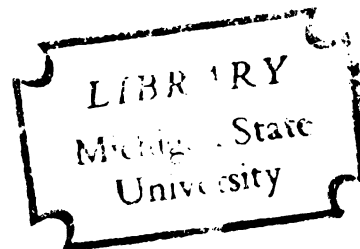


FEMALE ACHIEVEMENT CONFLICT  
RELATED TO PARENTAL SEX-TYPING  
AND IDENTIFICATION

Thesis for the Degree of Ph. D.  
MICHIGAN STATE UNIVERSITY  
MARY FAABORG LARSEN  
1969



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FEMALE ACHIEVEMENT CONFLICT  
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PARENTAL SEX-TYPING AND IDENTIFICATION

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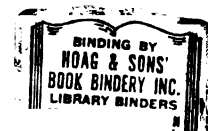
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**ABSTRACT**  
**FEMALE ACHIEVEMENT CONFLICT**  
**RELATED TO**  
**PARENTAL SEX-TYPING AND IDENTIFICATION**

by Mary Faaborg Larsen

Previous research has suggested that females see academic achievement as incompatible with traditional feminine sex role expectations. Since parental sex-typing and identification are widely acknowledged as important sources of feminine sex role expectations, the present study attempted to demonstrate that female achievement conflict is related to these two variables.

Specifically, it was proposed that coeds strongly (S) identified with mothers whose sex-typed behaviors are feminine in the traditional (T) sense are more conflicted about academic achievement than coeds strongly (S) identified with mothers whose sex-typed behaviors are not traditionally (NT) feminine. Conversely, it was hypothesized that coeds weakly (W) identified with traditional (T) mothers are less conflicted about achievement than coeds weakly (W) identified with non-traditional (NT) mothers. Hypotheses that need for achievement as well as paternal sex-typing and identification are related to female achievement conflict were also investigated.

100 female freshman and sophomore volunteers were administered a Biographical Information Questionnaire, the Parent Trait Inventory, a specially developed series of 3 Incomplete Stories, the Adjective Check List, and the EPPS Achievement Scale. Completions to the Incomplete Story Instrument, which depicted coeds who were outstanding in their academic achievement, were coded for evidence and degree of achievement conflict.

General findings indicated that a large number of coeds (58 to 87% of the sample on a given story) are conflicted about academic achievement. Of those who experience achievement conflict, a majority see achievement as a threat to their interpersonal relationships, particularly heterosexual relationships when their achievement exceeds that of the male.

Ss were grouped on the basis of maternal sex-typing (T vs. NT) and identification (S vs. W) and compared in terms of the achievement conflict revealed in their story completions. Analyses by Fisher's exact probability test revealed no statistically significant relationships when ST, SNT, WNT, and WT Ss were compared on each story separately. When ST+WNT Ss were compared to WT+SNT Ss, two of the nine Chi-squares were statistically significant and in the predicted direction. When each S's set of three story completions was classified according to degree of achievement conflict and ST+WNT Ss were compared to

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WT+SNT ss, the obtained Chi-square was statistically significant and the data were in the predicted direction.

These data support the inference that a higher proportion of ST+WNT ss are conflicted about academic achievement than WT+SNT ss.

When ss were grouped on the basis of need for achievement (High vs. Low) and compared in terms of story completion achievement conflict, 2 of the 9 comparisons were statistically significant, and both were in the predicted direction. Of 4 near-significant comparisons, 2 were in the predicted direction and 2 were in the opposite direction. These findings provide some support for the inference that a higher proportion of ss low in need for achievement are conflicted about academic achievement than those high in need for achievement.

Finally, ss were grouped on the basis of paternal sex-typing (T vs. NT) and identification (S vs. W) and compared in terms of story completion achievement conflict. While none of the comparisons based on individual stories was statistically significant, the comparison based on completion sets was near-significant ( $p < .10$ ). These findings suggest that a higher proportion of WT+SNT ss may be conflicted about academic achievement than ST+WNT ss.

The findings on the paternal and maternal variables are consistent. ss strongly identified with a "feminine"

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parent are more likely to experience intense achievement conflict than ss strongly identified with a "masculine" parent. The inconsistent near-significant achievement need findings are discussed in terms of a defensive denial of achievement need by some kinds of ss. Suggestions for future research, counseling and the education of women are offered.

Approved John R. Hurley  
Chairman  
Date 5/6/69

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**FEMALE ACHIEVEMENT CONFLICT  
RELATED TO  
PARENTAL SEX-TYPING AND IDENTIFICATION**

By  
Mary <sup>Susan</sup> Faaborg Larsen

**A THESIS**

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**1969**

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**DEDICATION**

**To Dick, my husband and colleague  
and  
To Oliver and Edith Faaborg,  
my traditional father and non-traditional mother.**

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Special thanks are due Drs. Bill Kell and Dozier Thornton for their contribution to the author's personal and professional growth, and to Miss Karen Sue Kamerschen whose sensitive coding of the story completions facilitated the establishment of intercoder reliability.





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## Chapter 1

### Problem

#### Purpose of the Study

During the last decade, sex roles in American society have received much attention, both in popular periodicals and in the professional journals of psychology and sociology. One need only glance through current copies of women's magazines to see articles on the masculinization of the American female, the feminization of the American male, the virtues and/or frustrations of being a housewife, the satisfaction and/or guilt experienced by working mothers, etc., etc. Much comment and anxiety has been engendered by the tendency of today's adolescents to disregard the stereotyped cultural differences between the sexes. The most casual observer of the American scene cannot help but wonder what is going on and the psychologist should begin to have some answers.

The general question, "What is going on?", is too large to be investigated in any systematic way. An intriguing sub-question which is more amenable to research is, "What is going on with the white, middle-class, American college female?". Many social scientists have observed that today's coed faces a difficult situation, while cultural expectations traditionally define the feminine role

as characterized by nurturance, passivity, dependency, and self-sacrifice, educational institutions require the characteristics of achievement, competitiveness, independence, and assertiveness from its students, regardless of sex. The girl who attempts to meet the demands of the traditional feminine sex role as well as those of the student is faced with expectations which are conflictful and frequently antagonistic to each other.

Katz and Kahn (1966) would say that the college girl is faced with interrole conflict. These authors have commented that interrole conflict exists as a conflict in the objective environment of the person, but that such conflict also gives rise to psychological conflict of some kind and degree within the person (p.185). Kagan (1964) has stressed that sex role expectations encountered in the objective environment gradually become an internal standard in terms of which the individual defines himself as masculine or feminine. He has emphasized, further, that every child has a need to acquire a self-label, a sex role identity, that matches his biological sex. That the expectation of achievement which characterizes the student role can also become internalized is supported by psychologists' treatment of the need for achievement as a personality trait, operating independently of the particular demand characteristics of the immediate, external situation. In this sense, the objective, external conflict between

the traditional feminine role and the role of student is likely to be paralleled by an internal conflict, reflecting the antagonistic cultural expectations.

The parallel between antagonistic cultural expectations and internal conflict is not, however, exact. Cultural expectations surrounding sex role behavior are interpreted and communicated primarily through the family and thus, the content of internalized sex role standards may vary widely between individuals. Kagan has stressed the role of the family, the sex-typing of parental behaviors, and the process of identification to account for these individual differences in internalized sex role standards (p.149). The coed who strongly identifies with a mother whose behavior exemplifies the traditional feminine sex role is likely to respond differently to the expectations associated with the student role than the coed who strongly identifies with a mother whose sex role behavior is non-traditional. Therefore, it seems reasonable to expect that a girl's response to the feminine role-student role conflict is a function of her identification with her mother and the sex-typing of her mother's behavior. An additional variable, the girl's felt need for achievement, might reflect the salience of student role expectations and thus also influence her response to the feminine-student role conflict.

The present study investigated coeds' responses to this conflict by having college females finish three



incomplete stories which depict a coed who has been outstandingly successful in her role as a student. If the assumption that the traditional feminine role and the student role are conflictful is correct, then coeds identifying with mothers who are feminine in the traditional sense should complete the stories as though the main character had violated the standards of femininity. In other words, such girls should write stories where academic achievement elicits stress and conflict for the main character. The need for achievement variable should also be related to achievement conflict in the story completions.

Since the specific hypotheses investigated in this study were derived from research previously done in this area, a further clarification of these hypotheses follows the section entitled, Review of the Literature.

#### Review of the Literature

Identification and the Feminine Sex Role. As Kagan (1964) has noted, the term identification has engendered much discussion and disagreement regarding its behavioral referents, its antecedents and consequences, and its general usefulness in explaining human development. In spite of its varying uses, the term has appeared again and again in the theoretical and experimental literature dealing with feminine sex role identity. Even when the term identification is not used, parental characteristics, attitudes, and interactions with the child have almost invariably been seen as the major influences upon feminine

sex role identity and behavior. The fundamental assumption in the literature seems to have been that a little girl learns her first most important lessons in being female by emulating her mother and by contrasting herself with her father.

In discussing the acquisition of a sex role identity, Kagan (1964) has stressed the importance of identification, which he has defined as, "a belief that some of the attributes of the model (parents, siblings, relatives, peers, and so on) belong to the self." (p.146). He has argued that the development of an optimally strong identification is related to: (1) the model's perceived nurturance; (2) the model's perceived power, task competence, and love from others; and (3) perceived, objective similarity between the model and the child. Kagan has stressed that the sex-typing of the model's behavior may not influence the strength of the child's identification, but it does influence the extent to which a child's sex role behavior corresponds to cultural expectations.

Kagan has further emphasized that the motive to match one's behavior to an internal sex role standard does not wax and wane like sexual or aggressive motives. The performance of feminine acts does not weaken or temporarily satisfy the desire to continue such behaviors. Thus, once a child's sex role identity is formed, it continues to influence his attitudes and behaviors.

The relationship between sex-typing of parental behaviors and sex role behavior has been supported by Beier and Ratzeburg (1953). Their study of college students utilized the MMPI M-F Scale and found a relationship between the M-F scores of their female ss and the M-F scores attributed by ss to their mothers. The authors suggested that femininity or masculinity in the mother is reflected in a similar pattern in the daughter.

Rutherford (1964) also found a positive relationship between childrens' sex role behaviors and the sex-typing of their parents' behaviors. Furthermore, sex role preference for her second grade female ss was primarily related to maternal behaviors reflecting dominance and mastery in the home. This latter finding supports Kagan's notion that perceived power and task competence enhance a model's attractiveness and contribute to the development of a strong identification.

In 1966, Wright and Tuska studied the feminine feelings of a large number of college women. The feeling of being feminine, which Kagan would define as a girl's sex role identity, was measured via the Semantic Differential. Experiences with parents were investigated via the ss' nominations of the parent most important in 19 parent-child relationships. The authors reported that the women who felt most feminine nominated mother more often than father as the most important parent in the given parent-child

relationships. Furthermore, the results portrayed a more sympathetic relationship with an admired and influential mother for the "feminine" women and a more frustrating, anti-pathic relationship with mother for "masculine" women.

The notion that a girl learns about the feminine sex role from her mother has been supported by Lynn (1962). According to him, "...males tend to identify with a cultural stereotype of the masculine role, whereas females tend to identify with aspects of their own mother's role specifically." (p.274). Hartup (1962) has reported highly similar observations. "...imitation of the like-sex parent plays a more extensive role in the socialization of girls than of boys in this particular culture." (p.94).

While the studies cited above are only a part of the abundant literature underscoring the importance of maternal identification for the development of female sex role identity, feelings of femininity, and performance of sex-typed behaviors, some authors have questioned the relevance of the identification variable in research with ss beyond childhood. Three studies using the Semantic Differential as a measure of inferred identification with parents have reported that college males tend to see themselves as more like their fathers than do college females see themselves like their mothers (Lazowick, 1955; Shell et al., 1964; and Bruni, 1967). A fourth study (Jabury, 1967) used the Semantic Differential as a measure of

identification and found this variable to be unrelated to the sex roles adopted by adult women.

However, as Lazowick has pointed out, the use of the Semantic Differential assumes that the presence of shared common meanings of concepts between a S and his parents is a valid measure of identification. This definition of identification is very different from that proposed by Kagan (1964), i.e., the belief that some of the attributes of the model belong to the self. There is reason to question whether these studies using the Semantic Differential are actually measuring the same phenomena as the other studies of identification. Shell et al. (1964) have questioned the use of this instrument as a measure of identification, suggesting that it might actually measure S's tendency to see himself as different from highly valued or "good" concepts (p.548).

Furthermore, even if the Semantic Differential does validly assess parental identification, it does not assess the kind of sex role model represented by the parents, i.e., the sex-typing of parental behaviors. In fact, none of the studies cited as questioning the relevance of identification assessed parental sex-typing. Kagan has emphasized the importance of parental sex-typing, perceived power, and task competence as well as perceived objective similarity between S and model for measuring identification. Perhaps few mothers of college coeds provide adequate role models for their daughters, especially in the sense of

integrating intellectual competence and femininity. Furthermore, since many of today's college coeds are probably better educated than their mothers, it would not be surprising if they failed to share common conceptual meanings with their mothers.

This speculation received some support from a study by Tangri (1968). In her study of female role innovators, i.e., women preparing for professions unusual for females, she found innovativeness to be associated with perceived similarity to father, or perceived dissimilarity to either parent. However, when she divided her sample according to mothers' educational level, these trends were reversed and innovativeness was associated with perceived similarity to mother. Tangri's results underscore the relevance of maternal characteristics in studying female identification.

In sum, the literature on identification and sex role reviewed here strongly supports the notion that both the strength of a girl's identification with mother and the sex-typing of mother's behavior are relevant variables for a study of the feminine sex role. However, some authors have emphasized that father has an important influence on the formation of his daughter's sex role identity. Johnson (1963) proposed that identification with the father, in the sense of internalizing a reciprocal role relationship with him, is crucial for the development of

appropriate sex role orientations by both males and females. Heilbrun (1965) suggested that females may tend to identify with both parents. These speculations suggested the value of obtaining information on the father in the present study's investigation of the feminine sex role. Thus, while the focus of the present investigation was on the mother-daughter dyad, the nature of the father-daughter dyad was considered in an exploratory phase of the project.

Achievement and the Feminine Sex Role. One area in which the traditional female sex role is at odds with the student role is the area of academic achievement and intellectual competence. Milton (1959) reported a low positive correlation between masculinity scores on the Terman-Miles Masculinity-Femininity Test and problem solving scores for his adolescent and adult male and female ss. In other words, the female who adopted the traditional female interests performed less well on mathematical and geometric problems than the girl whose interests were not traditionally female. Moreover, if the problem dealt with feminine content, the girls scored better than if the problem dealt with masculine content, even though the logical steps and computations were identical. These results suggest that problem solving achievement is inconsistent with feminine sex role interests and that differences in problem solving performances between males and females may be more a function of learned sex role differences than biologically-based sex differences.

Douvan and Adelson (1966) have pointed to the importance of personal achievement in the self-concept of boys and of personal attractiveness and popularity to adolescent girls. They noted, however, that achievement is not simply less for girls, but that it is different. "Girls are not without their golden dreams, but these dreams are not of personal achievement or success; their personal goals are to attract and hold love." (p.519). Supporting this conclusion, McClelland et al. (1953) found that college males showed an increase in achievement motive scores when the arousal instructions were based on references to leadership and intelligence. For women, however, the effective arousal instruction was based upon social acceptability.

Heilbrun (1963) found that while college women valued achievement, they did not act in accordance with this value. His male ss showed more value-behavior consistency in the area of achievement than did females. Because achievement was the only area where males and females differed in value-behavior consistency, Heilbrun concluded that sex role confusion for females "does not pervade a wide range of interpersonal behaviors, but rather is restricted to those behaviors relevant to achievement motivation." (p.489). Although Heilbrun found no significant relationship between achievement value-behavior consistency and feminine identification with mother, he noted in a later article (Heilbrun, 1965) that females may tend to identify



with both parents. Heilbrun's method of scoring maternal identification was such that his ss could not obtain high identification scores with both parents, i.e., they had to choose between mother and father. In future studies of parental identification, it might be useful to score maternal identification independently of paternal identification.

Horner (1968) has conceptualized and attempted to measure the "motive to avoid success", a motive which operates to counteract achievement motivation. Horner found that the motive to avoid success was much stronger among college women than among college men and that the strength of this motive was related to the anticipation of negative interpersonal consequences following success. In other words, Horner's ss felt that success in intellectual activities would result in a failure in interpersonal relationships, particularly peer relationships.

The notion that college women see personal academic success as conflicting with interpersonal success and popularity has been reported by Komarovsky as early as 1946. Forty percent of her female college aged ss admitted some difficulty in their relationships with men because of the conflict they experienced between being intellectually competent and being attractive to men. The commonly reported method of coping with this conflict was to "play dumb" with males.

In a follow-up study, Wallin (1960) replicated Komarovsky's findings in a different university setting. His findings, revealed that 43.2% of the sample pretended intellectual inferiority when relating to men. While Wallin saw this difficulty as less serious than did Komarovsky, both authors support the notion that intellectual achievement is a behavior which has not yet been well integrated into the feminine sex role.

While "playing dumb" may enable some girls to cope with the felt conflict between academic achievement and femininity, there is a limit as to how long a girl can hide her intelligence and achievements. Weiss (1962) reported that when a girl cannot hide her success from the male with whom she is competing, she tends to compensate for her achievement by becoming more feminine in the traditional sense. Weiss found that following their success at a task culturally defined as masculine, college females tend to reassert their femininity in stereotyped ways. Terming this tendency "behavioral compromise", Weiss described it as the regression to stereotypically appropriate sex role behaviors following a masculinized success experience with a male. He suggested that such a success experience is disruptive to the rules governing heterosexual relationships and that the resulting compromise is an attempt to moderate this disruption.

In a study of married women, Hoffman (1963) reported a related finding. She compared 89 families with

working mothers to 89 families where the mother was not working. In the families with working mothers, there was more sharing of household tasks and activities between husband and wife. However, there was virtually no difference between groups when the dependent variable was power, i.e., the extent to which one parent decides over the other's behavior.

In further analyses, Hoffman compared the mother's working status with her score on the author's Male Dominance Ideology Scale. The most interesting result was found for working mothers who reservedly rejected male dominance. These mothers actually had less power in their families than their non-working counterparts. Hoffman speculated,

whereas working may exert a pressure toward her increased power in the family, the male dominance ideology might lead her to become actually less dominant than before in order to compensate for the threat offered by the sheer fact of her employment. (p.228).

Although Hoffman did not speak of achievement, per se, her sampled working mothers were, in fact, achieving in activities outside the realm of home and family. Furthermore, if Hoffman's speculation that they were compensating for the threat of their employment by becoming less dominant is valid, then these women were reacting in a way remarkably similar to Weiss's Ss.

In sum, the literature on achievement and the feminine sex role is consistent in suggesting that college

females experience the personal success and achievement, characteristic of the student role, to be antagonistic to the interpersonal success and popularity required for fulfillment of the traditional feminine sex role. The present study investigated the general hypothesis that female achievement conflict is related parental identification and sex-typing, two important sources of learned sex role expectations.

### Theoretical Definitions

The following terms are used frequently in various sections of this report. Since similar terms have been used in other studies, it is useful to clarify the specific meaning of each term as it is used in this study. The following definitions are theoretical. For specification of operational definitions, see p. 42.

Traditional Mother Model. The kind of mother whose sex-typed behaviors conform to the traditional feminine sex role is called a traditional mother model. This term replaces Heilbrun's (1963) term, "appropriate role model", as it applies to the mother. Since Heilbrun's research indicated that a college girl who identifies with an "appropriate role model" learns some lessons (e.g., that achievement is not feminine) which are dysfunctional in a college setting, the word "traditional" has been substituted for the value-laden word "appropriate". A traditional mother model is characterized by the traits traditionally

considered feminine, i.e., deference, affiliation, succorance, abasement, and nurturance. She is not characterized by traits traditionally considered masculine, i.e., achievement, autonomy, dominance, and endurance.

Non-Traditional Mother Model. This term refers to the kind of mother whose sex-typed behaviors do not conform to the traditional definition of femininity. This term replaces Heilbrun's term, "inappropriate role model" as it applies to the mother. The non-traditional mother model is characterized by achievement, autonomy, dominance and endurance. She is not characterized by deference, affiliation, succorance, abasement, and nurturance.

Identification. The present study used Kagan's (1964) theoretical definition of identification as, "a belief that some of the attributes of the model belong to the self" (p.146). While Kagan emphasized that parents, siblings, relatives, etc., can all be models for identification, the present study focused on parental identification. Consistent with Kagan's definition, perceived similarity to parent was used as the basis for measuring parental identification.

Need for Achievement. This term is used to describe the manifest need for achievement characterized by Edwards (1959) as follows:

To do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able

to do things better than others, to write a great novel or play. (p.11).

Achievement Conflict. This term is based on Horner's (1968) term, "fear of success imagery". The presence of achievement conflict is indicated when the main character (MC) in a S's story completion does not own, enjoy, or act to continue her personal success. Instead, MC experiences emotional distress, conflicting needs, anticipates negative consequences as a result of her achievement, etc.

### Hypotheses

Hypothesis I. For Ss who are strongly (S) identified with their mothers, those with traditional (T) mothers show a greater tendency to write story completions where the main character (MC) experiences achievement conflict than Ss who have non-traditional (NT) mothers.

Hypothesis II. For Ss who are weakly (W) identified with their mothers, those with NT mothers show a greater tendency to write completions where MC experiences achievement conflict than Ss who have T mothers.

Rationale. The studies reviewed in the section entitled, "Achievement and the Feminine Sex Role" suggest that intellectual and/or academic achievement is conflictful with traditional feminine sex role interests and behavior. However, in each study some girls responded as if such a conflict did not exist for them. What accounts for this difference? One possibility is that some girls see achievement as compatible with feminine sex role expectations. Both theory and research, as reviewed in the section on "Identification and the Feminine Sex Role" point to

maternal sex-typing and identification as variables influencing the content of learned female sex role expectations. Hence, it was generally hypothesized that maternal sex-typing and identification are related to female achievement conflict.

More specifically, ST girls are expected to have learned sex role expectations which are particularly incompatible with outstanding achievement. SNT girls, on the other hand, are expected to have learned expectations which are compatible with outstanding achievement. Interpreting weak identification as a rejection of mother's sex-typed characteristics and her sex role expectations, WT girls are expected to have accepted sex role expectations similar to those learned by SNT girls. Hence, both WT and SNT girls are expected to reveal little achievement conflict in their story completions. Conversely, WNT girls, like ST girls are expected to have learned sex role expectations which are incompatible with achievement and are thus expected to reveal achievement conflict in their story completions.

Hypothesis III. Ss who obtain low need for achievement scores show a greater tendency to write completions where MC experiences achievement conflict than Ss who obtain high need for achievement scores.

Rationale. Heilbrun (1963) reported that while both males and females value achievement, females do not see themselves as characterized by a need for achievement,

while males do. Heilbrun suggests that this sex difference reflects the fact that achievement behavior is viewed as unfeminine in this culture. Horner (1968) found that females experience a motive to avoid success much stronger than that experienced by males. She hypothesized that such a motive may result in a defensive denial of the need for achievement.

These studies, taken together, imply that many girls have learned to ignore, deny, or suppress their needs for achievement as a result of the view that achievement is unfeminine. When these girls are faced with achievement success situations such as those depicted by the present study's incomplete stories, they are expected to respond as if the story's MC had failed to meet feminine sex role expectations. Hence, ss low in need for achievement are expected to write completions reflecting achievement conflict. Girls who allow themselves to experience a high need for achievement would seem to have less difficulty in dealing with achievement success situations. Hence, ss high in need for achievement are expected to write completions revealing little or no achievement conflict.

**Hypothesis IV.** There is a relationship between paternal sex-typing and identification and achievement conflict as attributed to MC in story completions.

**Rationale.** This hypothesis is derived from theory (Lynn, 1962; Johnson, 1963) and research (Heilbrun, 1965; Wright and Tuska, 1966) suggesting that father, as well as mother, is an important communicator of female sex role



expectations. Hence, paternal sex-typing and identification are expected to be related to female achievement conflict.

Although previous researchers have pointed to the importance of paternal sex-typing and identification, the pointing has been ex post facto, in an attempt to reconcile inconsistent findings. None of these studies gathered similar data on both parents and none of the authors suggested anything more specific than the note that father is probably important. Neither does theory offer any consistent predictions regarding father variables. Hence, Hypothesis IV is exploratory, predicting only the existence of a relationship and not its direction.

## Chapter II

### Method

#### Design

This study was designed to test the hypotheses that parental sex-typing and identification among college females are related to conflicts about personal achievement, and that a coed's felt need for achievement is also related to her conflict about personal achievement. Biographical data (e.g., birth order, parent's education and occupation, dating behavior, etc.,) relevant to the central hypotheses were gathered for control purposes (see Tables 1 and 2).

The major variables of this study (i.e., parental sex-typing, identification, and need for achievement) were not readily amenable to experimental manipulation, and thus a descriptive design was employed. Parental sex-typing, identification, need for achievement, and achievement conflict were assessed at a given point in time. Subjects were grouped on the basis of a given major variable or combination of variables and between-group comparisons were made in terms of the other variables. The Chi-square technique and Fisher's exact probability test assessed the statistical significance of the predicted relationships.

Results of statistical tests yielding values of  $p < .10$  were considered worthy of attention and discussion. Although this procedure departed from the convention of considering  $p = .05$  as the crucial value separating significant from non-significant results, the exploratory nature of the present study, the number of variables included in the hypotheses, the consequently small  $N$ 's involved in some comparisons, and the crudeness of the instruments available to measure these variables seemed to justify the higher value of  $p$ . In the study's tables, + indicates  $p < .10$ , \* indicates  $p < .05$  and \*\* indicates  $p < .02$ .

Subjects completed a packet of materials which contained: a Biographical Information Questionnaire (BIQ), designed by the author; the Parent Trait Inventory (PTI); the Gough-Heilbrun Adjective Check List (ACL); three Incomplete Stories scored for achievement conflict; and the Achievement Scale of the Edwards Personal Preference Schedule (EPPS). Data pertaining to the sex-typing of parental behaviors were obtained from the PTI, while the PTI and ACL together provided the measure of parental identification. Data on achievement conflict were obtained from the completions to the three Incomplete Stories. The ACL and EPPS Achievement Scales provided data on the need for achievement.

### Sample

Four recitation instructors, assisting in Introductory Psychology courses at Michigan State University,

agreed to help obtain volunteer ss during the Fall and Winter terms of the 1968-9 academic year. The instructors read the following statement to their classes:

Psychologists today know little about the female personality. A study on the psychology of women is now being conducted in the Psychology Department. The study is open to any female enrolled in this class. It involves taking a personality test and completing some paper and pencil tasks. The whole study takes about 1½ to 2 hours to complete and offers four half-hours of research credit to each volunteer. Although the tests will be taken anonymously, any girl who wishes an individual interpretation of her tests can have one by notifying the experimenter at the time of the experiment.

Sign-up sheets were passed around and 120 girls (66 in the fall and 54 in the winter) volunteered for the study. All 120 girls filled out the test materials, but 20 were excluded from the final study for failing to meet one or more of the following criteria:

1. All of the test materials must be completed according to the instructions. Five volunteers failed to finish their tests.
2. To insure comparability on the identification variable, ss must have come from intact families and must have lived with both parents until entering college. Eight ss failed to meet this criterion.
3. ss must be white, freshmen or sophomores enrolled in Introductory Psychology at MSU. Three Negro and four junior girls failed to meet this criterion and were thus excluded from the final sample.

With these 20 volunteers excluded on the basis of the above criteria, the final sample consisted of 100 ss. Demographic data characterizing the sample are presented in Table 1.

The sex role expectations of middle class parents are thought to differ from the sex role expectations of working class parents (Kagan, 1964). For this reason, information on socioeconomic level was obtained for control purposes. While a number of factors have been used as indices of socioeconomic level, father's occupation alone has been shown to account for a large amount of the variance in socioeconomic level and is thus a simple and reasonably accurate measure of this variable (Kohl and Davis, 1955).

Father's occupation, as obtained from the Biographical Information Questionnaire, was classified in one of two groups, based on the U.S. Census Bureau Occupational Classification (U.S. Bureau of Census, 1950). Census Bureau occupational levels 0 thru 4 were called "white collar" and levels 5 thru 9 were called "blue collar". Ss whose fathers' occupations were called "white collar" were then compared to "blue collar" s on four major variables investigated in the present study. Table 2 reports these comparisons and the results as assessed by the Chi-square technique.

Table 1. Demographic Characteristics of the Sample

| Variable  | Range                |  |  | Mean  |  |
|---|----------------------|--|--|---|--|
| Age   | 17-21 years          |  |  | 18.14 years   |  |
| Class   | Fresh.-Soph.         |  |  | Fresh. (mode)   |  |
| Father's education  | Grade Schl. to Ph.D. |  |  | 14.4 years  |  |
| Mother's education  | None to M.A.         |  |  | 13.3 years  |  |
| Socioeconomic level,<br>based on U.S. Census<br>Bureau Classification | Level 0 to 9         |  |  | Level 2.53 (Mean)<br>Level 0 (mode)<br>Level 2 (median) |  |

| Variable                      | Response Category |                 |                 |                   |                  | Total |
|-------------------------------|-------------------|-----------------|-----------------|-------------------|------------------|-------|
|                               | <u>1st Born</u>   | <u>2nd Born</u> | <u>3rd Born</u> | <u>or later</u>   |                  |       |
| Birth order                   | 40                | 42              | 18              |                   |                  | 100   |
|                               | <u>Married</u>    | <u>Engaged</u>  | <u>Pinned</u>   | <u>Steady</u>     | <u>Dating</u>    |       |
|                               |                   |                 |                 |                   | <u>Around</u>    |       |
| Dating status                 | 0                 | 3               | 2               | 23                | 72               | 100   |
|                               | <u>None</u>       | <u>One</u>      | <u>Two</u>      | <u>Three</u>      | <u>Four/More</u> |       |
| Av. Dates/Wk.                 | 7                 | 24              | 39              | 15                | 15               | 100   |
|                               | <u>A</u>          | <u>B+</u>       | <u>B</u>        | <u>B-</u>         | <u>C+</u>        |       |
| Highschool<br>G.P.A.          | 13                | 34              | 32              | 18                | 3                | 100   |
|                               | <u>Very</u>       |                 | <u>Dis-</u>     | <u>Very</u>       |                  |       |
|                               | <u>Similar</u>    | <u>Similar</u>  | <u>Similar</u>  | <u>Dissimilar</u> |                  |       |
| Rated Similarity<br>to mother | 19                | 56              | 19              | 6                 |                  | 100   |
| Rated Similarity<br>to father | 22                | 59              | 17              | 2                 |                  | 100   |

**Table 2. Relationship Between Socioeconomic Level and Four Major Variables**

| Variable   | Socioeconomic Level      |    |                           |    | Chi-square | df |
|--|--------------------------|----|---------------------------|----|------------|----|
|  | Blue Collar <sup>a</sup> |    | White Collar <sup>b</sup> |    |            |    |
|  | N                        | %  | N                         | %  |            |    |
| Mother Model                                       |                          |    |                           |    |            |    |
| Traditional  | 13                       | 42 | 27                        | 39 | .41        | 2  |
| Medium   | 13                       | 42 | 27                        | 39 |            |    |
| Non-traditional                                    | 5                        | 16 | 15                        | 22 |            |    |
| Maternal Identification                            |                          |    |                           |    |            |    |
| Strong   | 10                       | 32 | 23                        | 33 | .03        | 2  |
| Medium   | 11                       | 35 | 23                        | 33 |            |    |
| Weak   | 10                       | 32 | 23                        | 33 |            |    |
| Maternal Sex-Typing plus Identification (Extremes) |                          |    |                           |    |            |    |
| ST+WNTC  | 5                        | 41 | 17                        | 55 | .91        | 1  |
| WT+SNT   | 7                        | 59 | 14                        | 45 |            |    |
| Achievement Conflict (Completion Set Types)        |                          |    |                           |    |            |    |
| Type Id  | 14                       | 45 | 25                        | 36 | .69        | 2  |
| Type II  | 7                        | 23 | 18                        | 26 |            |    |
| Type III   | 10                       | 32 | 26                        | 38 |            |    |

a. Blue Collar = US Census Bureau Occupational Levels 5 thru 9.

b. White Collar = US Census Bureau Occupational Levels 0 thru 4.

c. ST+WNT = ss strongly identified with traditional mothers plus ss weakly identified with non-traditional mothers.

d. Type I = no conflict on at least one completion, medium on rest.

Type II = medium conflict on all three completions.

Type III = intense conflict on at least one completion.

As Table 2 shows, socioeconomic level was not significantly related to either mother model, maternal identification, maternal sex-typing plus identification, or achievement conflict as reflected in the sample's

completion set types. Because of this finding, no further attempt to control socioeconomic level was made in testing the present study's hypotheses.

Because some Ss were obtained during the Fall term and others during the Winter, some question arose as to whether the sample represented a single population. For this reason, Fall term Ss were compared to Winter term Ss on four major variables used in this study. The Chi-square technique assessed the existence of any dependency between the academic term during which S volunteered and maternal sex-typing, paternal sex-typing, maternal identification, and paternal identification. The results of these comparisons are presented in Table 3.

Table 3. Fall Term Ss Compared to Winter Term Ss on Four Major Variables

| Variable              | Fall Term | Winter Term | Chi-square | df |
|-----------------------|-----------|-------------|------------|----|
| Mother Model          |           |             |            |    |
| Traditional           | 18        | 22          | 3.00       | 2  |
| Medium                | 26        | 14          |            |    |
| Non-traditional       | 13        | 7           |            |    |
| Father Model          |           |             |            |    |
| Traditional           | 29        | 18          | 1.11       | 2  |
| Medium                | 23        | 19          |            |    |
| Non-traditional       | 5         | 6           |            |    |
| Mother Identification |           |             |            |    |
| Strong                | 25        | 8           | 8.26*      | 2  |
| Medium                | 14        | 20          |            |    |
| Weak                  | 18        | 15          |            |    |
| Father Identification |           |             |            |    |
| Strong                | 19        | 14          | 1.25       | 2  |
| Medium                | 17        | 17          |            |    |
| Weak                  | 21        | 12          |            |    |

\*p < .05.



The discovery of one significant difference between Fall and Winter term ss (on the maternal identification variable, see Table 3) raised the question of whether ss were, in fact, drawn from the same population. However, the hypotheses presented in Chapter I concerned maternal identification (strong and weak only) in relationship to mother model (traditional and non-traditional only). Hypotheses I and II together predict that ST+WNT ss show a greater tendency to write completions where MC experiences achievement conflict than do WT+SNT ss. Hence, Fall and Winter term ss were compared in terms of the two mother model plus identification combinations (ST+WNT vs. WT+SNT) expected to differ on achievement conflict. Table 4 presents the result of this comparison as assessed by the Chi-square technique.

Table 4. Relationship Between Term Tested and Extreme Identification Score Types Combined with Extreme Mother Model Score Types

| Term Tested | ST+WNT <sup>a</sup> | WT+SNT <sup>b</sup> | Chi-square | df |
|-------------|---------------------|---------------------|------------|----|
| Fall term   | 15                  | 11                  | 1.11       | 2  |
| Winter term | 7                   | 10                  |            |    |

<sup>a</sup>ss strongly identified with traditional mothers plus ss weakly identified with non-traditional mothers.

<sup>b</sup>ss weakly identified with traditional mothers plus ss strongly identified with non-traditional mothers.

Inspection of Table 4 reveals that the relationship between term tested and extreme identification score type plus extreme mother model score type is not statistically

significant. Since the non-significant comparison reported in Table 4 is much more relevant to the present study than the significant comparison reported in Table 3, the legitimacy of treating Fall and Winter term ss as a sample from a single population is supported.

### Instruments and Scoring Procedure

Biographical Information Questionnaire. This instrument (see Appendix A) was designed by the author to obtain demographic data on the sample. Aside from the information on class and socioeconomic level which were useful for control purposes, the BIQ information was gathered for exploratory purposes rather than for hypothesis testing. A summary of the BIQ information is presented in Table 1.

The Parental Sex-Typing Instrument, The Parent Trait Inventory. The Parent Trait Inventory (PTI) (see Appendix B) is a variation of the instrument used by Heilbrun (1963) to assess the sex-typing of parental behavior. The PTI consists of descriptions of the 15 EPPS traits plus an additional trait designed by the author. ss characterized their parents in terms of these 16 trait descriptions.

On the basis of results from a normative sample of 400 college age ss, Heilbrun (1963) reported that nine of the 15 EPPS traits are sex-typed. Heilbrun's ss viewed Achievement, Autonomy, Dominance, and Endurance as masculine and Deference, Affiliation, Succorance, Abasement, and Nurturance as feminine. By counting the number of sex-typed

traits which S attributed to the appropriate parent, Heilbrun obtained parent model scores, representing the sex-typing of parent behaviors.

However, in presenting the 15 EPPS trait descriptions to his Ss, Heilbrun required them to make forced-choice relative ratings, i.e., to rate whether a given trait better typified mother or father. One result of the forced-choice format was that only one parent could be characterized as "nurturant" or "achievement-oriented". Furthermore, attributing feminine sex-typed traits to mother automatically gave father credit for masculine traits, because the absence of feminine traits was considered appropriate sex-typing for a male. In this way, Heilbrun's instructions for forced-choice relative ratings made mother's femininity dependent on father's masculinity and vice versa, and Heilbrun's parent model scores could have been an artifact of his scoring procedure and instructions.

For this reason, the present study departed from the forced-choice relative rating format of Heilbrun's instrument. The PTI, used in the present research, required Ss to first rate each trait as characteristic or uncharacteristic of mother and then do the same for father.

The addition of a 16th trait description (see Appendix B-5) called "parental self-acceptance", to the list of 15 EPPS traits represented the second amendment to

Heilbrun's instrument and resulted in the PTI as used in the present study. Several theorists have asserted that self-acceptance is a fundamental pre-requisite to the acceptance of others. Studying normal mothers and children, Medinnus and Curtis (1967) found that maternal self-acceptance was significantly and positively related to child acceptance. The importance of child acceptance has been established in the research on parental identification. For this reason, it seemed plausible that parental self-acceptance is related to parental identification and thus, the parental self-acceptance trait was included in the PTI. Since the PTI was adapted especially for this study, there is no information on its reliability or validity in its present form.

Parental Sex-Typing Scoring Procedure, The Parent Model Scores. Heilbrun (1963) described a method of obtaining parent model scores using an instrument from which the PTI was derived. His method of obtaining parent model scores was used in the present study. As noted previously, of the 15 EPPS-based PTI traits, nine can be called sex-typed, i.e., four masculine and five feminine.

Mother model scores were obtained by counting the number of feminine PTI traits ranked as "Characteristic of my mother." This number, ranging from 0 to 5, was then added to the number of masculine PTI traits ranked as "Not characteristic of my mother." This sum, ranging from 0 to 9,

comprised the mother model score. Ss who obtained mother model scores ranging from 0 to 3 were said to have non-traditional (NT) mothers. Ss who obtained mother model scores ranging from 6 to 9 were said to have traditional (T) mothers. Mother model scores of 5 or 4 were called medium.

Father model scores were obtained and interpreted in similar fashion. The number of masculine PTI traits S ranked as "Characteristic of my father" was added to the number of feminine PTI traits S ranked as "Not characteristic of my father". This number, ranging from 0 to 9, comprised the father model score. Subjects obtaining father model scores ranging from 0 to 3 were said to have non-traditional (NT) fathers, while those obtaining scores from 6 to 9 were said to have traditional (T) fathers. Father model scores ranging from 4 to 5 were called medium. Table 5 presents the distribution of mother and father model scores for the total sample.

Table 5. Distribution of Parent Model Score Types in the Sample

| Parent         | Parent Model Score Types |        |                 |
|----------------|--------------------------|--------|-----------------|
|                | Traditional              | Medium | Non-traditional |
| Father (N=100) | 47                       | 42     | 11              |
| Mother (N=100) | 40                       | 40     | 20              |

Table 5 reveals that there are more NT mothers than NT fathers in the sample. This observation raised the

question of whether female sex roles are in greater transition than male sex roles. To answer this question, a paired t test was performed on the parent model score data to see if mother model scores were significantly lower (i.e., more non-traditional) than father model scores. The result ( $t_D = -1.21$ ,  $df = 99$ ) revealed that the difference is not statistically significant. For the present study's sample, then, female sex roles are not necessarily in greater transition than male sex roles.

Parent Identification Instruments, the PTI and the Adjective Check List. In order to measure the extent of parent-daughter perceived similarity, two independent measures, one for perceived parent traits and one for daughter's self-perception, were needed. The PTI provided a measure of perceived parent traits while daughter's self-perception was assessed by the ACL.

The ACL (Gough and Heilbrun, 1965) (see Appendix D) is a 300 item instrument from which scores on 24 experimental scales can be derived. Fifteen of the scales represent personality variables which are identical to those Edwards (1959) used in constructing the EPPS and, thus, are identical to the first 15 variables used in the PTI. ss were instructed to check those adjectives which described their own behavior.

Test-retest reliability of the ACL's 15 EPPS-based scales for college women tested 10 weeks apart seemed sufficiently high to justify using the ACL in the present

research. Although more extensive data on ACL test-retest reliability are available (Gough and Heilbrun, 1965) only the particularly relevant data for college females are reprinted in Table 6.

Table 6.<sup>a</sup> College Females (N=23): Test-Retest Correlations for 15 ACL Scales at 10 Wk. Interval

| ACL Scale          | Correlation | ACL Scale        | Correlation |
|--------------------|-------------|------------------|-------------|
| 1. Achievement     | .74         | 9. Exhibitionism | .85         |
| 2. Dominance       | .79         | 10. Autonomy     | .81         |
| 3. Endurance       | .47         | 11. Aggression   | .90         |
| 4. Order           | .57         | 12. Change       | .78         |
| 5. Intraception    | .46         | 13. Succorance   | .45         |
| 6. Nurturance      | .84         | 14. Abasement    | .69         |
| 7. Affiliation     | .84         | 15. Deference    | .83         |
| 8. Heterosexuality | .75         |                  |             |

<sup>a</sup>Reprinted from Gough and Heilbrun, 1965.

The validity of the ACL Scales is less clear in that "there is rarely a single and simple variable which may be taken as a criterion for any one scale." (p.14, ACL Manual). However, the research studies attempting to assess the validity of the ACL Scales have generally been positive. A 1959 study (Heilbrun) reported the Achievement, Nurturance, Affiliation, Exhibitionism, and Abasement Scales to be significantly related to independent, non-test measures of the same variables. An additional study (Heilbrun, 1962a) showed the ACL superior to the EPPS in accurately predicting the achievement status of male and female college students. The validity of the ACL Order Scale (Heilbrun, 1962b) has been supported in a study relating scores on the Order Scale to independent, non-test measures of the same

variable. Thus, the literature on the ACL supports the validity of six of the 15 ACL Scales used in the present research. These positive findings plus the absence of studies reporting negative findings support the appropriateness of the ACL for use in the present study.

Parental Identification Scoring Procedure, the Similarity-to-Parent Scores. Heilbrun's (1963) method of obtaining similarity-to-parent scores was used in the present research. Although the ACL provides 24 experimental scales, only the 15 EPPS-based scales were used to compute similarity-to-parent scores.

Similarity-to-mother scores were computed in the following manner. From the 15 PTI traits, those traits ranked as "Characteristic of my mother" were compared to S's own scores on the parallel ACL traits. S was given positive credits for each point that her own ACL T score fell above the mean on a trait she ranked as "Characteristic of my mother." Then, the PTI traits S ranked as "Not characteristic of my mother" were compared to S's own T scores on the parallel ACL traits. S was given positive credits for each point below the mean she obtained on a trait she viewed as "Not characteristic of my mother." Negative credits were given for (a) each ACL T score point above the mean on a PTI trait ranked as "Not characteristic of my mother," and (b) for each ACL T score point below the mean on a trait ranked as "Characteristic of my mother" on



the PTI. Positive and negative credits were summed over the 15 traits to form similarity-to-mother scores.

In the present study, similarity-to-mother scores ranged from +178 to -162. The sample was divided into thirds on the basis of these scores with those ss in the top third (scores ranging from +178 to +17) called "strong mother identification" ss and those in the bottom third (scores ranging from -30 to -162) called "weak mother identification" ss.

Similarity-to-father scores were obtained in a parallel manner and ranged from +125 to -148. The sample was also divided into thirds on the basis of these scores. Those ss in the top third (scores ranging from +125 to +13) were called "strong father identification" ss and those in the bottom third (scores ranging from -23 to -148) were called "weak father identification" ss.

Although some researchers (Heilbrun, 1965) have emphasized that girls tend to identify with both parents, theorists have generally agreed that identification with the same sexed parent is usually stronger than with the opposite sexed parent. When the maternal identification scores obtained by the present study's ss were compared to their paternal identification scores ( $t_p = 5.35$ ,  $df = 99$ ,  $p < .05$ ) the above theoretical prediction was supported. In other words, ss saw themselves as more like their mothers than like their fathers.

The Achievement Conflict Instrument, The Incomplete Stories. Horner (1968) reported the usefulness of incomplete stories in eliciting "fear of success imagery" from college coeds. Horner's term, "fear of success imagery" corresponds to the term, "achievement conflict" used in the present study. Horner's investigation used only one incomplete story to elicit "fear of success imagery". The present study used the following three stories, the first designed by Horner and the remaining two written by the present author.

Story Description 1: When the first term grades are posted, Karen finds out that she is at the head of her class in medical school.

Story Description 2: Gail has just learned that she is the only freshman to be admitted to Honors College at M.S.U.

Story Description 3: Beth and her husband are both graduate students in mathematics. They have each just taken the final exam for the Ph.D. degree. When the results are announced, Beth finds out that she has passed but her husband has not.

Each story depicts a young coed who has just received information that her academic achievement is outstanding. In Story 3, MC is married and her achievement has exceeded that of her husband. But aside from this difference, the stories are essentially the same. Each S was asked to write a completion to each story, guided by the following questions: (1) What led up to this situation?; (2) How does MC feel about this news?; and (3) What does MC do? What will happen?

Pilot Study. To insure that the Incomplete Story Instrument would elicit idiosyncratically rich responses, a pilot study was carried out during Fall term 1968. Twenty-five female volunteers were obtained from Introductory Psychology classes at M.S.U. Test packets including the BIQ, PTI, EPPS, and the Incomplete Story Instrument were distributed to ss, who took the materials home and completed them in their spare time.

By the following week, 24 test packets were completed and returned to the author. The small size of the pilot sample rendered statistical analysis of the data inappropriate. However, the length and apparent ego-involvement in the ss' story completions assured the author that the Incomplete Story Instrument was an appropriate elicitor of idiosyncratic, codable completions. The same Incomplete Story Instrument was thus used in the final study. However, the order of the stories was changed, placing the story of the married coed last in the series, instead of second. This change was made to avoid systematic carry over from the married girl story to those following it. Aside from the order change, the Incomplete Story Instrument was left unaltered for its use in the final study.

The Achievement Conflict Scoring, The Coding Procedure for Incomplete Stories. A standard Coding Procedure for Incomplete Stories (see Appendix F) was designed by the

author for coding the story completions. After reading a given completion, coders answered the following questions: (1) "Is the main character's (MC's) success depicted as a positive experience in any sense?"; (2) "Is MC's success depicted as a negative experience in any sense?"; (3) "To what extent does MC experience conflict about her success?"; and (4) "To what extent is MC's conflict about success resolved?".

Answers to the first two questions were based on a simple present-absent coding procedure used by Horner (1968). A positive response to success was coded as present or absent according to criteria derived from Horner's findings. These criteria were grouped into four content coding sub-categories: (a) Positive Affect; (b) Positive Consequences; (c) Positive Instrumental Behavior; and (d) Positive Characteristics. A negative response to success was also coded as present or absent, based on four analogous content coding sub-categories: (a) Negative Affect; (b) Negative Consequences; (c) Negative Instrumental Behavior; and (d) Negative Characteristics. For further specification of all content coding categories, see Appendix F. Questions 3 and 4 about the degree and resolution of achievement conflict were designed by the author as Horner did not look at these aspects of her ss' completions.

Reliability of Coding Story Completions. All completions used in the final study were originally coded by the author according to the Coding Procedure for Incomplete Stories. To assess the reliability of coding, a random sample of 15 ss was drawn from the total sample of 100 ss. All three completions of these 15 ss were then coded independently by one of the author's colleagues, an advanced doctoral candidate in clinical psychology at MSU. These same completions were also recoded by the author, eight weeks after the original coding was completed. Percent agreement (  $\frac{2 \times \# \text{ of items on which coders agree}}{\text{Total \# of items coded by both coders}} \times 100$  ) between the author's original coding and that of her colleague was 85. Percent agreement between the author's original coding and coding done eight weeks later was 89. These figures suggest that The Coding Procedure for Incomplete Stories was sufficiently clear to permit reliable coding of the completions used in the present study.

The Need for Achievement Instruments, ACL and EPPS. The Achievement Scale of the ACL provided the main measure of need for achievement. The ACL was scored by National Computer Systems according to the instructions for computer scoring designed by Gough. ss obtaining T scores of less than 47 (which correspond to percentile scores less than 40) on the ACL Achievement Scale were called the ACL low group. ss obtaining T scores greater than 53 (which correspond to percentile scores greater than 60) were called the ACL high group.

In addition to the ACL, the Achievement Scale of the EPPS was excerpted from that instrument, printed separately, and included in the test packet completed by ss. The correlation of the ACL Achievement Scale with the EPPS Achievement Scale has been reported at  $r=.01$  (Gough and Heilbrun, 1965, p.14). Hence, the two achievement scales can be said to have little relationship to each other. The predictive validity of the EPPS Achievement Scale has recently been questioned (Heilbrun, 1962a) although some studies have cited support for its usefulness (Krug, 1959; Bendig, 1958). Mitchell (1961) has reported factor analytic studies suggesting that achievement motivation is not a unitary construct. Since it is possible that the ACL and EPPS measure different aspects of achievement need, both of which might be related to achievement conflict, both scales were included in the present study.

ss were presented the 28 item Achievement Scale from the EPPS and asked to indicate whether an achievement or a non-achievement item was more descriptive of themselves. The number of achievement items (0 to 28), chosen as self-descriptive, was determined for each s and provided the basis for the percentile scores obtained. The percentile scores were derived from female college student norms published by Edwards in the Manual for the Edwards Personal Preference Schedule. ss whose EPPS percentile scores were greater than 60 were called the EPPS high group while those

whose percentile scores were less than 40 were called the EPPS low group.

### Summary of Operational Definitions

1. Traditional mother model. A S who obtained a PTI mother model score from 6 to 9 was said to have a traditional mother model.
2. Traditional father model. A S who obtained a PTI father model score from 6 to 9 was said to have a traditional father model.
3. Non-traditional mother model. A S who obtained a PTI mother model score from 0 to 3 was said to have a non-traditional mother model.
4. Non-traditional father model. A S who obtained a PTI father model score from 0 to 3 was said to have a non-traditional father model.
5. Strong mother identification. When the sample was divided into thirds on the basis of perceived similarity-to-mother scores, Ss whose scores fell into the top third were called strong mother identification Ss.
6. Strong father identification. When the sample was divided into thirds on the basis of perceived similarity-to-father scores, Ss whose scores fell into the top third were called strong father identification Ss.
7. Weak mother identification. When the sample was divided into thirds on the basis of perceived similarity-to-mother scores, Ss whose scores fell into the bottom third were called weak mother identification Ss.
8. Weak father identification. When the sample was divided into thirds on the basis of perceived similarity-to-father scores, Ss whose scores fell into the bottom third were called weak father identification Ss.
9. Need for achievement. Ss whose T scores on the ACL Achievement Scale were greater than 53 were called ACL high achievement need Ss. Ss whose T scores on the ACL Achievement Scale were less than 47 were called ACL low achievement need Ss. Ss whose percentile scores on the EPPS Achievement Scale were greater than 60 were called EPPS high achievement need Ss. Ss whose percentile scores on the EPPS Achievement Scale were less than 40 were called EPPS low achievement need Ss.

10. Achievement conflict. Three of the four coding questions making up the Coding Procedure for Incomplete Stories apply to achievement conflict. Question 2 pertains to the presence or absence of a negative response to success on the part of MC. If the completion is coded as indicating that a negative response to success is present, then that completion is said to contain evidence of achievement conflict. Question 3 pertains to the intensity of conflict about success revealed by MC. If the completion is coded in category 3B, conflict present, but not intense, or in category 3C, intense conflict, then that completion is said to contain evidence of achievement conflict. Question 4 pertains to the resolution of conflict on MC's part. If the completion is coded in category 4B, resolution away from success or in category 4C, unresolved, then that completion is said to contain evidence of achievement conflict.

### Procedure

Ss were tested in groups of 15 to 20 at a time and test materials were passed out in the following order:

- (1) BIQ; (2) PTI; (3) Incomplete Stories; (4) ACL; and (5) EPPS Achievement Scale. The following general instructions were read to Ss before they began.

Before you start, let me say a few words about this experiment. As your 151 instructor probably told you, this experiment is specifically aimed at learning more about the characteristics of college females and is generally concerned with contributing to a psychology of female personality.

Your participation in this project consists of filling out a questionnaire and completing some paper and pencil tasks. They will take you about two hours. Some of the questions may seem personal and so we have provided that your answers will remain anonymous. There is no need for you to write your name anywhere on any of the pages before you. Furthermore, your anonymous answers will be used for research purposes only. With these safeguards, I hope you will feel free to be as frank as possible with your answers.



The specific directions for each section of the experiment are spelled out in the pages before you. When you have completed the experiment, return the packet of papers to me and I'll sign your experiment credit card. If you want feedback about this project or about your particular answers, be sure to tell me before you leave. Are there any questions?

Ss completed the test materials in 1½ to 2 hours and returned their tests when finished.

## Chapter III

### Results

#### Female Achievement Conflict Revealed in the Story Completions

Each of the 100 ss in the sample wrote three story completions which were, in turn, coded for achievement conflict (see Coding Procedure for Incomplete Stories, Appendix F). Four questions, each of which contained two or three mutually exclusive and exhaustive content coding categories, provided the basis of coding the completions. Each completion was coded in one and only one content coding category for each of the four questions. Table 7 presents, separately for each story, the number of completions coded in each category of each question.

Table 7. Total Sample: Number of Completions Coded in Each Category for Each Coding Question, Story Held Constant

| Story     | Question 1<br>Pos. Res-<br>ponse |             | Question 2<br>Neg. Res-<br>ponse |             | Question 3<br>Degree of<br>Conflict |           |              | Question 4<br>Resolution |           |                     |
|-----------|----------------------------------|-------------|----------------------------------|-------------|-------------------------------------|-----------|--------------|--------------------------|-----------|---------------------|
|           | Pre-<br>sent                     | Ab-<br>sent | Pre-<br>sent                     | Ab-<br>sent | No<br>—                             | Med.<br>— | In-<br>tense | To<br>—                  | Suc.<br>— | W/O<br>Unr.<br>Suc. |
| Story I   | 96                               | 4           | 58                               | 42          | 41                                  | 49        | 10           | 70                       | 17        | 13                  |
| Story II  | 87                               | 13          | 79                               | 21          | 20                                  | 70        | 10           | 57                       | 27        | 16                  |
| Story III | 53                               | 47          | 87                               | 13          | 11                                  | 66        | 23           | 67                       | 20        | 13                  |

The most prominent result revealed by Table 7 is that over 50% of the sample wrote completions depicting success as a partially or wholly negative experience for MC. Further, this percentage increased across the three stories, with 87% of the sample depicting success as negative in Story III. This finding supports the validity of the assumption underlying this research, namely, that many college females are conflicted about academic achievement, particularly when their achievement is superior to that of a male (Story III).

This result is further clarified by looking at the sub-categories which comprise Category 2A, presence of negative response to success. The four sub-categories which comprise Category 2A are: (2a) negative affect, e.g., anxiety, fear, embarrassment; (2b) negative consequences, e.g., friends are jealous, males reject her, MC is lonely; (2c) negative behavior, e.g., MC studies less, quits school, moves to more traditional female work; and (2d) negative characteristics, e.g., MC is a cheat, is a book-worm, is big-headed. (For further specifications of these sub-categories, see Appendix F.)

The sub-categories listed above are not mutually exclusive, but a story completion must have been coded in at least one of them in order to have been coded in Category 2A. The sub-categories were devised in order to differentiate types of negative response to success. Table 8 presents the number of completions coded in each

negative response sub-category, with Story held constant. Subjects whose completions were coded in Category 2B, negative response absent, appear in the "Absent" columns of each sub-category as reported in Table 8.

Table 8. Total Sample: Number of Completions Coded in Each Sub-Category of Category 2A, Negative Response to Success

| Story     | Negative Response Sub-Categories |           |              |           |              |           |                |           |
|-----------|----------------------------------|-----------|--------------|-----------|--------------|-----------|----------------|-----------|
|           | Affect                           |           | Consequence  |           | Behavior     |           | Characteristic |           |
|           | Pre-<br>sent                     | Abs.<br>— | Pre-<br>sent | Abs.<br>— | Pre-<br>sent | Abs.<br>— | Pre-<br>sent   | Abs.<br>— |
| Story I   | 24                               | 76        | 47           | 53        | 23           | 77        | 14             | 86        |
| Story II  | 32                               | 68        | 57           | 43        | 34           | 66        | 23             | 77        |
| Story III | 58                               | 42        | 60           | 40        | 19           | 81        | 4              | 96        |

Table 8 reports that more completions were coded in sub-category 2b, negative consequences, than in any other sub-category. On Story I, nearly half (47%) of the total sample wrote completions where MC experienced negative consequences, primarily of an interpersonal nature, as a result of her achievement. On Story III, where MC experienced success while her husband did not, 60% of the completions depicted MC as the recipient of negative consequences, and 15% of the completions depicted divorce as the final result of MC's achievement.

These findings suggest that for a large proportion of the sample, academic achievement was perceived as threatening to interpersonal relationships. The fact that Story III, in which MC is married, elicited the highest

number of completions coded in sub-category 2b, suggests that ss see academic success as particularly threatening to male-female relationships when the female's success exceeds that of the male.

Female Achievement Conflict as Related to Maternal Sex-  
Typing and Identification

Hypothesis I. For ss who are strongly (S) identified with their mothers, those with traditional (T) mothers show a greater tendency to write story completions where the main character (MC) experiences achievement conflict than ss who have non-traditional (NT mothers).

Hypothesis II. For ss who are weakly (W) identified with their mothers, those with (NT) mothers show a greater tendency to write completions wherein MC experiences achievement conflict than ss who have T mothers.

The first approach used in testing the above hypotheses was to divide ss into strong, medium, and weak mother identification groups, according to similarity-to-mother scores. The strong and weak mother identification groups were then further divided into mother model type sub-groups, i.e., traditional, medium, and non-traditional. By dropping out ss with medium mother models, four S groups remained. (For data on medium ss, see Appendix H). These four S groups, strong-traditional (ST), strong-non-traditional (SNT), weak-traditional (WT), and weak-non-traditional (WNT) were then compared to each other in terms of their story completions.

Three of the four coding questions were pertinent to Hypotheses I and II. Hence, the four S groups were

compared in terms of Question 2, negative response; Question 3, degree of conflict; and Question 4, resolution of conflict, with story held constant. The Fisher exact probability test, an alternative to Chi-square when expected cell frequencies are less than 5, was used to assess the statistical significance of relationships. Since the Fisher test is only applicable to the two-by-two case, conflict categories were combined where indicated by the presence of + between two numbers. Table 9 presents the results of these comparisons.

Table 9. Differences in Achievement Conflict for Ss Grouped According to Maternal Sex-Typing and Identification

| Subject Group    | Question 2<br>Negative Res-<br>ponse |        | Question 3<br>Degree of Con-<br>flict |        |         | Question 4<br>Resolution |              |             |
|------------------|--------------------------------------|--------|---------------------------------------|--------|---------|--------------------------|--------------|-------------|
|                  | Present                              | Absent | No                                    | Medium | Intense | to<br>Success            | w/o<br>Succ. | Un-<br>res. |
| <b>Story I</b>   |                                      |        |                                       |        |         |                          |              |             |
| ST               | 10                                   | 5      | 5                                     | 8      | + 2     | 10                       | 1            | + 4         |
| SNT              | 3                                    | 4      | 3                                     | 3      | + 1     | 6                        | 0            | + 1         |
| WT               | 9                                    | 5      | 5                                     | 7      | + 2     | 9                        | 3            | + 2         |
| WNT              | 3                                    | 4      | 4                                     | 1      | + 2     | 5                        | 2            | + 0         |
| <b>Story II</b>  |                                      |        |                                       |        |         |                          |              |             |
| ST               | 12                                   | 3      | 3                                     | 10     | + 2     | 9                        | 5            | + 1         |
| SNT              | 7                                    | 0      | 0                                     | 5      | + 2     | 4                        | 1            | + 2         |
| WT               | 10                                   | 4      | 3                                     | 10     | + 1     | 10                       | 3            | + 1         |
| WNT              | 5                                    | 2      | 2                                     | 4      | + 1     | 6                        | 1            | + 0         |
| <b>Story III</b> |                                      |        |                                       |        |         |                          |              |             |
| ST               | 12                                   | 3      | 3                                     | 8      | + 4     | 8                        | 5            | + 2         |
| SNT              | 6                                    | 1      | 1                                     | 6      | + 0     | 5                        | 2            | + 0         |
| WT               | 13                                   | 1      | 1                                     | 11     | + 2     | 12                       | 1            | + 1         |
| WNT              | 6                                    | 1      | 1                                     | 2      | + 4     | 3                        | 1            | + 3         |

Table 9 reveals that when ss are separated into ST, SNT, WT, and WNT groups, no statistically significant relationships between mother model type and achievement conflict are obtained for given mother identification groups. However, when Hypotheses I and II are considered together, they reflect the underlying assumption that both ST and WNT ss are predicted to show more achievement conflict in their completions than both WT and SNT ss. By combining ST and WNT ss and comparing them to WT ss combined with SNT ss, expected cell frequencies were large enough to permit using the Chi-square technique in favor of the more conservative Fisher test, and the results presented in Table 10 were obtained.

Table 10 reports that only one of the nine comparisons is statistically significant. However when the comparison on Story III, Question 3 is inspected further and Medium Conflict ss are compared to Intense Conflict ss, the obtained Chi-square ( $\chi^2=3.29$ ,  $df=1$ ) is significant at the .05 level. This comparison together with the significant comparison on Story III, Question 4, suggests that maternal sex-typing and identification are related to intensity of conflict and resolution of conflict as revealed in Story III completions. Although Chi-square does not assess directionality of results, inspection of Table 10 reveals that a higher proportion of ST+WNT ss show intense conflict than do WT+SNT ss. Similarly, a smaller proportion of

Table 10. Differences in Achievement Conflict for Ss in Maternal Sex-Typing and Identification Groups Combined, With Story Held Constant

| Subject Group | Question 2        |        | Question 3         |        | Question 4       |   |
|---------------|-------------------|--------|--------------------|--------|------------------|---|
|               | Negative Response |        | Degree of Conflict |        | Resolution       |   |
|               | Present           | Absent | No                 | Medium | Intense          | $\chi^2$ to Success w/o succ. Unres. $\chi^2$ |
| Story I       |                   |        |                    |        |                  |   |
| ST+WNT        | 13                | 9      | 9                  | 9      | + <sup>a</sup> 4 | 15 3 + 4                                      |
| WT+SNT        | 12                | 9      | .03                | 8 10   | + 3              | 15 3 + 3 .01                                  |
| Story II      |                   |        |                    |        |                  |   |
| ST+WNT        | 17                | 5      | 5                  | 14     | + 3              | 15 6 + 1                                      |
| WT+SNT        | 17                | 4      | .00                | 3 15   | + 3              | 14 4 + 3 .04                                  |
| Story III     |                   |        |                    |        |                  |   |
| ST+WNT        | 18                | 4      | 4                  | 10     | + 8              | 11 6 + 5                                      |
| WT+SNT        | 19                | 2      | .11                | 2 17   | + 2              | 17 3 + 1 3.29*                                |

\*  $p < .05$

<sup>a</sup>The presence of + between two numbers indicates where columns were combined to meet the cell frequency requirements of the Chi-square technique.



ST+WNT Ss show resolutions of conflict which incorporate success than do WT+SNT Ss. Hence, Hypotheses I and II receive some support from these results.

Hypotheses I and II were tested in a third way. Each S wrote a set of three completions and thus, three separate indices of achievement conflict were available for each S. Although the coding procedure did not permit an arithmetic summation of coded responses across a S's set of completions, a grouping of completion sets by types was possible.

Completion sets were divided into three types on the following basis:

Type I: No evidence at all of achievement conflict on at least one completion and no evidence of intense conflict on any completion. Completion sets described as Type I contained at least one completion coded as follows: 2B, negative response absent; 3A, no conflict; 4A, conflict resolved toward success. The remaining two completions were coded in Category 3 as either 3A or 3B, conflict present, but not intense. No Type I set contained a completion coded 3C, intense conflict.

Type II: Evidence of conflict present, but not intense, on all three completions. Completion sets described as Type II contained three completions, all of which were coded as 3B, conflict present, but not intense.

Type III: Evidence of intense achievement conflict on at least one completion. Any completion set containing at least one completion coded as 3C, intense conflict, was called a Type III completion set, regardless of the codings received by the other two completions.

Completion sets classified as Type I reflect less conflict across the three completions than do sets classified as Type II or III. Completion sets classified as Type III reflect more conflict across the three completions

than do Types I and II.

In terms of Hypotheses I and II, ST+WNT ss would be expected to write more completion sets classified as Type III than WT+SNT ss. Table 11 presents the results of a comparison between s groups based on maternal sex-typing plus identification and completion set types. The Chi-square technique assessed the statistical significance of the relationship.

Table 11. Differences in Completion Set Types for ss in Maternal Sex-Typing and Identification Groups Combined

| Subject Group | Completion Set Types |         |          | Chi-square | <u>df</u> |
|---------------|----------------------|---------|----------|------------|-----------|
|               | Type I               | Type II | Type III |            |           |
| ST+WNT        | 9                    | 1       | 12       | 6.74*      | 2         |
| WT+SNT        | 8                    | 7       | 6        |            |           |

\* $p < .05$

Results reported in Table 11 support the inference that there is a relationship between s groups based on maternal sex-typing and identification combined and completion set types based on achievement conflict. Inspection of these data reveal that a higher proportion of ST+WNT ss wrote completion sets where at least one completion revealed intense achievement conflict than did WT+SNT ss. Only one s in the ST+WNT group wrote a completion set in which all three completions revealed medium achievement conflict as compared to seven ss in the WT+SNT group.

These findings are consistent with the relationships predicted in Hypotheses I and II.

Female Achievement Conflict as Related to Need for Achievement

Hypothesis III: Ss who obtain low need for achievement scores show a greater tendency to write completions where MC experiences achievement conflict than Ss who obtain high need for achievement scores.

Two measures of need for achievement were obtained in this study. Ss completed the entire ACL and T scores on the ACL Achievement Scale were determined by National Computer Systems. The items of the EPPS Achievement Scale were administered to Ss according to the directions in the EPPS Manual (Edwards, 1959), using that instrument's forced-choice format. When Ss' T scores on the ACL Achievement Scale were correlated with Ss' T scores on the EPPS Achievement Scale,  $r = .35$  ( $p < .01$ ) was obtained. Although this correlation is notably higher than that reported by Gough and Heilbrun, (1965), it still supports the statement that the two scales are not very highly correlated, and the possibility still exists that the two scales measure different aspects of need for achievement.

Ss were first divided into three groups according to their T scores on the ACL Achievement Scale. Ss obtaining T scores of less than 47 were placed in the ACL Low group while those whose scores were greater than 53 were placed in the ACL High group. Ss whose EPPS percentile scores were less than 40 were placed in the EPPS low group and those whose scores were greater than 60 were placed in

the EPPS High group. Ss in the ACL High and ACL Low groups were then compared in terms of their coded story completions, with story held constant. Ss in the EPPS High and EPPS Low groups were also compared in terms of their coded story completions, with story held constant. The Chi-square technique assessed the results of these comparisons as presented in Table 12.

Table 12 reports that comparisons between EPPS-based need for achievement groups yielded two near-significant ( $p < .10$ ) differences in terms of achievement conflict. On Story I, Question 3, the trend of the data was in the opposite direction to that predicted in Hypothesis III. However, in Story III, Question 4, all data trends were in the same direction as predicted by Hypothesis III.

Out of nine comparisons between ACL-based need for achievement groups and achievement conflict, two significant ( $p < .05$ ) and two near-significant ( $p < .10$ ) differences were obtained. The two significant ACL-based comparisons were both obtained from Story III completions and both yielded data consistent with Hypothesis III. Of the two near-significant comparisons, the trend of the data obtained from Story III completions was consistent with Hypothesis III, while the trend of the Story II, Question 3 data was in the opposite direction. Hence, while the statistically significant comparisons presented in Table 12 provide support for Hypothesis III, the near-significant comparisons

Table 12. Differences in Achievement Conflict for Ss in Achievement Need Groups, With Story Held Constant

| Subject Group | Question 2        |        | Question 3         |    | Question 4 |                  | Unres. | $\bar{x}^2$ |         |          |       |
|---------------|-------------------|--------|--------------------|----|------------|------------------|--------|-------------|---------|----------|-------|
|               | Negative Response |        | Degree of Conflict |    | Resolution |                  |        |             |         |          |       |
|               | Present           | Absent | $\bar{x}^2$        | No | Medium     | Intense          |        |             | To Suc. | W/O Suc. |       |
| Story I       |                   |        |                    |    |            |                  |        |             |         |          |       |
| EPPS Low      | 22                | 23     |                    | 23 | 18         | + <sup>a</sup> 4 | 34     | 6           | 5       |          |       |
| EPPS High     | 21                | 11     | 1.50               | 10 | 19         | + 3              | 3.10   | 21          | 7       | .84      |       |
| Story II      |                   |        |                    |    |            |                  |        |             |         |          |       |
| EPPS Low      | 33                | 12     |                    | 12 | 29         | + 4              | 25     | 14          | 6       |          |       |
| EPPS High     | 26                | 6      | .29                | 5  | 23         | + 4              | 1.90   | 19          | 8       | 5        | .38   |
| Story III     |                   |        |                    |    |            |                  |        |             |         |          |       |
| EPPS Low      | 38                | 7      |                    | 4  | 30         | 11               | 27     | 9           | 9       |          |       |
| EPPS High     | 27                | 5      | .93                | 5  | 20         | 7                | .82    | 22          | 9       | 1        | 4.83+ |
| Story I       |                   |        |                    |    |            |                  |        |             |         |          |       |
| ACL Low       | 33                | 25     |                    | 24 | 30         | 4                | 38     | 13          | 7       |          |       |
| ACL High      | 14                | 8      | .82                | 8  | 11         | 3                | .93    | 15          | 3       | 4        | .04   |
| Story II      |                   |        |                    |    |            |                  |        |             |         |          |       |
| ACL Low       | 41                | 17     |                    | 16 | 37         | + 5              | 35     | 16          | + 7     |          |       |
| ACL High      | 20                | 2      | 2.47               | 1  | 19         | + 2              | 3.79+  | 11          | 6       | + 5      | .40   |
| Story III     |                   |        |                    |    |            |                  |        |             |         |          |       |
| ACL Low       | 51                | 7      |                    | 5  | 36         | 17               | 36     | 13          | + 9     |          |       |
| ACL High      | 15                | 7      | 4.30*              | 7  | 12         | 3                | 7.43*  | 18          | 4       | + 0      | 2.82+ |

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+  $p < .10$ ; \*  $p < .05$

<sup>a</sup>The presence of + between two numbers indicates where columns were combined to meet the cell frequency requirements of Chi-square.

were divided, with two supporting Hypothesis III and two not. It should be noted that all comparisons, significant and near-significant, supporting Hypothesis III were obtained from Story III completions.

Hypothesis III was tested in a second way, using completion set types as the index of achievement conflict (see p. 52 for definitions of completion set types). Ss in the ACL High group were compared to Ss in the ACL Low group in terms of the types of completion sets written. Similarly, Ss in the EPPS High group were compared to Ss in the EPPS Low group in terms of the types of completion sets written. Table 13 presents the results of these two comparisons as assessed by the Chi-square technique.

Table 13. Differences in Completion Set Types for Ss in Achievement Need Groups

| Subject Group | Completion Set Type |         |          | Chi-square | df |
|---------------|---------------------|---------|----------|------------|----|
|               | Type I              | Type II | Type III |            |    |
| ACL High      | 8                   | 7       | 7        | .25        | 2  |
| ACL Low       | 23                  | 13      | 22       |            |    |
| EPFS High     | 10                  | 12      | 10       | 2.91       | 2  |
| EPPS Low      | 19                  | 9       | 17       |            |    |

Inspection of Table 13 reveals that neither Chi-square was statistically significant. Thus, out of the twenty comparisons reported in Tables 12 and 13, only two were statistically significant and presented data supporting Hypothesis III. Four comparisons were near-significant,

but only two of these revealed a trend in the predicted direction. All comparisons, significant and near-significant, supporting Hypothesis III were obtained from Story III data.

Female Achievement Conflict as Related to Paternal Sex-Typing and Identification

Hypothesis IV: There is a relationship between paternal sex-typing and identification and achievement conflict as attributed to MC in story completions.

Hypothesis IV was an exploratory hypothesis which predicted the existence of a relationship but not its direction. The two approaches used in testing this hypothesis parallel the first and third approaches used in testing Hypotheses I and II. First, Ss were divided into paternal identification groups (S,M, and W). Ss in the S and W identification groups were further divided into subgroups (T,M, and NT) based on paternal sex-typing. By dropping out Ss with medium fathers, four S groups, ST, WT, SNT, and WNT, remained. In the first assessment of Hypothesis IV, these four S groups were compared to each other in terms of the achievement conflict revealed in their coded story completions. Table 14 presents the results of these comparisons as tested by the Fisher exact probability test. Since the Fisher test is applicable to the 2x2 contingency table only, frequencies were combined where indicated by +'s in the table.

Table 14. Differences in Achievement Conflict for ss Grouped According to Paternal Sex-Typing and Identification, With Story Held Constant

| Subject Group | Question 2<br>Negative Response |               | Question 3<br>Degree of Conflict |               |                | Question 4<br>Resolution |                 |               |
|---------------|---------------------------------|---------------|----------------------------------|---------------|----------------|--------------------------|-----------------|---------------|
|               | <u>Present</u>                  | <u>Absent</u> | <u>No</u>                        | <u>Medium</u> | <u>Intense</u> | <u>to Suc.</u>           | <u>w/o Suc.</u> | <u>Unres.</u> |
| Story I       |                                 |               |                                  |               |                |                          |                 |               |
| ST            | 5                               | 7             | 6                                | 5             | +              | 1                        | 8               | 1             |
| SNT           | 5                               | 1             | 1                                | 3             | +              | 2                        | 3               | 3             |
| WT            | 10                              | 7             | 7                                | 9             | +              | 2                        | 14              | 1             |
| WNT           | 2                               | 0             | 0                                | 2             | +              | 0                        | 1               | 1             |
| Story II      |                                 |               |                                  |               |                |                          |                 |               |
| ST            | 11                              | 1             | 1                                | 9             | +              | 2                        | 5               | 3             |
| SNT           | 5                               | 1             | 1                                | 2             | +              | 3                        | 1               | 4             |
| WT            | 11                              | 6             | 6                                | 11            | +              | 0                        | 14              | 2             |
| WNT           | 2                               | 0             | 0                                | 2             | +              | 0                        | 1               | 1             |
| Story III     |                                 |               |                                  |               |                |                          |                 |               |
| ST            | 10                              | 2             | 2                                | 10            | +              | 0                        | 8               | 3             |
| SNT           | 6                               | 0             | 0                                | 2             | +              | 4                        | 3               | 1             |
| WT            | 15                              | 2             | 2                                | 8             | +              | 7                        | 10              | 1             |
| WNT           | 2                               | 0             | 0                                | 2             | +              | 0                        | 2               | 0             |



None of the eighteen comparisons presented in Table 14 was statistically significant. However, low expected cell frequencies required the use of the Fisher exact probability test, a conservative test of significance. Since combining ST+WNT ss into one group and WT+SNT ss into a second group proved fruitful in testing Hypotheses I and II and since it resulted in larger cell frequencies, the same procedure was followed in the second test of Hypothesis IV. Completion set types (see p. 52 for definitions) were used as the measure of achievement conflict, with Type I completion sets representing the least conflict across completions and Type III the most. The comparison between s groups based on paternal sex-typing plus identification and completion set types is presented in Table 15, as tested by the Chi-square technique.

Table 15. Differences in Completion Set Types for ss Grouped According to Paternal Sex-Typing and Identification

| Subject Group | Story Set Type |         |          | Chi-square | df |
|---------------|----------------|---------|----------|------------|----|
|               | Type I         | Type II | Type III |            |    |
| ST+WNT        | 5              | 6       | 3        | 5.43+      | 2  |
| WT+SNT        | 8              | 3       | 12       |            |    |

+p < .10

Table 15 reveals a near-significant relationship between s groups based on paternal sex-typing plus identification and completion set types based on achievement conflict.

Inspection of Table 15 suggests that the WT+SNT group may have contained a higher proportion of Type III completion set writers and a smaller proportion of Type II completion set writers than did the ST+WNT group.

#### Additional Findings of Interest

A No-Conflict Trio. Out of the total sample of 100 ss, only three ss gave no evidence of achievement conflict on any of their story completions. Each of these three unusual ss had a non-traditional mother, a medium father, and her similarity-to-mother score was greater than her similarity-to-father score. Two of the three were 3rd born children whose father's occupations were classified as "white collar". The other girl was a first born child whose father's occupation was "blue collar". The trio showed no consistency on achievement need, with one girl in each of the three ACL-based achievement need groups. Although these ss were highly unusual in their consistent lack of achievement conflict and their small number rendered statistical analysis inappropriate, their similarity in terms of maternal sex-typing, paternal sex-typing, and identification makes them a fascinating trio.

Maternal and paternal identification compared. As noted in Chapter II, theorists generally agree that identification with the same sexed parent is usually stronger than with the opposite sexed parent. When the maternal identification scores obtained in the present study were

compared to paternal identification scores ( $t_D=5.35$ ,  $df=99$ ,  $p < .05$ ) the above prediction was supported. In other words, ss saw themselves as more like their mothers than like their fathers.

Mother model and father model scores compared.

Inspection of Table 5 revealed that the sample contained more non-traditional mothers than non-traditional fathers. In view of the common observation that female sex roles are in greater transition than male sex roles, the obtained mother model scores were compared to the obtained father model scores. The result ( $t_D=-1.21$ ,  $df=99$ ) revealed that the difference is not statistically significant. For the present study, then, female sex roles do not appear to be in greater transition than male sex roles.

Parental self-acceptance and parental identification.

Item 16 on the PTI was called "parental self-acceptance". Item 16 was included in the PTI for exploratory purposes and to investigate the hunch that parental self-acceptance is an important variable mediating the strength of parental identification. However, this hunch was not supported in the present study. Chi-square analysis of the relationships between maternal self-acceptance and maternal identification and between paternal self-acceptance and paternal identification were neither statistically significant, nor were any trends in the data apparent.

Birth order and maternal identification. Data on S's birth order were obtained from BIQs for exploratory purposes. Heilbrun and Fromme (1965) found birth order to be related to maternal identification for their female college student ss. For the present study's female ss, a similar relationship proved statistically significant ( $\chi^2=9.51$ ,  $df=4$ ,  $p < .05$ ). As in the Heilbrun and Fromme study, a greater proportion of only, first, and second born daughters were strongly identified with mother than daughters born third or later. Thus, only, first, and second born girls, who have the opportunity of relating to mother when she has the time to give them relatively exclusive attention and close interaction, tend to establish a stronger identification with mother, which endures through late adolescence and early adulthood, than do later born girls.

### Summary of Results

Hypothesis I: For ss who are strongly (S) identified with their mothers, those with traditional (T) mothers show a greater tendency to write completions where MC experiences achievement conflict than ss who have non-traditional (NT) mothers.

Hypothesis II: For ss who are weakly (W) identified with their mothers, those with non-traditional (NT) mothers show a greater tendency to write completions where MC experiences achievement conflict than ss who have traditional (T) mothers.

When ST, SNT, WNT, and WT ss were compared, separately for each story, analyses by Fisher's exact probability test revealed no statistically significant relationships between s groups and story completion achievement

conflict. When ST+WNT Ss were compared to WT+SNT Ss, two of the obtained Chi-squares were statistically significant and in the predicted direction. When ST+WNT and WT+SNT Ss were compared in terms of completion set types, the obtained Chi-square was statistically significant. Inspection of these data revealed that a higher proportion of ST+WNT Ss than WT+SNT Ss wrote Type III completion sets in which at least one completion revealed intense achievement conflict. Hypotheses I and II receive some support from these findings.

Hypothesis III: Ss who obtain low need for achievement scores show a greater tendency to write completions where MC experiences achievement conflict than S who obtain high need for achievement scores.

When high achievement need Ss were compared to low Ss in terms of story completion achievement conflict, two of the obtained Chi-squares were statistically significant and in the predicted direction. Of four near-significant comparisons ( $p < .10$ ), two were in the predicted direction and two were in the opposite direction. Hypothesis III receives some support from these findings, but the inconsistent findings need explanation.

Hypothesis IV: There is a relationship between paternal sex-typing and identification and achievement conflict attributed to MC in story completions.

When ST, WT, WNT, and SNT Ss were compared in terms of story completion achievement conflict, the relationships as analyzed by Fisher's exact probability test were not

statistically significant. However, when ST+WNT and WT+SNT Ss were compared in terms of completion set types, the obtained Chi-square was near-significant ( $p < .10$ ) and offered some support for Hypothesis IV. These data revealed that a higher proportion of WT+SNT Ss than ST+WNT Ss wrote Type III completion sets in which at least one completion revealed intense achievement conflict.

## Chapter IV

### Discussion

#### Female Achievement Conflict Revealed in the Story Completions

Considering the Incomplete Story Instrument as a projective technique on which ss' attributed their own feelings and attitudes to the MC, the results reported in Tables 7 and 8 suggested the following about the present study's sample of young college coeds.

1) While almost all the coeds saw academic achievement as a positive experience, a large proportion of them (58 to 87% on a given story) saw it as negative as well (an indication of achievement conflict). The following story completion (with underlining added by E) was selected from the sample because it was particularly illustrative of the above point.

Karen is the daughter of a prominent physician. She has always wanted to become a doctor like her father. Karen's mother was not a college graduate and Karen felt her mother was insignificant in comparison to her father. Karen was determined to become something worthwhile and not just a mother and wife. Thus, she studied diligently in school and obtained excellent grades. Upon finding that she is at the head of her class, Karen is ecstatic. She is successful and feels superior to the men in her class. She has now overcome the inferiority that she imagined her mother felt in relationship to her father.

Karen will graduate from medical school with many honors. She will have a tough time with her internship and residence because she will constantly feel aware of the superiority of the male in the medical field.

Karen may marry, but she will either marry some one lower than she in education or someone on par. She will always have the hang-up about the male superiority in our society. It is doubtful that Karen would be a good mother because she will constantly be attempting to prove herself as good as the next man. Then she would not have the time for the simple but rewarding joys of womanhood. Undoubtedly, Karen will never be a completely happy individual.

2) A large proportion of the coeds (47 to 60% on a given story) expected negative interpersonal consequences to follow such achievement.

3) This proportion was particularly high (60%) when the female's achievement excelled that of her husband (Story III). In the most extreme case, 15% of the sample expected that divorce would follow the wife's outstanding achievement. The following story completion was selected from the sample as particularly illustrative of the above point.

Beth loves her husband very much, in fact she worships him. But she had always felt off and on that sometimes he didn't love her.

Beth is not happy about receiving her Ph.D. because her husband didn't. She tries to minimize her achievement and give him confidence. No matter how hard Beth tries she notices her husband change and become sullen and pouty. Beth realizes her husband is doing this deliberately. She thinks her husband is a rational human being and it would be better if she confronted him with the fact that she knew he was acting that way on purpose. She was hoping to relieve the tension. She confronts him with it, he becomes very angry, knocks her around, and walks out. She never sees him again and becomes very depressed and guilty because she knows it was her fault and she still loves him and wants him to come back.



The fact that Story III elicited the greatest proportion of achievement conflict stories suggests that women see male-female relationships as particularly threatened when their own achievement is superior to that of the male. Previous studies (Horner, 1968; Komarovsky, 1946; Wallin, 1960; and Weiss, 1962) have suggested that college women are unlikely to actualize their potential when they are placed in direct competition with a male. The results of the present study suggest that it may not be the fact of competition but the possibility that the female might prove superior to the male which is distressing.

Only three ss wrote story completion sets containing no evidence of achievement conflict at all. Although none of their individual completions appeared to depict success as any more positive than other individual "no conflict" completions, the trio was highly unusual in their consistent lack of conflict across all three completions. Consistent with Hypothesis I, each girl had a non-traditional mother, a medium father, and perceived herself as more similar to mother than father. The trio did not show consistency on birth order, socioeconomic status, dating behavior, or achievement need. The following story was written by a member of the "no conflict" trio and was chosen as illustrative of a "no conflict" completion to Story II.

Gail eagerly scans the letter that admits her to the Honors College at M.S.U. She is so excited she nearly drops her books as she walks down the

hallway of Central High.

Quickly she dashes to the counseling service where she finds Mrs. Dimiz, the head counselor. As the words pour quickly out of her mouth, Mrs. Dimiz smiles knowingly. Gail has an extremely high I.Q. and Mrs. Dimiz has had a good idea this was coming.

Gail thought about the exciting new challenge of college and shook eagerly. The last bell rang and Gail quickly runs home to tell her parents of the great news.

All turns out well, as Gail wins a scholarship and eventually makes many new friends and is very happy with college life.

For some coeds, academic achievement appears to be quite compatible with the feminine sex role, while for others it is incompatible. If this assumption is valid, then female achievement conflict should be related to selected parental variables, since parents, particularly mothers, are the widely acknowledged primary source of learned female sex role expectations.

#### Female Achievement Conflict as Related to Maternal Sex-Typing and Identification

Hypothesis I: For SS who are strongly (S) identified with their mothers, those with traditional (T) mothers show a greater tendency to write story completions where the main character (MC) experiences achievement conflict than SS who have non-traditional (NT) mothers.

Hypothesis II: For SS who are weakly (W) identified with their mothers, those with NT mothers show a greater tendency to write completions where MC experiences achievement conflict than SS who have T mothers.

When Stories I, II, and III were considered separately, the relationships between achievement conflict and maternal sex-typing plus identification were not

statistically significant. When Ss hypothesized to reveal achievement conflict (ST+WNT Ss) were combined and compared separately for each story, to Ss hypothesized not reveal achievement conflict (WT+SNT Ss), only Story III revealed statistically significant relationships between achievement conflict and maternal sex-typing plus identification. However, when completion sets (a completion set = completions to Stories I, II, and III by a given S) were classified in terms of achievement conflict, more ST+WNT Ss wrote sets revealing intense conflict than did WT+SNT Ss. This result supported Hypotheses I and II, although somewhat indirectly, and permitted the inference that achievement conflict among young college coeds is related to maternal sex-typing plus identification.

Why did the comparisons based on completions to individual stories fail to reach statistical significance, while the completion set comparison did succeed? Two explanations for this discrepancy seem plausible. First, the set of these completions for each S may have provided greater latitude for responses than did completions for any single story. Secondly, Story III, which was the only individual story revealing a significant relationship between the variables, may have contributed more to the significance of the completion set comparison than did Stories I and II. The plausibility of this interpretation is supported by the finding (see Appendix G) that, when only Stories I and II were considered, the relationship

between completion set types and achievement conflict was not statistically significant, nor were there any apparent trends in these data.

If Story III completions contributed more to the significance of the completion set comparison than did Stories I and II, the interpretation of these findings must be amended. The amended interpretation could be phrased as follows. Maternal sex-typing and identification are significantly related to female achievement conflict when the female's achievement exceeds that of an important male.

In 1968, Horner reported a related finding and suggested that, "women, especially those high in motive to avoid success will explore their intellectual potential only when they are in a non-competitive situation and least of all when they are competing against men" (p.67). Similarly, Weiss (1962) found that his college age female ss tended to perform at a lower level when competing against males than when competing with other females. Although neither Horner nor Weiss investigated parental variables, both authors reported results which would predict Story III to be a particularly potent elicitor of female achievement conflict. Furthermore, this study's findings suggest that it is not simply the act of competition, but rather the possibility of female superiority which proves distressing.

Girls who experience this type of achievement conflict are unlikely to explore their intellectual potential in a co-educational setting, lest they prove superior to their male colleagues. Since the process of identification and the model's sex-typing are related to such achievement conflict, it seems reasonable that the same variables would be relevant in attempting to help females resolve achievement conflict in a constructive manner. The availability of feminine, achievement-oriented role models (e.g., professors, administrators, etc.) with whom coed can identify, would seem to be important in any institution where the education of women is taken at all seriously. For coeds whose achievement conflict is so intense that they seek therapeutic help, a female counselor who could provide a feminine, achievement-oriented role model for the coed might be indicated.

#### Female Achievement Conflict as Related to Paternal Sex-Typing and Identification

Hypothesis IV: There is a relationship between paternal sex-typing and identification and achievement conflict attributed to MC in story completions.

When Stories I, II, and III were considered separately, the relationships between achievement conflict and paternal sex-typing plus identification were not statistically significant. However, when Ss were compared in terms of completion set types, the resulting Chi-square ( $p < .10$ ) fell just below the conventional level of significance.

This finding suggests that ST+WNT Ss may be less likely to experience achievement conflict than WT+SNT Ss. The findings on the maternal variables appear to be just the opposite in that WT+SNT Ss are less likely to experience achievement conflict than ST+WNT Ss. Remembering that the PTI traits which define a traditional father are the same as those which define a non-traditional mother, reconciles these findings and points to their consistency. If S is highly identified with a parent characterized by the PTI "masculine" traits or it weakly identified with a parent characterized by the PTI "feminine" traits, then that S is less likely to experience intense achievement conflict than a S whose parental sex-typing and identification reflects either of the two opposite patterns. This finding, however, should not automatically be interpreted as indicating that Ss' identified with parent traits in such a way that parent's sex was irrelevant. Such an interpretation would run counter to almost all psychological theories which utilize the concept of identification.

Although the present study did not obtain data designed to differentiate between T fathers and NT mothers in terms of the kind of contribution each parent made to Ss' feelings about female achievement, some speculation about this issue could provide hypotheses for future research. The NT mother, by her behavior, is probably communicating that it is O.K. for a woman to be achievement-oriented and

that a woman need not be too anxious about occasionally besting a male. The T father, on the other hand, while demonstrating that it is O.K. for a man to be achievement-oriented, may or may not extend this approval to female achievement. Perhaps the identification variable enters in here with ST father Ss having had the O.K. for male and female achievement from father, while WT father Ss have had only the O.K. for male achievement. If this is the case, then the education of women would also be facilitated by the presence of achievement-oriented males who allow and encourage females to explore their intellectual potential. Certainly, future studies in this area would need to obtain more information on parents in order to clarify the above issue.

#### Female Achievement Conflict as Related to Need for Achievement

Hypothesis III: Ss who obtain low need for achievement scores show a greater tendency to write completions where MC experiences achievement conflict than Ss who obtain high need for achievement scores.

The results reported in Tables 12 and 13 present two significant and four near-significant relationships (out of 20 tested) between need for achievement and achievement conflict. Although both significant relationships and two of the near-significant relationships were in the predicted direction, two near-significant relationships were in the opposite direction. The data supporting Hypothesis III were all derived from Story III completions, while the contrary evidence stemmed only from Story I and





II completions. To account for this discrepancy, a suggestion from Horner seemed useful.

Horner (1968) used McClelland's TAT measure of N Ach and found no significant relationship between this measure of need for achievement and fear of success imagery as revealed in her story completions. To account for this finding, Horner reasoned that her "motive to avoid success" variable may have influenced performance on the measure of need for achievement, itself. In other words, some kinds of ss experiencing achievement conflict, could have defensively suppressed or denied their own needs for achievement. Such defensive ss might have had a higher threshold for stimuli eliciting achievement conflict. Thus, while such defensive ss might not have revealed conflict in their completions to Stories I or II, they might have been unable to deny the conflict eliciting properties of Story III.

However, neither Horner's study nor the present study had any way of differentiating between defensively low need achievement ss and ss whose low achievement need scores were non-defensive. In a sense, this issue represents the chicken-egg problem, i.e., does achievement conflict result in a defensively lowered need for achievement or is achievement s simply a more conflictful experience for ss whose need for achievement is low? Some suggestions for future research relevant to this question are discussed in the following section.

### Limitations of the Present Study and Suggestions for Future Research

While the use of a projective technique such as the Incomplete Story Instrument is advantageous in eliciting qualitatively rich data, the problem of treating such data quantitatively is always difficult. The Coding Procedure for Incomplete Stories was designed to provide a crude scale in terms of which degree of achievement conflict could be assessed. Although this coding procedure moved well beyond the simple present-absent system used by Horner, the procedure needs to be extended much further before statistical techniques other than Chi-square can be used appropriately.

Further refining of the coding procedure would have the additional advantage of allowing a meaningful test of the Incomplete Story Instrument's reliability. When Stories I and II were considered as alternate forms and reliability coefficients were computed on the coded completions, the within sample variance was so restricted by the coding procedure that the coefficient was meaninglessly small. The present study was exploratory in nature and did not focus principally on methodological issues. Additional research, aimed at developing a coding procedure capable of making finer discriminations in the data would be an important next step in this area of work.

In addition to the limitations of the Coding Procedure for Incomplete Stories, the problems surrounding the ACL and EPPS Achievement Scales should also be noted. As referenced in the section entitled, "Instruments", the validity of the EPPS Achievement Scale has recently been questioned, while the validity of the ACL's Scale has received more consistent research support. Even though the correlation between the obtained EPPS and ACL Achievement Scale scores was notably higher ( $\underline{r} = .35$ ) than that previously reported ( $\underline{r} = .01$  Gough and Heilbrun, 1965) the ACL-based Achievement need groups yielded more statistically significant relationships with achievement conflict than did the EPPS-based groups. This finding is consistent with previous research suggesting that the ACL may be a more useful measure of achievement need than the EPPS.

As previously noted, both the ACL and EPPS may have been vulnerable to the confounding effects of defensive denial or suppression of achievement need by some Ss. Heilbrun (1963) reported a method of determining the degree of consistency between a person's values regarding achievement and his manifest achievement needs or behavior. Heilbrun found that college females show a greater degree of achievement value-behavior/need inconsistency than do college males. This achievement value-behavior/need consistency index may be reflecting the suppression of achievement needs which has been suggested as characteristic of some college coeds. Heilbrun's method could be used to test

the hypothesis that coeds who suppress their achievement needs (i.e., low achievement value-behavior/need consistency) have a higher threshold for achievement conflict and, thus, reveal less achievement conflict on completions to Stories I and II than do coeds who do not suppress their achievement needs (i.e., high achievement value behavior need consistency). On the hunch that Story III is a more potent achievement conflict stimulus, the hypothesis for Story III completions would be reversed with achievement need suppressors expected to reveal more achievement conflict than non-suppressors.

Heilbrun's method has the potential advantage of differentiating between ss whose low achievement need scores accurately reflect their needs and those whose scores reflect a defensive suppression of need because the experience of that need is so distressing. The present study did not include any instruments or methods capable of making such a differentiation. Future researchers might take heed and profit from this hindsight.

The measure of parental identification used in the present study was a perceived similarity measure, based on the similarity between s's self-description and her perception of each parent, in terms of 15 ACL personality trait scales. Nine of the 15 traits provided the measure of parental sex-typing. Hence, saying that s was highly identified with a parent characterized by a particular group

of sex-typed traits was almost tantamount to saying that S was characterized by that same group of sex-typed traits, herself.

However, six of the 15 trait scales comprising the identification measure were non-sex-typed traits and S could have been so highly similar to her parent on these six trait scales that her identification would have been considered strong even though she was not very similar to her parent on the sex-typed traits. The fact that the identification measure included additional non-sex-typed traits prevented the present study's operational definitions of parental identification and sex-typing from collapsing into meaningless pseudo-variables.

An important empirical question, however, remains unanswered. Is it necessary to invoke the concepts of identification and sex-typing to account for individual differences in achievement conflict? Perhaps placing ss into sex-typed groups, based on their own self-descriptions alone, is sufficient to account for such individual differences. The value of the present study's identification approach lies in the fact that isolating relevant "antecedent" variables frequently offers suggestions for constructive resolution of the problem as well as suggestions for its prevention. Yet, future researchers might want to compare the identification approach to the direct S sex-typing approach, in order to assess which variables offer greater predictive accuracy with respect to achievement conflict.

Having discussed the problems of coding, instruments and variables, the problem of sampling is encountered next. The present study excluded non-white female volunteers from it's final sample. This exclusion seemed justified because only three Negro girls volunteered, a number too small to attempt to control for possible interracial differences in sex role expectations. Psychologists investigating the feminine sex role have consistently ignored the Negro woman. As the proportion of Negro girls enrolled in American universities increases every year, so does the importance of understanding the problems of the Negro coed. A replication of the present study, investigating the relationship between achievement conflict, parental sex-typing, and identification in a sample of Negro coeds, must be carried out before the present study's findings can be generalized to all college coeds.

The finding that first term ss were more highly identified with their mothers than second term ss raises an additional sampling issue. Are first term freshman coeds the most appropriate ss for a study of female achievement conflict? The first term in college is a hectic one, to say the least. For most girls, it is the first time they have lived away from home. Dependence-independence conflicts arise, old values and attitudes are challenged, academic self-doubts are frequent, and loneliness and intense anxiety are not uncommon among freshmen. In the

midst of all this, expecting first term freshmen women to meaningfully sort out their parental and self-perceptions may be somewhat unrealistic. Furthermore, decisions on marriage and/or career are distant for freshmen and the Incomplete Stories may be less relevant to them than they would be to older girls. A modified replication of the present study, using coeds all sampled during the beginning of their senior year in college would permit some interesting comparisons with the present study. In any event, future researchers might make an effort to obtain all of their ss at one time and after the first term of the freshman year.

The present study's findings which point to the importance of parental sex-typing and identification in relation to female achievement conflict suggest additional areas worthy of investigation. Certainly, dividing all mothers into three basic types, traditional, medium, and non-traditional obscures many subtle, but important within-type differences. Why do ST+WNT mother ss reveal more conflict on Story III than WT+SNT ss, but fail to reveal such differences on Stories I and II? Perhaps traditional mothers somehow communicate the message, "Beware of excelling your husband, lest he be displeased and leave you." An in-depth study of T and NT mother ss utilizing a semi-structural clinical interview approach might provide useful insights into the mother-daughter communications which

result in Story III achievement conflict. Such a study could contribute importantly in clarifying the relevant variables and designing appropriate measuring instruments.

A study of parent pairs based on sex-typing and identification would necessitate a much larger sample and a coding procedure designed to make finer discriminations in degree and type of achievement conflict. Such a study might gather additional parent information, such as a ranking of traits according to "My father's ideal woman" and "My mother's ideal woman". Such information might get at father's approval of achievement and whether it is solely directed at males or at females as well. In any such study, the inclusion of male-female incomplete stories might be crucial in eliciting differentiated achievement conflict responses from Ss grouped on parental pair variables.



# BIBLIOGRAPHY

- Beier, E.G. and Ratzeburg, F. The parental identification of male and female college students. J. abnorm. soc. Psychol., 1953, 48, 569-572.
- Bendig, A.W. Objective measures of needs and course achievement in introductory psychology. J. general Psychol., 1958, 59, 51-57.
- Bruni, E. Age and sex trends in assumed similarity to the same sexed parent as a function of the development of identity. Unpublished doctoral dissertation. Michigan State University, 1967.
- Douvan, E.A. and Adelson, J. Adolescent Experience, New York: Wiley, 1966.
- Edwards, A.L. Edwards Personal Preference Schedule. New York: Psychological Corp., 1953.
- \_\_\_\_\_. Manual for the Edwards Personal Preference Schedule. (Rev. ed.) New York: Psychological Corp., 1959.
- Gough, H.G. The Adjective List. California: Consulting Psychologists Press, 1952.
- \_\_\_\_\_, and Heilbrun, A.B. The Adjective Check List Manual. California: Consulting Psychologists Press, 1965.
- Hartup, W.W. Some correlates of parental imitation in young children. Child Developm., 1962, 33, 85-96.
- Heilbrun, A.B. Validation of a need scaling technique for the Adjective Check List. J. Consult. Psychol., 1959, 23, 347-351.
- \_\_\_\_\_. Social desirability and the relative validities of achievement scales. J. consult. Psychol., 1962, 26, 317-320. (a).
- \_\_\_\_\_. Further validation of the need scales: the Order Scale. J. consult. Psychol., 1962, 26, 478 (b).
- \_\_\_\_\_. Sex-role identity and achievement motivation. Psychol. Rep., 1963, 12, 483-490.

- Heilbrun, A.B. Sex differences in identification learning. J. Genetic Psychol., 1965, 106, 185-193.
- \_\_\_\_\_, and Fromme, D.K. Parental identification of late adolescents and level of adjustment: The importance of parent-model attributes, ordinal position and sex of the child. J. Genetic Psychol., 1965, 107, 49-59.
- Hoffman, L.W. Parental power relations and the division of household tasks. In Nye, F.I. and Hoffman, L.W. (eds.) The Employed Mother in America. Chicago: Rand McNally, 1963, 215-230.
- Horner, M. Women's anxiety about success. A paper read at the convention of the American Psychol. Assn., San Francisco, September, 1968.
- Jabury, D.E. Identity diffusion as a function of sex-roles in adult women. Unpublished doctoral dissertation., Michigan State University, 1967.
- Johnson, M.M. Sex role learning in the nuclear family. Child Developm., 1963, 34, 319-333.
- Kagan, J. Acquisition and significance of sex-typing and sex-role identity. In Hoffman, M. and Hoffman, L.W. (eds.) Review of Child Development Research: Vol. 1. New York: Russel Sage Foundation, 1964, 137-167.
- Katz, D. and Kahn, R.L. The Social Psychology of Organizations. New York: John Wiley and Sons, Inc., 1966.
- Kohl, J.A. and Davis, J.A. A comparison of indexes of socioeconomic status. Amer. socio. Rev., 1955, 20, 317-326.
- Komarovsky, M. Cultural and contradictions and sex roles. Amer. J. Sociol., 1946, 52, 184-189.
- Krug, R.E. Over- and underachievement and the Edwards Personal Preference Schedule. J. Appl. Psychol., 1959, 43, 133-136.
- Lazowick, L.M. On the nature of identification. J. abnorm. soc. Psychol., 1955, 51, 175-183.
- Lynn, D.B. Sex-role and parental identification. Child Developm., 1962, 33, 555-564.
- Medinnus, G.R. and Curtis, F.J. The relation between maternal self-acceptance and child acceptance. In Medinnus, G.R. (ed.) Readings in the Psychology of Parent Child Relations, New York: Wiley, 1967.

- McClelland, D.C., Atkinson, J.W., Clark, R. and Lowell, R.L. The Achievement Motive., New York: Appleton-Century-Crofts, 1953.
- Milton, G.A. Sex differences in problem solving as a function of the role appropriateness of the problem content. Psychol. Rep., 1959, 5, 705-708.
- Mitchell, J.V. Jr. An analysis of the factorial dimensions of the achievement motivation construct. J. ed. Psychol., 1961, 52, 179-187.
- Rutherford, E.E. Familial antecedents of sex role development in young children. Unpublished doctoral dissertation, University of California, Berkeley, 1964.
- Shell, S.A. O'Mally, J.M. and Johnsgard, K.W. The Semantic Differential and inferred identification. Psychol. Rep., 1964, 547-558.
- Tangri, S. Role innovators. A paper read at the convention of the American Psychol. Assn., San Francisco, September, 1968.
- U.S. Bureau of Census. Classified index of occupations and industries. U.S. Gov't Printing Office, 1950.
- Wallin, P. Cultural contradictions and sex roles; a repeat study. In, J.M. Seidman (ed.) The Adolescent - A Book of Readings, New York: Holt, Rinehart and Winston, 1960, 282-293.
- Weiss, P. Some aspects of femininity. Unpublished doctoral dissertation, University of Colorado, 1962.
- Wright, B. and Tuska, S. The nature and origin of feeling feminine. Brit. J. Clin. Psychol., 1966, 5, 140-149.

APPENDIX A

Biographical Information Questionnaire

Directions: Please answer all of these questions. Do not write your name on this form. All information will be treated confidentially and will be used for research purposes only.

Your age: \_\_\_\_ Your class at M.S.U.: (Circle one) Fr. So. Jr. Sr.

Your father's education: \_\_\_\_\_

Your father's occupation: \_\_\_\_\_

Your mother's education: \_\_\_\_\_

Your mother's occupation: \_\_\_\_\_

If you have any brothers, what are their ages? \_\_\_\_\_

If you have any sisters, what are their ages? \_\_\_\_\_

Did you live with your parents until you started college?

Yes \_\_\_\_ No \_\_\_\_

If you did not live with your parents, with whom did you live and for how long? \_\_\_\_\_

What is your present dating status? (Circle one) Married, Engaged, Pinned, Going Steady, Dating around.

On the average, about how many times a week do you date? \_\_\_\_

What was your overall highschool grade average? (Circle one)

A B+ B B- C+ C

What is your major at M.S.U.? \_\_\_\_\_

What are your career plans following graduation? \_\_\_\_\_

In ten years, what would you like to be doing? \_\_\_\_\_

## APPENDIX A (Continued ....)

Compared to other girls your age, how similar are you to  
your mother? (Circle one) Very Similar Similar  
Dissimilar Very Dissimilar.

Compared to other girls your age, how similar are you to  
your father? (Circle one) Very Similar Similar  
Dissimilar Very Dissimilar

## APPENDIX B-1

### Parent Trait Inventory

Directions: On the following pages, we have described 16 personality traits. We would like you to read each trait description, decide whether it is characteristic or uncharacteristic of your mother, and then answer by checking the appropriate statement following the trait description. There may be instances in which it is hard to decide whether the trait is characteristic or uncharacteristic of your mother. But we would like you to make a decision on the basis of which statement is more appropriate. Please complete all 16 traits and do not omit any. You may now turn the page and begin.

## APPENDIX B (Continued ....)

Trait Description 1: To do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able to do things better than others, to write a great play or novel.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is not characteristic of my mother.

Trait Description 2: To get suggestions from others, to find out what others think, to follow instructions and do what is expected, to praise others, to tell others that they have done a good job, to accept the leadership of others, to read about great men, to conform to custom and avoid the unconventional, to let others make decisions.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is not characteristic of my mother.

Trait Description 3: To have written work neat and organized, to make plans before starting on a difficult task, to have things organized, to keep things neat and orderly, to make advance plans when taking a trip, to organize details of work, to keep letters and files according to some system, to have meals organized and a definite time for eating, to have things arranged so that they run smoothly without change.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is not characteristic of my mother.

Trait Description 4: To say witty and clever things, to tell amusing jokes and stories, to talk about personal adventures and experiences, to have others notice and comment on one's appearance, to say things just to see what effect it will have on others, to talk about personal achievements, to be the center of attention, to use words that others do not know the meaning of, to ask questions others cannot answer.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is Not characteristic of my mother.

**Trait Description 5:** To be able to come and go as desired, to say what one thinks about things, to be independent of others in making decisions, to feel free to do what one wants, to do things that are unconventional, to avoid situations where one is expected to conform, to do things without regard to what others may think, to criticize those in positions of authority, to avoid responsibilities and obligations.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is not characteristic of my mother.

**Trait Description 6:** To be loyal to friends, to participate in friendly groups, to do things for friends, to form new friendships, to make as many friends as possible, to share things with friends, to do things with friends rather than alone, to form strong attachments, to write letters to friends.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is not characteristic of my mother.

**Trait Description 7:** To analyze one's motives and feelings, to observe others, to understand how others feel about problems, to put one's self in another's place, to judge people by why they do things rather than by what they do, to analyze the behavior of others, to analyze the motives of others, to predict how others will act.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is not characteristic of my mother.

**Trait Description 8:** To have others provide help when in trouble, to seek encouragement from others, to have others be kindly, to have others be sympathetic and understanding about personal problems, to receive a great deal of affection



from others, to have others do favors cheerfully, to be helped by others when depressed, to have others feel sorry when one is sick, to have a fuss made over one when hurt.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is not characteristic of my mother.

Trait Description 9: To argue for one's point of view, to be a leader in groups to which one belongs, to be regarded by others as a leader, to be elected or appointed chairman of committees, to make group decisions, to settle arguments and disputes between others, to persuade and influence others to do what one wants, to supervise and direct the actions of others, to tell others how to do their jobs.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is not characteristic of my mother.

Trait Description 10: To feel guilty when one does something wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrong doing, to feel better when giving in and avoiding a fight than when having one's own way, to feel the need for confession of errors, to feel depressed by inability to handle situations, to feel timid in the presence of superiors, to feel inferior to others in most respects.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is not characteristic of my mother.

Trait Description 11: To help friends when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favors for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection toward others, to have others confide in one about personal problems.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is not characteristic of my mother.

Trait Description 12: To do new and different things, to travel, to meet new people, to experience novelty and change in daily routine, to experiment and try new things, to eat in new and different places, to try new and different jobs, to move about the country and live in different places, to participate in new fads and fashions.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is not characteristic of my mother.

Trait Description 13: To keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle until it is solved, to work at a single job before taking on others, to stay up late working in order to get a job done, to put in long hours of work without distraction, to stick at a problem even though it may seem as if no progress is being made, to avoid being interrupted while at work.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is not characteristic of my mother.

Trait Description 14: To go out with members of the opposite sex, to engage in social activities with someone of the opposite sex, to be in love with someone of the opposite sex, to kiss those of the opposite sex, to be regarded as physically attractive by those of the opposite sex, to participate in discussions about sex, to read books and plays involving sex, to listen to or to tell jokes involving sex, to become sexually excited.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is not characteristic of my mother.

Trait Description 15: To attack contrary points of view, to tell others what one thingd about them, to criticize others publicly, to make fun of others, to tell others off when disagreeing with them, to get revenge for insults, to become angry, to blame others when things go wrong, to read newspaper accountsof violence.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is not characteristic of my mother.

Trait Description 16: To feel good about oneself most of the time, to consider one's contributions valuable and important, to be happy in one's daily activities, to feel effective and competent as a person, to feel self-confident, to be generally satisfied with oneself and one's lot in life.

(Check one)

\_\_\_\_\_ This description is characteristic of my mother

\_\_\_\_\_ This description is not characteristic of my mother.

Directions: You have just completed the Parent Trait Inventory for your mother. Now we would like you to do the same for your father. On the following pages you will find descriptions of 16 personality traits. We would like you to read each description, decide whether it is characteristic or not characteristic of your father, and then check the appropriate statement following each trait description. Continue until you have finished all 16 trait descriptions and please do not omit any. Now you may turn the page and begin.

Trait Description 1: To do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able to do things better than others, to write a great novel or play.

(Check one)

\_\_\_\_\_ This description is characteristic of my father

\_\_\_\_\_ This description is not characteristic of my father.

Trait Description 2: To get suggestions from others, to find out what others think, to follow instructions and do what is expected, to praise others, to tell others, that they have done a good job, to accept the leadership of others, to read about great men, to conform to custom and avoid the unconventional, to let others make decisions.

(Check one)

\_\_\_\_\_ This description is characteristic of my father

\_\_\_\_\_ This description is not characteristic of my father.

Trait Description 3: To have written work neat and organized, to make plans before starting on a difficult task, to have things organized, to keep things neat and orderly, to make advance plans when taking a trip, to organize details of work, to keep letters and files according to some system, to have meals organized, to have a definite time for eating, to have things arranged so that they run smoothly without change.

(Check one)

\_\_\_\_\_ This description is characteristic of my father

\_\_\_\_\_ This description is not characteristic of my father.

Trait Description 4: To say witty and clever things, to tell amusing jokes and stories, to talk about personal adventures and experiences, to have others notice and comment upon one's appearance, to say things just to see what effect it will have on others, to talk about personal achievements, to be the center of attention, to use words that others do not know the meaning of, to ask questions others cannot answer.

(Check one)

- \_\_\_\_\_ This description is characteristic of my father
- \_\_\_\_\_ This description is not characteristic of my father.

Trait Description 5: To be able to come and go as desired, to say what one thinks about things, to be independent of others in making a decision, to feel free to do what one wants, to do things that are unconventional, to avoid situations where one is expected to conform, to do things without regard to what others may think, to criticize those in positions of authority, to avoid responsibilities and obligations.

(Check one)

- \_\_\_\_\_ This description is characteristic of my father
- \_\_\_\_\_ This description is not characteristic of my father.

Trait Description 6: To be loyal to friends, to participate in friendly groups, to do things for friends, to form new friendships, to make as many friends as possible, to share things with friends, to do things with friends rather than alone, to form strong attachments, to write letters to friends.

(Check one)

- \_\_\_\_\_ This description is characteristic of my father
- \_\_\_\_\_ This description is not characteristic of my father.

Trait Description 7: To analyze one's motives and feelings, to observe others, to understand how others feel about problems, to put one's self in another's place, to judge people by why they do things rather than by what they do to analyze the behavior of others, to analyze the motives of others, to predict how others will act.

(Check one)

- \_\_\_\_\_ This description is characteristic of my father
- \_\_\_\_\_ This description is not characteristic of my father.

Trait Description 8: To have others provide help when in trouble, to seek encouragement from others, to have others be kindly, to have others be sympathetic and understanding about personal problems, to receive a great deal of affection from others, to have others do favors cheerfully,

to be helped by others when depressed, to have others feel sorry when one is sick, to have a fuss made over one when hurt.

(Check one)

- \_\_\_\_\_ This description is characteristic of my father
- \_\_\_\_\_ This description is not characteristic of my father.

Trait Description 9: To argue for one's point of view, to be a leader in groups to which one belongs, to be regarded by others as a leader, to be elected or appointed chairman of committees, to make group decisions, to settle arguments and disputes between others, to persuade and influence others to do what one wants, to supervise and direct the actions of others, to tell others how to do their jobs.

(Check one)

- \_\_\_\_\_ This description is characteristic of my father
- \_\_\_\_\_ This description is not characteristic of my father.

Trait Description 10: To feel guilty when one does something wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrong doing, to feel better when giving in and avoiding a fight than when having one's own way, to feel the need for confession of errors, to feel depressed by inability to handle situations, to feel timid in the presence of superiors, to feel inferior to others in most respects.

(Check one)

- \_\_\_\_\_ This description is characteristic of my father
- \_\_\_\_\_ This description is not characteristic of my father.

Trait Description 11: To help friends when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favors for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection toward others, to have others confide in one about personal problems.

(Check one)

- \_\_\_\_\_ This description is characteristic of my father
- \_\_\_\_\_ This description is not characteristic of my father

Trait Description 12: To do new and different things, to travel, to meet new people, to experience novelty and change in daily routine, to experiment and try new things, to eat in new and different places, to try new and different jobs, to move about the country and live in different places, to participate in new fads and fashions.

(Check one)

- \_\_\_\_\_ This description is characteristic of my father
- \_\_\_\_\_ This description is not characteristic of my father.

Trait Description 13: To keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle or problem until it is solved, to work at a single job before taking on others, to stay up late working in order to get a job done, to put in long hours of work without distraction, to stick at a problem even though it may seem as if no progress is being made, to avoid being interrupted while at work.

(Check one)

- \_\_\_\_\_ This description is characteristic of my father
- \_\_\_\_\_ This description is not characteristic of my father.

Trait Description 14: To go out with members of the opposite sex, to engage in social activities with someone of the opposite sex, to be in love with someone of the opposite sex, to kiss those of the opposite sex, to be regarded as physically attractive by those of the opposite sex, to participate in discussions about sex, to read books and plays involving sex, to listen to or to tell jokes involving sex, to become sexually excited.

(Check one)

- \_\_\_\_\_ This description is characteristic of my father
- \_\_\_\_\_ This description is not characteristic of my father.

Trait Description 15: To attack contrary points of view, to tell others what one thinks about them, to criticize others publicly, to make fun of others, to tell others off

when disagreeing with them, to get revenge for insults, to become angry, to blame others when things go wrong, to read newspaper accounts of violence.

(Check one)

- ☐ This description is characteristic of my father
- ☐ This description is not characteristic of my father.

Trait Description 16: To feel good about oneself most of the time, to consider one's contributions valuable and important, to be happy in one's daily activities, to feel effective and competent as a person, to feel self-confident, to be generally satisfied with oneself and one's lot in life.

(Check one)

- ☐ This description is characteristic of my father
- ☐ This description is not characteristic of my father.



## APPENDIX C

### Incomplete Stories

Directions: On each of the following pages you will find a brief description about a girl who has just received some news. We would like you to write a story about each girl. In writing your stories, please use the following questions as guidelines:

- 1) What led up to this situation?
- 2) How does the main character feel about the news she has just received? What does she think about it?
- 3) What does the main character do? What will happen to her?

Obviously, there are no right or wrong stories, so feel free to use your imagination and make up any kind of story which our description suggests to you. Just be sure to use the three questions listed above as a guide. When you have finished writing one story, go on to the next until you have finished all three. Spend about 15 minutes writing each story, so that all three take you about 45 minutes. You may now turn the page and begin.

Story Description 1: When the first term grades are posted, Karen finds out that she is at the head of her class in medical school.

- Remember to include:
- (1) What led up to this situation?
  - (2) How does Karen feel about this news?
  - (3) What does Karen do?  
What happens to her?

Story Description 2: Gail has just learned that she is the only freshman to be admitted to Honors College at M.S.U.

- Remember to include:
- (1) What led up to this situation?
  - (2) How does Gail feel about this news?
  - (3) What does Gail do? What will happen to her?

Story Description 3: Beth and her husband are both graduate students in the mathematics department. They have each just taken the final exam for the Ph.D. degree. When the test results are announced, Beth finds out that she has passed but her husband has not.

- Remember to include:
- (1) What led up to this situation?
  - (2) How does Beth feel about this news?
  - (3) What does Beth do? What will happen to her?



# NCS ANSWER SHEET FOR THE ADJECTIVE CHECK LIST BY HARRISON G. GOUGH

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## DIRECTIONS FOR USING NCS ANSWER SHEET

This answer sheet contains a list of 300 adjectives. Please read them quickly and blacken in the circle beside each one you would consider to be self-descriptive. Do not worry about duplications, contradictions, and so forth. Work quickly and do not spend too much time on any one adjective. Try to be frank, and fill the circles for the adjectives which describe you as you really are, not as you would like to be. **BE SURE TO TURN THE PAGE OVER** and continue through adjective No. 300 on the reverse side.

● Use No. 2½ or softer pencil ● Fill circles heavily ● Erase any errors or stray marks completely ● Do not use ball point or ink ● Example: ●

- |                 |                   |                 |                  |                      |
|-----------------|-------------------|-----------------|------------------|----------------------|
| 1 absent-minded | 31 cheerful       | 61 frozen-foot  | 91 foresighted   | 121 impulsive        |
| 2 active        | 32 civilized      | 62 discontent   | 92 forgetful     | 122 independent      |
| 3 adaptable     | 33 clean-thinking | 63 dazed        | 93 forgiving     | 123 indifferent      |
| 4 adventurous   | 34 clever         | 64 d-amazed     | 94 formal        | 124 individualistic  |
| 5 affected      | 35 coarse         | 65 discreet     | 95 frank         | 125 industrious      |
| 6 affectionate  | 36 cold           | 66 disorderly   | 96 friendly      | 126 infantile        |
| 7 aggressive    | 37 come-over      | 67 distrustful  | 97 frivolous     | 127 informal         |
| 8 alert         | 38 convincing     | 68 extractable  | 98 fussy         | 128 ingenuous        |
| 9 aloof         | 39 commiserated   | 69 distrustful  | 99 generous      | 129 irritated        |
| 10 ambitious    | 40 contented      | 70 dominant     | 100 gentle       | 130 intuitive        |
| 11 anxious      | 41 confident      | 71 dreamy       | 101 gloomy       | 131 ingratiate       |
| 12 apathetic    | 42 contented      | 72 dull         | 102 good-looking | 132 intelligent      |
| 13 appreciative | 43 contented      | 73 easy-going   | 103 good-natured | 133 interests narrow |
| 14 arrogant     | 44 conversative   | 74 efficient    | 104 greedy       | 134 interests wide   |
| 15 arrogant     | 45 contemptuous   | 75 efficient    | 105 handsome     | 135 intolerant       |
| 16 astute       | 46 contented      | 76 efficient    | 106 hard-headed  | 136 inventive        |
| 17 attractive   | 47 conventional   | 77 emotional    | 107 hard-hearted | 137 irresponsible    |
| 18 attractive   | 48 cool           | 78 empty        | 108 hasty        | 138 irritable        |
| 19 attractive   | 49 cooperative    | 79 enterprising | 109 headstrong   | 139 jolly            |
| 20 awkward      | 50 conspicuous    | 80 enterprising | 110 heady        | 140 kind             |
| 21 bawdy        | 51 cowardly       | 81 evasive      | 111 helpful      | 141 lazy             |
| 22 blatant      | 52 cruel          | 82 exuberant    | 112 high-strung  | 142 leisurely        |
| 23 beautiful    | 53 courteous      | 83 fair-minded  | 113 honest       | 143 logical          |
| 24 bossy        | 54 cynical        | 84 half-hearted | 114 hostile      | 144 loud             |
| 25 calm         | 55 daring         | 85 indifferent  | 115 numerous     | 145 loyal            |
| 26 capable      | 56 deceitful      | 86 fastidious   | 116 hurried      | 146 mannerly         |
| 27 careless     | 57 defensive      | 87 hawk         | 117 idealistic   | 147 masculine        |
| 28 cautious     | 58 delicate       | 88 fastidious   | 118 imaginative  | 148 mature           |
| 29 changeable   | 59 dominating     | 89 foolish      | 119 immature     | 149 meek             |
| 30 charming     | 60 dependable     | 90 forceful     | 120 impatient    | 150 methodical       |

**DIRECTIONS FOR USING NAME GRID:** In the boxes above, print your last name first. Skip a box, then print as much of your first name as possible. Below each box blacken the circle that is lettered the same as the letter in the box. Blacken the blank circle for spaces.

**I. D. NO./SPECIAL CODES**  
(use only as directed)

**FOR NCS  
USE ONLY**

CONTINUE ON REVERSE SIDE

● Use No. 21 or softer pencil ● Fill circles heavily ● Erase any errors or stray marks completely ● Do not use ballpoint or ink

- 151 ○ mild 181 ○ practical 211 ○ sarcastic 241 ○ sophisticated 271 ○ tough  
 152 ○ mischievous 182 ○ praising 212 ○ self-centered 242 ○ spendthrift 272 ○ trusting  
 153 ○ moderate 183 ○ precise 213 ○ self-confident 243 ○ spineless 273 ○ unaffected  
 154 ○ modest 184 ○ prejudiced 214 ○ self-controlled 244 ○ spinsterhood 274 ○ unambitious  
 155 ○ moody 185 ○ preoccupied 215 ○ self-deny ing 245 ○ spunk 275 ○ unassuming  
 156 ○ nagging 186 ○ progressive 216 ○ self-pitying 246 ○ stable 276 ○ unconventional  
 157 ○ natural 187 ○ prudish 217 ○ self-punishing 247 ○ steady 277 ○ unpendable  
 158 ○ nervous 188 ○ quarrelsome 218 ○ self-seeking 248 ○ stern 278 ○ understanding  
 159 ○ noisy 189 ○ queer 219 ○ selfish 249 ○ staid 279 ○ unemotional  
 160 ○ obliging 190 ○ quick 220 ○ sensitive 250 ○ stolid 280 ○ unexcitable  
 161 ○ obnoxious 191 ○ quiet 221 ○ sentimental 251 ○ strong 281 ○ unfriendly  
 162 ○ opinionated 192 ○ quitting 222 ○ serious 252 ○ stubborn 282 ○ uninhibited  
 163 ○ opportunistic 193 ○ rational 223 ○ severe 253 ○ submissive 283 ○ unintelligent  
 164 ○ optimistic 194 ○ rattled 224 ○ sexy 254 ○ suggestion 284 ○ unkind  
 165 ○ organized 195 ○ realistic 225 ○ shallow 255 ○ sulky 285 ○ unrealistic  
 166 ○ original 196 ○ reasonable 226 ○ sharp-witted 256 ○ superstitious 286 ○ unscrupulous  
 167 ○ outgoing 197 ○ rebellious 227 ○ shittless 257 ○ suspicious 287 ○ unstable  
 168 ○ outspoken 198 ○ reckless 228 ○ show-off 258 ○ sympathetic 288 ○ unsteady  
 169 ○ painstaking 199 ○ reflective 229 ○ shrew 259 ○ tactful 289 ○ vindictive  
 170 ○ patient 200 ○ relaxed 230 ○ shy 260 ○ tactless 290 ○ versatile  
 171 ○ peaceable 201 ○ reliable 231 ○ silent 261 ○ talkative 291 ○ warm  
 172 ○ peculiar 202 ○ resentful 232 ○ simple 262 ○ temperamental 292 ○ wary  
 173 ○ persevering 203 ○ reserved 233 ○ sincere 263 ○ tense 293 ○ weak  
 174 ○ persistent 204 ○ resourceful 234 ○ slipshod 264 ○ thankless 294 ○ whiny  
 175 ○ pessimistic 205 ○ responsible 235 ○ slow 265 ○ thorough 295 ○ wholesome  
 176 ○ playful 206 ○ restless 236 ○ sly 266 ○ thoughtful 296 ○ wise  
 177 ○ pleasant 207 ○ retiring 237 ○ smug 267 ○ thrifty 297 ○ withdrawn  
 178 ○ pleasure-seeking 208 ○ rigid 238 ○ snobbish 268 ○ timid 298 ○ witty  
 179 ○ poised 209 ○ robust 239 ○ sociable 269 ○ tolerant 299 ○ worrying  
 180 ○ polished 210 ○ rude 240 ○ soft-hearted 270 ○ touchy 300 ○ zany

## APPENDIX E

### EPPS SCALE

#### Directions:

This scale consists of a number of pair of statements about things that you may or may not like. Look at the example below.

- A. I like to talk about myself to others.
- B. I like to work toward some goal that I have set for myself.

Which of these two statements is more characteristic of what you like? If you like "talking about yourself to others" more than you like "working toward some goal that you have set for yourself," then you should choose A or B. If you like "working toward some goal that you have set for yourself" more than you like "talking about yourself to others," then you should choose B over A.

You may like both A and B. In this case, you would have to choose between the two and you should choose the one that you like better. If you dislike both A and B, then you should choose the one that you dislike less.

Your choice, in each instance, should be in terms of what you like at the present time, and not in terms of what you think you should like. This is not a test. There



are no right or wrong answers. Your choices should be a description of your own personal likes. Make a choice for every pair of statements; do not skip any.

The pairs of statements on the following pages are similar to the examples given above. Read each pair of statements and pick out the one statement that better describes what you like. Circle the letter beside the statement you choose. You may now turn the page and begin.

EPFS SCALE

1. A I like to help my friends when they are in trouble.  
B I like to do my very best in whatever I undertake.
2. A I like to find out what great men have thought about various problems in which I am interested.  
B I would like to accomplish something of great significance.
3. A Any written work that I do I like to have precise, neat, and well organized.  
B I would like to be a recognized authority in some job, profession, or field of specialization.
4. A I like to tell amusing stories and jokes at parties.  
B I would like to write a great novel or play.
5. A I like to be able to come and go as I want to.  
B I like to be able to say that I have done a difficult job well.
6. A I like to solve puzzles and problems that other people have difficulty with.  
B I like to follow instructions and to do what is expected of me.
7. A I would like to be a recognized authority in some job, profession, or field of specialization.  
B I like to have my work organized and planned before beginning it.
8. A I like to be able to do things better than other people can.  
B I like to tell amusing stories and jokes at parties.
9. A I like to accomplish tasks that others recognize as requiring skill and effort.  
B I like to be able to come and go as I want to.
10. A I like to be successful in things undertaken.  
B I like to form new friendships.
11. A I like to solve puzzles and problems that other people have difficulty with.  
B I like to judge people by why they do something not by what they actually do.
12. A I like to accomplish tasks that others recognize as requiring skill and effort.  
B I like my friends to encourage me when I meet with failure.

13. A I would like to write a great novel or play.  
B When serving on a committee, I like to be appointed or elected Chairman.
14. A I would like to be a recognized authority in some job, profession, or field of specialization.  
B I feel guilty whenever I have done something I know is wrong.
15. A I like to do my very best in whatever I undertake.  
B I like to help other people who are less fortunate than I am.
16. A I like to be able to do things better than other people can.  
B I like to eat in new and strange restaurants.
17. A I like to be able to say that I have done a difficult job well.  
B I like to work hard at any job I undertake.
18. A I would like to accomplish something of great significance.  
B I like to kiss attractive persons of the opposite sex.
19. A I like to be loyal to my friends.  
B I like to do my best in whatever I undertake.
20. A I like to observe how another individual feels in a given situation.  
B I like to be able to say that I have done a difficult job well.
21. A I like my friends to encourage me when I meet with failure.  
B I like to be successful in things undertaken.
22. A I like to be one of the leaders in the organizations and groups to which I belong.  
B I like to be able to do things better than other people can.
23. A When things go wrong for me, I feel that I am more to blame than anyone else.  
B I like to solve puzzles and problems that other people have difficulty with.
24. A I like to help my friends when they are in trouble.  
B I like to do my very best in whatever I undertake.

25. A I like to travel and to see the country.  
B I like to accomplish tasks that others recognize as requiring skill and effort.
26. A I like to work hard at any job I undertake.  
B I would like to accomplish something of great significance.
27. A I like to go out with attractive persons of the opposite sex.  
B I like to be successful in things undertaken.
28. A I like to read newspaper accounts of murders and other forms of violence.  
B I would like to write a great novel or play.

## APPENDIX F

### Coding Procedure for Incomplete Stories

General Instructions: After reading a story please answer the following four questions about it.

1. Is the main character's (MC's) success depicted as a positive experience in any sense? Indicate whether a positive response to success was present or absent from the story. A positive response to success is defined in terms of the four content coding categories listed below. If a story meets the criteria of at least one of the content coding categories, consider a positive response to success as present in the story. Then indicate which category or categories were applicable to the story. If more than one category applies, check more than one. If the story does not meet the criteria of any one content coding category, then consider a positive response to success as absent from the story.

Category 1a. Positive Affect. MC experiences positive affect because of her success. For example, MC feels proud, is happy, is relieved, excited, honored, delighted, etc.

Category 1b. Positive Consequences. MC experiences or anticipates positive consequences because of her success. For example, others respond positively to MC's success, parents are proud, friends are happy for her, MC receives a scholarship or good job because of her success. In this category, MC is the recipient of positive consequences. Differentiate this from Category 1c where MC is the agent of positive instrumental behavior following success.

Category 1c. Positive Instrumental Behavior. MC engages in instrumental behavior toward present and/or future success. MC engages in positive, self-enhancing behavior which incorporates her intelligence and success. For example, she continues studying, goes on to further successes, has a happy life, makes valuable contributions in the future, etc. If MC must move to more traditional female vocations such as secondary school teaching, social work,

nursing, etc., or must move away from her profession entirely to find happiness, consider this as contra-indicating instrumental behavior toward success.

Category 1d. Positive Characteristics Attributed to MC by Author. In the course of the story, the author attributes positive characteristics to MC, characteristics which reveal the author's valuation of a successful girl. For example, MC is pretty, nice, friendly, feminine, hard working, deserving of success, etc. If author states that MC is intelligent, this may or may not be a positive characteristic in the eyes of the author. If "intelligent" is the only positive characteristic attributed to MC, this should generally be considered as inadequate evidence for the story to be coded in this category.

2. Is MC's success depicted as a negative experience in any sense? First, judge whether a negative response to success was present or absent from the story. A negative response to success is defined in terms of the four content coding categories listed below. If a story meets the criteria of at least one of the content coding categories, consider a negative response to success as present in the story. Then, indicate which category or categories were applicable to the story. If more than one category applies, check more than one. If a story does not meet the criteria of any one of the content coding categories, then consider a negative response to success as absent from the story.

Category 2a. Negative Affect. MC experiences negative affect because of her success. Differentiate this from affect because of her husband's failure as in Story II. This category considers MC's affect because of her own success. For example, MC experiences anxiety, worry, fear, embarrassment, or disturbance because of her success.

Category 2b. Negative Consequences. MC experiences or anticipates negative consequences because of her success. In this category, MC is the recipient of negative consequences. Differentiate this from Category 2C where MC is the agent of negative instrumental behavior. For example, others respond negatively to her success, friends are jealous, males reject her, MC is lonely or isolated. If MC keeps success a secret, tries to pretend intelligence is not a part of her or does not own her success,

infer that she anticipates negative consequences. For example, MC knew that her success was sheer luck. Also, if she tries to protect her husband from knowing that she succeeded or worries about his response to her success, infer that she anticipates negative consequences. Try to differentiate consequences due to her success from consequences due to his failure. Consider only the former in this category.

Category 2c. Negative Instrumental Behavior. MC engages in negative, self-limiting, success-detracting behaviors which deny her intelligence or limit or undo her success. For example, MC studies less, sluffs off, drops out of school, moves to more traditional female work such as nursing, social work, secondary education, gives up career to be married, etc.

Category 2d. Negative Characteristics Attributed to MC by Author. In the course of the story, the author attributes negative characteristics to MC, characteristics which reveal the author's valuation of a successful girl. For example, MC is ugly, is a bookworm, is selfish, is big-headed, is masculine, is a cheat, is undeserving of success, etc.

3. To what extent does MC experience conflict about her success? Look for indications that MC considers personal success to be incompatible with other needs, goals, or expectations. If, in answering question #2, you found evidence of a negative response to success, infer that MC experiences some degree of conflict and code the extent of conflict in either Category 3B or 3C, which ever is more appropriate.

Category 3A. No Conflict. MC experiences her success positively and owns it unambivalently, indicating that she feels her success to be compatible with other personal needs. A story referring to the hard work and sacrifice required of a doctor or other professional may be appropriately coded as "No Conflict" unless that sacrifice refers to giving up fulfillment of needs for affection, interpersonal closeness, etc. If, in answering question #2, this story was coded as indicating a negative response to success, then this story does not meet the criteria of Category 3A, "No Conflict."

Category 3B. Conflict Present but Not Intense. MC experiences success as somewhat conflictful with other personal needs. For example, MC's studies

leave her social life empty, MC wonders if she hasn't missed out on some fun at school. If MC does not own her success, but attributes it to luck, then infer some conflict present. If MC experiences mildly distressful affect about success, infer Category 3B. MC worries, has mixed feelings, is somewhat nervous etc., are examples of mildly distressful affect and "Conflict Present but Not Intense". If MC anticipates or experiences moderately negative consequences, e.g., she tends to become unpopular, she withdraws so others won't ask how well she did on the exam, she has trouble finding dates, then code the story in this category.

Category 3C. Intense Conflict. This category is different from Category 3B only in degree. MC experiences success as highly conflictful with other personal needs. For example, MC's interpersonal relations are severely hampered, MC will never be able to find a man who will accept her, MC is warped forever and can't do anything about it. MC experiences intensely distressful affect because of success. For example, is terrified, grieves many long hours, goes crazy, commits suicide, etc. MC anticipates or experiences highly negative consequences due to her success. For example, she becomes divorced, etc. MC goes to elaborate lengths to undo or deny her success. For example, she fabricates a reason to see her test and changes her answers so that she won't be number one any more.

4. To what extent is MC's conflict about success resolved? This question is best answered by looking at how the story ends. Is the ending happy and optimistic or is it pessimistic? If you coded the story as indicating "No Conflict" in response to question #3, then also code this story in Category 4A, "Conflict Resolved Toward Success. If the story ends on a neutral note, without being optimistic or pessimistic, give the author the benefit of the doubt and code the conflict as resolved. Now answer question #4 by choosing the single most appropriate content coding category from those listed below.

Category 4A. Conflict Resolved Toward Success. The conflict resulting from MC's success seems to be resolved by the end of the story (or the author suggests that it will be resolved in the future) in a way that incorporates MC's intelligence and success. For example, MC gets a better job, stays



in Honors College, becomes a famous doctor, MC becomes a math professor, MC hopes that her success will benefit her career, etc.

Category 4B. Conflict Resolved Away From Success. The conflict resulting from MC's success seems to be resolved by the end of the story (or the author suggests that it will be resolved in the future) in a way that ignores, denies, or does not incorporate MC's intelligence and/or success. For example, MC quits college and finds real happiness with the man she loves, MC leaves medical school, MC ends up as an average student and stays there, etc.

Category 4C. Conflict Unresolved. The story ends on a note of pessimism or resignation. MC cannot meet both her achievement needs and her other personal needs, so she stays in conflict. For example, MC realizes that she's missed something in life, MC will find it harder and harder to make friends, MC will always be lonely, MC is warped and it's too late to do anything about it, etc.

# APPENDIX G

Differences in Completion Set Types (Stories I and II only)  
for Ss in Maternal  
Sex-Typing and Identification Groups Combined

| Subject<br>Group | Completion Set Types |         |          | Chi-<br>square | <u>df.</u> |
|------------------|----------------------|---------|----------|----------------|------------|
|                  | Type I               | Type II | Type III |                |            |
| ST+WNT           | 11                   | 5       | 6        | 1.70           | 2          |
| WT+SNT           | 8                    | 8       | 5        |                |            |

## APPENDIX H

## Total Sample-Summary of Data

| Subject<br>Code | Variable |       |        |       |       |       |        |       |         |   |          |   |          |   |
|-----------------|----------|-------|--------|-------|-------|-------|--------|-------|---------|---|----------|---|----------|---|
|                 | Mother   |       | Father |       | ACL*  |       | EPPS** |       | Story 1 |   | Question |   | Question |   |
|                 | Model    | Score | Model  | Score | Model | Score | Model  | Score | 1       | 2 | 3        | 4 | 1        | 2 |
| (N=100)         | Model    | Score | Model  | Score | Model | Score | Model  | Score | 1       | 2 | 3        | 4 | 1        | 2 |
| Completion      | Set      | Type  |        |       |       |       |        |       |         |   |          |   |          |   |
|                 |          |       |        |       |       |       |        |       |         |   |          |   |          |   |
| 26              | 5        | 9     | 4      | -11   | 44    | 11    | A      | B     | A       | A | B        | A | A        | B |
| 27              | 7        | 74    | 6      | -148  | 23    | 9     | A      | B     | A       | A | B        | A | A        | B |
| 28              | 6        | 71    | 6      | -53   | 46    | 13    | A      | B     | A       | A | B        | B | A        | A |
| 29              | 5        | -48   | 7      | -14   | 48    | 17    | A      | A     | B       | A | A        | B | A        | A |
| 31              | 4        | 45    | 6      | -15   | 42    | 10    | A      | A     | B       | A | A        | B | A        | A |
| 32              | 4        | -34   | 6      | -8    | 44    | 10    | A      | A     | B       | A | A        | B | A        | A |
| 33              | 3        | 50    | 7      | 54    | 55    | 11    | A      | A     | B       | A | A        | B | A        | A |
| 35              | 6        | -5    | 4      | -65   | 30    | 15    | A      | A     | B       | A | A        | B | A        | A |
| 36              | 5        | 18    | 7      | -38   | 40    | 14    | A      | A     | B       | A | A        | B | A        | A |
| 37              | 2        | -34   | 0      | 28    | 53    | 15    | A      | A     | B       | A | A        | B | A        | A |
| 38              | 4        | -161  | 7      | -121  | 32    | 15    | A      | B     | A       | A | B        | A | A        | A |
| 39              | 5        | 29    | 4      | 17    | 43    | 9     | A      | B     | A       | A | B        | A | A        | A |
| 40              | 5        | -1    | 6      | -27   | 33    | 14    | B      | A     | B       | A | A        | B | A        | A |
| 41              | 6        | 67    | 4      | -47   | 54    | 9     | A      | B     | A       | A | B        | A | A        | A |
| 42              | 7        | 11    | 5      | 17    | 50    | 12    | A      | A     | B       | A | A        | B | A        | A |
| 43              | 5        | -42   | 5      | 20    | 40    | 11    | A      | B     | A       | A | B        | A | A        | A |
| 44              | 4        | 44    | 7      | -22   | 30    | 9     | A      | B     | A       | A | B        | A | A        | A |
| 45              | 4        | 15    | 9      | -100  | 37    | 10    | A      | A     | B       | A | A        | B | A        | A |
| 47              | 4        | 19    | 5      | 34    | 54    | 17    | A      | B     | A       | A | B        | A | A        | A |
| 48              | 4        | -30   | 3      | -18   | 36    | 14    | A      | A     | B       | A | A        | B | A        | A |
| 49              | 4        | 27    | 6      | 3     | 44    | 6     | A      | A     | B       | A | A        | B | A        | A |
| 50              | 6        | -71   | 4      | -17   | 28    | 17    | B      | A     | B       | A | A        | B | A        | A |
| 51              | 5        | 8     | 7      | -66   | 48    | 18    | A      | B     | A       | A | B        | A | A        | A |
| 55              | 5        | 38    | 5      | -10   | 59    | 14    | A      | B     | A       | A | B        | A | A        | A |
| 56              | 7        | 55    | 6      | -27   | 40    | 16    | A      | A     | B       | A | A        | B | A        | A |
| 57              | 6        | 65    | 4      | 90    | 26    | 16    | A      | A     | B       | A | A        | B | A        | A |
| 58              | 8        | 14    | 2      | -117  | 19    | 13    | A      | A     | B       | A | A        | B | A        | A |
| 59              | 3        | 57    | 7      | 43    | 33    | 25    | A      | B     | A       | A | B        | A | A        | A |
| 60              | 7        | 178   | 7      | -2    | 38    | 8     | A      | A     | B       | A | A        | B | A        | A |
| 61              | 2        | 35    | 5      | 13    | 52    | 10    | A      | B     | A       | A | B        | A | A        | A |

| Subject<br>Code | Variable |         |       |       |       |         |       |       |       |         | Completion          |       |       |         |       |          |       |         |       |       |          |         |       |       |       |          |       |       |       |         |       |   |   |   |   |
|-----------------|----------|---------|-------|-------|-------|---------|-------|-------|-------|---------|---------------------|-------|-------|---------|-------|----------|-------|---------|-------|-------|----------|---------|-------|-------|-------|----------|-------|-------|-------|---------|-------|---|---|---|---|
|                 | Mother   |         |       |       |       | Father  |       |       |       |         | ACL* EPPS** Story 1 |       |       |         |       | Question |       |         |       |       | Question |         |       |       |       | Set Type |       |       |       |         |       |   |   |   |   |
|                 | Model    | Identif | Score | Model | Score | Identif | Score | Model | Score | Identif | Score               | Model | Score | Identif | Score | Model    | Score | Identif | Score | Model | Score    | Identif | Score | Model | Score | Identif  | Score | Model | Score | Identif | Score |   |   |   |   |
| 62              | 6        | -68     | 4     | -122  | 35    | 9       | A     | A     | B     | B       | B                   | A     | A     | B       | B     | B        | A     | A       | B     | B     | A        | A       | B     | B     | A     | A        | B     | B     | A     | A       | B     | A |   |   |   |
| 64              | 7        | -87     | 7     | 1     | 59    | 10      | A     | A     | C     | C       | A                   | A     | B     | B       | A     | A        | B     | B       | A     | A     | B        | B       | A     | A     | B     | B        | A     | A     | B     | A       | A     | B | A |   |   |
| 65              | 3        | -71     | 7     | -89   | 33    | 9       | A     | B     | A     | A       | A                   | B     | A     | A       | A     | A        | B     | B       | A     | A     | B        | B       | A     | A     | B     | B        | A     | A     | B     | A       | A     | B | A |   |   |
| 66              | 6        | 17      | 4     | 37    | 64    | 12      | A     | B     | A     | A       | A                   | B     | A     | A       | A     | A        | B     | B       | A     | A     | B        | B       | A     | A     | B     | B        | A     | A     | B     | A       | A     | B | A |   |   |
| 67              | 4        | 53      | 6     | 39    | 38    | 9       | A     | B     | A     | A       | A                   | B     | A     | A       | A     | A        | B     | B       | A     | A     | B        | B       | A     | A     | B     | B        | A     | A     | B     | A       | A     | B | A |   |   |
| 68              | 2        | -79     | 1     | 95    | 32    | 7       | A     | B     | A     | A       | A                   | B     | A     | B       | B     | A        | B     | B       | A     | B     | A        | A       | C     | C     | A     | A        | B     | B     | A     | A       | B     | A | A |   |   |
| 69              | 3        | 2       | 4     | -8    | 46    | 18      | A     | B     | A     | A       | A                   | B     | A     | B       | B     | A        | A     | B       | B     | A     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 70              | 1        | -39     | 5     | -81   | 39    | 11      | A     | A     | B     | A       | A                   | A     | B     | B       | A     | A        | B     | B       | A     | B     | A        | A       | C     | C     | A     | A        | B     | B     | A     | A       | B     | A | A | B | A |
| 71              | 2        | -106    | 5     | -112  | 37    | 13      | A     | B     | A     | A       | A                   | B     | B     | A       | A     | B        | B     | A       | B     | B     | A        | A       | C     | C     | A     | A        | B     | B     | A     | A       | B     | A | A | B | A |
| 72              | 5        | -90     | 5     | 26    | 42    | 13      | A     | A     | B     | B       | A                   | A     | B     | B       | A     | A        | B     | B       | A     | B     | A        | A       | B     | B     | A     | A        | B     | B     | A     | A       | B     | A | A | B | A |
| 73              | 3        | 67      | 4     | 23    | 53    | 10      | A     | B     | A     | A       | A                   | B     | B     | A       | A     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 74              | 6        | -65     | 6     | -25   | 49    | 12      | A     | A     | B     | B       | A                   | A     | A     | B       | B     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 75              | 2        | -7      | 3     | 13    | 54    | 11      | A     | A     | B     | B       | A                   | A     | A     | B       | B     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 76              | 9        | 140     | 8     | -60   | 32    | 12      | A     | A     | B     | B       | A                   | A     | A     | B       | B     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 78              | 5        | -57     | 6     | 23    | 60    | 7       | A     | A     | B     | B       | C                   | A     | A     | B       | B     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 79              | 6        | -162    | 5     | -55   | 64    | 20      | A     | B     | A     | A       | A                   | A     | B     | B       | A     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 81              | 4        | -9      | 5     | -11   | 44    | 10      | A     | A     | B     | B       | C                   | A     | A     | B       | B     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 82              | 6        | 27      | 5     | -5    | 43    | 13      | A     | A     | B     | B       | C                   | A     | A     | B       | B     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 83              | 5        | -3      | 4     | -23   | 40    | 12      | A     | A     | B     | B       | C                   | A     | A     | B       | B     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 84              | 6        | 55      | 5     | 43    | 48    | 8       | A     | A     | B     | B       | A                   | A     | A     | B       | B     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 85              | 3        | 79      | 7     | 57    | 54    | 10      | A     | A     | B     | B       | A                   | A     | A     | B       | B     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 86              | 5        | 9       | 7     | 17    | 53    | 23      | A     | B     | A     | A       | A                   | A     | B     | B       | A     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 87              | 4        | 17      | 7     | -13   | 40    | 12      | A     | B     | A     | A       | C                   | A     | A     | B       | B     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 89              | 5        | 0       | 7     | -60   | 48    | 13      | A     | A     | C     | C       | A                   | A     | B     | B       | A     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 90              | 3        | 49      | 5     | 125   | 59    | 17      | A     | A     | B     | A       | A                   | A     | B     | B       | A     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 91              | 4        | 5       | 8     | 111   | 33    | 16      | A     | B     | A     | A       | A                   | B     | B     | A       | A     | B        | B     | A       | B     | A     | B        | B       | A     | A     | B     | B        | A     | A     | B     | A       | A     | B | A |   |   |
| 92              | 4        | -143    | 7     | -31   | 26    | 7       | A     | B     | A     | A       | A                   | A     | B     | B       | A     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 93              | 5        | 6       | 5     | -34   | 42    | 9       | A     | B     | A     | A       | A                   | A     | B     | B       | A     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 94              | 3        | 14      | 5     | -21   | 55    | 8       | A     | B     | A     | A       | A                   | A     | B     | B       | A     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 95              | 3        | 29      | 5     | -85   | 42    | 11      | A     | A     | C     | C       | B                   | A     | A     | C       | C     | A        | A     | B       | B     | A     | B        | B       | A     | A     | B     | B        | A     | A     | B     | A       | A     | B | A |   |   |
| 96              | 3        | -46     | 6     | 10    | 57    | 12      | B     | A     | C     | C       | B                   | A     | A     | C       | C     | A        | A     | B       | B     | A     | B        | B       | A     | A     | B     | B        | A     | A     | B     | A       | A     | B | A |   |   |
| 97              | 6        | -1      | 7     | -17   | 50    | 13      | A     | B     | A     | A       | A                   | A     | B     | B       | A     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 98              | 6        | -22     | 4     | 26    | 40    | 6       | A     | B     | A     | A       | A                   | A     | B     | B       | A     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 99              | 5        | 5       | 8     | -15   | 46    | 9       | A     | A     | B     | B       | B                   | A     | A     | B       | B     | A        | A     | B       | B     | A     | B        | A       | B     | B     | A     | A        | B     | B     | A     | A       | B     | A | A | B | A |
| 100             | 7        | 65      | 6     | -18   | 44    | 12      | A     | B     | A     | A       | A                   | A     | B     | B       | A     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 101             | 3        | -16     | 5     | 14    | 54    | 12      | A     | A     | C     | C       | A                   | A     | B     | B       | A     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 102             | 3        | -75     | 7     | -97   | 33    | 11      | A     | B     | A     | A       | A                   | A     | B     | B       | A     | A        | B     | B       | A     | B     | A        | B       | B     | A     | A     | B        | B     | A     | A     | B       | A     | A | B | A |   |
| 103             | 7        | 11      | 4     | -115  | 17    | 14      | A     | A     | B     | B       | B                   | A     | A     | B       | B     | A        | A     | B       | B     | A     | B        | A       | B     | B     | A     | A        | B     | B     | A     | A       | B     | A | A | B | A |
| 104             | 5        | -38     | 6     | 2     | 45    | 9       | A     | A     | B     | B       | A                   | A     | A     | B       | B     | A        | A     | B       | B     | A     | B        | A       | B     | B     | A     | A        | B     | B     | A     | A       | B     | A | A | B | A |
| 105             | 5        | 20      | 5     | 26    | 57    | 14      | A     | A     | B     | B       | A                   | A     | A     | B       | B     | A        | A     | B       | B     | A     | B        | A       | B     | B     | A     | A        | B     | B     | A     | A       | B     | A | A | B | A |

| Subject<br>Code | Variable |         |        |         |       |         |        |       |         |   | Completion |   |
|-----------------|----------|---------|--------|---------|-------|---------|--------|-------|---------|---|------------|---|
|                 | Mother   |         | Father |         | ACL*  |         | EPPS** |       | Story 1 |   | Question   |   |
|                 | Model    | Identif | Model  | Identif | Model | Identif | Ach.   | Ach.  | 1       | 2 | 3          | 4 |
|                 | Score    | Score   | Score  | Score   | Score | Score   | Score  | Score | 1       | 2 | 3          | 4 |
| 106             | 4        | 17      | 5      | 3       | 51    | 9       |        |       | A       | A | B          | B |
| 107             | 7        | -107    | 5      | -17     | 52    | 13      |        |       | A       | A | B          | A |
| 108             | 7        | -79     | 5      | -59     | 55    | 15      |        |       | A       | A | B          | A |
| 109             | 6        | 8       | 8      | 32      | 53    | 11      |        |       | A       | A | B          | B |
| 110             | 6        | 3       | 6      | -7      | 38    | 11      |        |       | A       | A | B          | B |
| 113             | 8        | -46     | 5      | -20     | 44    | 16      |        |       | B       | A | B          | B |
| 114             | 7        | 162     | 3      | 60      | 38    | 15      |        |       | A       | A | B          | B |
| 115             | 6        | -68     | 3      | 12      | 50    | 15      |        |       | B       | A | C          | B |
| 116             | 5        | -45     | 3      | 61      | 47    | 8       |        |       | A       | B | A          | A |
| 117             | 5        | -21     | 3      | 37      | 59    | 5       |        |       | A       | A | C          | C |
| 118             | 9        | 88      | 3      | 16      | 36    | 13      |        |       | A       | A | B          | A |
| 119             | 3        | -19     | 5      | 9       | 59    | 8       |        |       | A       | A | B          | A |
| 120             | 8        | -61     | 4      | -25     | 44    | 9       |        |       | A       | A | B          | A |
| 122             | 5        | -31     | 7      | -29     | 32    | 15      |        |       | A       | A | B          | A |
| 123             | 4        | 10      | 7      | -14     | 46    | 7       |        |       | A       | A | B          | A |
| 125             | 7        | -1      | 7      | 17      | 59    | 16      |        |       | A       | A | B          | A |
| 126             | 5        | -58     | 5      | 4       | 46    | 13      |        |       | A       | A | B          | B |
| 127             | 6        | -23     | 3      | -25     | 42    | 17      |        |       | A       | A | B          | A |
| 128             | 4        | 23      | 7      | -23     | 56    | 22      |        |       | A       | A | B          | A |
| 129             | 6        | -70     | 6      | -10     | 52    | 15      |        |       | A       | A | B          | A |
| 130             | 3        | -5      | 7      | -19     | 44    | 12      |        |       | A       | A | B          | A |
| 131             | 8        | -34     | 8      | 16      | 51    | 12      |        |       | A       | A | B          | A |
| 132             | 7        | -114    | 5      | 22      | 61    | 16      |        |       | A       | A | B          | A |
| 133             | 4        | -15     | 5      | 13      | 58    | 12      |        |       | A       | A | B          | A |
| 134             | 7        | 62      | 5      | 62      | 50    | 6       |        |       | A       | A | B          | A |
| 137             | 6        | -26     | 5      | -32     | 38    | 11      |        |       | A       | A | B          | A |
| 138             | 5        | -24     | 7      | -64     | 29    | 9       |        |       | A       | A | B          | A |
| 139             | 6        | -34     | 5      | -30     | 36    | 12      |        |       | A       | A | B          | A |
| 140             | 5        | -24     | 8      | 28      | 52    | 9       |        |       | A       | A | B          | A |
| 144             | 6        | 53      | 6      | -9      | 39    | 14      |        |       | A       | A | B          | A |

\* ACL scores are T Scores

\*\*EPPS scores are raw scores

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