have been continuing to increase. Some of these works, relevant to the current study, will be reviewed briefly because future research should incorporate these works as well.

The most important and most meticulous of these new studies was reported in a book by Spence and Helmreich (1977). They have added many dimensions in their latest work, for example, different age and socioeconomic groups, subjects' reports of parents' sex role identities, and parents' reports of their own sex role identities. They established "couple types" for sets of parents of subjects, for all the possible combinations of mother-father sex role identities, e.g., Androgynous-Androgynous, Androgynous-Feminine. They then investigated correlates of these couple types for their college student subjects. They have constructed another instrument with which to measure sex role identity correlates, the Work and Family Orientation Questionnaire (WOFO). They administered yet another instrument, the Parental Attitudes Questionnaire, and in factor analysis found seven scales significant for both males and females: Father positivity, Mother Positivity, Father Democracy, Mother Democracy, Rule Enforcement, Family Protectiveness, and Sex-Role Enforcement. Two factors were found to be specific to women, Female Family Harmony and Mother Supportiveness, and Female Standards.

The wealth of their findings cannot be adequately summarized here. Spence and Helmreich continued to find support for dualistic notions of masculinity and femininity, for the relationship between parental behaviors and sex role identity, for the importance of the children's perceptions of their parents, and for the importance of parental identities and other environmental factors. As for its relevance to the current study, their book has only one major limitation: its publication occurred after the implementation of this study.

A study presenting results that indicated the "flexibility and adjustment were generally associated with masculinity rather than androgyny for both males and females" (p. 298) was conducted by Jones, Chernovetz, and Hansson (1978). These researchers investigated sex role identity as measured by the BSRI, and a number of other variables: attitudes toward women's liberation, locus of control, neurosis, self-esteem, problems with alcohol, creativity, political awareness, confidence in one's ability, helplessness, and sexual maturity. However, although they included many possible correlates of sex role identity and have presented a fresh challenge, they may have further clouded the issues by returning to Bem's original scoring for the BSRI which produces three categories: Androgynous, Masculine, and Feminine. They used the earlier scoring procedure despite acknowledging in their review of the literature that Bem had acceded to the criticism of Spence and others, and began using the four-category scoring procedure. It would be interesting and valuable to re-analyze the data Jones, Chernovetz, and Hansson obtained

with the addition of the median-split technique for scoring the BSRI. Their inclusion of a large number of possible correlates is important.

Kelly, Furman, and Young (1978) completed the first study of interscale comparability for the BSRI (Bem, 1974), PAQ (Spence, Helmreich & Stapp, 1975), PRF ANDRO (Berzins, Welling & Wetter, 1978), and the ACL Masculinity and Femininity scales (Heilbrun, 1976). Their basic conclusion was that the four inventories may be measuring quite different subgroups and that it is inappropriate to assume cross-sex comparability.[3] They also conclude that "when sex role styles are dichotomized into broad typological quadrants, as is the current practice in sex role research, substantial predictive utility may be lost" (p. 1574).

A study addressing one aspect of the present study was conducted by Doherty and Schmidt (1978), investigating the relationship between sex role identity and self-esteem among college women. Doherty and Schmidt used the BSRI, which they scored in the revised manner, and the Tennessee Self-Concept Inventory. All of their significant differences occurred between the Androgynous group and one of the other sex role categories, and, "androgynous women scored higher than undifferentiated women on six self-concept dimensions, higher than masculine women on five dimensions, and higher

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[3]This finding adds credence to the idea that differences between PBF-and-sex-role results in the current study and in Kelly's and Worell's (1976) study are due to the fact that the BSRI was used in the current study, and the PRF ANDRO was used in their study, to measure sex role identity.

than feminine women on two dimensions" (p. 496). They also found a trend for feminine women's scoring higher than masculine and undifferentiated women, although the differences were not significant.

In a study of subjects older (between 40 and 50 years) than those typically studied, O'Connor, Mann, and Bardwick (1978) found support for Spence's and associates' work, with androgynous self-descriptions predicting the highest levels of self-esteem. However, they are careful to say that theirs are middle-class subjects, as are most college students.

Lastly, a comprehensive text on sex roles and women has been written by Frieze, Parsons, Johnson, Ruble, and Zellman (1978) which includes review and synthesis of a large amount of the literature relevant to the psychology of women and sex role identity. One of the areas they have covered is Kohlberg's cognitive-developmental theory. In a chapter for which Parsons was the primary author, it is stated that:

> The evidence is somewhat equivocal for Kohlberg's prediction that one's sex and sex role valuing would emerge naturally due to the egocentric thinking of preschool children. . . . While most girls express positive feelings toward being female and toward the female role, there is clear evidence of ambivalence. . . . What it may suggest is that cultural processes interact with cognitive-developmental processes to influence the acquisition of any behavior. (p. 132)

Parsons also indicates the importance of this interaction between cognition and environment during adolescence, when, according to Piaget's theory, people are making the change from concrete operations to formal reasoning. Adolescent girls may be likely to try less rigid role behavior. According to Parsons, having decided egocentrically that being a girl is best, but hearing from the culture that

being a boy is best, the girl feels ambivalence which leads to her trying as many cross-sex roles as she can while retaining same-sex roles. Another factor, then, is the type of environment in which she exists. The argument can be made for the current study that the college environment may not include as much pressure for conformity as some other environments for late adolescents.

Suggestions for Future Research

Because of the complexity of the relationships between sex role identity and other variables it would be helpful to be able to say more about the degree of impact each of the variables does have, and how they might be rank ordered. One way of accomplishing the task would be to use a multivariate technique for analysis, especially knowing from the current study which areas are unclear. For example, multiple regression analysis (with dummy variables, because sex role as it is now measured is discrete), or discriminant function analysis could be used. These types of analysis might allow researchers to say, for example, what amount of the variance in sex role category is accounted for by self-esteem, or perceptions of parental sex role identity. If the data from the present study were to be analyzed again, using one of the multivariate techniques, the inconsistent results across the two sample groups might be clarified, or new questions could be developed.

Sex role identity should be studied with samples having different ages, socioeconomic status, and ethnic backgrounds than white, middle-class college students. Spence and Helmreich (1977) have encouraged this step in their book. They have studied high school

students with broad backgrounds, and other cultural subgroups, and speak to the particular difficulty in reaching non-white groups. It would also be interesting to compare the findings on college student samples with findings on late adolescents and young adults who are not attending college. Not only could their perceptions be compared, but also their environments could be contrasted to test for the interaction between their perceptions and environments.

Careful logic should be applied to the interpretation of the types of relationships which are being studied, so that variables are not assumed to be asymmetrically (one causes the other) related when they may, in fact, be reciprocal, or symmetrically related.

It would be profitable to compare the PBF (Worell & Worell, Note 1) to the Parental Attitudes Questionnaire developed by Spence and Helmreich (1978) to evaluate which is the stronger measure, or which elements from each could best be combined for future studies on parental antecedents of sex role identity.

Studies of large samples, such as that by Bem and Lenney (1976), might provide norm groups for the sex role categories rather than using the median-split technique on a sample-by-sample basis. In addition, finer distinctions should be made than what the four categories currently in use provide. One way of conceptualizing how these finer distinctions might be made is a circumplex, which would include a High-Low dimension, and a Feminine-Masculine dimension. The circumplex could theoretically be divided into smaller and smaller "slices of pie" and concentric circles within the circumplex could also represent degree (see Figure 6.1).

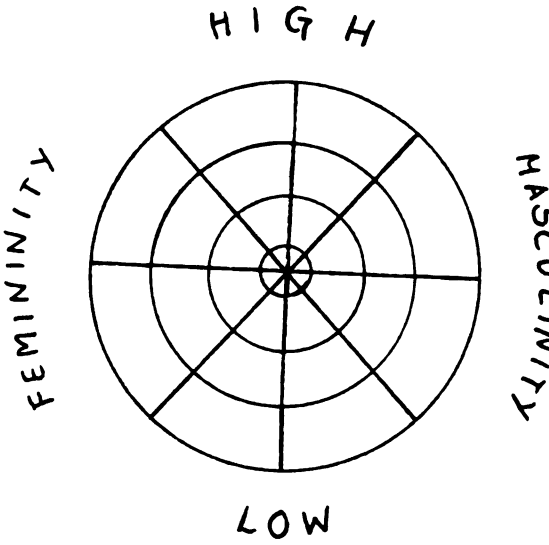

Fig. 6.1 A Circumplex Model for Sex Role Identity

Combining the findings about norm groups with the principle of a circumplex might show the need to divide the circumplex at a point other than midpoint (for example, see Figure 6.2) in order to indicate the proportions which are predicted for the population.

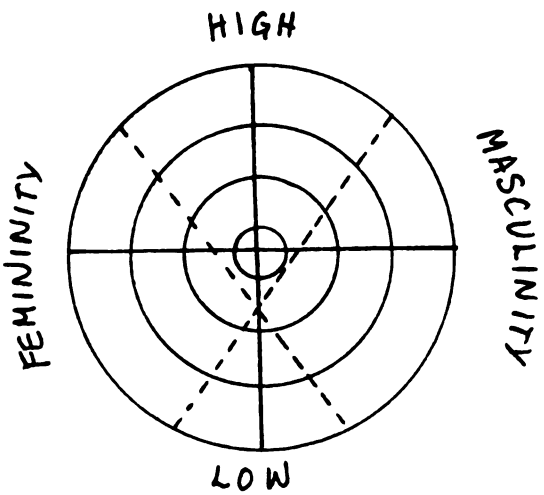

Fig. 6.2. A Sex Role Identity Circumplex, Adjusted for Population Proportions

However conceptualized, it is clear that as the understanding of sex role identity becomes more sophisticated, the models will need to be made more complicated, too. From the instability of some results in the present study, it can be concluded that a number of phenomena are lost or masked by the use of the four large categories for sex role identity.

APPENDICES

APPENDIX A

ACADEMIC MAJORS OF SUBJECTS

APPENDIX A

ACADEMIC MAJORS OF SUBJECTS

Agriculture and Natural Resources

1 - Animal Husbandry
4 - Animal Tech
1 - Fisheries & Wildlife
1 - Food Systems Economics & Management
1 - Packaging
1 - Park Design
1 - Recreation

Arts and Letters

1 - Classical Studies
2 - English
2 - French
1 - German
2 - History
1 - Humanities
3 - Music Therapy
2 - Pre-Law
1 - Theatre

Business

8 - Accounting
5 - Business
1 - Economics
2 - Hotel, Restaurant and Institutional Management
3 - Marketing
2 - Travel and Tourism

Communication Arts and Sciences

7 - Advertising
1 - Advertising/German
6 - Audiology & Speech Science
3 - Communications
4 - Journalism
1 - Telecommunication/Social Science Pre-Law

Education

8 - Child Development & Teaching
1 - Education
3 - Elementary Education
1 - English Education
1 - Math Education
1 - Physical Education
1 - Physical Education/Special
7 - Special Education (MI)

Engineering

1 - Chemical Engineering
2 - Civil Engineering
1 - Computer Science
2 - Electrical Engineering
1 - Engineering
1 - Engineering Arts
1 - Mechanical Engineering

Human Ecology

2 - Clothing & Textiles
1 - Consumer Community Service
1 - Dietetics
1 - Human Ecology
1 - Interior Design
1 - Nutrition
1 - Retailing

Natural Science

1 - Biochemistry
5 - Biology
1 - Botany/German
2 - Chemistry
1 - Chemical Physics
1 - Geology
1 - Math
11 - Medical Technology
2 - Microbiology
5 - Nursing
2 - Physiology

Natural Science (continued)

3 - Pre Med
5 - Pre Vet
1 - Wildlife Biology
2 - Zoology

Social Science

5 - Criminal Justice
1 - Industrial Psychology
1 - Labor & Industrial Relations
7 - Psychology
3 - Public Administration
2 - Social Science
1 - Social Work

University College

13 - No Preference

Justin Morrill College

1 - Linguistics

Lyman Briggs College

2 - General

APPENDIX B

NOTICE REQUESTING WOMEN'S PARTICIPATION IN THE STUDY

APPENDIX B

NOTICE REQUESTING WOMEN'S PARTICIPATION IN THE STUDY

Example 1:

Notice sent to women residents for administration of questionnaires at floor meeting

Dear Hubbard Resident:

I have obtained permission to conduct a research project with women undergraduates at MSU. I am a doctoral student in Counseling Psychology, and this research will be used for my dissertation.

I am asking for volunteer subjects, who are undergraduates at MSU, and who have been raised by two parents (not necessarily their biological parents, though) until their teenage years. In this study we'll be examining women's attitudes toward themselves and toward each of their parents to determine what relationships exist between certain elements of these attitudes.

While I can't promise you specific benefits for answering my questionnaire, I think that many people will find it interesting and thought-provoking. There are no "tricks" involved in the questionnaire. I will be happy to send you a report of the study's results if you're interested (a provision is made on the questionnaire for this). The questionnaire usually requires 45 minutes to an hour to fill out.

There will be a meeting for filling out the questionnaires on TUESDAY, MAY 23rd at 8:00 P.M. in the Elevator Lobby of the 6th Floor. I will be available to answer any questions. Please attend--your help will be greatly appreciated!

Sincerely,

Liz Monroe-Cook

Liz Monroe-Cook

Example 2:

Notice sent to women residents for delivery of questionnaires through Resident Assistants

Dear Resident:

I have obtained permission to conduct a research project with women undergraduates at MSU. I am a doctoral student in Counseling Psychology, and this research will be used for my dissertation.

I am asking for volunteer subjects, who are undergraduates at MSU, and who have been raised by two parents (not necessarily their biological parents, though) until their teenage years. In this study we'll be examining women's attitudes toward themselves and toward each of their parents to determine what relationships exist between certain elements of these attitudes.

While I can't promise you specific benefits for answering my questionnaire, I think that many people will find it interesting and thought-provoking. There are no "tricks" involved in this study. I will be happy to send you a report of the study's results if you're interested (a provision is made on the questionnaire for this).

Your RA will have the questionnaires and answer sheets--you will probably need between 45 minutes and an hour to fill it out. If you have any questions please let your RA know, and she will contact me.

In advance, thank you!

Liz Monroe-Cook

Liz Monroe-Cook
B 111 W. Fee Hall

APPENDIX C

CONSENT FORM

APPENDIX C

CONSENT FORM

PARTICIPANT CONSENT FORM

I understand that the study being conducted by Elizabeth Monroe-Cook under the supervision of Dr. William Farquhar is for the purpose of examining the relationships which may exist between some of my attitudes and perceptions about myself and about my parents. I understand that participating in this study will not result in direct benefits for me, nor will I be penalized in any fashion if I want to withdraw from participation. I also understand that the information I provide by filling out these forms will be kept strictly confidential. Only the researcher will have access to the original forms. General results will be reported, but none of these will identify individual subjects' results. I know that I will--upon request--receive a report of this study's general results, within the restrictions of confidentiality as outlined above.

_____ _____

Signature Date

_____ _____

Witness Date

APPENDIX D

BSRI AND PBF SCALE ITEMS AND ITEM-TOTAL INFORMATION

APPENDIX D

TABLE D1

BSRI FEMININE SCALE, ITEM-TOTAL INFORMATION, VALIDATION GROUP

ITEM	DAUGHTER		MOTHER		FATHER	
	ITEM-TOTAL CORR.	ALPHA IF ITEM DELETED	ITEM-TOTAL CORR.	ALPHA IF ITEM DELETED	ITEM-TOTAL CORR.	ALPHA IF ITEM DELETED
Yielding	.29688	.76467	.45701	.88412	.49232	.87578
Cheerful	.38806	.75998	.61359	.88043	.69425	.87023
Shy	.10370	.80054	.12505	.89397	.04806	.89260
Affectionate	.43443	.75640	.74360	.87460	.79924	.86436
Flatterable	.09599	.77887	.48085	.88340	.27055	.88394
Loyal	.20030	.76935	.38980	.88598	.55622	.87579
Feminine	.19249	.77124	.39413	.88636	.14171	.88367
Sympathetic	.58980	.74603	.77477	.87602	.83725	.86617
Sensitive to the needs of others	.63209	.74408	.67071	.87796	.75984	.86667
Understanding	.48699	.75507	.76888	.87553	.77754	.86718
Compassionate	.62860	.74334	.75803	.87466	.78063	.86606
Eager to soothe hurt feelings	.58645	.74698	.72598	.87595	.84090	.86332
Soft-spoken	.17841	.77605	.29623	.89038	.26409	.88442
Warm	.65561	.74256	.80682	.87415	.82814	.86434
Tender	.60052	.74660	.81829	.87262	.81795	.86368
Gullible	.13781	.77979	.21852	.89275	.12928	.88634
Childlike	.21986	.76965	.13719	.89697	-.25194	.89715
Does not use harsh language	.21223	.77587	.22542	.89634	.18604	.88981
Loves children	.36861	.75955	.50710	.88310	.57248	.87336
Gentle	.65959	.74492	.79113	.87412	.61062	.87167
	α = .77133		α = .88797		α = .88142	
	α^* = .81425		α^* = .90110		α^* = .88449	

*Standardized item alpha

TABLE D2

BSRI MASCULINE SCALE, ITEM-TOTAL
INFORMATION, VALIDATION GROUP

ITEM	DAUGHTER		MOTHER		FATHER	
	ITEM-TOTAL CORR.	ALPHA IF ITEM DELETED	ITEM-TOTAL CORR.	ALPHA IF ITEM DELETED	ITEM-TOTAL CORR.	ALPHA IF ITEM DELETED
Self-reliant	.45242	.88094	.65291	.92120	.32594	.91281
Defends own beliefs	.45090	.88047	.62483	.92215	.55947	.90857
Independent	.58900	.87710	.73515	.91943	.59150	.90715
Athletic	.37803	.88545	.29305	.92995	.38261	.91441
Assertive	.75042	.87198	.72024	.91976	.77173	.90344
Strong personality	.64471	.87427	.75257	.91907	.68595	.90442
Forceful	.57046	.87667	.52787	.92369	.45060	.91078
Analytical	.25180	.88669	.51022	.92391	.44534	.91005
Has leadership abilities	.72704	.87146	.79660	.91769	.75712	.90253
Willing to take risks	.37548	.88305	.45634	.92563	.42677	.91159
Makes decisions easily	.30732	.88530	.62152	.92167	.51947	.90848
Self-sufficient	.39040	.88207	.55338	.92307	.47202	.90959
Dominant	.60291	.87530	.61251	.92200	.64127	.90541
Masculine	.14547	.89019	.18800	.92928	.41769	.91057
Willing to take a stand	.64745	.87480	.75765	.92024	.71741	.90471
Aggressive	.63943	.87416	.67456	.92046	.52122	.90891
Acts as a leader	.66570	.87325	.78286	.91797	.78905	.90177
Individualistic	.47983	.87968	.57868	.92261	.61355	.90628
Competitive	.46732	.88043	.57479	.92282	.65953	.90487
	α = .88449		α = .92582		α = .91182	
	α^* = .89031		α^* = .92889		α^* = .91772	

*Standardized item alpha

TABLE D3

PBF SCALES, ITEM-TOTAL INFORMATION,
VALIDATION GROUP

SCALE ITEM	MOTHER ITEM-TOTAL CORR.	MOTHER ALPHA IF ITEM DELETED	FATHER ITEM-TOTAL CORR.	FATHER ALPHA IF ITEM DELETED
WARMTH				
Makes me feel better after talking over my worries with her/him.	.65523	.89903	.69129	.89687
Is able to make me feel better when I am upset.	.86922	.88268	.78053	.88987
Makes me feel free when I am with her/him.	.55416	.90741	.63768	.90065
Comforts me when I'm afraid.	.62279	.90123	.73597	.89357
Cheers me up when I am sad.	.69499	.89618	.82934	.88794
Has a good time at home with me.	.71087	.89657	.73354	.89400
Is easy to talk to.	.78144	.88943	.67088	.89861
Seems to see my good points more than my faults.	.62851	.90119	.54028	.90809
Smiles at me very often.	.67605	.89755	.57545	.90482
	α = .90738		α = .90765	
	α^* = .90878		α^* = .90904	
ACTIVE INVOLVEMENT				
Often praises me.	.69612	.86174	.70336	.89192
Believes in showing her/his love for me.	.75073	.85814	.75250	.88851
Tells me how much s/he loves me.	.76724	.85427	.71050	.89145
Tells me I'm good looking.	.54699	.87450	.52068	.90561
Says I make her/him happy.	.69352	.86169	.78914	.88520
Gives me a lot of care and attention.	.63019	.86803	.72712	.89041
Becomes very involved in my life.	.42872	.88542	.51565	.90468

TABLE D3--Continued

SCALE ITEM	MOTHER ITEM-TOTAL CORR.	MOTHER ALPHA IF ITEM DELETED	FATHER ITEM-TOTAL CORR.	FATHER ALPHA IF ITEM DELETED
ACTIVE INVOLVEMENT (Cont'd)				
Says I'm very good natured.	.57351	.87214	.74416	.88874
Is always thinking of things that will please me.	.57903	.87172	.64415	.89631
	α = .88078		α = .90454	
	α* = .88187		α* = .90442	
EGALITARIANISM				
Lets me help to decide how to do things we're working on.	.56782	.85914	.61227	.85618
Doesn't get angry if I disagree with her/his ideas.	.66498	.85109	.64032	.85351
Allows me to be myself.	.69721	.84832	.63982	.85416
Doesn't mind if I kid her/him about things.	.61041	.85620	.49881	.86553
Enjoys it when I bring friends to my home.	.44958	.86829	.57075	.85971
Allows discussion of right and wrong.	.46579	.86777	.70017	.84818
Is easy with me.	.67171	.84956	.45585	.86939
Tries to be a friend rather than a boss.	.66170	.85037	.71488	.84571
Tries to treat me as an equal.	.67258	.84935	.62460	.85484
	α = .86985		α = .87051	
	α* = .86967		α* = .86988	
COGNITIVE INDEPENDENCE				
Really wants me to tell her/him just how I feel about things.	.54499	.84199	.55025	.87042
Likes me to assert my own ideas with her/him.	.62001	.83401	.71621	.85440
Likes when I am able to criticize my own or others' ideas effectively.	.55854	.84033	.64173	.86116
Wants me to keep an open mind about my own or others' beliefs.	.57363	.83884	.65193	.86033

TABLE D3--Continued

SCALE ITEM	MOTHER ITEM-TOTAL CORR.	MOTHER ALPHA IF ITEM DELETED	FATHER ITEM-TOTAL CORR.	FATHER ALPHA IF ITEM DELETED
COGNITIVE INDEPENDENCE (Cont'd)				
Is pleased when I bring up original ideas.	.66581	.83187	.61854	.86348
Likes when I ask questions about all kinds of things.	.65809	.83003	.64481	.86105
Tells me to stand up for what I believe.	.48099	.84750	.61940	.86361
Gives me reasons for rules s/he makes.	.54966	.84202	.54918	.87114
Trains me to be rational and objective in my thinking.	.55667	.84096	.60853	.86443
	α = .85402		α = .87667	
	α^* = .85628		α^* = .87956	
COGNITIVE CURIOSITY				
Wants me to know how and and why natural things happen in the way they do.	.63032	.83038	.51235	.78720
Likes to discuss current events with me.	.61750	.83106	.64296	.77040
Talks with me about philosophical ideas.	.58855	.83431	.43537	.79747
Points out the beauties of nature.	.48212	.84441	.50560	.78790
Talks with me about how things are made.	.62058	.83104	.46692	.79295
Encourages me to discuss the causes and possible olutions of social, political, economic or international problems.	.73683	.81733	.66593	.76649
Feels I should read as much as possible on my own.	.50743	.84214	.40248	.80010
Encourages me to read news periodicals and watch news broadcasts on TV.	.47554	.84567	.34386	.80775
Encourages me to fool around with new ideas even if they turn out to be a waste of time.	.48012	.84478	.55404	.78195
	α = .85152		α = .80745	
	α^* = .85067		α^* = .80817	

TABLE D3--Continued

SCALE ITEM	MOTHER ITEM-TOTAL CORR.	MOTHER ALPHA IF ITEM DELETED	FATHER ITEM-TOTAL CORR.	FATHER ALPHA IF ITEM DELETED
COGNITIVE COMPETENCE				
Encourages me to develop after-school skills and hobbies.	.29693	.66267	.51483	.72547
Provided me with puzzles when I was young.	.39222	.64300	.31767	.75655
Has taken me to look at paintings, sculpture, and architecture.	.46090	.62601	.52568	.72233
Has taken me to see a performance in a play or concert.	.52483	.60842	.57309	.71284
Plays classical music when I am home.	.19700	.69934	.36896	.74750
Buys books for me to read.	.31821	.66071	.50376	.72650
Encourages me to be different from other people.	.39162	.64501	.32510	.75391
Requires me to arrive at my own conclusions when I have a problem to solve.	.22266	.67699	.38384	.74532
Wants me to find out answers for myself.	.35515	.65289	.43977	.73851
	α = .67823		α = .75948	
	α* = .67078		α* = .75837	
ACHIEVEMENT				
Is unhappy that I'm not better in school than I am.	.20833	.56463	.28428	.65460
Says that my teachers often expect too little of me.	.28907	.54316	.20918	.66713
Wants me to know a lot of facts regardless of whether or not they have meaning for me.	.25203	.55284	.23425	.66533
Says s/he would like to see me enter a profession which requires original thinking.	.21950	.56355	.48591	.60767
Wants me to pursue a career in a scientific field.	.25141	.55412	.32181	.64751

TABLE D3--Continued

SCALE ITEM	MOTHER ITEM-TOTAL CORR.	MOTHER ALPHA IF ITEM DELETED	FATHER ITEM-TOTAL CORR.	FATHER ALPHA IF ITEM DELETED
ACHIEVEMENT (Cont'd)				
Says s/he would like me to be an important or famous person someday.	.28299	.54418	.38336	.63432
Expects me to be successful in everything I try.	.45934	.48823	.45437	.61555
Is more concerned with my being bright rather than steady and dependable.	.28087	.54859	.40277	.63364
Prefers me to be good in academic work rather than in sports.	.21118	.56529	.32908	.64663
	α = .57690		α = .66889	
	α* = .58240		α* = .66788	
HOSTILE CONTROL				
If I take someone else's side in an argument, s/he is cold and distant to me.	.53946	.88530	.61684	.81037
Says I'm a big problem.	.48640	.88832	.55113	.82524
Almost always complains about what I do.	.72044	.87067	.69523	.80804
Tells me I am immature.	.60265	.88030	.14146	.85056
Often blows her/his top when I bother her/him.	.65498	.87530	.58184	.81541
Whenever we get into a discussion, s/he treats me more like a child than an adult.	.78665	.86356	.54052	.81995
When I don't do as s/he wants, s/he says I'm not grateful for all s/he has done for me.	.66765	.87445	.57630	.81486
Tells me of all the things s/he has done for me.	.71204	.87016	.58233	.81415
Is less friendly with me if I don't see things her/his way.	.65974	.87504	.69552	.79961
	α = .88846		α = .83543	
	α* = .89068		α* = .83860	

TABLE D3--Continued

SCALE ITEM	MOTHER ITEM-TOTAL CORR.	MOTHER ALPHA IF ITEM DELETED	FATHER ITEM-TOTAL CORR.	FATHER ALPHA IF ITEM DELETED
REJECTION				
Thinks I am just someone to "put up with."	.50229	.67391	.41005	.75897
Makes me feel I'm not loved.	.52098	.67791	.75925	.71473
Is never interested in meeting or talking with my friends.	.48651	.67873	.39369	.76011
Doesn't show that s/he loves me.	.42535	.67924	.63926	.71739
Doesn't seem to think of me very often.	.22896	.71557	.73668	.70532
Changes her/his mind to make things easier for herself/himself.	.43569	.67887	.53076	.73841
Doesn't get me things unless I ask over and over again.	.42172	.67999	.42323	.75950
Asks other people what I do away from home.	.24018	.71026	.30227	.77137
Almost always wants to know who phoned me or wrote to me and what they said.	.41863	.60617	.01210	.80343
	α = .71195		α = .77207	
	α* = .74055		α* = .77304	

* Standardized item alpha

APPENDIX E

BEM SEX ROLE INVENTORY AS PRESENTED TO SUBJECTS FOR SELF, MOTHER, AND FATHER

YOURSELF

BEM CHECK LIST

Using the following scale, darken the space of the number which best represents how well each of the following characteristics describes you: (Purple ink answer sheet)

1	2	3	4	5	6	7
Never or almost never true of me	Usually not true	Sometimes but infrequently true	Occasionally true	Often true	Usually true	Always or almost always true of me

1. Self-reliant	2. Yielding	3. Helpful	4. Defends own beliefs
5. Cheerful	6. Moody	7. Independent	8. Shy
9. Conscientious	10. Athletic	11. Affectionate	12. Theatrical
13. Assertive	14. Flatterable	15. Happy	16. Strong personality
17. Loyal	18. Unpredictable	19. Forceful	20. Feminine
21. Reliable	22. Analytical	23. Sympathetic	24. Jealous
25. Has leadership abilities	26. Sensitive to the needs of others	27. Truthful	28. Willing to take risks
29. Understanding	30. Secretive	31. Makes decisions easily	32. Compassionate
33. Sincere	34. Self-sufficient	35. Eager to soothe hurt feelings	36. Conceited
37. Dominant	38. Soft-spoken	39. Likeable	40. Masculine
41. Warm	42. Solemn	43. Willing to take a stand	44. Tender
45. Friendly	46. Aggressive	47. Gullible	48. Inefficient
49. Acts as a leader	50. Childlike	51. Adaptable	52. Individualistic
53. Does not use harsh language	54. Unsystematic	55. Competitive	56. Loves children
57. Tactful	58. Ambitious	59. Gentle	60. Conventional

YOUR MOTHER

BEM CHECK LIST

Using the following scale, darken the space of the number which best represents how well each of the following characteristics describes your mother:

1	2	3	4	5	6	7
Never or almost never true of my mother	Usually not true	Sometimes but infrequently true	Occasionally true	Often true	Usually true	Always or almost always true of my mother

1. Self-reliant	2. Yielding	3. Helpful	4. Defends own beliefs
5. Cheerful	6. Moody	7. Independent	8. Shy
9. Conscientious	10. Athletic	11. Affectionate	12. Theatrical
13. Assertive	14. Flatterable	15. Happy	16. Strong personality
17. Loyal	18. Unpredictable	19. Forceful	20. Feminine
21. Reliable	22. Analytical	23. Sympathetic	24. Jealous
25. Has leadership abilities	26. Sensitive to the needs of others	27. Truthful	28. Willing to take risks
29. Understanding	30. Secretive	31. Makes decisions easily	32. Compassionate
33. Sincere	34. Self-sufficient	35. Eager to soothe hurt feelings	36. Conceited
37. Dominant	38. Soft-spoken	39. Likeable	40. Masculine
41. Warm	42. Solemn	43. Willing to take a stand	44. Tender
45. Friendly	46. Aggressive	47. Gullible	48. Inefficient
49. Acts as a leader	50. Childlike	51. Adaptable	52. Individualistic
53. Does not use harsh language	54. Unsystematic	55. Competitive	56. Loves children
57. Tactful	58. Ambitious	59. Gentle	60. Conventional

YOUR FATHER

BEM CHECK LIST

Using the following scale, darken the space of the number which best represents how well each of the following characteristics describes your father:

1	2	3	4	5	6	7
Never or almost never true of my father	Usually not true	Sometimes but infrequently	Occasionally true	Often true	Usually true	Always or almost always true of my father

1. Self-reliant	2. Yielding	3. Helpful	4. Defends own beliefs
5. Cheerful	6. Moody	7. Independent	8. Shy
9. Conscientious	10. Athletic	11. Affectionate	12. Theatrical
13. Assertive	14. Flatterable	15. Happy	16. Strong personality
17. Loyal	18. Unpredictable	19. Forceful	20. Feminine
21. Reliable	22. Analytical	23. Sympathetic	24. Jealous
25. Has leadership abilities	26. Sensitive to the needs of others	27. Truthful	28. Willing to take risks
29. Understanding	30. Secretive	31. Makes decisions easily	32. Compassionate
33. Sincere	34. Self-sufficient	35. Eager to soothe hurt feelings	36. Conceited
37. Dominant	38. Soft-spoken	39. Likeable	40. Masculine
41. Warm	42. Solemn	43. Willing to take a stand	44. Tender
45. Friendly	46. Aggressive	47. Gullible	48. Inefficient
49. Acts as a leader	50. Childlike	51. Adaptable	52. Individualistic
53. Does not use harsh language	54. Unsystematic	55. Competitive	56. Loves children
57. Tactful	58. Ambitious	59. Gentle	60. Conventional

APPENDIX F

PARENT BEHAVIOR FORM AS PRESENTED TO SUBJECTS

PARENT BEHAVIOR FORM- MOTHER

Here are a series of statements people could use to describe their parents. Read each one and decide how accurately it describes your mother, using the following scale:

1	2	3
Like my mother	Somewhat like my mother	Not like my mother

Using the green-ink computer answer sheet darken the number which best represents the accuracy of each of the following:

1. Makes me feel better after talking over my worries with her.
2. Often praises me.
3. Lets me help to decide how to do things we're working on.
4. Really wants me to tell her just how I feel about things.
5. Wants me to know how and why natural things happen in the way they do.
6. Encourages me to develop after-school skills and hobbies.
7. Lets me dress in any way I please.
8. Tells me to think and plan before I act.
9. Is unhappy that I'm not better in school than I am.
10. Sees to it that I know exactly what I may or may not do.
11. Insists that I must do exactly as I'm told.
12. If I take someone else's side in an argument, she is cold and distant to me.
13. Thinks I am just someone to "put up with."
14. Tells me neither of us has a brain.
15. Is considerate of others.
16. Is able to make me feel better when I am upset.
17. Believes in showing her love for me.
18. Doesn't get angry if I disagree with her ideas.
19. Likes me to assert my own ideas with her.
20. Likes to discuss current events with me.

MOTHER

1	2	3
Like my mother	Somewhat like my mother	Not like my mother

21. Provided me with puzzles when I was young.

22. Doesn't tell me what time to be home when I go out.

23. Tells me that good hard work will make life worthwhile.

24. Says that my teachers often expect too little of me.

25. Wants to know exactly where I am and what I'm doing.

26. Believes in having a lot of rules and sticking to them.

27. Says I'm a big problem.

28. Makes me feel I'm not loved.

29. Says that things with sugar taste sour.

30. Makes good decisions about family problems.

31. Makes me feel free when I'm with her.

32. Tells me how much she loves me.

33. Allows me to be myself.

34. Likes when I am able to criticize my own or others' ideas effectively.

35. Talks with me about philosophical ideas.

36. Has taken me to look at paintings, sculpture and architecture.

37. Lets me do anything I like to do.

38. Sees to it that I keep my clothes neat, clean, and in order.

39. Wants me to know a lot of facts regardless of whether or not they have meaning for me.

40. Doesn't let me go places because something might happen to me.

41. Believes that all my bad behavior should be punished in some way.

42. Almost always complains about what I do.

43. Is never interested in meeting or talking with my friends.

44. Expects me to stare at the sun for hours.

45. Is hard working and efficient.

MOTHER

1	2	3
Like my mother	Somewhat like my mother	Not like my mother

46. Comforts me when I'm afraid.

47. Tells me I'm good looking.

48. Doesn't mind if I kid her about things.

49. Wants me to keep an open mind about my own or others' beliefs.

50. Points out the beauties of nature.

51. Has taken me to see a performance in a play or concert.

52. Doesn't pay much attention to my misbehavior.

53. Wants me to have the same religious beliefs as she does.

54. Says she would like to see me enter a profession which requires original thinking.

55. Is always telling me how I should behave.

56. Has more rules than I can remember, so is often punishing me.

57. Tells me I am immature.

58. Doesn't show that she loves me.

59. Tells me the earth is square.

60. Is a responsible person.

61. Cheers me up when I am sad.

62. Says I make her happy.

63. Enjoys it when I bring friends to my home.

64. Is pleased when I bring up original ideas.

65. Talks with me about how things are made.

66. Plays classical music when I am home.

67. Does not insist I obey if I complain or protest.

68. Taught me to believe in God.

69. Wants me to pursue a career in a scientific field.

70. Wants to control whatever I do.

1	2	3
Like my mother	Somewhat like my mother	Not like my mother

71. Sees to it that I obey when she tells me something.

72. Often blows her top when I bother her.

73. Doesn't seem to think of me very often.

74. Reads to me in Greek and Latin.

75. Is truthful.

76. Has a good time at home with me.

77. Gives me a lot of care and attention.

78. Allows discussion of right and wrong.

79. Likes when I ask questions about all kinds of things.

80. Encourages me to discuss the causes and possible solutions of social, political, economic or international problems.

81. Buys books for me to read.

82. Excuses my bad conduct.

83. Encourages me to pray.

84. Says she would like me to be an important or famous person someday.

85. Keeps reminding me about things I am not allowed to do.

86. Punishes me when I don't obey.

87. Whenever we get into a discussion, she treats me more like a child than an adult.

88. Changes her mind to make things easier for herself.

89. Gives me green lollipops everyday.

90. Uses good judgment.

91. Is easy to talk to.

92. Becomes very involved in my life.

93. Is easy with me.

94. Tells me to stand up for what I believe.

95. Feels I should read as much as possible on my own.

MOTHER

1	2	3
Like my mother	Somewhat like my mother	Not like my mother

96. Encourages me to be different from other people.

97. Can be talked into things easily.

98. Feels hurt when I don't follow her advice.

99. Expects me to be successful in everything I try.

100. Is always getting after me.

101. Believes in punishing me to correct and improve my manners.

102. When I don't do as she wants, she says I'm not grateful for all she has done for me.

103. Doesn't get me things unless I ask over and over again.

104. Buys me thousand dollar suits or dresses.

105. Is honest in dealing with others.

106. Seems to see my good points more than my faults.

107. Says I'm very good natured.

108. Tries to be a friend rather than a boss.

109. Gives me reasons for rules that she makes.

110. Encourages me to read news periodicals and watch news broadcasts on TV.

111. Requires me to arrive at my own conclusions when I have a problem to solve.

112. Seldom insists that I do anything.

113. Feels hurt by the things I do.

114. Is more concerned with my being bright rather than steady and dependable.

115. Decides which friends I can go around with.

116. Loses her temper with me when I don't help around the house.

117. Tells me of all the things she has done for me.

118. Asks other people what I do away from home.

119. Expects me to make all of my own clothes.

120. Obeys the law.

MOTHER

1	2	3
Like my mother	Somewhat like my mother	Not like my mother

121. Smiles at me very often.

122. Is always thinking of things that will please me.

123. Tries to treat me as an equal.

124. Trains me to be rational and objective in my thinking.

125. Encourages me to fool around with new ideas even if they turn out to be a waste of time.

126. Wants me to find out answers for myself.

127. Does not bother to enforce rules.

128. Seems to regret that I am growing up and am spending more time away from home.

129. Prefers me to be good in academic work rather than in sports.

130. Tells me how to spend my free time.

131. Doesn't give me any peace until I do what she says.

132. Is less friendly with me if I don't see things her way.

133. Almost always wants to know who phoned me or wrote to me and what they said.

134. Says I should never ride in an automobile.

135. Makes guests feel at home.

PARENT BEHAVIOR FORM - FATHER

Here are a series of statements people could use to describe their parents. Read each one and decide how accurately it describes your father, using the following scale:

1	2	3
Like my father	Somewhat like my father	Not like my father

Using the red-ink computer answer sheet, darken the number which best represents the accuracy of each of the following:

1. Makes me feel better after talking over my worries with him.
2. Often praises me.
3. Lets me help to decide how to do things we're working on.
4. Really wants me to tell him just how I feel about things.
5. Wants me to know how and why natural things happen in the way they do.
6. Encourages me to develop after-school skills and hobbies.
7. Lets me dress in any way I please.
8. Tells me to think and plan before I act.
9. Is unhappy that I'm not better in school than I am.
10. Sees to it that I know exactly what I may or may not do.
11. Insists that I must do exactly as I'm told.
12. If I take somone else's side in an argument, he is cold and distant to me.
13. Thinks I am just someone to "put up with."
14. Tells me neither of us has a brain.
15. Is considerate of others.
16. Is able to make me feel better when I am upset.
17. Believes in showing his love for me.
18. Doesn't get angry if I disagree with his ideas.
19. Likes me to assert my own ideas with him.
20. Likes to discuss current events with me.

FATHER

1	2	3
Like my father	Somewhat like my father	Not like my father

21. Provided me with puzzles when I was young.

22. Doesn't tell me what time to be home when I go out.

23. Tells me that good hard work will make life worthwhile.

24. Says that my teachers often expect too little of me.

25. Wants to know exactly where I am and what I am doing.

26. Believes in having a lot of rules and sticking to them.

27. Says I'm a big problem.

28. Makes me feel I'm not loved.

29. Says that things with sugar taste sour.

30. Make good decisions about family problems.

31. Makes me feel free when I'm with him.

32. Tells me how much he loves me.

33. Allows me to be myself.

34. Likes when I am able to criticize my own or others' ideas effectively.

35. Talks with me about philosophical ideas.

36. Has taken me to look at paintings, sculpture and architecture.

37. Lets me do anything I like to do.

38. Sees to it that I keep my clothes neat, clean, and in order.

39. Wants me to know a lot of facts regardless of whether or not they have meaning for me.

40. Doesn't let me go places because something might happen to me.

41. Believes that all my bad behavior should be punished in some way.

42. Almost always complains about what I do.

43. Is never interested in meeting or talking with my friends.

44. Expects me to stare at the sun for hours.

45. Is hard working and efficient.

FATHER

1	2	3
Like my father	Somewhat like my father	Not like my father

46. Comforts me when I'm afraid.

47. Tells me I'm good looking.

48. Doesn't mind if I kid him about things.

49. Wants me to keep an open mind about my own or others' beliefs.

50. Points out the beauties of nature.

51. Has taken me to see a performance in a play or concert.

52. Doesn't pay much attention to my misbehavior.

53. Wants me to have the same religious beliefs as he does.

54. Says he would like to see me enter a profession which requires original thinking.

55. Is always telling me how I should behave.

56. Has more rules than I can remember, so is often punishing me.

57. Tells me I am immature.

58. Doesn't show that he loves me.

59. Tells me the earth is square.

60. Is a responsible person.

61. Cheers me up when I am sad.

62. Says I make him happy.

63. Enjoys it when I bring friends to my home.

64. Is pleased when I bring up original ideas.

65. Talks with me about how things are made.

66. Plays classical music when I am home.

67. Does not insist I obey if I complain or protest.

68. Taught me to believe in God.

69. Wants me to pursue a career in a scientific field.

70. Wants to control whatever I do.

FATHER

1	2	3
Like my father	Somewhat like my father	Not like my father

71. Sees to it that I obey when he tells me something.

72. Often blows his top when I bother him.

73. Doesn't seem to think of me very often.

74. Reads to me in Greek and Latin.

75. Is truthful.

76. Has a good time at home with me.

77. Gives me a lot of care and attention.

78. Allows discussion of right and wrong.

79. Likes when I ask questions about all kinds of things.

80. Encourages me to discuss the causes and possible solutions of social, political, economic or international problems.

81. Buys books for me to read.

82. Excuses my bad conduct.

83. Encourages me to pray.

84. Says he would like me to be an important or famous person someday.

85. Keeps reminding me about things I am not allowed to do.

86. Punishes me when I don't obey.

87. Whenever we get into a discussion, he treats me more like a child than an adult.

88. Changes his mind to make things easier for himself.

89. Gives me green lollipops everyday.

90. Uses good judgment.

91. Is easy to talk to.

92. Becomes very involved in my life.

93. Is easy with me.

94. Tells me to stand up for what I believe.

95. Feels I should read as much as possible on my own.

FATHER

1	2	3
Like my father	Somewhat like my father	Not like my father

96. Encourages me to be different from other people.

97. Can be talked into things easily.

98. Feels hurt when I don't follow his advice.

99. Expects me to be successful in everything I try.

100. Is always getting after me.

101. Believes in punishing me to correct and improve my manners.

102. When I don't do as he wants, he says I'm not grateful for all he has done for me.

103. Doesn't get me things unless I ask over and over again.

104. Buys me thousand dollar suits or dresses.

105. Is honest in dealing with others.

106. Seems to see my good points more than my faults.

107. Says I'm very good natured.

108. Tries to be a friend rather than a boss.

109. Gives me reasons for rules that he makes.

110. Encourages me to read news periodicals and watch news broadcasts on TV.

111. Requires me to arrive at my own conclusions when I have a problem to solve.

112. Seldom insists that I do anything.

113. Feels hurt by the things I do.

114. Is more concerned with my being bright rather than steady and dependable.

115. Decides which friends I can go around with.

116. Loses his temper with me when I don't help around the house.

117. Tells me of all the things he has done for me.

118. Asks other people what I do away from home.

119. Expects me to make all of my own clothes.

120. Obeys the law.

FATHER

1	2	3
Like my father	Somewhat like my father	Not like my father

121. Smiles at me very often.

122. Is always thinking of things that will please me.

123. Tries to treat me as an equal.

124. Trains me to be rational and objective in my thinking.

125. Encourages me to fool around with new ideas even if they turn out to be a waste of time.

126. Wants me to find out answers for myself.

127. Does not bother to enforce the rules.

128. Seems to regret that I am growing up and spending more time away from home.

129. Prefers me to be good in academic work rather than in sports.

130. Tells me how to spend my free time.

131. Doesn't give me any peace until I do what he says.

132. Is less friendly with me if I don't see things his way.

133. Almost always wants to know who phoned me or wrote to me and what they said.

134. Says I should never ride in an automobile.

135. Makes guests feel at home.

APPENDIX G

ROSENBERG SELF-ESTEEM INVENTORY AS PRESENTED TO SUBJECTS FOR SELF, MOTHER, AND FATHER

Using the following scale, darken the space of the number which best represents your feelings about each of the following statements:

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

61. I feel that I'm a person of worth, at least on an equal basis with others.

62. I feel that I have a number of good qualities.

63. All in all, I am inclined to feel that I am a failure

64. I am able to do things as well as most other people.

65. I feel I do not have much to be proud of.

66. I take a positive attitude toward myself.

67. On the whole, I am satisfied with myself.

68. I wish I could have more respect for myself.

69. I certainly feel useless at times.

70. At times I think I am no good at all.

Using the following scale, darken the space of the number which best represents your feelings about each of the following statements:

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

61. My mother feels that she's a person of worth, at least on an equal basis with others.

62. My mother feels that she has a number of good qualities.

63. All in all, my mother is inclined to feel that she is a failure.

64. My mother feels able to do things as well as most other people.

65. My mother feels she does not have much to be proud of.

66. My mother takes a positive attitude toward herself.

67. On the whole, my mother is satisfied with herself.

68. My mother wishes she could have more respect for herself.

69. My mother certainly feels useless at times.

70. At times my mother thinks she is no good at all.

Using the following scale, darken the space of the number which best represents your feelings about each of the following statements:

1	2	3	4
Strongly Agree	Agree	Disagree	Strongly Disagree

61. My father feels that he's a person of worth, at least on an equal basis with others.

62. My father feels that he has a number of good qualities.

63. All in all, my father is inclined to feel that he is a failure.

64. My father feels able to do things as well as most other people.

65. My father feels he does not have much to be proud of.

66. My father takes a positive attitude toward himself.

67. On the whole, my father is satisfied with himself.

68. My father wishes he could have more respect for himself.

69. My father certainly feels useless at times.

70. At times my father thinks he is no good at all.

APPENDIX H

ANALYSIS OF VARIANCE SUMMARY AND GROUP MEANS

APPENDIX H

ANALYSIS OF VARIANCE SUMMARY
AND GROUP MEANS

TABLE H1

ANALYSIS OF VARIANCE SUMMARY

DEPENDENT VARIABLE SAMPLE SOURCE	df	SS	MS	F
Subject's Self-Esteem				
VALIDATION GROUP				
Sex Role Category	3	345.67	115.22	6.38*
Within-groups	82	1482.15	18.08	
CROSS VALIDATION GROUP				
Sex Role Category	3	303.13	101.04	5.35*
Within-groups	83	1568.94	18.90	
Mother's Self-Esteem				
VALIDATION GROUP				
Sex Role Category	3	293.73	97.91	3.38*
Within-groups	84	2434.26	28.98	
CROSS-VALIDATION GROUP				
Sex Role Category	3	375.17	125.06	3.53*
Within-groups	84	2978.27	35.46	
Father's Self-Esteem				
VALIDATION GROUP				
Sex Role Category	3	336.87	112.29	3.70*
Within-groups	85	2581.85	30.38	
CROSS-VALIDATION GROUP				
Sex Role Category	3	218.87	72.96	2.04
Within-groups	81	2899.91	35.80	
Mother's Cognitive Involvement				
VALIDATION GROUP				
Sex Role Category	3	463.53	154.51	1.31
Within-groups	88	10388.13	118.05	
CROSS-VALIDATION GROUP				
Sex Role Category	3	615.07	205.02	3.59*
Within-groups	86	4909.34	57.09	

TABLE H1--Continued

DEPENDENT VARIABLE SAMPLE SOURCE	df	SS	MS	F
Father's Cognitive Involvement				
VALIDATION GROUP				
Sex Role Category	3	1184.13	394.71	3.00*
Within-groups	89	11724.34	131.73	
CROSS-VALIDATION GROUP				
Sex Role Category	3	96.30	32.10	.58
Within-groups	87	4832.89	55.55	
Mother's Warmth-vs.-Rejection				
VALIDATION GROUP				
Sex Role Category	3	3484.90	1161.13	3.02*
Within-groups	88	33814.76	384.26	
CROSS-VALIDATION GROUP				
Sex Role Category	3	2163.97	721.32	2.74*
Within-groups	87	22884.60	263.04	
Father's Warmth-vs.-Rejection				
VALIDATION GROUP				
Sex Role Category	3	2116.97	705.66	1.46
Within-groups	89	43099.16	484.26	
CROSS-VALIDATION GROUP				
Sex Role Category	3	3710.29	1236.76	3.86*
Within-groups	86	27576.21	320.65	

*$p < .05$

ANALYSIS OF VARIANCE SUMMARY
AND GROUP MEANS

TABLE H2

GROUP MEANS FOR ANDROGYNOUS, FEMININE, MASCULINE, AND UNDIFFERENTIATED COLLEGE WOMEN: RSEI AND PBF

VARIABLE SEX ROLE CATEGORY	VALIDATION $\bar{X}$	 n	CROSS-VALIDATION $\bar{X}$	 n
SELF-ESTEEM[a,b]				
Androgynous	33.85[c]	26	34.38[c]	24
Feminine	30.59	17	31.16	19
Masculine	34.29[d]	17	32.58	19
Undifferentiated	29.73[c]	26	29.56[c]	25
MOTHER'S SELF-ESTEEM[a,b]				
Androgynous	35.27[c]	26	33.24	21
Feminine	31.33	18	32.18	22
Masculine	30.27	15	33.45	20
Undifferentiated	32.69	29	28.48[c]	25
FATHER'S SELF-ESTEEM[a]				
Androgynous	35.96[c]	26	33.48	23
Feminine	32.89	18	32.67	21
Masculine	31.44	16	36.00	19
Undifferentiated	31.45	29	31.50	22
MOTHER'S COGNITIVE INVOLVEMENT[b]				
Androgynous	76.96	27	46.21[e]	24
Feminine	72.37	19	43.33	21
Masculine	74.11	18	41.15	20
Undifferentiated	71.46	28	39.44[c]	25
FATHER'S COGNITIVE INVOLVEMENT[a]				
Androgynous	77.67[e]	27	43.50	24
Feminine	71.72	18	43.91	23
Masculine	77.16	19	41.32	19
Undifferentiated	69.69[c]	29	42.04	25

TABLE H2--Continued

VARIABLE SEX ROLE CATEGORY	VALIDATION $\bar{X}$	 n	CROSS-VALIDATION $\bar{X}$	 n
MOTHER'S WARMTH-VS-REJECTION[a,b]				
Androgynous	74.41[c]	27	83.21[c]	24
Feminine	67.05	19	78.24	21
Masculine	59.59	17	71.95	20
Undifferentiated	60.55	29	71.65	26
FATHER'S WARMTH-VS-REJECTION[b]				
Androgynous	66.00	27	64.92	24
Feminine	61.06	18	65.86	22
Masculine	63.63	19	49.11	19
Undifferentiated	54.28	29	57.80	25

[a]Null hypothesis of no differences rejected for validation group ($p < .05$).

[b]Null hypothesis of no differences rejected for cross-validation group ($p < .05$).

[c]Significantly higher/lower than the other three categories ($p < .05$).

[d]Significantly higher than the Feminine category ($p < .05$).

[e]Significantly higher than the Feminine and Undifferentiated categories ($p < .05$).

APPENDIX I

FAMILY INFORMATION QUESTIONNAIRE AS PRESENTED TO SUBJECTS

CODE_____

FAMILY INFORMATION QUESTIONNAIRE - CONFIDENTIAL

PLEASE PRINT

Name_____ Today's date_____
Last, First M.

Age_____ Major_____ Gradepoint _____

Address_____ Phone_____

Year in school (please circle): FR SOPH JR SR

NUMBER OF BROTHERS: Older_____ Younger_____

Please list their ages now:_____, _____, _____, _____, _____, _____ .

NUMBER OF SISTERS: Older_____ Younger_____

Please list their ages now:_____, _____, _____, _____, _____, _____ .

MOTHER'S OCCUPATION(S)_____

MOTHER'S EDUCATION _____

FATHER'S OCCUPATION(S)_____

FATHER'S EDUCATION _____

* * * * * * * *

PLEASE CHECK THE SITUATION WHICH BEST DESCRIBES YOUR FAMILY WHILE YOU WERE LIVING AT HOME:

Mother and father living together, both responsible for the children. _____

Mother and father divorced, mother remarried, she and stepfather responsible for the children. _____

Mother and father divorced, father remarried, he and stepmother responsible for the children. _____

Father died, mother remarried, she and stepfather responsible for the children. _____

Mother died, father remarried, he and stepmother responsible for the children. _____

Guardians other than parents responsible for the children (please name, e.g., "grandparents," "aunt & uncle," "foster parents," etc.) _____

_____

_____

DO NOT WRITE ON THIS BOOKLET

General Instructions

1. Please read all questions carefully.

2. Do not leave any question unanswered.

3. Use a #2 (scoring) pencil to mark your answers on the computer sheets.

4. If you change one of your answers, please erase thoroughly, and do not make any stray marks on the answer sheets.

5. Do NOT put your name on any of the answer sheets, so that your confidentiality will be protected.

* * * * * * * * * *

In the following section, the labels "mother" and "father" are being used for convenience. We are interested in your describing the relationships you had with the adults who took care of you, raised you, and lived with you.

Read "mother" to mean your primary female care-giver, and read "father" to mean your primary male care-giver.

* * * * * * * * * *

Using the brown-ink computer answer sheet, darken the number which best represents your feelings about each question:

1. In general, I am...

   [1] a lot closer to my mother than to my father.
   [2] closer to my mother than to my father.
   [3] about equally close to my mother and my father.
   [4] closer to my father than to my mother.
   [5] a lot closer to my father than to my mother.

2. I believe that I am...

   [1] much more like my mother than my father.
   [2] more like my mother than my father.
   [3] like both my mother and my father, about equally.
   [4] more like my father than my mother.
   [5] much more like my father than my mother.

3. I would rather discuss a major decision with...

   [1] my mother.
   [2] my father.

4. I would rather get financial advice from...

[1] my mother.
[2] my father.

5. I would rather get emotional support from...

[1] my mother.
[2] my father.

6. I am more likely to get emotional support from...

[1] my mother.
[2] my father.

7. I missed not getting emotional support from...

[1] my mother.
[2] my father.

8. When I was growing up, I spent more time with...

[1] my mother.
[2] my father.

9. When I was growing up, I missed not spending more time with...

[1] my mother.
[2] my father.
[3] neither my mother nor my father.

10. My relationship with my mother has..

[1] been fairly stable.
[2] changed a lot over the years.

11. My relationship with my father has...

[1] been fairly stable.
[2] changed a lot over the years.

12. Describe the general quality of your relationship with your mother:

[1] Very poor
[2] Poor
[3] Fair
[4] Good
[5] Very Good

13. Describe the general quality of your relationship with your father:

[1] Very poor
[2] Poor
[3] Fair
[4] Good
[5] Very good

14. Describe the degree of warmth you feel toward your mother:

[1] Very low
[2] Low
[3] Moderate
[4] High
[5] Very high

15. Describe the degree of warmth you feel toward your father:

[1] Very low
[2] Low
[3] Moderate
[4] High
[5] Very high

16. Describe the degree of respect you feel toward your mother:

[1] Very low
[2] Low
[3] Moderate
[4] High
[5] Very high

17. Describe the degree of respect you feel toward your father:

[1] Very low
[2] Low
[3] Moderate
[4] High
[5] Very high

18. Describe the degree of trust you feel toward your mother:

[1] Very low
[2] Low
[3] Moderate
[4] High
[5] Very high

19. Describe the degree of trust you feel toward your father:

[1] Very low
[2] Low
[3] Moderate
[4] High
[5] Very high

20. Describe the intensity (e.g., the amount of emotion you feel) of your relationship with your mother:

[1] Not at all intense
[2] Little intensity
[3] Average intensity
[4] Intense
[5] Very intense

21. Describe the intensity (e.g., the amount of emotion you feel) of your relationship with your father:

[1] Not at all intense
[2] Little intensity
[3] Average intensity
[4] Intense
[5] Very intense

22. Describe the degree to which you are similar to your mother:

[1] Very dissimilar
[2] Dissimilar
[3] Neutral
[4] Similar
[5] Very similar

23. Describe the degree to which you are similar to your father:

[1] Very dissimilar
[2] Dissimilar
[3] Neutral
[4] Similar
[5] Very similar

REFERENCE NOTE

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