

FEAR OF FAILURE AND ROLE  
CONGRUENCE: AN INVESTIGATION  
INTO THE NATURE OF ACHIEVEMENT  
MOTIVATION IN WOMEN

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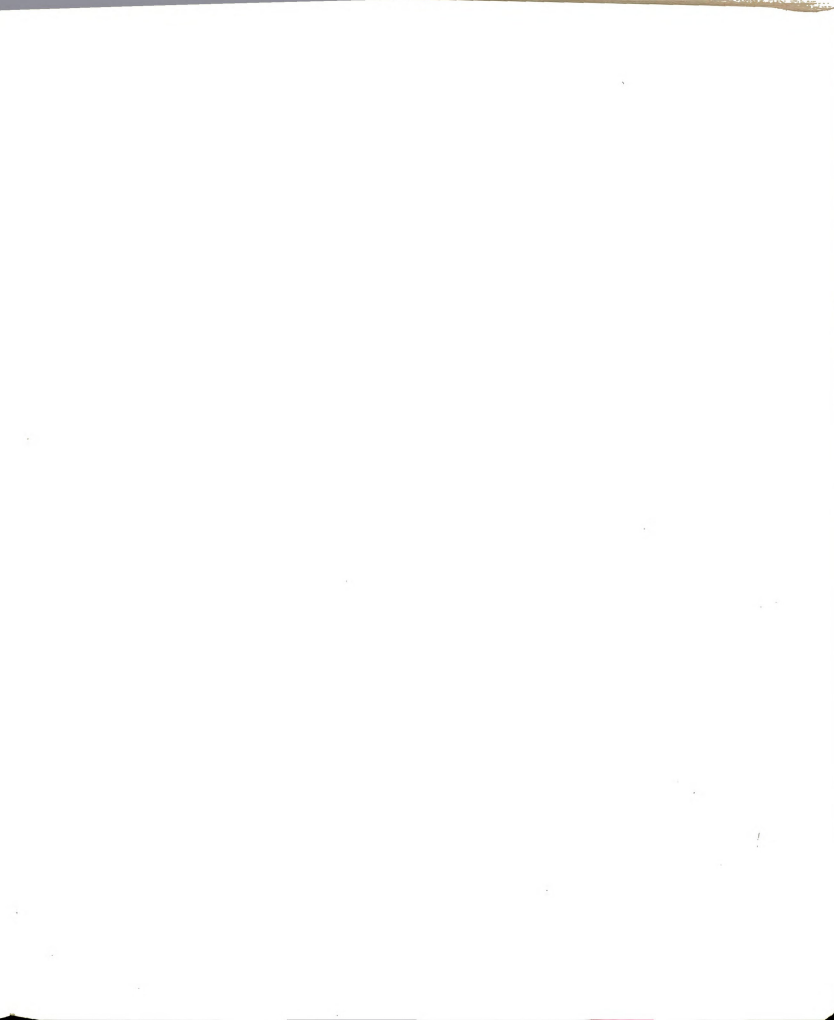
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## ABSTRACT

### FEAR OF FAILURE AND ROLE CONGRUENCE: AN INVESTIGATION INTO THE NATURE OF ACHIEVEMENT MOTIVATION IN WOMEN

By

Alice Madeline Wolfe Bernstein

This study was designed to demonstrate that the achievement behavior of women can be explained by the expectancy-value theory of achievement motivation without recourse to the concept of motive to avoid success. Predictions based upon the inhibitory model of motive to avoid failure and on previous studies relating ego involvement to performance were made about performance, level of aspiration, and level of expectation.

On the basis of their answers to three questions, female volunteers from introductory psychology classes were classified as having a career orientation, a home-making orientation, or as being undecided about their sex role orientation. The undecided group was eliminated. Stories told to four relatively neutral sentences were scored for hostile press imagery. A median break classified subjects with any hostile press imagery as high fear of failure subjects. At a second session the 100 remaining subjects, divided into four groups on the



basis of their sex role orientation and fear of failure classification, were administered a scrambled words test. Half of the subjects within each group were told that the task was a measure of homemaking ability, and half were told that the task was a measure of career ability. Before attempting the task the subjects were asked to indicate their levels of aspiration and expectation.

The level of aspiration, level of expectation, performance, and post-performance estimates of career-oriented subjects were significantly higher than those of subjects with a homemaking orientation. The task congruence variable produced significant F ratios for performance and numerical estimate of performance.

Although the fear of failure subjects had an overall nonsignificant tendency to perform better than subjects without fear of failure, their post-performance percentile estimates had a significant tendency to be lower than those of subjects without fear of failure. When the task was described as a test of homemaking ability, subjects with fear of failure performed better than subjects without fear of failure ( $p < .051$ ).

Career-oriented subjects with fear of failure set their level of aspiration high and appeared to underestimate their own performance while over-estimating the performance of others. While they estimated that their ability to succeed at a career was well above the average,

they estimated that their ability to be a homemaker was below average. Fear of failure subjects with a homemaking orientation, who were significantly more numerous than those with a career orientation, set their level of aspiration extremely low and estimated that their performance was extremely low. Relative to the other subjects, their estimates of ability on tests of career and homemaking ability were low, but there was little difference between their two ability predictions.

It is hypothesized that incentive value has both a competence and a social consequences component and that the relative weight of the social consequences component is greater for the fear of failure individual than for the individual without fear of failure. Fear of failure is conceived of as a strategy designed to minimize social rejection while maintaining a sense of personal competency.

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FEAR OF FAILURE AND ROLE CONGRUENCE: AN INVESTIGATION  
INTO THE NATURE OF ACHIEVEMENT MOTIVATION IN WOMEN

By

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To Larry

Who washed the dishes while I wrote.



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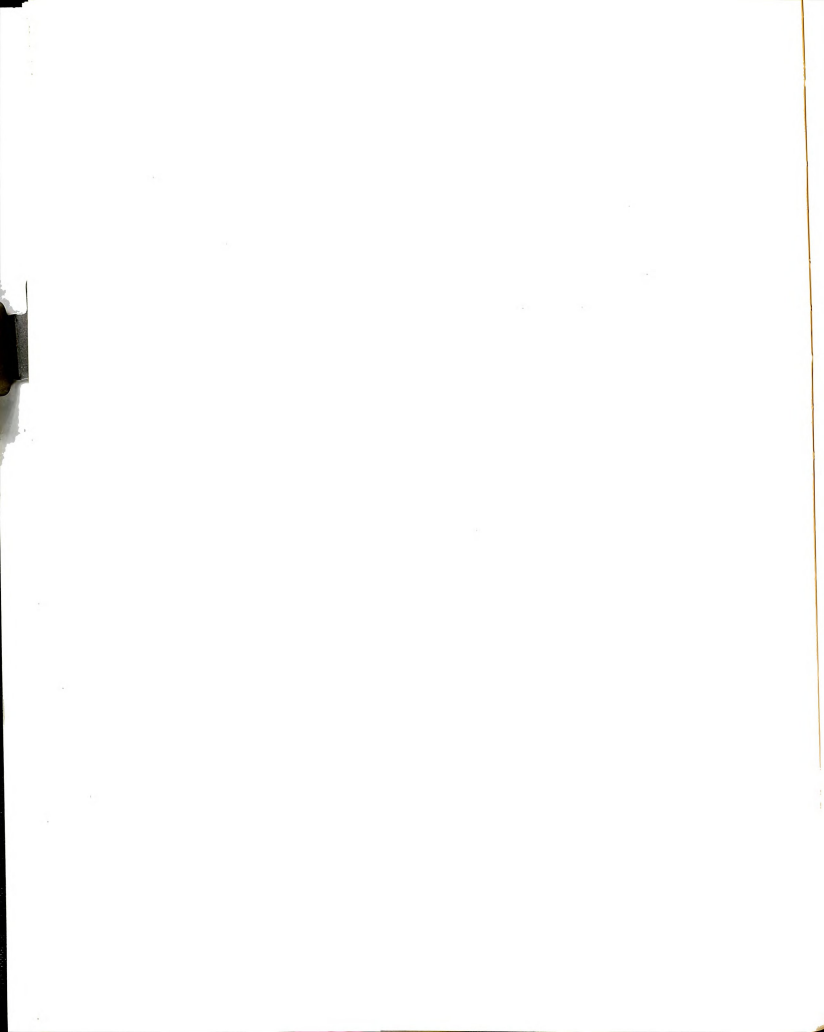
The experiment was conducted by Kathy Miller and Beth Oleshansky; their assistance was vital and is greatly appreciated. Ed Bourne and Ellen Washington of the University of Chicago helped me with the reliability checks. I only hope that I am as good a friend to them as they are to me. To Roger Ahrends I extend my thanks for helping me score the scrambled words protocols. Sue Wessner of the Graduate Research Office deserves great thanks for typing the rough draft of this lengthy manuscript.



The many variables examined in this study necessitated a computer analysis. Without Dave Thissen's help, I would have had to remain in East Lansing while analyzing the data.

Sandra Stuart generously provided me with a place to stay during my visits to the campus. She will always have a warm place in my heart and a warm bed to stay in when she visits Chicago and wherever we move afterwards. Rita Larson provided me with a place to stay during the early part of my work and also handed out the final draft copies. Like Sandy, she will always be welcome in my home.

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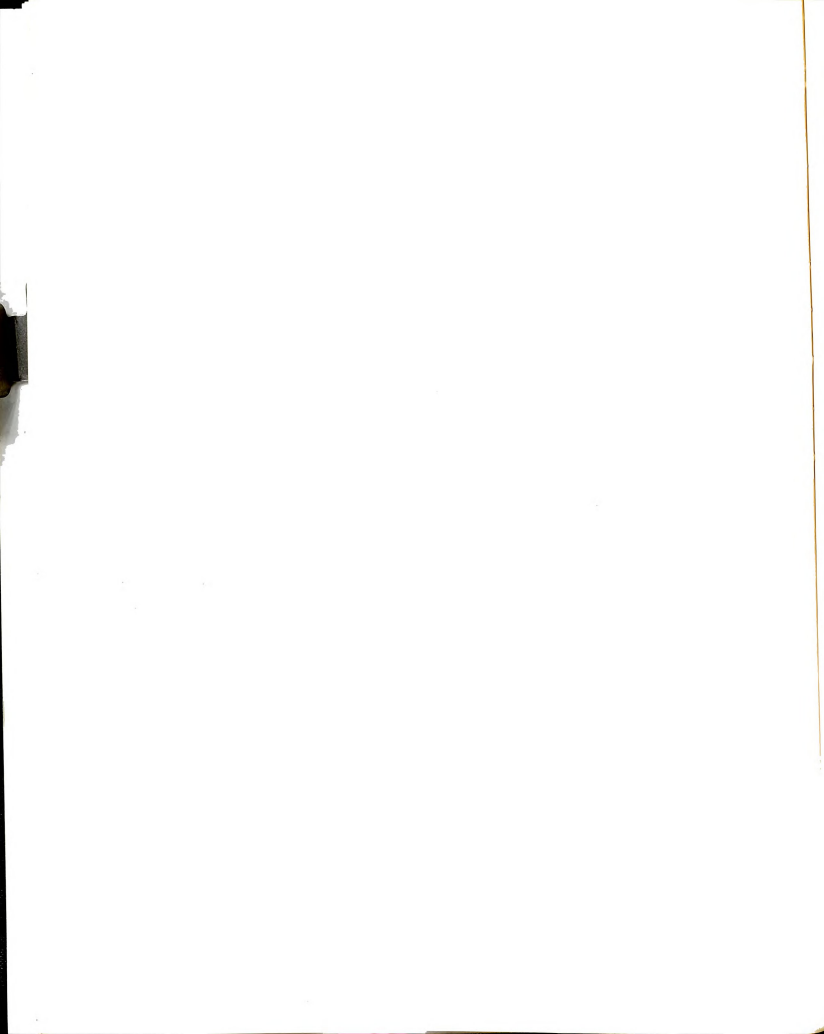
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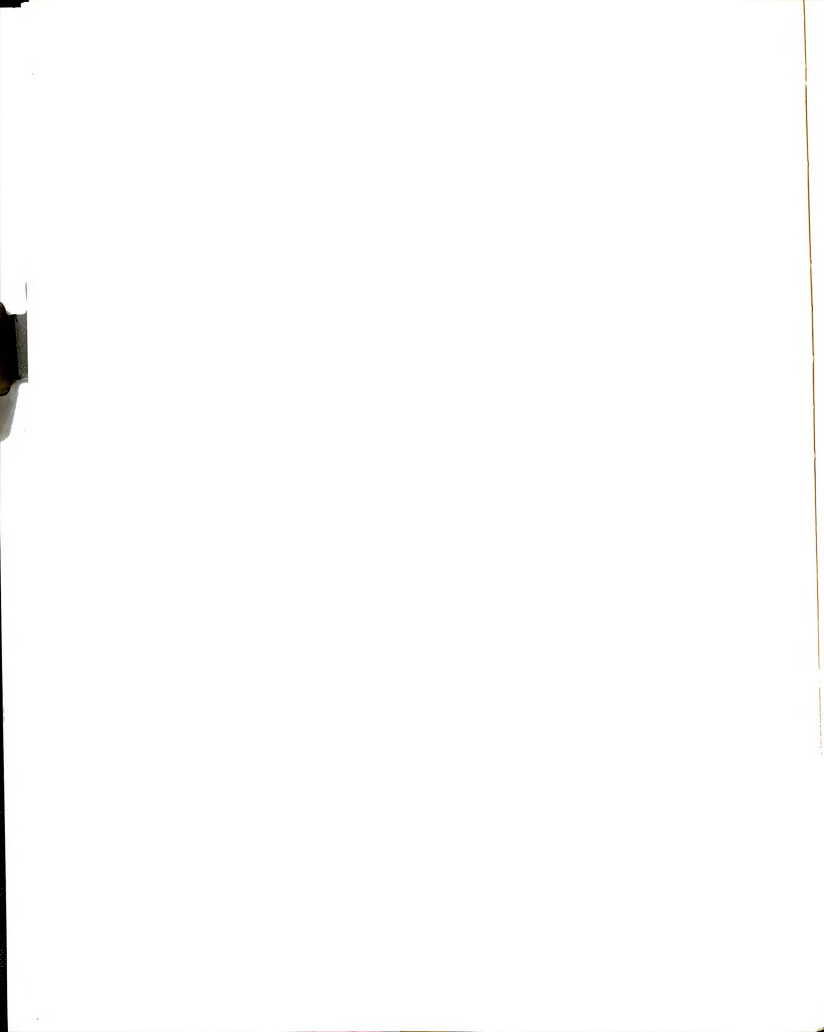




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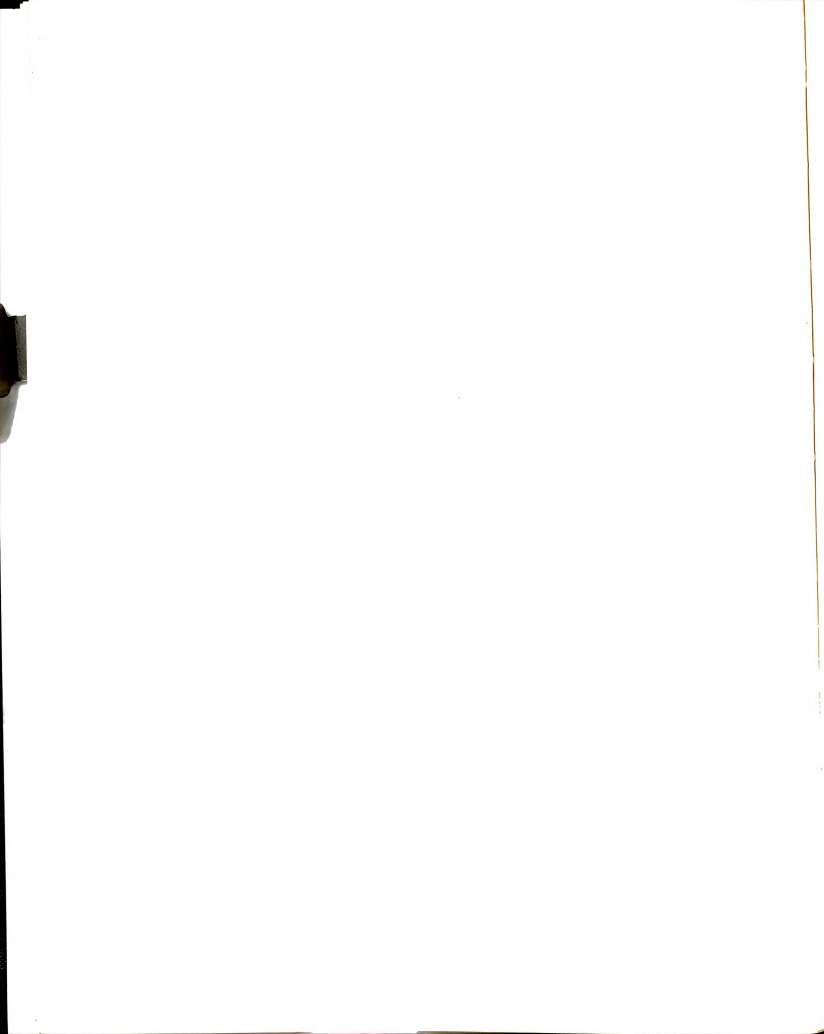


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## CHAPTER I

### INTRODUCTION

#### Achievement Motivation Research and Women

The exploration of achievement motivation has engaged many personality researchers over the last 20 to 5 years. Most of this research has employed male subjects, but within the last 5 years there has been a veritable explosion of articles concerning the achievement motivation of women. Although experimenters initially attempted to verify the McClelland-Atkinson model of achievement motivation, most recent research has attempted to explain the failure of White women in American society to realize their intellectual potential in conventionally recognized ways.

The manifestations of this failure are obvious (Fein & Bailey, 1973). In comparison to men of equal ability, fewer women enter and complete college, earn advanced degrees, or use their degrees once they are earned. At each level of academic achievement the proportion of women decreases (Bardwick, 1971). Even within the field of psychology, which has a relatively high

proportion of female members (24%), women publish fewer articles than men (Teghtsoonian, 1974). This finding is consistent with Terman's (1959) discovery that gifted women who enter academic fields publish significantly fewer articles and receive significantly fewer promotions than men at the same ability level.

One popular explanation for this situation is that most women perceive success in intellectual and leadership activities as unfeminine and, therefore, have a fear of success (Horner, 1968; 1971a; 1972a; 1972b; 1973; Horner and Walsh, 1973). The concept of this motive to avoid success was designed to fit into the McClelland-Atkinson model of achievement motivation. While the validity of this model for women has recently been questioned (Stein and Bailey, 1973), it is the contention of this author that an adaptation of this model, as suggested by Veroff (1969) and Feather (1965a), provides a more adequate model for the achievement behavior of both men and women. An extensive discussion of the achievement motivation literature concerning women is contained in Appendix J.

Why study achievement motivation? Numerous studies using male subjects have demonstrated relationships between Achievement imagery in stories told to T.A.T.-type stimuli and various measures of performance. McClelland, Atkinson, Clark, and Lowell (1953) report significant relationships for males between Achievement and number



f words written in an essay, number of Rorschach responses given in a testing situation, number of words unscrambled in consecutive intervals, college grades, and S.A.T. scores. It was found that the behavior of high and low Achievement subjects differed when they performed tasks under neutral, task-oriented, and achievement-arousing conditions. Furthermore, achievement-arousing instructions were found to increase the amount of achievement imagery produced by subjects.

Several recent reviews (Klinger, 1968; Klinger & Nelly, 1969; Entwistle, 1972) challenge the validity of the imagery-based measure of Achievement (and thus the whole achievement motivation literature) because of its poor reliability and failure to correlate with questionnaire measures of achievement motivation. Inconsistencies in the literature are also cited as evidence of the questionable validity of the positive findings. Essential to the consideration of these inconsistencies is the determination of whether the T.A.T. Achievement measure assesses the strength of the achievement motive (which should be consistent across conditions for an individual) or the strength of resultant achievement motivation (which should vary across conditions). Likewise, this measure may assess intensity of motive (or motivation) or extensivity (the degree of generalizability).

It is the position of this author that the T.A.T. measure is sensitive to resultant motivational strength rather than motive strength. If this were not the case, individual S's would not demonstrate increases in achievement imagery from neutral to "achievement-aroused" conditions. Since such changes are consistently found, it seems reasonable to conclude that the poor reliabilities are a function of the values of the other components of the resultant achievement motivation equation. But, in this explanation we have placed the cart before the horse. Let us first examine the theory of achievement motivation.

#### The Achievement Motivation Model

Although many others have contributed to formulation of the achievement motivation model, basic credit must be given to John Atkinson and David McClelland. In their 1953 book, The Achievement Motive, the motive was first extensively defined and described. Motive was here defined as "the reintegration by a cue of a change in an aversive situation (1953, p. 28)." By 1958 Atkinson had shifted the emphasis of this definition away from a change in affect. Motive was now defined "as a disposition to strive for a certain kind of satisfaction, as a capacity for satisfaction in the attainment of a certain class of incentives (1966, pp. 12-13)." The achievement motive was defined as the disposition to strive for satisfaction relative to a standard of excellence. From the beginning



McClelland and Atkinson recognized that resultant achievement motivation is a function of both an approach and an avoidance component. De Charms and Dave (1965) call these components hope of success and fear of failure. In their earliest discussion of the motive to approach success and the motive to avoid failure, McClelland, Atkinson, et al. (1953) assumed that these two components of resultant achievement motivation have an additive effect on resultant motivation. Later, after more data were collected, Atkinson (1958) hypothesized that motivation to avoid failure has an inhibitory effect on motivation to approach success and thus reduces the intensity of resultant achievement motivation.

The McClelland-Atkinson model is called an expectancy-value theory of motivation. Within this theory, motivation is considered to be a function of the multiplicative combination of motive strength, expectancy of motive attainment, and the incentive value of attainment. Atkinson (1966) hypothesizes that the incentive value (of success or failure) equals one minus expectancy of the subjective probability of success or failure). Furthermore, subjective probability of failure is believed to be equal to the negative value of the subjective probability of success. As a consequence of these hypothesized mathematical relationships, resultant achievement motivation is believed to be maximal when

jective probability of success equals .5. In actuality, high need achievement individuals seem to prefer objective probabilities of success which are somewhat lower than those predicted by the equation (Atkinson & Feather, 1966; Horner, 1968). The validity of these quantitative relationships between subjective probability of success and incentive value has been questioned by Feather (1965a), Veroff (1969), and Birney, Burdick, and Van (1969).

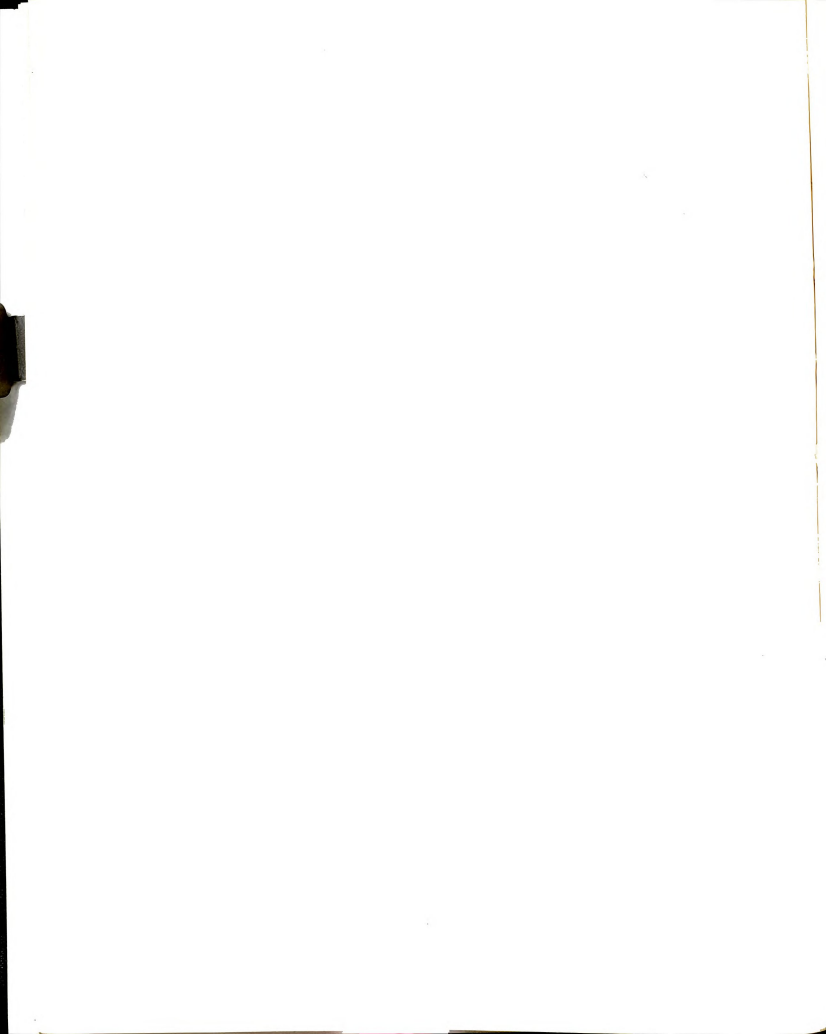
Resultant achievement motivation is also believed to be a function of the strength of motivation to avoid success (Horner, 1968) and of extrinsic factors such as affiliation or financial incentives in addition to motivation to approach success and motivation to avoid failure (Atkinson & O'Connor, 1966). The motive to avoid success is conceived by Horner as a tendency to avoid success because of its aversive qualities; it is defined as combining multiplicatively with expectancy and incentive value to yield motivation to avoid success. An achievement motivation equation can, therefore, be written  $T_A = (M_{AF} - M_S) + \text{ext}$  when  $T_A$  = the tendency to achieve,  $M_{AF}$  = motivation to avoid failure,  $M_S$  = motivation to avoid success, and ext = extrinsic factors.

Heinz Heckhausen, a German author, has developed a theory of achievement motivation which is similar, but

identical, to the McClelland-Atkinson model. He calls the expectancy-incentive component "the expectation gradient (1967, p. 3)" and places a relatively greater emphasis on time and other factors as determining both expectancy and incentive. In addition, he suggests that the standard of excellence in achievement motivation may be either internal or external (competitive).

This idea is emphasized even more by Joseph Veroff (1969). Achievement motivation in the adult is conceived by him, as an integration of competency motivation and social comparison. Within this conception the incentive value of success, and, ultimately, resultant motivation to approach success, can be high only if the probabilities of achieving success on the task and of satisfying social needs within the context of the task are in a high positive correlation.

It seems to this author that Veroff's conception eliminates the necessity of Horner's (1968) motive to avoid success. If, as Horner suggests, success in intellectual and leadership activities has an aversive effect for women, then the incentive value of success at these activities is reduced, with a consequent reduction in motivation to succeed. If failure at intellectual and leadership activities has less aversive consequences for women than it does for men, then the incentive value of failure at these activities is greater for women than it is for men.



If motivation to avoid success is eliminated from the resultant achievement motivation equation, we are faced, once again, with hope of success, fear of failure, and extrinsic factors. The focus of this study is to examine both hope of success and fear of failure on women. The primary focus is on fear of failure, which has received relatively little attention in the literature concerning achievement motivation in women.

### Fear of Failure

Motivation to avoid failure was, at first (McClelland, Atkinson, Clark, & Lowell, 1953), believed to facilitate performance but is now (1966) considered by Atkinson et al. to have an inhibitory effect on performance. Birney, Dick, and Teevan (1969) retain the additive model with the addition of the Yerkes-Dodson hypothesis. That is, they suggest that resultant achievement motivation increases as an additive function of motivation to approach success and motivation to avoid failure up to a maximal point and thereafter begins to decrease.

All three models (facilitory, inhibitory, and Yerkes-Dodson) assume some connection between fear of failure and anxiety. Atkinson (1966) suggests that motivation to avoid failure may be associated with anxiety but that the anxiety may not be experienced unless it is greater than  $M_S$ . Heckhausen (1967) posits that anxiety will be experienced in association with the

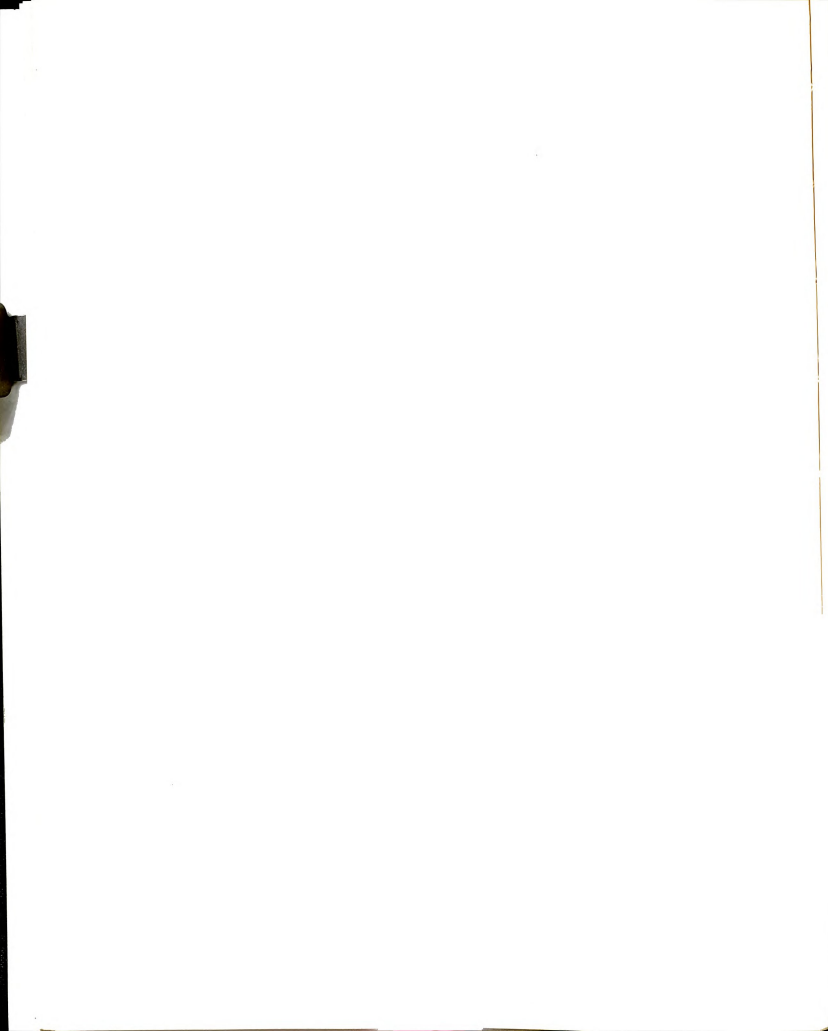
approach-avoidance conflict produced when  $M_{AF} = M_S$ . The  
 Yerkes-Dodson hypothesis, which is favored by Birney,  
 Burdick, and Teevan (1969), would suggest that anxiety  
 would appear when both  $M_{AF}$  and  $M_S$  are high. In other  
 words, when the additive combination of  $M_S$  and  $M_{AF}$  exceeds  
 some point of maximal constructive arousal, this arousal  
 is experienced as anxiety which inhibits performance.

The question of when anxiety becomes salient is  
 crucial if one attempts to measure fear of failure. The  
 most popular mode of assessment is administration of  
 anxiety questionnaires, either the Test Anxiety Question-  
 naire of Mandler and Sarason (1952) or the Achievement  
 Anxiety Questionnaire of Haber and Alpert (1960). For  
 the Atkinson formulation the questionnaires should be  
 adequate in differentiating between individuals who are  
 motivated by fear of failure than by hope of success.  
 On the other hand, the anxiety questionnaire technique  
 would prove inadequate in assessing the absolute strength  
 of fear of failure since it is only the surplus of fear of  
 failure over hope of success which is experienced as  
 anxiety. The questionnaire technique is wholly inadequate  
 for both the Heckhausen and Birney, Burdick, and Teevan  
 formulation.

If the questionnaire technique of assessment of  
 fear of failure is abandoned, analysis of projective  
 tests remains as another option. Numerous attempts have

made to provide a story analysis technique of assessing fear of failure. De Charms and Dave (1965) and Heckhausen (1967) scored achievement stories as indicating either hope of success or fear of failure, depending on their content and outcome. The hostile press scoring system developed by Birney, Burdick, and Teevan (1969) assesses not only achievement-related fears but also "the potential threat of non-achievement forces (1969, p. 156)." Achievement-related scoring systems classify only success and task failure as indicating fear of failure, but the hostile press system includes several categories of interpersonal sanctions. For our formulation, which assumes that incentive value is a joint function of task characteristics (relevance to personal goals, responsibility for performance, and probability of success) and interpersonal factors, the hostile press system is far more adequate.

Let us reiterate the author's conception of achievement motivation. We essentially retain the O'Rand-Atkinson expectancy-value theory but without the hypothesized mathematical relationship between subjective probability of success and incentive value of success. The incentive value of success, we believe, has at least two determinants. The incentive value of success for a particular task is determined, in part, by the relationship of success on the task to the individual's personal evaluation of competency. At the same time, incentive





is affected by the implications of task success for  
 ification of the individual's interpersonal needs.  
 There are many possible variants of personal definition  
 competency. For example, a woman may value good grades  
 school and completion of a training course without  
 ing promotion to a leadership position in her field.  
 the same token, she might value being a good cook and  
 competent mother without caring about the appearance of  
 er herself or her house.

For one individual, success on the same task may  
 different incentive values depending upon the social  
 cations of success. For example, suppose a pro-  
 onal woman writes a book. Since she has defined  
 lf as a professional woman, publication of the book  
 d have a high incentive value for her sense of  
 nal competence. If her family and peer reference  
 value professional achievement for women, the inter-  
 nal incentive value will also be high. Suppose the  
 y and peer group perceive the same success as  
 ropriate to their expectations for a woman. Then  
 terpersonal incentive value of success will be low,  
 n negative. Hope of success will be greater for  
 rst woman than for the second.

Let us examine the fear of failure component for  
 me women. For both women, failure to complete the  
 ill have an adverse effect on their personal sense



competency. Interpersonally, however, it will have different effects. The woman whose peer group supports professional achievement for women will lose social esteem if she does not complete the book, while the woman whose peer group does not believe such achievements are appropriate for women may increase in social esteem if she stops writing. The incentive values of success and of avoiding failure are clearly high for the first woman and lower for the second.

If we add into our formulation the concept of different weightings of the competency and social comparison components, the picture becomes even more complicated. For the first woman only the strength of the total motive is important because both she and her reference group value success and abhor failure equally. The second woman's situation is more complicated. If she values personal competency more than she values social esteem, she may be motivated to complete the book. If, on the other hand, she values social esteem over personal competency, her tendency to complete the book will be low. If, however, she values social esteem and personal competency equally, her approach and avoidance tendencies are in conflict, producing a conflict of the type which Rosen (1967) suggests will produce anxiety.

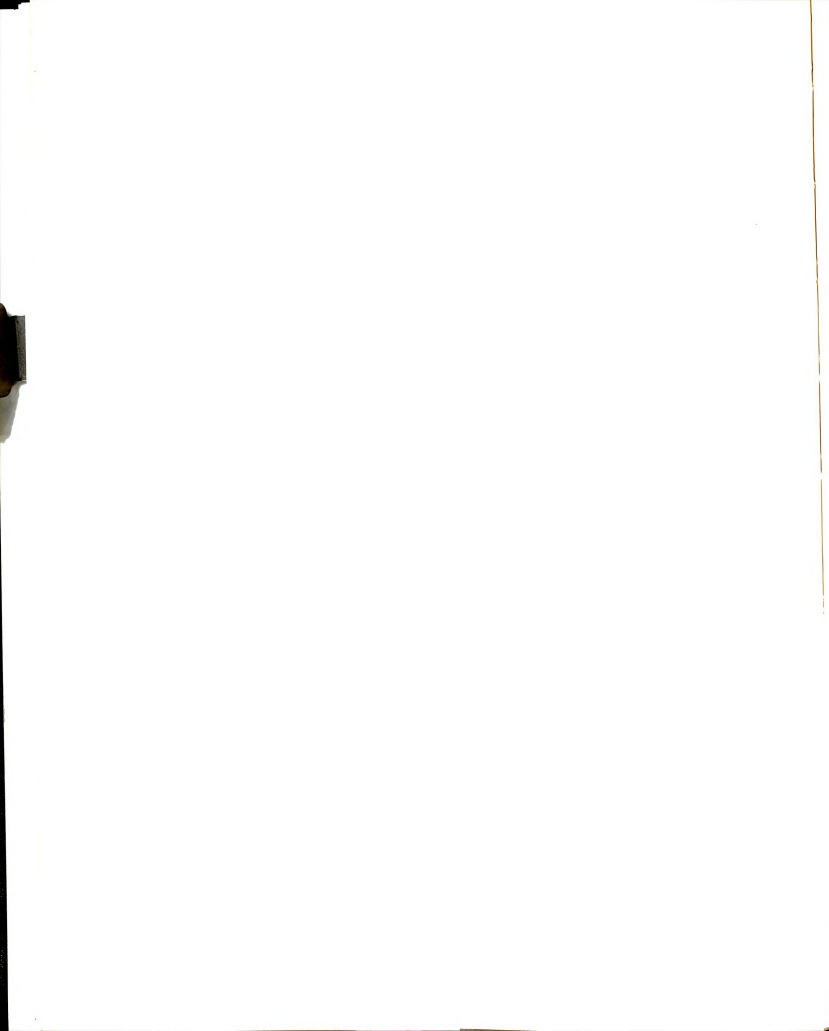
Let us shift our frame of reference for a moment. The pattern which we have just described for the first woman is typical for males in our society. That is,

professional success by a man is likely to be associated with increased social esteem. The second pattern, in which professional success is associated with small increases in social esteem or even loss of social esteem, is more typical for women. It is clear that, as a group, men should be more motivated to approach professional success than women.

Up to now we have ignored subjective probability of success as a component in resultant achievement motivation. Several studies (Crandall, 1969; Feather, 1969; Feather & Feather, 1973; Feather & Simon, 1974) indicate that women underestimate their ability to succeed at a variety of tasks, both in experimental and in natural situations, while men consistently overestimate their abilities. This difference, alone, suggests that resultant achievement motivation for men should be higher than resultant achievement motivation for women. If women's expectations of success are lower than those of men.

The advantage of this conception of achievement motivation is that it explains the achievement behavior of both sexes on intellectual and leadership tasks using concepts of motivation to approach success, motivation to avoid failure, and extrinsic factors. This approach supports the hypothesized mathematical relationship between probability of success and incentive value of

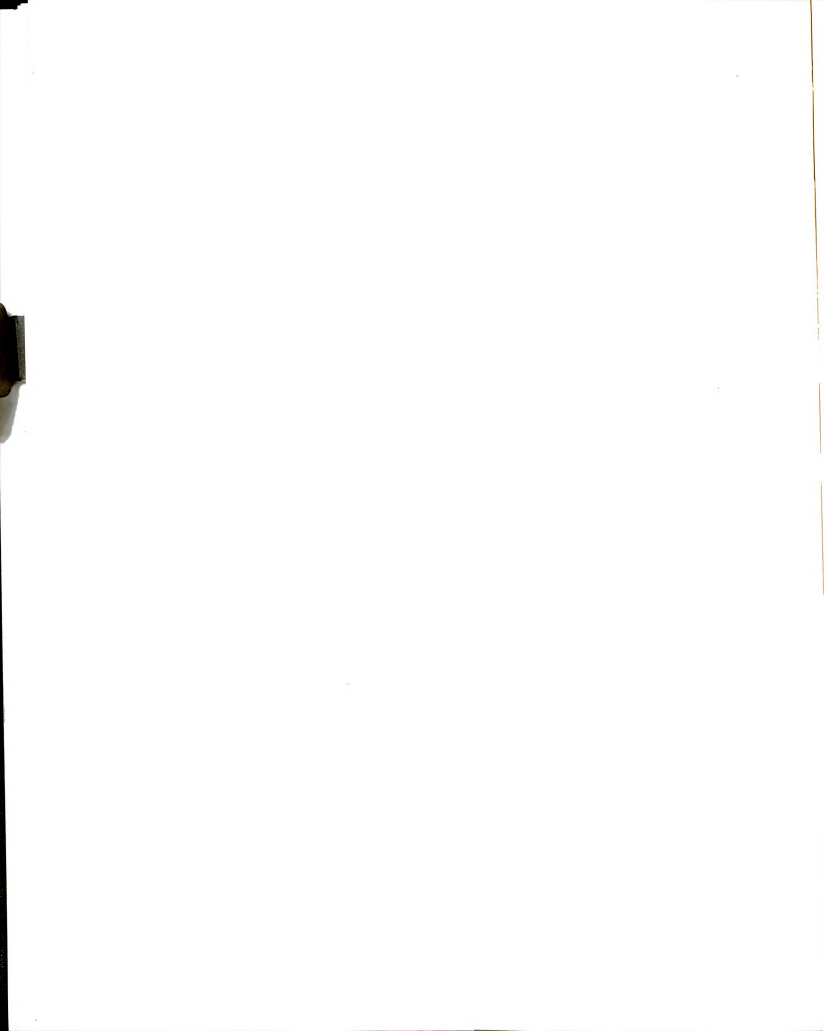
cess as well as the necessity of including the motive  
 avoid success as a separate component in the resultant  
 achievement motivation equation. We do not deny that some  
 men seem to fear success in traditionally male activi-  
 ties. The apparently fear-motivated behavior of such  
 men, however, is simply behavior which is consistent  
 with their personal definitions of competency. If a woman  
 feels that success in traditionally male activities is  
 inconsistent with her personal definition of femininity,  
 she does not avoid such activities because she is afraid  
 of them but simply because she is not interested. There  
 is probably a small minority of individuals, both male  
 and female, who fear success in general because they  
 were punished for successes in childhood. The number of  
 individuals who were subjected to such pathogenic early  
 experiences is probably low. The failure of most women  
 to achieve success on the intellectual and leadership  
 tasks is appropriate to their intellectual potential in a  
 situation of restrictive societal proscriptions for  
 appropriate female behavior, personal definitions of  
 competency which place little emphasis on success at  
 these tasks, and the tendency of most women to under-  
 estimate their abilities. Women are not, as Veroff (1969)  
 suggests, suffering from an ambivalent attitude towards  
 success produced by an unsuccessful resolution of the  
 Oedipal triangle, but, instead, are suffering from the



negative aspects of the female sex role stereotype (Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972).

### Statement of the Problem

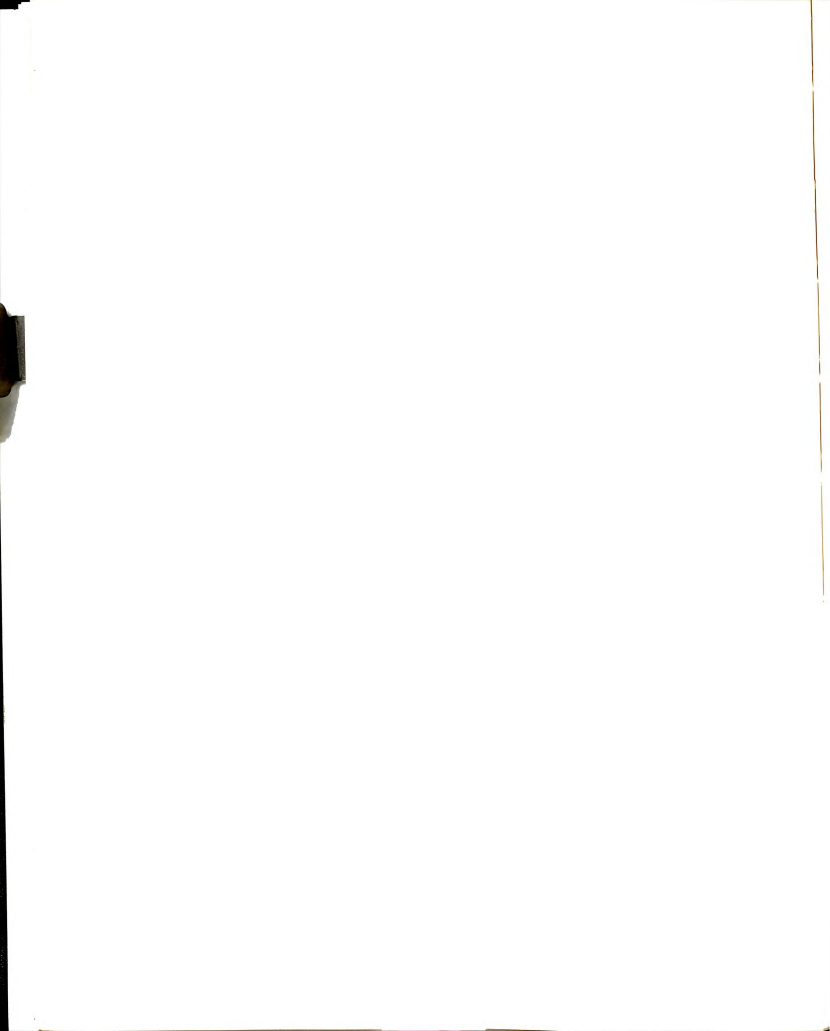
The previously described formulation of achievement motivation is far too complicated to be tested in a single experiment. This experiment tested one portion of the formulation: That incentive value of success and, ultimately, performance level are dependent upon the correspondence between the task and the subject's personal definition of competency. For this purpose the subjects were divided into two groups, one of which placed relatively more value on success in a career and the other of which placed relatively more value on success in marriage as a homemaker. Each of these groups was asked to complete a scrambled words test which was described as a test of career ability to some subjects and as a test of homemaking ability to others. For purposes of brevity, subjects will be described as serving in a congruent condition when their personal competency definition and task description were similar and as incongruent when personal definition of competency and the task description were dissimilar. The theory predicts that subjects will perform significantly better on a congruent than on an incongruent task.





Although several previous studies have examined aspects of the problem to some extent, the relationship of performance to the correspondence between personal competency definition and task description has never been adequately evaluated. Milton (1959) found that men performed significantly better than women on problems with typically male content, while women perform significantly better than men on problems with typically female content. He did not, however, examine intra-sex variations. French Lesser's (1964) findings were confounded by experimental error. Parker (1971) and Makosky (1972) related performance to fear of success score but did not analyze their data using sex role ideology as a subject variable. Bell and Gonzalez (1972) did not measure performance in their study but only offered their subjects a choice of plausible story outcomes. While all these studies lead us to believe that a subject will perform better when a task is described as being congruent to her personal definition of competency than when it is not, this hypothesis has not been precisely tested. A further discussion of the experiments described above is contained in Appendix J.

In our discussion thus far, only the hope of success component of the resultant achievement motivation has been considered. In this experiment we also examined the comparative effect of fear of failure motivation on performance, level of aspiration and expectation,



formance estimates, and performance attribution. While the study of fear of failure has attracted considerable attention in the research literature on males, it has been largely ignored by the achievement motivation experiments working with female subjects. Only nine of 60 studies of fear of failure reviewed by Birney, Burstein, and Teevan (1969) included women; only 6 of these studies were published; and none took the possibility of sex differences into consideration. In his only published study concerning sex differences in fear of failure (Smith and Teevan, 1971), Teevan found that hostile press imagery was negatively correlated with general self-ideal congruence for both men and women. While there was a negative relationship between hostile press imagery and self-assessment of the achievement related items for men, this relationship did not hold up for women.

Several studies examining the effect of fear of failure on the motivation of women have been published in the last few years. A Norwegian study (Vollmer, 1973) found no significant differences in the achievement grades of seventh-grade girls with the four combinations of n-Ach and test anxiety. Another Norwegian study (Vollmer, 1973) found a significant positive relationship between fear of failure, assessed by the Heckhausen system, and a Holtzman ink blot measure of personality differentiation. Crossing the globe,



pping over the U.S.A., we find that a Hong Kong study (Ng-Fun Li, 1974) discovered significant positive correlations between low test anxiety in fifth- and sixth-grade girls and reported parental attitudes of dominance harshness as well as of encouragement of communication, comradeship, and sharing.

Only two American studies examining variations in fear of failure among women seem to have been published. Karabenick (1968) found no significant relationship between fear of failure (as measured by the Debilitating Test Anxiety subscale of the Haber-Alpert Achievement Anxiety Questionnaire) and performance on several measures of verbal and analytic skill. Karabenick and Marshall (1974) examined test anxiety (as a measure of fear of failure), fear of success, competition condition, and type of feedback to improvement on a digit substitution task. A significant three-way interaction was discovered between fear of success, opponent condition, and test anxiety. Low fear of success subjects with low test anxiety improved most when competing against a man, while those with high test anxiety improved most when competing against a woman. Fear of success subjects with low test anxiety improved most when working alone, and those with high test anxiety improved most when competing against a man. Karabenick found that low test anxiety subjects improved most



er failure feedback, while high test anxiety subjects  
proved most after success.

Obviously, the literature on fear of failure motivation in women is meager and in need of extension. In this study we contrasted the behavior of subjects who scored above and below the median on the hostile personality (HP) measure of fear of failure. We did not use the test anxiety measure of fear of failure which has been used in the previously described studies (Daugert, & Horner, 1968; Karabenick & Marshall, 1974) which examined the relationship between fear of failure and performance. The inhibitory model of fear of failure, which predicts that resultant achievement motivation will be decreased by the magnitude of motivation to avoid failure, was the basis for our predictions. The combination of task congruence and fear of failure produces conditions roughly akin to the four combinations of task congruence and fear of failure used in the male studies (high task congruence, high fear; high task congruence, low fear; low task congruence, high fear; low task congruence, low fear). In this experiment it was assumed that task congruence stimulates a higher level of success relative to that associated with task incongruence.

In line with the inhibitory model of fear of failure and achievement motivation, the following predictions were made. If the fear of failure is low, subjects will perform better





er conditions producing high hope of success than under  
itions producing low hope of success. Re-phrased in  
s of this experiment the hypothesis becomes:

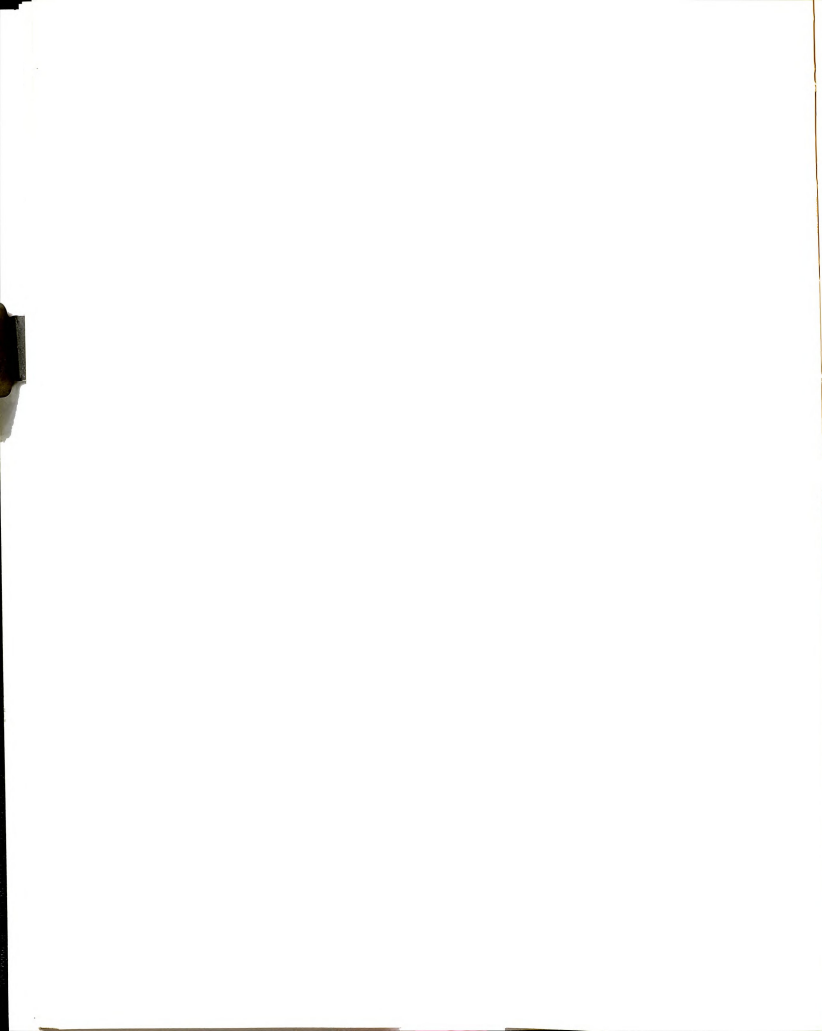
Hypothesis 1:

Low fear of failure subjects will unscramble significantly more words in the congruent condition than in the incongruent condition.

When fear of failure is high, it should inhibit effect of hope of success on resultant achievement motivation. Furthermore, fear of failure is greatest when of success is maximal. Since, in this experiment, hypothesized that hope of success is greater in the congruent condition than in the incongruent condition, as a corollary, fear of failure should be greater in the congruent condition than in the incongruent condition. As a consequence, the resultant achievement motivation of high fear of failure individuals should be inhibited by fear of failure more in the congruent condition than in the incongruent condition. In terms of this experiment, hypothesis was stated:

Hypothesis 2:

High fear of failure subjects will unscramble significantly more words in the incongruent condition than in the congruent condition.



Finally, the model predicts that when hope of success is high, subjects with low fear of failure should perform better than subjects with high fear of failure. In this experiment, the hypothesis became:

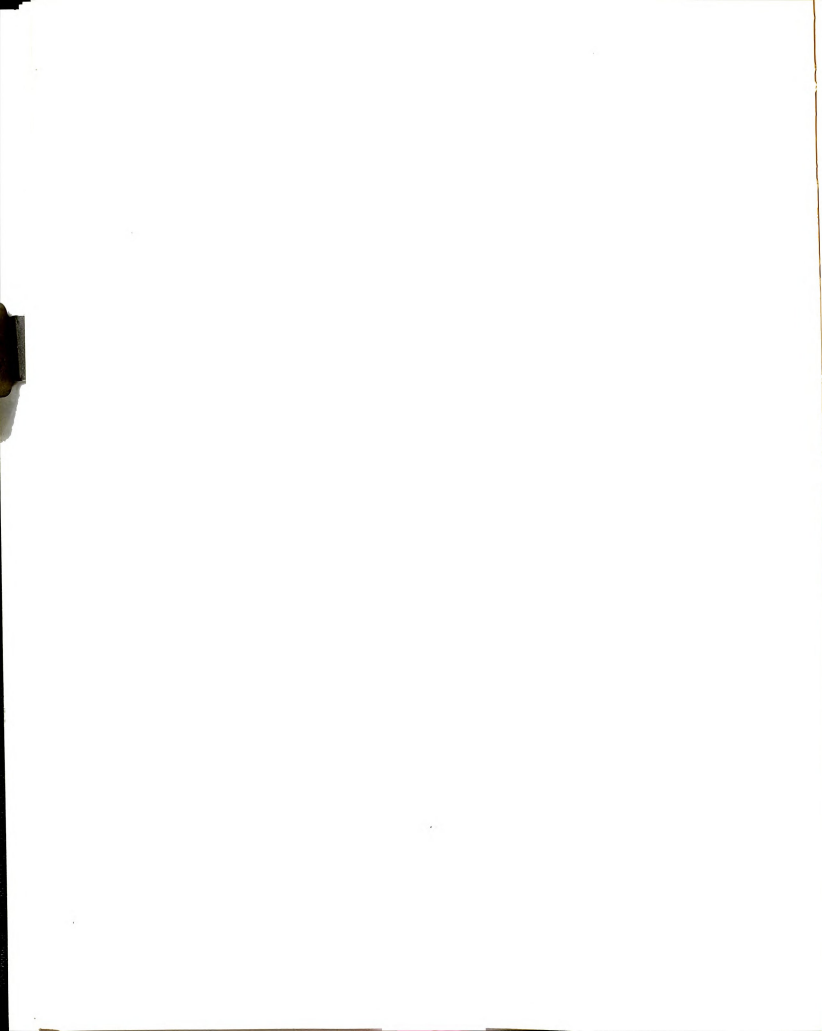
Hypothesis 3:

In the congruent condition, low fear of failure subjects will perform significantly better than high fear of failure subjects.

If these hypotheses are confirmed, we can tentatively conclude that fear of failure has an inhibitory effect on resultant achievement motivation in women when success on the task is likely to be instrumental to achievement of a goal valued by the subject. This conclusion is consistent with the findings of studies which employed male subjects. High fear of failure males consistently (Feather, 1965a; Hancock & Teevan, 1964; Thomas & Teevan, 1964) prefer tasks which are either extremely easy or difficult, while low fear of failure males choose tasks at intermediate levels of difficulty. The women in this experiment were asked to estimate their generalized expectancy for difficulty of task. Hypotheses 4 and 5 predicted replication of the male study results.

Hypothesis 4:

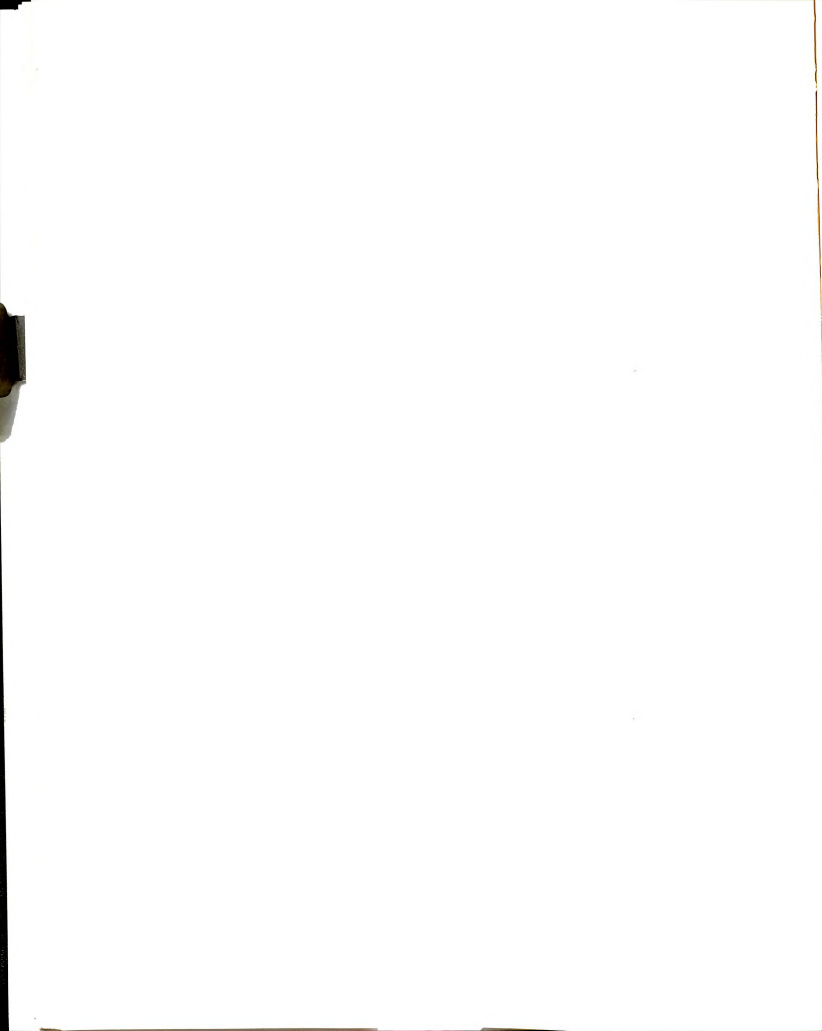
Significantly more subjects with low fear of failure than subjects with high fear of failure will prefer intermediate task difficulty (30 to 70% probability of success).



Hypothesis 5:

Significantly more subjects with high fear of failure than subjects with low fear of failure will prefer extreme task difficulty (0 to 29 and 71 to 100% probability of success).

We also asked our subjects to indicate (in percentiles) their level of aspiration on the scrambled words task. High fear of failure individuals typically (Birney, Dick, & Teevan, 1969) set their level of aspiration extremely high or extremely low relative to the level of aspiration preferred by low fear of failure individuals. The inhibitory model of fear of failure predicts that for individuals with fear of failure when hope of success is minimal, fear of failure should also reach its peak. It is predicted, therefore, that high fear of failure subjects would display the defensive behaviors of aiming low when hope of success is high. Subjects with low fear of failure should aspire for an intermediate level of performance because this level of aspiration maximizes the probability of confirming their expectations. When hope of success is relatively high (in the congruent condition), subjects with low fear of failure should move to intermediate levels of performance to a significantly greater extent than subjects with high fear of failure. Phrased in terms of this experiment, the hypothesis became:



Hypothesis 6:

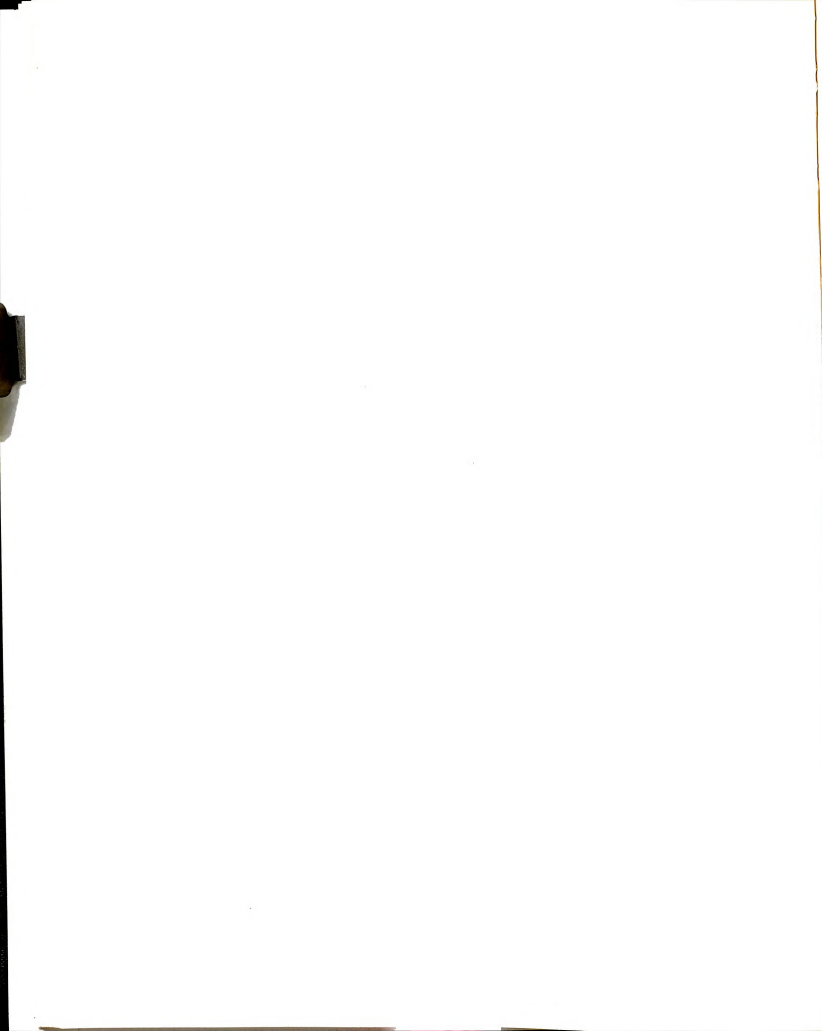
In the congruent condition, significantly more subjects with low fear of failure than subjects with high fear of failure will aspire to intermediate levels of performance (30th to 70th percentile).

When hope of success is high, subjects with high levels of fear of failure should aspire to extreme levels of performance significantly more often than they aspire to intermediate levels of performance. We hypothesized:

Hypothesis 7:

In the congruent condition, high fear of failure subjects with a homemaking orientation will aspire to extreme levels of performance (0-29 percentile and 71-100th percentile) significantly more often than they aspire to intermediate (30-70th percentile) levels of performance.

A more directional hypothesis was made for the high fear of failure career oriented women. High fear of failure males have nearly the same preference for the strategies of setting level of aspiration extremely high or extremely low (Birney, Burdick, & Teevan, 1969). We hypothesized that a high fear of failure woman who defines personal competency in terms of success at a career is likely to set her level of aspiration extremely high. High fear of failure woman is in a sense "aiming high" when she elects to pursue a career. Discriminatory selection, hiring, and promotion policies, along with social pressures, make it difficult for a woman to pursue a career. A high fear of failure, career-oriented woman





who prefers the strategy of aiming low is, therefore, likely to drop her efforts to pursue a career. Among career-oriented women, then, high fear of failure individuals should aspire significantly higher than low fear of failure individuals because of their preference for the "aiming high" strategy. Phrased in terms of this experiment, the hypothesis becomes:

#### Hypothesis 8:

In the congruent condition, career-oriented women with high fear of failure will aspire significantly higher than career-oriented women with low fear of failure.

Several studies (Birney, Burdick, & Teevan, 1969) indicate that high fear of failure males have less confidence in their performance than low fear of failure subjects. Lack of confidence in the high fear of failure is likely to be expressed in large differences between level of aspiration and level of expectation. We therefore predicted:

#### Hypothesis 9:

The difference between performance aspiration and performance expectation will be significantly greater for the high fear of failure subjects than for the low fear of failure subjects.

In addition to those variables for which hypotheses have been presented, a number of other relationships were examined. Subjects were asked to estimate the



number of words which they had unscrambled, and this estimate was compared both to their performance and to the estimates which they made prior to attempting the task. In addition, they were asked to estimate their performance level in percentiles. They were also asked to predict their performance level on a test measuring ability to be a homemaker and on a test measuring ability to succeed in a career. Our interest here was to discover whether subjects differing in level of fear of failure motivation also differ in the extent to which they assume that the ability to succeed on one type of task precludes the ability to succeed on a task of the opposite sex role orientation. Finally, the relationship between Horner's new scoring system for the motive to avoid success and the hostile press scoring system for fear of failure was examined.



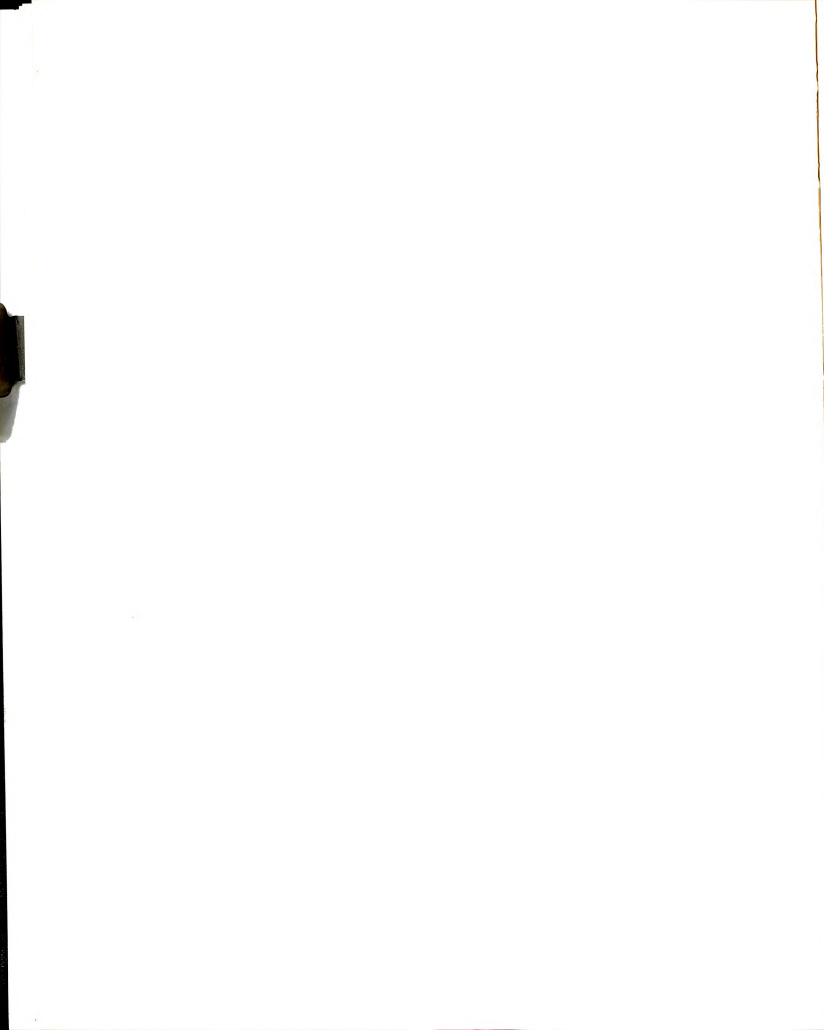
## CHAPTER II

### METHODOLOGY

#### Subjects

The subjects were 100 female introductory psychology students at Michigan State University drawn from an initial (first session) sample of 156 subjects. The experiment was conducted in October and November of 1973. Eighty-three individuals volunteered for the experiment but did not attend the first session. Thirty-three subjects were excluded from the experiment because they did not have a clear preference for one sex role orientation. The two subjects who were born in foreign countries were excluded.

Using the criteria listed in the Group Assignment section, 69 subjects were regarded as homemaking oriented; 21 were regarded as career oriented; and 33 were considered to be undecided about their sex role orientation. Of the subjects asked to return for the second session, 58 career-oriented and 58 homemaking-oriented subjects attended. As described in the Group Assignment Section, a median cut of the homemaking and career-oriented subjects, taken together, gave a classification of 58 subjects



fear of failure Ss and 63 Ss without fear of failure. These subjects, 48 subjects with fear of failure and without fear of failure attended the second session. Number of subjects attending the second session who fell into each of the four categories created by combination of these two variables was: (1) Career orientation, high fear of failure (17); (2) Career orientation, low fear of failure (25); (3) Homemaking orientation, high fear of failure (31); and (4) Homemaking orientation, low fear of failure (27).

### Materials

During the first session, the Ss were administered four story leads in the booklet entitled "Cue Interpretations." (See Appendix A.) The instructions for this booklet were adapted from Horner (1968) and differed from her instructions only in minor details. The booklet in random order were four story leads selected for this experiment--one career-oriented activity, one homemaking-oriented activity, and two feeling state descriptions. Ss were given five minutes to write each story, with a verbal warning one minute before the time expired. The career-oriented and homemaking-oriented activities employed different settings; the homemaking activity placed the woman in a kitchen, while the career lead placed the woman at work.

The career-oriented lead was: A woman is working in an office.

The homemaking-oriented lead was: A woman is working in her kitchen.

The two feeling leads were: (1) A woman has a smile on her face; (2) A woman has a thoughtful look on her face.

The stories composed by the Ss were content analyzed for fear of failure using the hostile press imagery scoring system developed by Birney, Burdick, and Teevan (1969) and for fear of success using the new (1973) Horner scoring system. Horner's new scoring system for fear of success requires the inclusion of both activity and nonactivity stimuli. She now believes that responses to her "Anne-medical school" stimulus were highly influenced by the stimulus content. The results of a pilot study conducted by this author suggest that any specific information describing the character in the stimulus colors the stories told by the subjects. For this reason the stimuli were made as uniform as possible and only the activity or feeling state of the woman was specified.

The hostile press scoring system for fear of failure used in this study has no significant correlation between scores on either the Haber-Alpert Dehabilitating Movement Anxiety Test or the Mandler-Sarason Test





Anxiety Questionnaire (Birney, Burdick, & Teevan, 1969) which have traditionally been used as measures of fear of failure motivation. On the other hand it has a significant negative relationship to n-Ach; this relationship is consistent with the assumed inhibiting effect of fear of failure on resultant achievement motivation. Hostile press imagery is significantly greater following failure feedback than under neutral conditions. The consistent differences in level of aspiration between high and low fear of failure individuals found in studies using the F.A.Q. and Haber-Alpert measures also appear when the hostile press imagery scoring system is used. A variety of other studies indicate that high scores are predictive of a pattern of behavior consistent with the conception of a motive to avoid failure.

#### Group Assignment

The Cue Interpretations Booklet, which contained the story leads, provided for identification of Ss only by a code number. The four stories which Ss wrote to the Es in this booklet were separated and sorted into a group with all the other stories for the same lead. These stories were scored for hostile press imagery and for the motive to avoid success by the author. Twenty protocols were selected randomly and scored by a graduate student in psychology. Interjudge reliability for hostile press imagery was 100%. An additional 20



protocols were selected randomly and rescored by the author six months after the initial scoring. Intra-judge reliability for hostile press imagery was 95%.

The number of hostile press imagery (fear of failure) stories told by each S was computed, and a frequency distribution for the number of hostile press imagery stories told by the subjects classified as having either a career or homemaking orientation was completed. The median for this distribution was one; subjects telling one or more hostile press imagery stories were categorized as having high fear of failure, while subjects telling no hostile press imagery stories were categorized as having low fear of failure.

The Personal Characteristics Questionnaire (see Appendix B), administered to the Ss at the first session, was developed for this experiment; it included questions for determining the sex role orientation as well as a question indicating task difficulty preference. These questions were buried among filler items, with the intent of distracting the S's attention from the questions concerning sex role orientation. Some of the filler questions yielded interesting results, but they were designed to convince the Ss that E was interested in these variables which differentiate women who go to college from those who do not.



Six questions were included to determine sex role orientation. Three of these questions were adapted from Barker (1971). The other three questions were taken from Almquist and Angrist (1970). Only three of these questions were actually useful for assigning subjects to the sex role orientation classification. On the basis of their responses to these three questions, Ss were designated as career oriented, undecided, or homemaking oriented. Assignment to either the career or the homemaking sex role orientation required a relatively consistent pattern of responses to the three questions. The questions used appear in Table 1. A subject was classified as having a homemaking orientation if she gave one of the following patterns of response: c, d, or e to question 13, 4 or 5 to question 15, and a, b, or e to question 35. A subject was also classified as having a homemaking orientation if she answered d or e to question 2 to question 15, and a, b, or e to question 35; she was also classified as having a homemaking orientation if she answered d or e to question 13, 4 or 5 to question 15, and c to question 35. A subject was classified as having a career orientation if she answered a or b to question 1 to question 15, and d to question 35. A subject was also considered career oriented if she answered c to question 13, 1 to question 15, and d to question 35, or if she answered a or b to question 13, 2 to question 15,



Table 1

Answer Distributions--Questions Used for Sex  
Role Assignment

---

3. If you could have only a career or only marriage, which do you think you would choose?
- a. Definitely career without marriage (12)
  - b. Would probably prefer career rather than marriage (19)
  - c. Undecided (45)
  - d. Would probably prefer marriage without career (65)
  - e. Definitely marriage without career (16)
4. Would you want to work under the following conditions?
- a. One child of school age, husband's salary adequate
- 1. Definitely yes (54)
  - 2. Probably yes (60)
  - 3. Undecided (18)
  - 4. Probably not (15)
  - 5. Definitely not (10)
5. Assume that you are trained for the occupation of your choice, that you will marry and have children, and that your husband will earn enough so that you will never have to work unless you want to. Under these conditions, which of the following would you prefer?
- a. To participate in clubs or volunteer work (5)
  - b. To spent time on hobbies, sports, or other activities (5)
  - c. To work part-time in your chosen occupation (78)
  - d. To work full-time in your chosen occupation (29)
  - e. To concentrate on home and family (12)
-





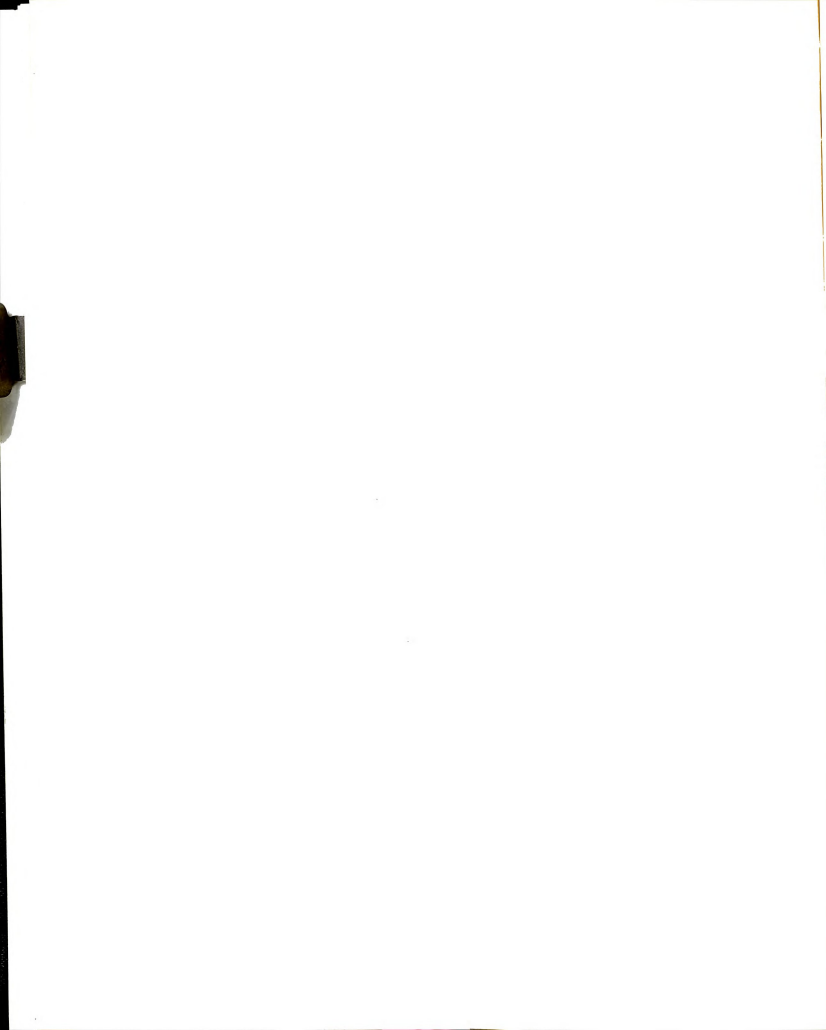
nd d to question 35, or if she answered a or b to question 3, 1 to question 15, and d to question 35. Those subjects not classified as having either a career or a homemaking orientation were considered undecided and were eliminated from further consideration. Subjects who grew up in a country other than the U.S.A. were also eliminated.

Thus, four groups of uneven size were formed. The high drop-out rate before the first session suggested that there might be a high drop-out rate between the first and second sessions, so the four groups were left uneven size. On a random basis, half the Ss in each group were assigned to a congruent condition and half to an incongruent condition.

### Session II Materials

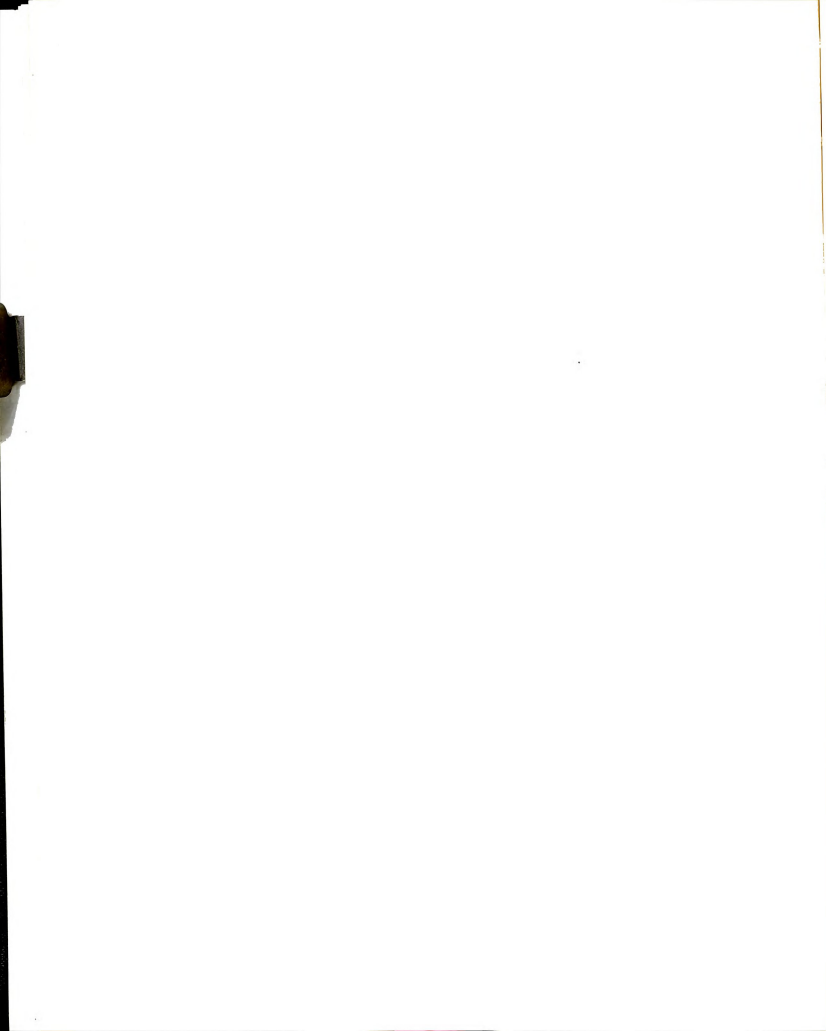
During the second session Ss were administered the Scrambled Words Test (see Appendix C), six pages with 4-letter scrambled words on each page which were taken from Parker (1971). On the page following the instructions for the scrambled words task, Ss were asked to indicate on a scale from 1 to 100, divided into five-unit intervals, in which percentile they would try to have their performance to fall and in which percentile they expected their performance to fall.

After completion of the Scrambled Words Test, the subjects were asked to fill out the Data Questionnaire. (See Appendix D.) In this questionnaire the Ss were asked to estimate the number of words they had unscrambled and also



the percentile into which they thought their performance had fallen. Subjects were asked to indicate in percentages how much of their performance they attributed to effort, skill, luck, and task difficulty. Subjects were also asked to predict their performance on a test measuring ability to be a homemaker and on a test measuring ability to be successful in a career. One of these questions provided us with the S's estimate of her ability to succeed at the sex role activity which is closest to her personal definition of competence and the other question enabled us to determine the relationship of this estimate to her estimated ability for the opposite sex role orientation. Analysis of this data allowed examination of the hypothesis that high fear of failure assumes that ability in one area implies ineptness in other.

Three questions were included to evaluate the acceptance of the experimental manipulations. On the first page of the Data Questionnaire, Ss were asked, "How did a test of career/homemaking ability do you think this test was?" The choices for answers were "excellent," "good," "fair," and "poor." On the second page of the questionnaire Ss were asked, "What do you think this experiment was about?" and "Did you believe the experimenter when she told you that the scrambled words test related with success in a career/as a homemaker?"



### Procedure

There were two sessions conducted in a medium-sized classroom with about 20 Ss present at a time. Two female undergraduate psychology students served as experimenters. Only one experimenter was present as each group was tested, but each experimenter ran groups of subjects in both Session 1 and Session 2. All but nine subjects had the same experimenter for both sessions. The experimenters, like the subjects, were led to believe that the experiment was designed to test the differences between women who do attend college and those who do not. After completion of the experiment, both experimenters were asked what they thought was the purpose of the experiment. Neither experimenter believed the author, and one thought the experiment was concerned with achievement motivation, however, both were unaware of the different groups of subjects and the hypotheses concerning their behavior.

Ss signed up for a particular initial session of the experiment on sign-up sheets in their introductory psychology classroom and were reminded by telephone a day two prior to the experiment. Prior to the second session, Ss were contacted by the author and asked to come to a second session. Subjects received research credits for their introductory psychology course in return for their participation.

### First Session

At the first session the E handed out the two booklets and recited the instructions (see Appendix E). Ss were given five minutes to complete each story in the Cue Interpretations Booklet. This is the same period of time used by Parker (1971) and in the pilot study and is far easier to time accurately than the four minutes used by Horner (1968). There was no time limit for the Personal Characteristics Questionnaire.

### Second Session

After four groups of subjects were selected on the basis of fear of failure and sex role orientation scores as previously described, each S was contacted by the author and asked to return for the second session. Before each session E received from the author a list of the subjects who were to attend, along with the instructions she was to administer. Fifteen to 20 Ss attended each of the second sessions. While these testing groups contained women of both sex role orientations, all the Ss in each testing group received the same condition instructions. The general instructions for the Scrambled Words task (see Appendix F) were given prior to administration of the condition instructions. Ss were administered either the homemaking or career condition instructions.





Subjects who received the homemaking condition instructions were told, "This task is a measure of verbal ability, which, studies indicate, is related to social ability and empathy, two attributes which are crucial to the homemaker's success." Subjects who received the career condition instructions were told, "This task is a measure of verbal ability, which, studies, indicate, is related to the analytic and integrative skills necessary for success in a career."

After E administered the achievement-arousing instructions, she asked the SS to read the instructions for the Scrambled Words Test. When the SS finished reading, she said, "Before we begin, please answer the questions on the second page." When the SS finished this task, E said, "You will have two minutes for each page. Remember, do not turn the page until I tell you to go ahead. Ready, begin."

After completion of this task, E stated, "Now there is another questionnaire I would like you to complete, but first I want to collect the materials you've already finished." E then collected the Scrambled Words tests. Then she said, "Now I'd like you to complete the Questionnaire. There is no time limit. Please be sure to write your name on the front page; we need this information so that we can relate your data from the first session to the information we receive from you



oday. When you are done, please bring the booklet up  
ere to me. Thank you, again, for your participation."  
he Scrambled Words Test booklet and the Data Question-  
aire were identified by a code number so that results  
n one could be related to results on the other.

### Numerical Data and Data Analysis

The experiment yielded considerable data. To  
egin with, there is the S's performance data on the  
rambled Words Test. Secondly, Ss indicated their level  
preferred task difficulty as well as their level of  
piration and expectation just prior to taking the  
rambled Words Test. Ss were also asked to estimate  
eir performance numerically and in percentiles follow-  
completion of the experimental task. The Ss were  
quired to indicate their estimated performance on a task  
the sex role orientation opposite to their own. Ss  
e also asked to indicate the percentage of their per-  
formance attributable to effort, skill, luck, and task  
difficulty. An additional body of data provided general  
riptive information about the Ss as well as infor-  
on about their acceptance of the experimental  
pulations.

Each S's Scrambled Words Test was scored and  
led. A 2 X 2 X 2 factorial unweighted means analysis  
ariance was computed for this data. A similar  
ysis of variance was performed on the level of



aspiration and level of expectation data as well as on the level of aspiration for goal opposite task data. Additionally, a difference score indicating the numerical difference between the actual and self-estimated performance was computed and a  $2 \times 2 \times 2$  factorial unweighted means analysis of variance was computed for this data.

The S's protocols were scored for both hostile press imagery and the motive to avoid success. A coefficient of correlation was computed between the two measures. A coefficient of correlation between each of the six components of the motive to avoid success and the spring system and the total measure of hostile press imagery was also computed.



## CHAPTER III

### RESULTS

#### Sex Role Orientation

Seven of the questions in the Personal Characteristics Questionnaire were to have been used to determine sex role orientation. Four of these questions did not yield sufficient variation in response so that they could not be used to assign subjects to a sex role orientation group. These questions and the distributions of their answers are listed in Table 2. The skewed distributions of answers to questions 7, 18, and 30 suggest that these items may have a large component of social desirability. On the other hand, this pattern can be interpreted as indicating that most of our subjects are attracted to homemaking and a career simultaneously. If this is the case, our assignment of SS to one or the other sex role orientation is clearly a relative rather than an absolute assignment. These three questions were not used to determine sex role orientation because there was insufficient variability of response. Question 15b was actually a duplicate to one of the questions which was used (15a) and responses to this question differed so little from

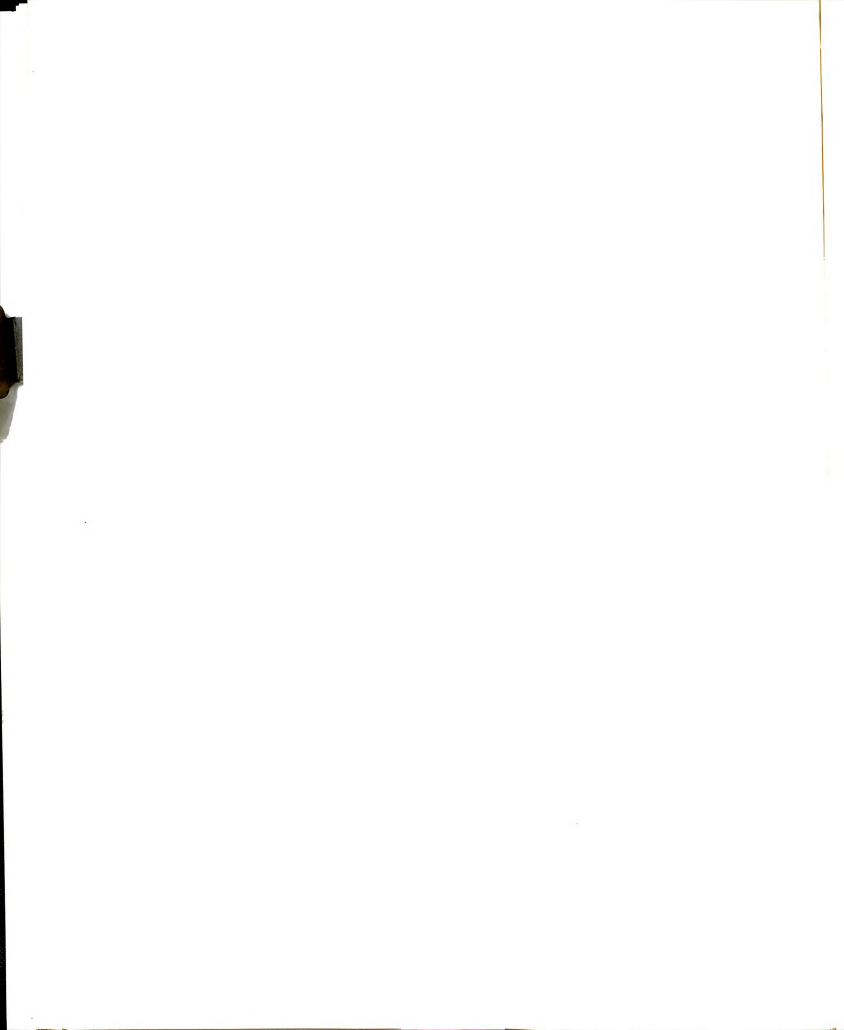




Table 2

Answer Distributions--Questions Not Used for  
Sex Role Assignment

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How important do you feel that a professional career of your own is?

- a. Important (126)
- b. Probably important (20)
- c. Undecided (9)
- d. Probably unimportant (2)
- e. Unimportant (0)

Would you want to work under the following conditions?

b. Two or more children of school age, husband's salary adequate.

- 1. Definitely yes (51)
- 2. Probably yes (63)
- 3. Undecided (16)
- 4. Probably not (17)
- 5. Definitely not (9)

How important do you feel that marriage and a family are to you?

- a. Important (108)
- b. Probably important (32)
- c. Undecided (17)
- d. Probably unimportant (5)
- e. Unimportant (5)

Fifteen years from now would you like to be:

- a. A housewife with no children (0)
  - b. A housewife with one or more children (25)
  - c. An unmarried career woman (4)
  - d. A married career woman without children (15)
  - e. A married career woman with children (127)
  - f. Other (0)
-



answers to question 15a that its inclusion would have had little effect on subject assignment. Question 30 appeared to tap social desirability.

Questions 13, 15a, and 35 were used to assign sex role orientation. The distributions of responses to these questions are indicated in Table 1. Assignment of subjects to sex role orientation was done on a purely pragmatic basis to provide the best three-way split of the sample. On the basis of the criteria described in the Procedure chapter, 69 subjects were categorized as homemakers, 52 were categorized as careerists, and 33 subjects were regarded as undecided about their sex role orientation.

After completion of the experiment, a sex role ideology scale was developed to evaluate the parameters of sex role orientation for the entire sample. All six questions were used in this scale and were weighted equally. Answers to each question were given a value of one if they suggested a career orientation, two if they suggested a homemaking orientation, and zero if they were "undecided." The range for this scale was 3-12 with a midpoint of 9. For the sample the mean score was 7.3 with a standard deviation of 1.6; the median was 7.0, and the mode was 8.0. The range of scores was 3-11. It would appear, therefore, that the sample as a whole tended to be career oriented. This finding



is not surprising in light of the fact that the sample was drawn from a college population. An important implication of this result, however, is that our assumption of task congruence when the homemaking task was presented to the homemaking oriented Ss may be invalid.

#### Hostile Press Imagery

The stories composed by the subjects were scored for hostile press imagery using the Birney, Burdick, and Teevan (1969) system with a maximum possible score of 6 for each story. The four cues, in spite of their apparent neutrality of content, were markedly different in the amount of hostile press imagery which they stimulated. Mean hostile press imagery scores for each lead and their standard deviations were as follows: Kitchen,  $\bar{X} = 1.040$ ,  $\sigma = 1.860$ ; office,  $\bar{X} = .390$ ,  $\sigma = 1.113$ ; thoughtful look,  $\bar{X} = .710$ ,  $\sigma = 1.589$ ; and smile,  $\bar{X} = .80$ ,  $\sigma = .753$ . There was a marked positive skew to all these distributions. Thirty-one hostile press imagery stories were told to the "kitchen" stimulus, 22 to the "office" stimulus, 22 to the "thoughtful look" stimulus, and 8 to the "smile" stimulus. The most common theme of the need press in the "kitchen" stories was hostile environment (18 stories). The majority of these stories were reminiscent of the television commercials in which a busy housewife is simultaneously



besieged by a crowd of ravenous children, a telephone call, a delivery man, and a cooking emergency. In the "office" stories, on the other hand, the most common source of press was reprimands for personal activity, usually from a male supervisor. In both the "smile" and the "thoughtful look" stories, deprivation of an affiliative relationship was the most common source of need press.

Nearly half the subjects wrote at least one hostile press imagery story, while slightly more than half did not write any hostile press imagery stories. Sixty-three of the 100 subjects wrote no stories containing hostile press imagery, 39 Ss wrote one hostile press imagery story, 16 Ss wrote two, and 3 Ss wrote three. One subject wrote four stories containing hostile press imagery. The mean number of hostile press imagery stories was .66, while the median was slightly below one. The numeric scores for hostile press imagery produced a higher mean (2.30), but the median score was still slightly below one.

Subjects who told stories with any hostile press imagery were, therefore, classified as high fear of failure subjects relative to the other subjects, while those who had not told stories containing hostile press imagery were regarded as low fear of failure subjects relative to the other subjects.





A t-test revealed a significant ( $p < .02$ ) difference between the mean number of hostile press imagery stories written by homemakers ( $\bar{X} = 1.72$ ) and the mean number written by careerists ( $\bar{X} = .81$ ). Later in this chapter we shall examine the relationship between hostile press imagery scores and fear of success scores, but let us proceed to an examination of the experimental hypotheses.

### The Experimental Hypotheses

The first three hypotheses concerned performance on the scrambled words task. The first hypothesis stated, "Low fear of failure subjects will unscramble significantly more words in the congruent condition than in the incongruent condition." The hypothesis was tested using a two-tailed t-test for uncorrelated means and was not confirmed ( $t = 1.385$ ,  $df = 50$ ,  $p > .05$ ).

Hypothesis 2 was, "High fear of failure subjects will unscramble significantly more words in the incongruent condition than in the congruent condition." A comparison of these two groups produced significant results ( $t = -2.046$ ,  $df = 46$ ,  $p < .05$ ) but in the opposite direction from that predicted; high fear of failure subjects unscrambled significantly more words in the congruent condition ( $\bar{X} = 103.826$ ) than in the incongruent condition ( $\bar{X} = 83.000$ ).



The third hypothesis posited, "In the congruent condition, low fear of failure subjects will perform significantly better than high fear of failure subjects." This hypothesis was not confirmed ( $t = -1.063$ ,  $df = 47$ ).

Hypothesis 4 stated, "Significantly more subjects with low fear of failure than subjects with high fear of failure will prefer intermediate task difficulty (30 to 70% probability of success). Intermediate levels of task difficulty preference were indicated by 26 out of 48 subjects with high fear of failure and 23 out of 52 subjects with low fear of failure. Although the trend is opposite to prediction, the probability that the effect was produced by chance was greater than .5 ( $\chi^2 = .18$ ).

Hypothesis 5 stated, "Significantly more subjects with high fear of failure than subjects with low fear of failure will prefer extreme levels of task difficulty (10 to 29 and 71 to 100% probability of success)." Preference for extreme levels of task difficulty was indicated by 22 out of 48 subjects with high fear of failure and 26 out of 52 subjects with low fear of failure. Once again the trend was opposite to prediction, but the chi square value of .33 had a chance probability of greater than .5.

Hypotheses 6 through 8 concerned the subjects' level of aspiration on the anagram task. The subjects have been asked to indicate in which percentile they



would try to have their performance fall. Hypothesis 6 stated, "In the congruent condition, significantly more low fear of failure subjects than high fear of failure subjects will aspire to an intermediate level of performance (30th to 70th percentile)." This hypothesis was not confirmed ( $\chi^2 = .5$ ,  $p < .25$ ); in fact, only one subject aspired to an intermediate level of performance as here defined. As will be later discussed, all the other subjects aspired to an extremely high level of performance. Table 3, the summary table for a three-way analysis of variance using the unweighted means technique, indicates that the task congruence by fear of failure interaction for this data had no significant effect.

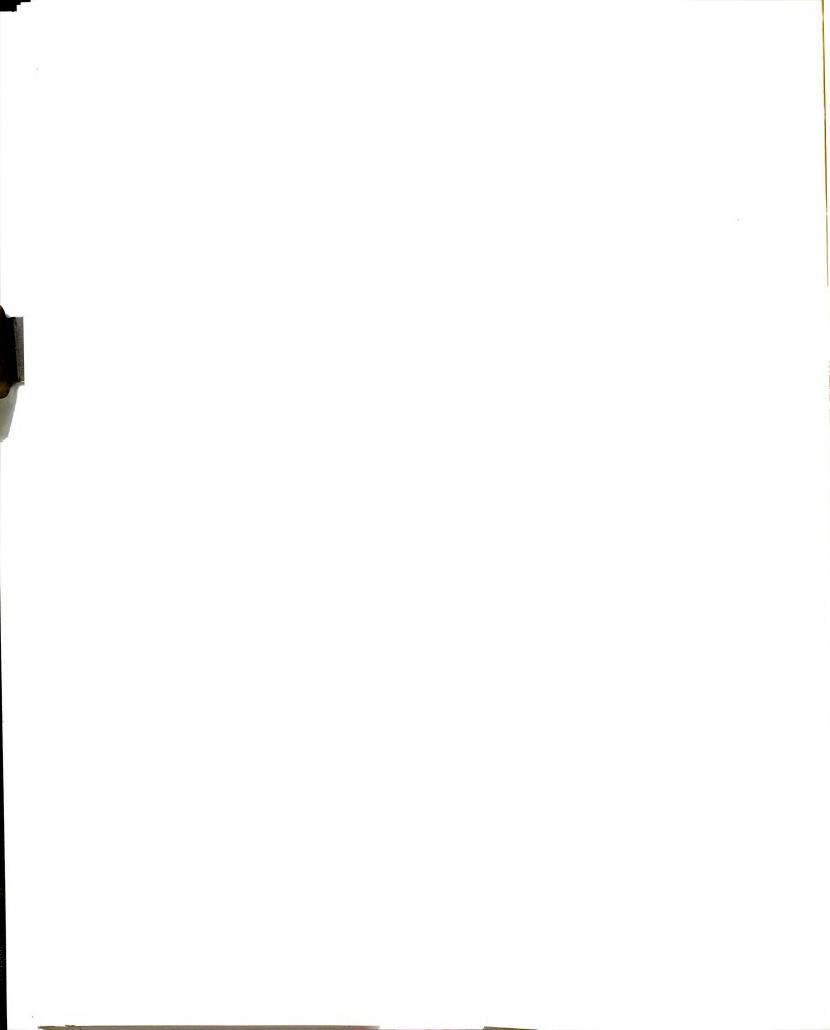
The seventh hypothesis stated, "In the congruent condition, homemakers with high fear of failure will aspire to an extreme level of performance (0-30 and 60-100th percentile) significantly more frequently than they will aspire to an intermediate level of performance (30th to 69th percentile)." Once again, the hypothesis was not confirmed because all the subjects had aspired to what had been defined as an extreme level of aspiration.

Hypothesis 8 states, "In the congruent condition, peer-oriented women with high fear of failure will aspire to a significantly higher level of performance



Table 3  
Three-Way Anova--Level of Aspiration

	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	682.458	1	682.458	4.609	.035*	4.36
Fear of Failure	41.356	1	41.356	.279	Over .5	.26
Task Congruence	529.977	1	529.977	3.579	.062	3.39
S.R. X F.F.	638.877	1	638.877	4.315	.041*	4.08
S.R. X T.C.	1.589	1	1.589	.011	Over .5	.01
F.F. X T.C.	60.921	1	60.921	.411	Over .5	.39
S.R. X F.F. X T.C.	62.557	1	62.557	.422	Over .5	.40
Error	13,622.688	92	148.073			87.11
Total	15,640.410	99	157.984			100.00





man career-oriented women with low fear of failure."  
 This hypothesis was not confirmed ( $t = 1.61$ ,  $df = 20$ ).

The last hypothesis concerned the difference between the percentile for which S said she would try and the percentile in which she expected her performance to fall. The ninth hypothesis proposed, "The difference between performance aspiration and performance expectation will be significantly greater for the high fear of failure subjects than for the low fear of failure subjects." Table 4 summarizes the results of a three-way analysis of variance using the unweighted means technique for the try for percentile minus the expect percentile interaction. Inspection of the table reveals that there was no significant main effect for fear of failure, thus indicating that Hypothesis 9 was not confirmed. (Note: This and all other analyses reported in this study were computed using the "Data Text" program on an I.B.M. 360 computer at the University of Chicago Computation Center.)

We end this section with the depressing conclusion that none of the hypotheses were confirmed. There are several possible explanations for this absence of correspondence between hypotheses and data. On one hand, we have examined experimental variables which have no relationship to the dependent variables. On the other hand, the experimental variables may be relevant but our



Table 4  
Three-Way Anova--Aspiration Level Minus Expectation Level

	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	81.742	1	81.742	.523	.472	.53
Fear of Failure	114.479	1	114.479	.732	.395	.74
Task Congruence	280.169	1	280.169	1.792	.184	1.81
S.R. X F.F.	497.538	1	497.538	3.183	.078	3.22
S.R. X T.C.	83.498	1	83.498	.534	.467	.54
F.F. X T.C.	31.803	1	31.803	.203	Over .5	.21
S.R. X F.F. X T.C.	.556	1	.556	.004	Over .5	.00
Error	14,380.895	92	156.314			92.95
Total	15,470.668	99	156.269			100.00



hypotheses based upon an inaccurate understanding of the processes involved. That the later explanation is more appropriate is suggested by the fact that further analysis of the data revealed numerous significant effects. We will shortly discuss these results, but first let us investigate the validity of our experimental manipulations.

### Validity Measures

A number of measures were included in the experiment to test the validity of the experimental manipulations. The subjects were asked whether they believed the experimenter when she told them that the anagrams measured career or homemaking ability. It is surprising that there were many significant effects found in the data (which are discussed in the Discussion and Appendices) relating to the anagram task because only 40 of the 100 subjects believed the experimenter. Forty-two subjects said they did not believe the experimenter, and 46 stated that they believed her somewhat. There was no experimenter effect on belief in the description of the task. While not significant ( $p < .059$ ), there was a strong tendency for the test to be perceived as relatively better when it was described as a career test than when it was described as a test of homemaking ability. When SS were asked to evaluate the quality of the test, they were similarly unimpressed. One subject

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thought the test was excellent, 22 thought it was good, 11 thought it was fair, and 31 thought it was a poor test. There was no significant association between task congruence and/or experimenter on test quality. As would be expected, there was a significant ( $p < .007$ ) association between test quality and belief in the experimenter.

In their written explanations of their belief or disbelief of the experimenter, many subjects stated that the scrambled words task was too simple to predict such a complex skill as success in a career or as a homemaker. Most of the subjects stated that the experimenter acted in such a manner that they disbelieved her; in fact, one subject indicated she believed the experimenter because she seemed honest. Many of the subjects who had been told the test was a measure of homemaking ability believed that homemakers would recognize and unscramble words faster than men and to the home more rapidly than women without homemaking ability. An explanation favored by subjects who perceived the career version of the instructions was that the test measured verbal ability which is part of intelligence and, thus, is generally predictive of success in a career.

One additional check for experimenter effect was a four-way (experimenter by sex role by fear of failure by task congruence) analysis of variance, using a weighted means model was performed on the anagram

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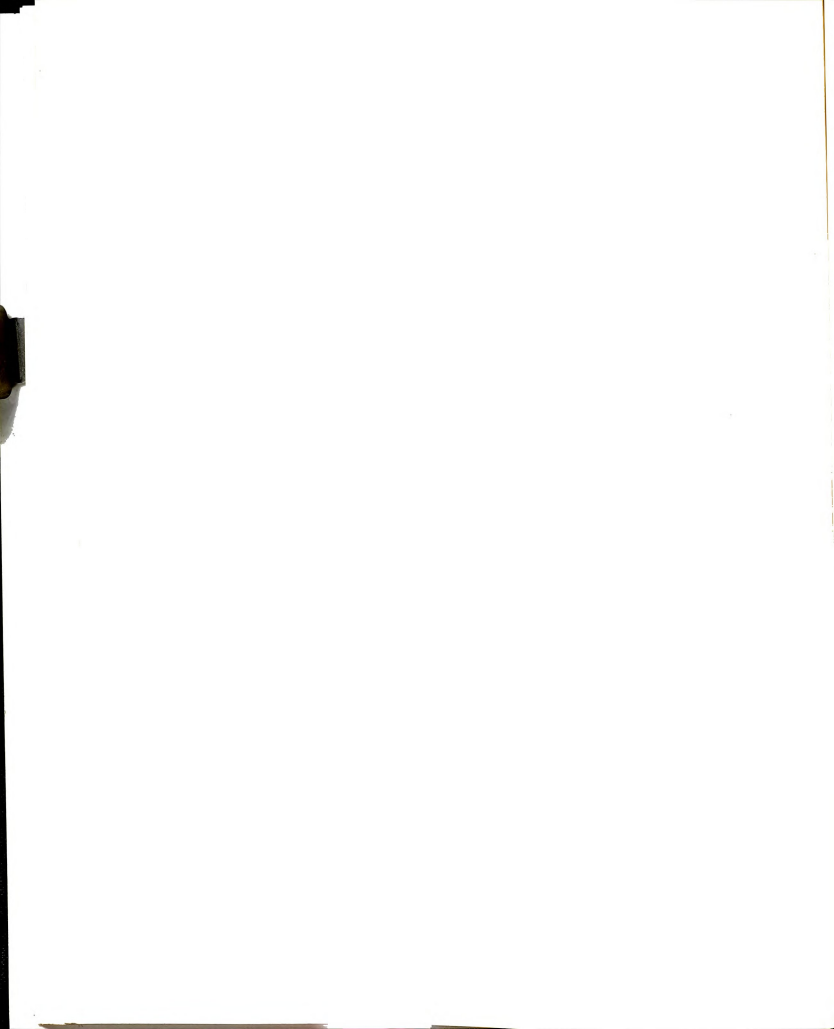
The nine subjects who had a different experimenter during the second session than they had during the first session were excluded from this analysis because of the procedural requirement that there be no empty cells. As stated in Table 5, there were no significant main effects or interactions indicative of experimenter effect. It would appear that while there was no experimenter effect in this experiment, the subjects had considerable doubt about the validity of the experimental manipulations, and, as a result, the effect of these manipulations was probably weakened.

#### Scrambled Words Data

The scrambled word scores were subjected to a two-way (sex role by fear of failure by task congruence) analysis of variance using the unweighted means model. Analysis was performed on the total number of correct unscrambled anagrams and also on the interval by total scores. As reflected in Table 6, there were significant ( $p < .05$ ) main effects for sex role and task congruence. Women with a career sex role orientation performed significantly better ( $\bar{X} = 100.449$ ) than did women with a homemaking sex role orientation ( $\bar{X} = 83.034$ ). In addition, subjects who were told that the task was congruent with their sex role orientation performed significantly better ( $\bar{X} = 100.095$ ) than those subjects who



Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role					
7,302.453	1	7,302.453	6.383	.014*	7.00
Fear of Failure	1	1,098.310	.960	.331*	1.05
Task Congruence	1	5,690.559	4.974	.029	5.46
Experimentier	1	135.230	.118	Over .5	.13
S.R. X F.F.	1	233.124	.204	Over .5	.22
S.R. X T.C.	1	601.594	.526	.471	.58
F.F. X T.C.	1	744.011	.650	.423	.71
S.R. X Exp.	1	17.424	.015	Over .5	.02
F.F. X Exp.	1	300.870	.263	Over .5	.29
T.C. X Exp.	1	745.783	.652	.422	.72
S.R. X F.F. X T.C.	1	1,367.091	1.195	.278	1.31
S.R. X F.F. X Exp.	1	11.456	.010	Over .5	.01
S.R. X T.C. X Exp.	1	227.558	.199	Over .5	.22
F.F. X T.C. X Exp.	1	20.184	.018	Over .5	.02
S.R. X F.F. X T.C. X Exp.	1	0.764	Very Small		.00
Error	75	85,803.938			82.27
Total	90	104,299.750			100.00



# Three-Way Anova--Anagram Task Performance

55

	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	7,156.402	1	7,156.402	6.878	.011*	6.26
Fear of Failure	2,150.697	1	2,150.697	2.067	.154	1.88
Task Congruence	6,586.242	1	6,586.242	6.330	.014*	5.76
S.R. X F.F.	609.528	1	609.528	.586	.447	.53
S.R. X T.C.	1,128.027	1	1,128.027	1.084	.301	.99
F.F. X T.C.	459.489	1	459.489	.442	Over .5	.40
S.F. X F.F. X T.C.	1,533.418	1	1,533.418	1.474	.228	1.34
Error	94,682.750	91	1,040.470			82.83
Total	114,306.313	98	1,166.391			100.00



told that the task was incongruent with their sex orientation ( $\bar{X} = 83.388$ ). Table 7 lists the mean standard deviation of the scores for each group.

Table 7

Anagram Total--Means and Standard Deviations

		Fear of Failure		No Fear of Failure	
		Mean	S.D.	Mean	S.D.
Congruent Condition	Career	117.750	41.990	106.769	31.638
	Homemaker	96.400	29.355	79.462	29.082
Incongruent Condition	Career	97.778	30.051	79.500	27.330
	Homemaker	74.133	30.622	82.143	29.866

As illustrated by Tables 8-13, these main effects were relatively consistent across the intervals. However, the exceptions were that sex role orientation did not achieve a conventional level of significance in Interval 2 ( $p < .07$ ) or Interval 6 ( $p < .064$ ), task congruence did not achieve conventional levels of significance in Interval 5 ( $p < .077$ ). In all three cases the F ratios fell only slightly short of significance, suggesting that the effects would probably have achieved conventional levels of significance with a larger sample.





Table 8

## Three-Way Anova--Interval 1 Anagram Scores

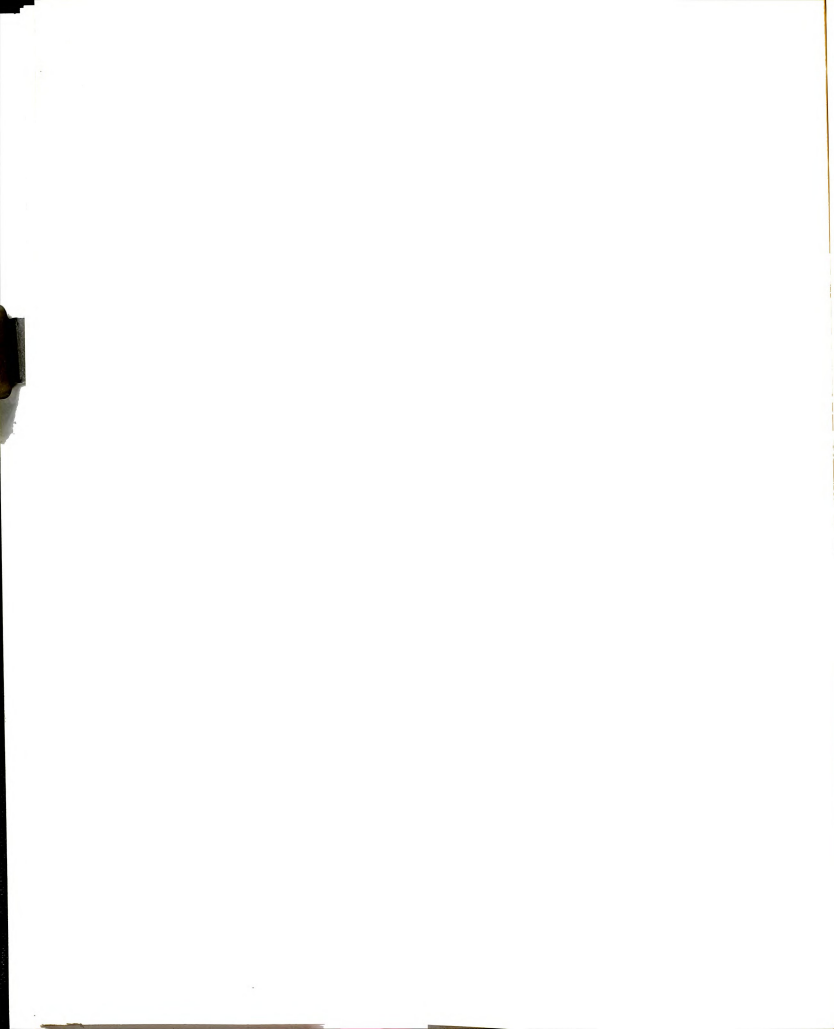
Sex Role	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Fear of Failure	137.139	1	137.139	3.965	.050*	3.79
Task Congruence	69.941	1	69.941	2.022	.159	1.93
S.R. X F.F.	194.026	1	194.026	5.609	.020*	5.36
S.R. X T.C.	1.687	1	1.687	.049	Over .5	.05
F.F. X T.C.	1.794	1	1.794	.052	Over .5	.05
S.R. X F.F. X T.C.	7.634	1	7.634	.221	Over .5	.21
Error	22.725	1	22.725	.657	.421	.63
Total	3,182.309	92	34.590			87.98
	3,617.254	99	36.538			100.00



Table 9

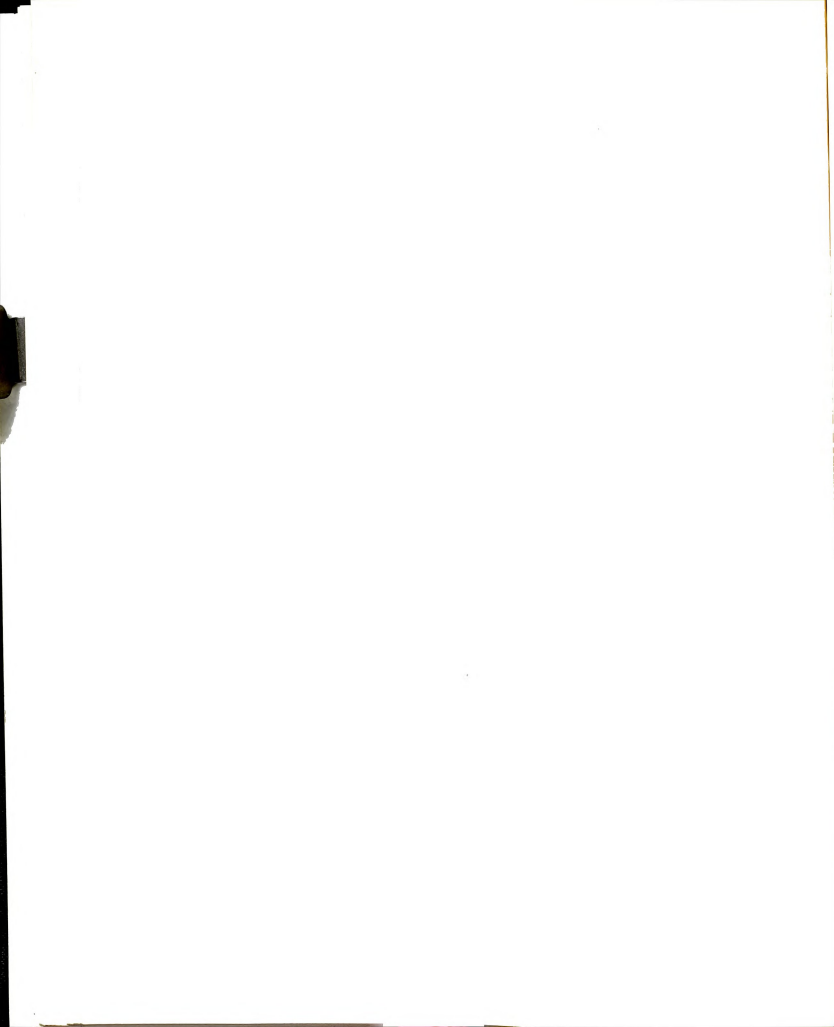
## Three-Way Anova--Interval Two Anagram Scores

	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	123.894	1	123.894	3.364	.070	3.23
Fear of Failure	24.104	1	24.104	.654	.421	.63
Task Congruence	193.680	1	193.680	5.258	.025*	5.05
S.R. X F.F.	6.571	1	6.571	.178	Over .5	.17
S.R. X T.C.	23.046	1	23.046	.626	.431	.60
F.F. X T.C.	24.749	1	24.749	.672	.415	.64
S.R. X F.F. X T.C.	52.521	1	52.521	1.426	.236	1.37
Error	3,388.796	92	36.835			88.31
Total	3,837.361	99	38.761			100.00



Three-Way Anova--Interval Three Anagram Scores

Sex Role	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Fear of Failure	481.296	1	481.296	9.889	.003*	8.34
Task Congruence	244.536	1	244.536	5.025	.028*	4.24
	220.991	1	220.991	4.541	.036*	3.83
S.R. X F.F.	94.025	1	94.025	1.932	.168	1.63
S.R. X T.C.	83.460	1	83.460	1.715	.194	1.45
F.F. X T.C.	24.667	1	24.667	.507	.479	.43
S.R. X F.F. X T.C.	143.554	1	143.554	2.950	.090	2.49
Error	4,477.500	92	48.668			77.59
Total	5,770.012	99	58.283			100.00



Three-Way Anova--Interval Four Anagram Scores

Sex Role	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Fear of Failure	186.836	1	186.836	7.063	.010*	6.64
Task Congruence	24.274	1	24.274	.918	.341	.86
S.R. X F.F.	117.436	1	117.436	4.439	.038*	4.17
S.R. X T.C.	22.299	1	22.299	.843	.361	.79
F.F. X T.C.	23.938	1	23.938	.905	.344	.85
S.R. X F.F. X T.C.	4.580	1	4.580	.173	Over .5	.16
Error	1.331	1	1.331	.050	Over .5	.05
	2,433.810	92	26.454			86.98
Total	2,814.504	99	28.429			100.00





Three-Way Anova--Interval Five Anagram Scores

	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	240.620	1	240.620	7.579	.008*	7.00
Fear of Failure	21.089	1	21.089	.664	.418	.61
Task Congruence	101.799	1	101.799	3.206	.077	2.96
S.R. X F.F.	50.485	1	50.485	1.590	.211	1.47
S.R. X T.C.	38.821	1	38.821	1.223	.272	1.13
F.F. X T.C.	25.566	1	25.566	.805	.372	.74
S.R. X F.F. X T.C.	40.354	1	40.354	1.271	.263	1.17
Error	2,920.794	92	31.748			84.92
Total	3,439.528	99	34.743			100.00



Three-Way Anova--Interval Six Anagram Scores

	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	128.551	1	128.551	3.538	.064	3.26
Fear of Failure	57.591	1	57.591	1.585	.212	1.46
Task Congruence	330.822	1	330.822	9.106	.004*	8.38
S.R. X F.F.	5.981	1	5.981	.165	Over .5	.15
S.R. X T.C.	46.140	1	46.140	1.270	.263	1.17
F.F. X T.C.	4.293	1	4.293	.118	Over .5	.11
S.R. X F.F. X T.C.	67.728	1	67.728	1.864	.176	1.72
Error	3,306.156	91	36.331			83.75
Total	3,947.260	98	40.278			100.00



Considering the centrality of fear of failure to formulation of this experiment, the significant finding for the main effect of fear of failure in the third interval is both gratifying and perplexing. It is gratifying because it supports our contention that fear of failure is a relevant variable in predicting women's performance. On the other hand, it is perplexing that this effect was significant only during one of the six intervals.

As explained in the Methodology section, the sample as a whole can be regarded as having a career orientation because the subjects indicated that having a career had significantly more importance to them than being married and having a family. Consequently, the anagram total scores were re-analyzed separately for the group of Ss who had been told that the test measured career ability and for the group of Ss who had been told that the test measured homemaking ability. The results of these 2 X 2 (sex role by fear of failure) unweighted analyses of variance are summarized in Tables 14 and 15. For the group which had received the career instructions, there was a significant ( $p < .002$ ) sex effect: The career subjects performed better ( $M = 12.260$ ) than did the homemaking subjects ( $\bar{X} = 10.12$ ). For the group which had received the homemaking instructions this effect was virtually nonexistent.



Table 14

Two-Way Anova--Anagram Score--Career Test

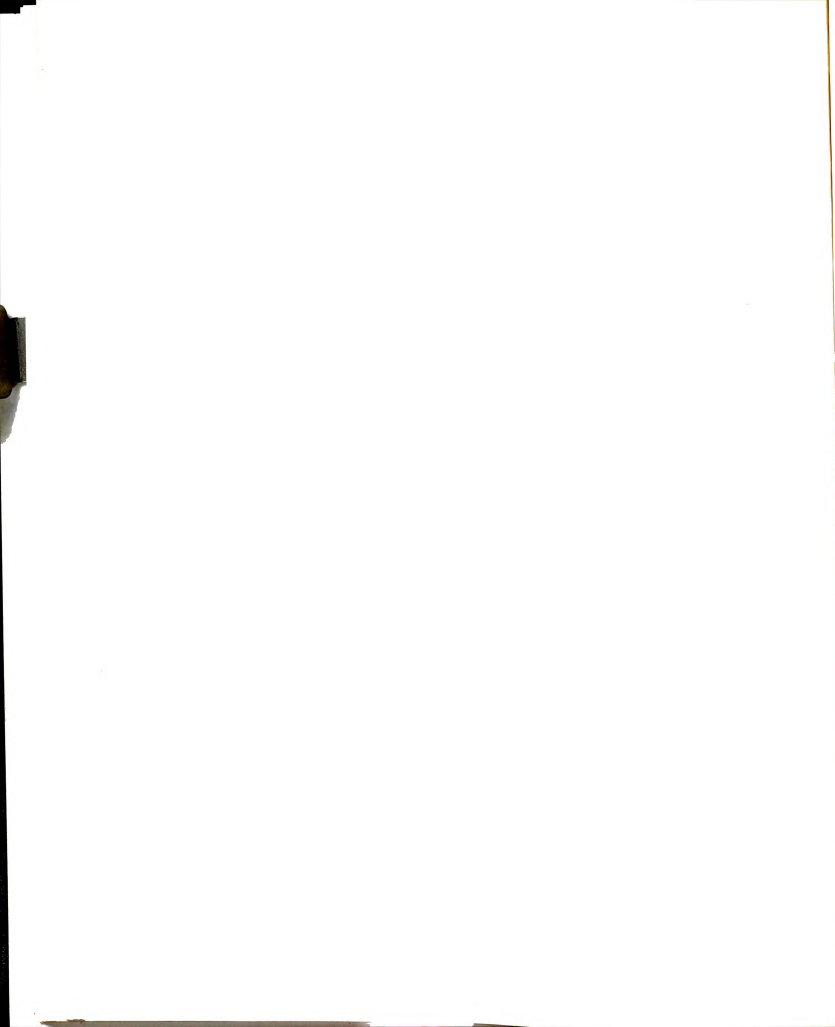
	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	13,696.641	1	13,696.641	11.739	.002*	20.01
Fear of Failure	25.964	1	25.964	.022	Over .5	.04
S.R. X F.F.	1,060.623	1	1,060.623	.909	.346	1.55
Error	53,671.313	46	1,166.768			78.40
Total	68,454.500	49	1,397.031			100.00





Table 15  
Two-Way Anova--Anagram Score--Homemaking Test

	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	5.934	1	5.934	.007	Over .5	.01
Fear of Failure	3,668.811	1	3,668.811	4.026	.051	8.21
S.R. X F.F.	5.306	1	5.306	.006	Over .5	.01
Error	41,011.438	45	911.365			91.77
Total	44,691.484	48	931.073			100.00



= .007). Perhaps the task was viewed as role incongruent by both groups of subjects when it was described as a test of homemaking ability. For the homemaking instructions the main effect for fear of failure was close to conventional levels of significance ( $p < .1$ ) that it could be considered acceptable. On the homemaking task, fear of failure subjects performed better ( $\bar{X} = 97.089$ ) than did subjects without fear of failure ( $\bar{X} = 79.481$ ). If we regard the homemaking task description as making the task incongruent for our sample, it appears that in the incongruent condition subjects with fear of failure perform better than subjects without fear of failure. The significant sex role effect discovered in the original analysis of variance of the anagram total score (see Table 4) appears to be a task congruence effect.

#### Level of Aspiration

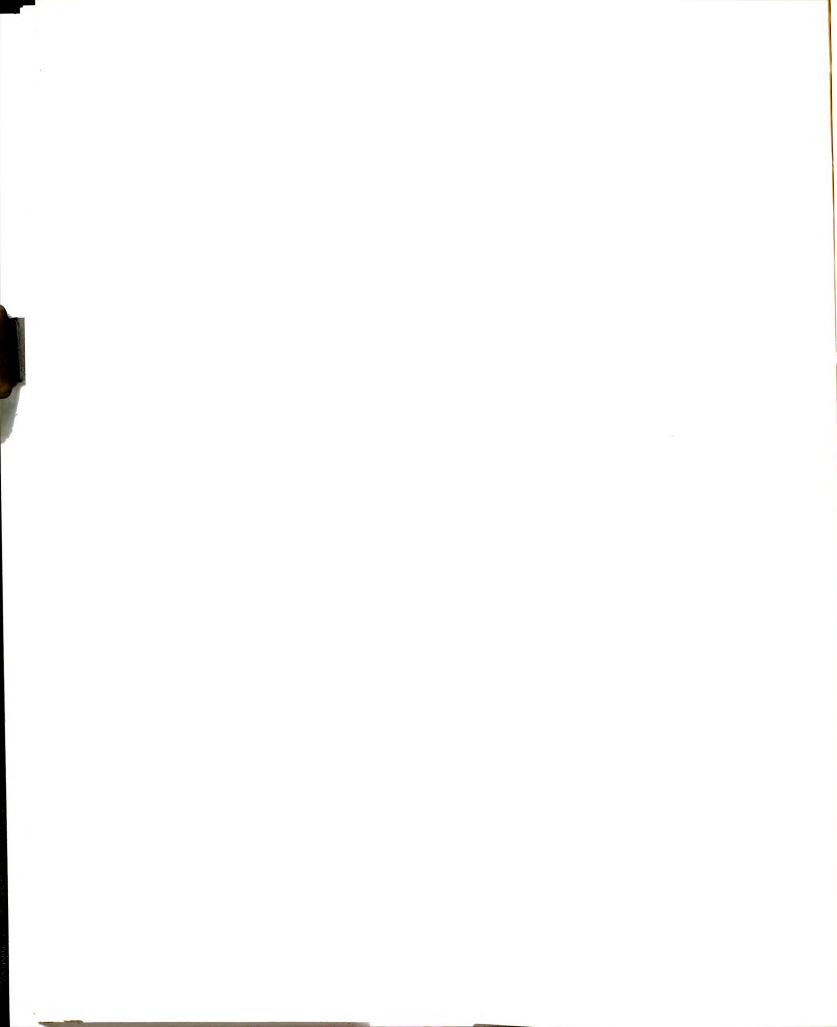
Five measures of level of aspiration and two of their combinations were included in the data analysis. Table 16 summarizes the findings of a two factor (sex by fear of failure) unweighted means analysis of variance for subject's general preference for task difficulty. There was no significant main effect or interaction for this variable.

It seems likely that the absence of significant effects for this variable was a function of the vagueness

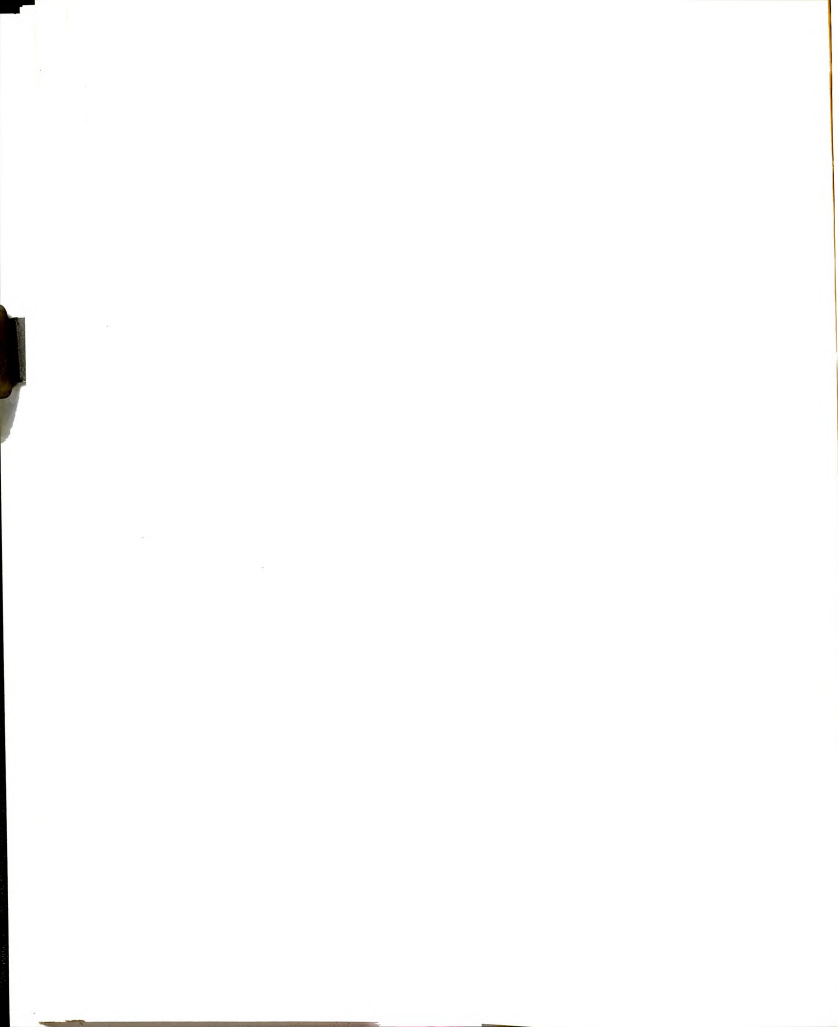


Table 16  
Two-Way Anova--Generalized Preference for Task Difficulty

	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	178.036	1	178.036	.494	.484	.51
Fear of Failure	337.345	1	337.345	.936	.336	.97
Sex Role X Fear of Failure	916.158	1	916.158	2.543	.115	2.62
Error	33,507.691	93	360.298			95.90
Total	34,939.227	96	363.950			100.00



the question. This conclusion is supported by the significant findings when subjects were asked to indicate in which percentile they would try to have their program task performance fall. As Table 3 indicates, a three-way analysis of variance using the unweighted ANOVA model produced two significant effects and a third effect which approached significance. The level of performance ( $\bar{X} = 95.844$ ) which women with a career orientation said they would try for was significantly ( $p < .05$ ) higher than the level of performance indicated by women with a homemaking orientation ( $\bar{X} = 90.483$ ). There was a significant ( $p < .05$ ) interaction between role orientation and fear of failure. Most of this effect is attributable to the fear of failure subjects. Career-oriented subjects with fear of failure had a mean "try for" percentile of 97.778 ( $n = 17$ ), while homemaking-oriented subjects with fear of failure had a mean "try for" percentile of 87.229 ( $n = 31$ ). A t-test reveals this difference to be significant beyond the .05 level ( $t = 2.2979$ ,  $df = 48$ ), using a two-tailed test of significance. For the subjects without fear of failure, there was virtually no difference between the two groups; for the career SS was 93.910, and mean for the homemaking SS was 93.736. Although not satisfying conventional levels of significance ( $p < .062$ ), subjects in the congruent condition tended to aspire higher than





e in the incongruent condition. Table 17 lists the  
and standard deviation of the level of aspiration  
es for each group.

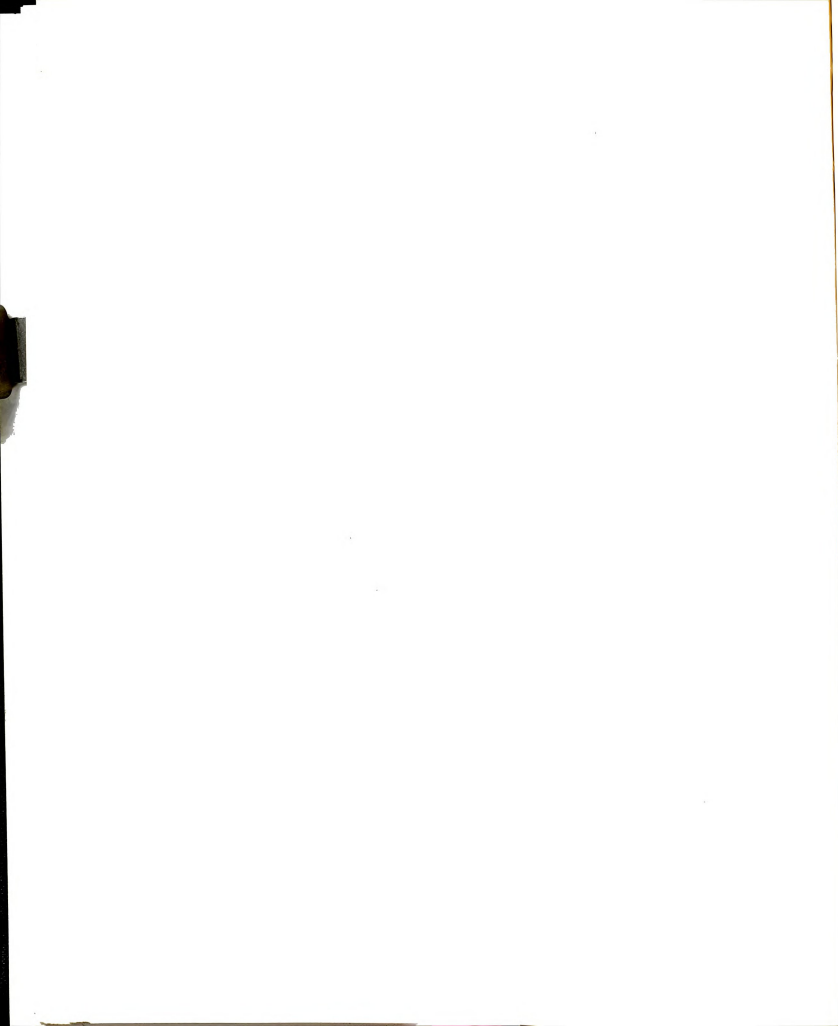
Table 17

Level of Aspiration--Means and Standard Deviations

		Fear of Failure		No Fear of Failure	
		Mean	S.D.	Mean	S.D.
Congruent condition	Career	100.00	0.000	96.154	6.505
	Homemaking	91.333	11.872	94.615	7.763
Incongruent condition	Career	95.556	7.265	91.667	8.349
	Homemaking	83.125	22.426	92.857	11.387

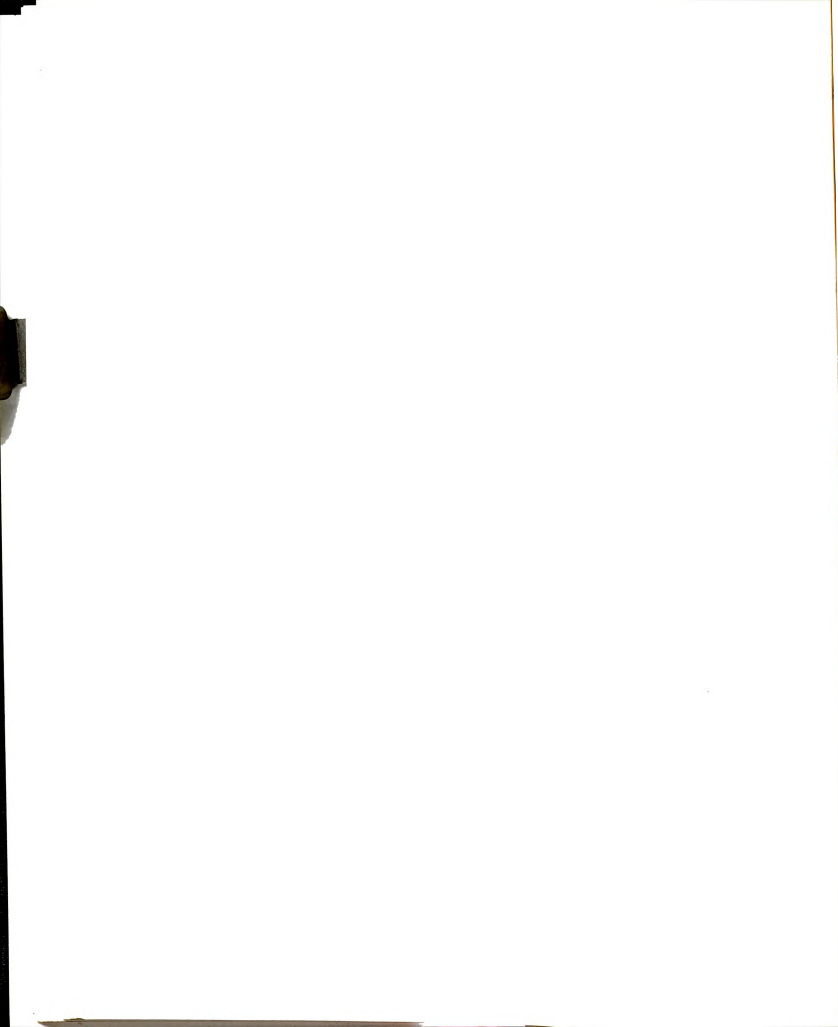
Much to our surprise, a three-way analysis of  
variance, using an unweighted means design, on the sub-  
jects' estimates of the percentile in which they expected  
their performance to fall yielded only one significant  
effect. As Table 18 indicates, career-oriented women  
were expected to perform ( $\bar{X} = 74.509$ ) significantly ( $p < .006$ )  
better than did subjects with a homemaking orientation  
( $7.292$ ). Table 19 lists the mean and standard  
deviation of the level of expectation scores for each

An identical analysis of variance performed on  
the difference between the "try for" and "expect" per-  
centages failed to yield any significant F ratios. There



Three-Way Anova--Level of Expectation

	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	1,236.570	1	1,236.570	8.268	.006*	7.90
Fear of Failure	293.450	1	293.450	1.962	.165	1.87
Task Congruence	39.475	1	39.475	.264	Over .5	.25
S.R. X F.F.	8.824	1	8.824	.059	Over .5	.06
S.R. X T.C.	62.048	1	62.048	.415	Over .5	.40
F.F. X T.C.	180.759	1	180.759	1.209	.275	1.15
S.R. X F.F. X T.C.	74.913	1	74.913	.501	.481	.48
Error	13,760.251	92	149.568			87.89
Total	15,656.277	99	158.144			100.00



is, however, a trend approaching conventional levels of significance ( $p < .078$ ) for the sex role by fear of failure interaction. Although not significant, the difference between level of aspiration and level of expectation tended to be greater for career subjects with fear of failure ( $\bar{X} = 24.722$ ) than for those without it ( $\bar{X} = 22.949$ ). For homemaking ss the trend was in the opposite direction but not of nearly as large a magnitude (fear of failure  $\bar{X} = 22.000$ , no fear  $\bar{X} = 24.382$ ).

Table 19

Level of Expectation--Means and Standard Deviations

		Fear of Failure		No Fear of Failure	
		Mean	S.D.	Mean	S.D.
Congruent Condition	Career	75.000	11.952	76.923	10.316
	Homemaking	67.333	10.998	66.923	13.775
Incongruent Condition	Career	71.111	9.280	75.000	9.045
	Homemaking	63.125	16.621	71.786	11.703

The Relationship Between Fear of Failure  
and Fear of Success

Approximately six months after the scoring for hostile press imagery was completed, the same stories were rescored for fear of success, using Horner's new method. Table 20 lists the mean hostile press imagery

and mean fear of success score for each stimulus and the standard deviations. Inspection reveals the fear of success scores to be slightly more uniform over the four stories than the hostile press imagery scores. For both scoring systems, the "kitchen" stimulus produced the most need press imagery. Also contained in Table 20 are the Pearson product-moment coefficients of correlation between the hostile press imagery scores and the fear of success scores. These correlations are significant beyond the .001 level for all four stimuli; it appears that there is significant overlap between the hostile press imagery scoring system and the fear of success scoring system.

Table 20

Hostile Press Imagery Scores, Fear of Failure Scores, and Correlations

	Hostile Press Imagery Score		Fear of Success Score		Correlation
	Mean	S.D.	Mean	S.D.	
Kitchen	1.040	1.860	2.440	1.651	.463*
Fice	.390	1.113	1.510	1.936	.330*
oughtful ok	.710	1.589	1.890	1.964	.368*
le	.180	.753	1.670	1.625	.359*

\* Significant beyond .01

Horner's fear of success scoring system contains six components--noncontingent negative consequences, contingent negative consequences, interpersonal engagement, relief, absence of instrumental activity, and absence of others. Each of these components has been assigned (by Horner, 1973) a scoring weight ranging from 1 to -2. Pearson product-moment correlations were computed separately for each story and for the total scores between the numeric fear of failure scores and the numeric fear of success scores. Correlations were also computed between the absence or presence of hostile press imagery and the absence or presence of each component of fear of success. These data are summarized in Table 21. Examination of the table reveals a relatively consistent correlation between hostile press imagery and the two categories concerning negative consequences. The source of negative consequences, however, appears to be related to the content of the stimulus. For the "kitchen" story negative consequences appear to have been mostly contingent, while the "office" and "thoughtful look" stimuli appear to have elicited stories with noncontingent negative consequences. Overall, there was a statistically significant ( $p < .001$ ) correlation between the presence of hostile press imagery and the appearance of negative consequences, both contingent and noncontingent. It is, therefore, reasonable to suspect that Horner's new

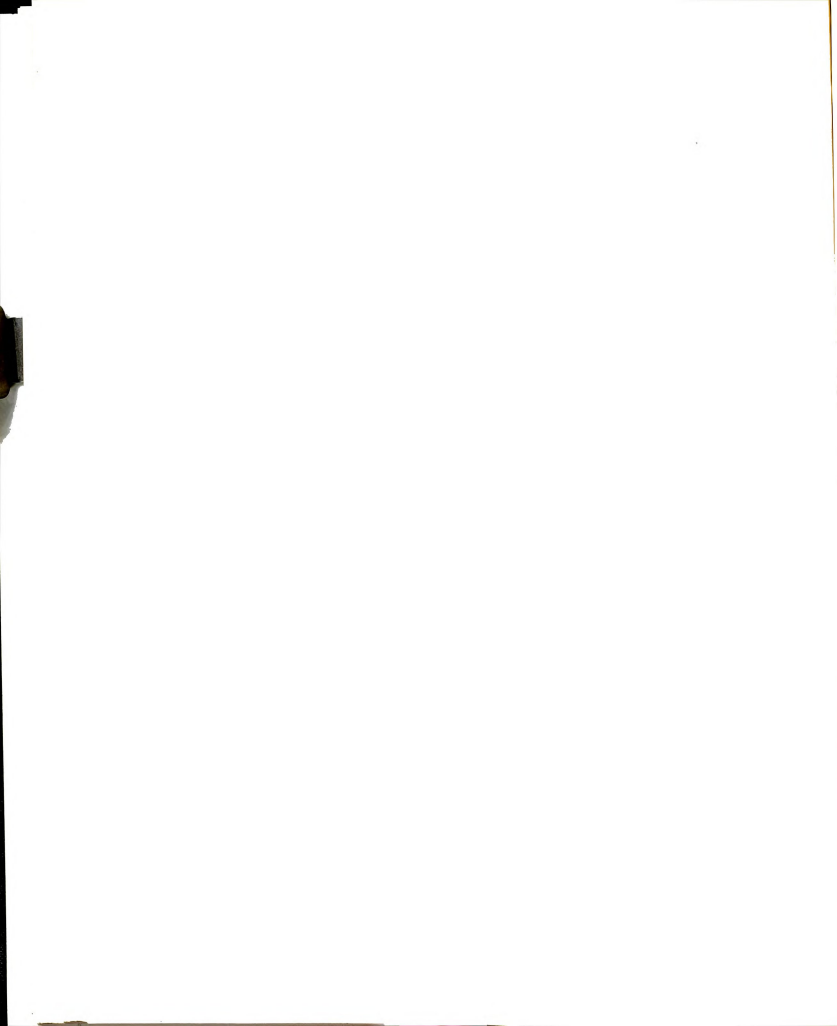




Table 21

## Correlations Between Hostile Press Imagery Scores and Components of the Fear of Success Scoring System

	Non- Contg.	Contg.	Intpl. Engm.	Rel.	Abs. Intl. Act.	Abs. of Others
chen						
meric	.097	.512 <sup>a</sup>	.160	.213 <sup>b</sup>	.125	.105
ple	.120	.524 <sup>a</sup>	.167	.184	.124	.106
ice						
meric	.327 <sup>a</sup>	.054	.152	.195	-.016	-.135
ple	.298 <sup>c</sup>	.171	.146	.101	-.018	-.149
ughtful						
ok						
meric	.507 <sup>a</sup>	.219 <sup>b</sup>	.134	-.086	-.035	-.090
ple	.568 <sup>a</sup>	.186	.117	-.069	-.039	-.114
le						
meric	.500 <sup>a</sup>	.223 <sup>b</sup>	.101	.195	.154	.091
ple	.528 <sup>a</sup>	.236 <sup>b</sup>	.106	.261 <sup>c</sup>	.163	.096
l						
meric	.251 <sup>b</sup>	.352 <sup>a</sup>	.120	.171	.121	-.082
le	.315 <sup>a</sup>	.384 <sup>a</sup>	.137	.171	.121	-.092

nd

Contg.: Noncontingent Negative Consequences

y.: Contingent Negative Consequences

l. Engm.: Interpersonal Engagement

Relief

Intl. Act.: Absence of Instrumental Activity

of Others: Absence of Others

ic: Correlation between numeric hostile press

gery score and numeric fear of success score

e: Correlation between the presence or absence of

tile press imagery and the presence or absence of

indicator of components of the fear of success

ring system

a = Significant beyond .001

b = Significant beyond .05

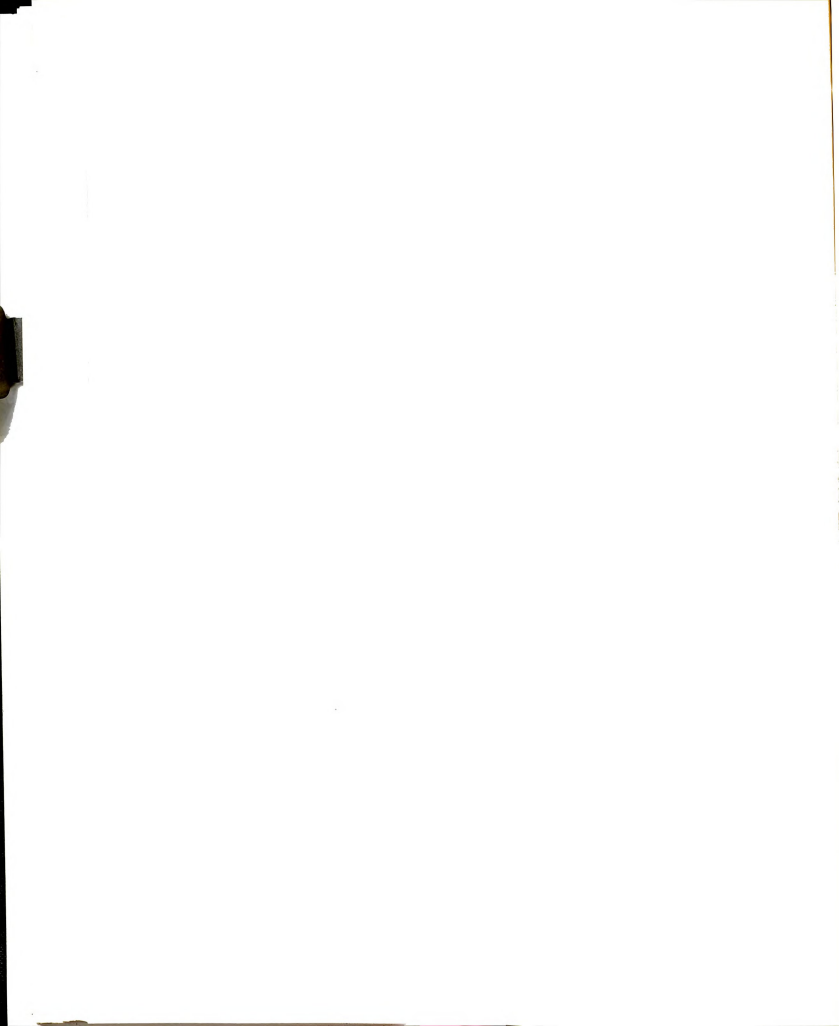
c = Significant beyond .01



fear of success scoring system does not assess an entirely new motive, but rather, overlaps with at least one previously recognized influence on achievement behavior.

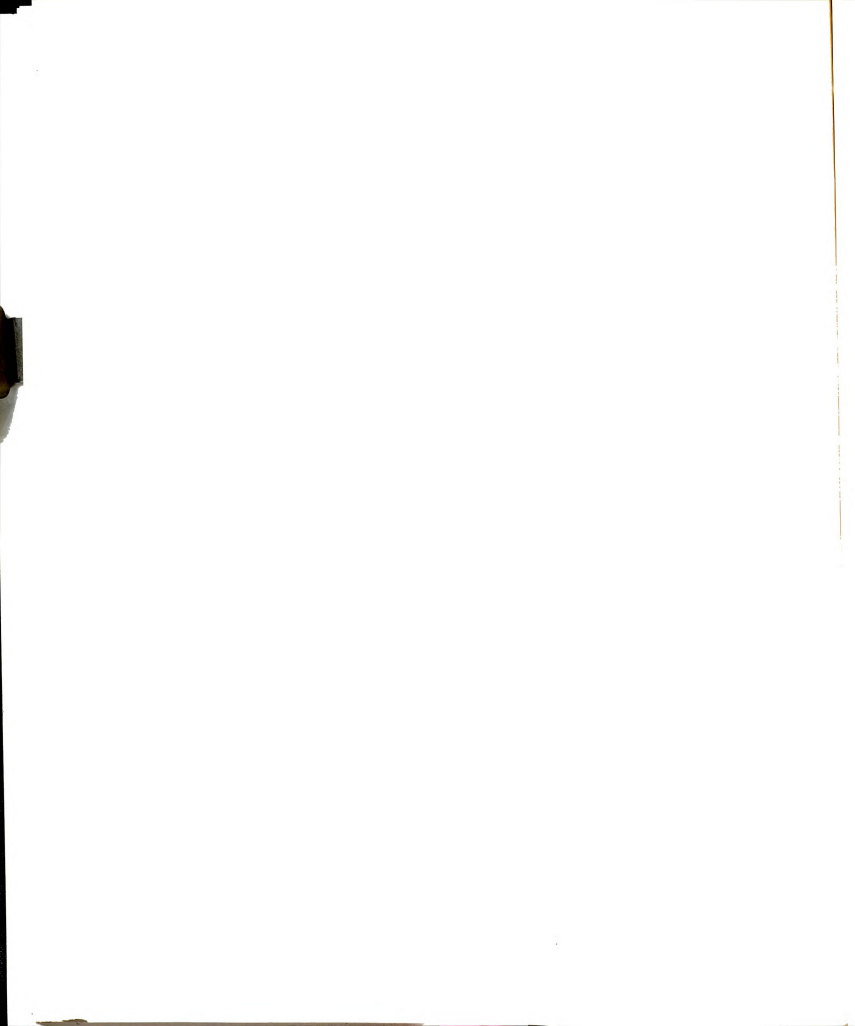
### Informational Data

The Personal Characteristics Questionnaire completed by subjects during the first session contained 27 filler items. Responses to some filler items were examined both to discover some characteristics of our sample group and to investigate possible relationships between the descriptive information and our experimental variables. Let us examine some of these characteristics. The mean age of the subjects was 18.38 with a standard deviation of .846 and a range of 16 to 21. Ninety-five of the ss were Caucasian, while five were Negroid. The majority of the subjects were Freshmen (72), while 19 were Sophomores, 8 were Juniors, and 1 was a Senior. They were majoring in 27 different fields, with the three most popular being--no preference (26), nursing (6), and education (10). Socio-economic status was estimated using father's occupation (Reiss, Duncan, et al., and North, 1961), and it was discovered that the subjects were from families of high socio-economic status. The median socio-economic status of the subjects was in the highest (10th) decile, while the mean decile of socio-economic status was 8.968 with a standard deviation



f 1.623. The median number of siblings was 2.0 while the mean was 2.850 with a standard deviation of 1.857. These data indicate that our sample group tended to come from families slightly larger than the national average. Only one subject was an only child, 23 subjects were the oldest child, and 34 were the youngest child. The majority of the Ss (81) reported that they were in the top quarter of their high school graduating classes, with 5 of these Ss being in the top 10%. Although the majority of Ss (55) had fathers who were college graduates, only 31 had mothers with a college education. Less than half of the subjects (48) had mothers with an occupation other than being a housewife.

This information, along with answers to the more attitudinal questions, was subjected to both three-way (sex role X fear of failure X variable) and two-way (sex role X variable or fear of failure X variable) chi square analyses. A number of significant ( $p < .05$ ) associations were discovered. Career subjects planned to marry at an older age than did homemaking subjects. The fathers of subjects with fear of failure tended to have more education than did the fathers of subjects without fear of failure. For subjects with a homemaking orientation, those with fear of failure tended to have parents who would be moderately disturbed if they left college in comparison to the strong disapproval or mild approval

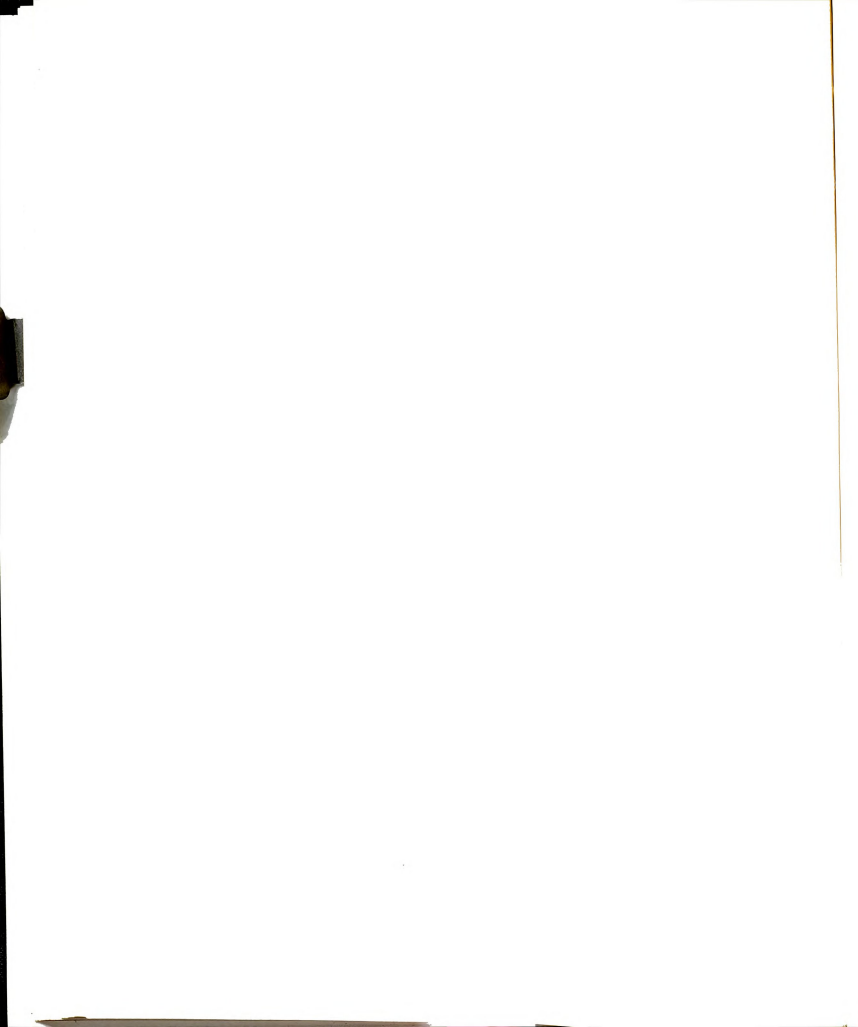


of the parents of subjects with no fear of failure. Career subjects were more likely than homemaking SS to have no older sibling. Career SS were more likely than homemaking SS to have a different religion from their parents. Finally, subjects with a career orientation tended to come from families with higher socio-economic status more than did subjects with a homemaking orientation.

### Summary

The sex role variable appears to be most potent of the variables examined. Significant sex role effects were discovered for: Anagram score, level of aspiration, level of expectation, estimated percentile on a test of homemaking ability, and difference between estimated percentile on a test of career ability and estimated percentile on a test of homemaking ability. Fear of failure was significantly related to estimated performance on a test of homemaking ability. Task consequence was significantly related to anagram performance. Finally, the sex role by fear of failure interaction produced two significant F ratios--one for level of aspiration and one for the difference between the actual estimated number of anagrams completed.

Table 22 contains a correlation matrix relating the variables subjected to analysis of variance including those examined in Appendices E, F, and G) to



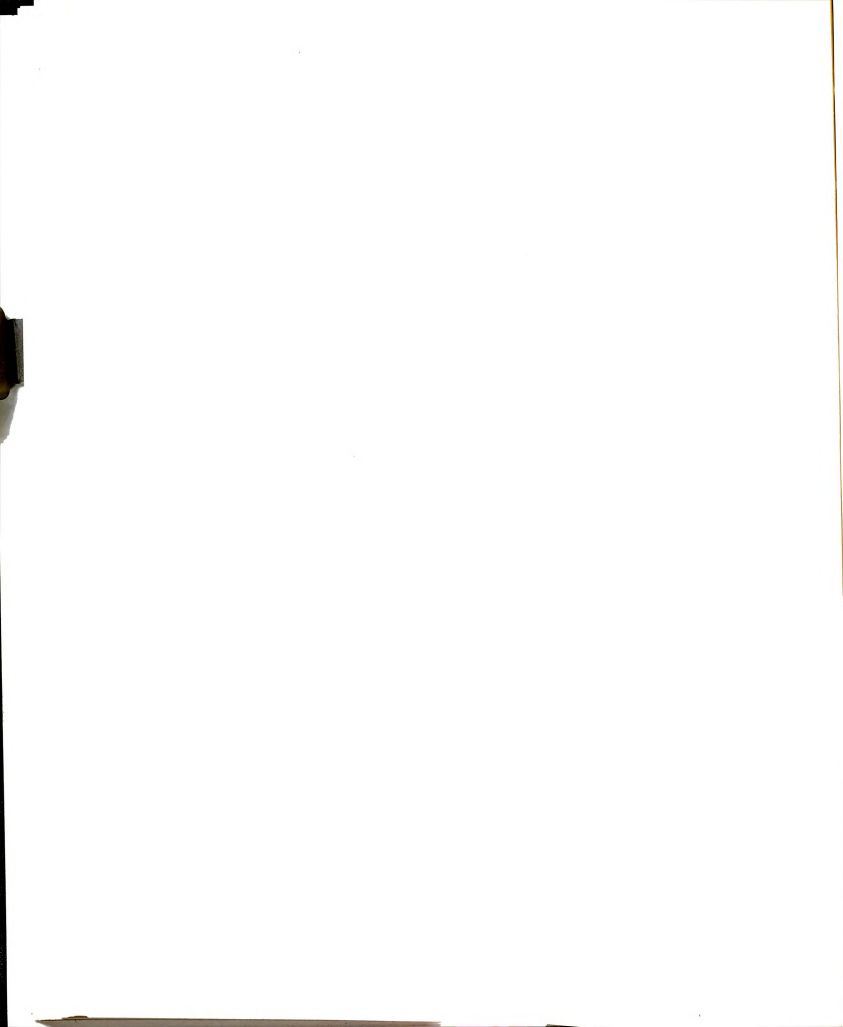


Correlation Matrix--Variables Subject to Analysis of Variance

A	B	C	D	E	F	G	H	I	J	K	
A	1.000	-0.128	0.017	-0.234	-0.160	-0.217	-0.026	-0.208	-0.298	0.091	-0.197
B	-0.128	1.000	-0.021	-0.091	-0.055	0.236	-0.009	0.120	0.185	-0.067	0.191
C	0.017	-0.021	1.000	-0.240	-0.228	-0.116	0.095	-0.195	-0.052	-0.144	0.029
D	-0.234	-0.091	-0.240	1.000	0.687	0.469	0.098	0.146	0.309	-0.167	0.345
E	-0.160	-0.055	-0.228	0.687	1.000	0.557	-0.565	0.237	0.319	-0.083	0.324
F	-0.217	0.237	-0.116	0.469	0.556	1.000	-0.227	0.315	0.496	-0.182	0.442
G	-0.026	-0.009	0.095	0.098	-0.656	-0.227	1.000	-0.170	-0.078	-0.093	-0.052
H	-0.208	0.120	-0.195	0.146	0.237	0.315	-0.170	1.000	0.511	0.492	0.231
I	-0.298	0.185	-0.052	0.309	0.319	0.496	-0.078	0.511	1.000	-0.496	0.363
J	0.091	-0.067	0.144	-0.167	-0.083	-0.182	-0.093	0.492	-0.496	1.000	-0.135
K	-0.197	0.191	0.029	0.345	0.324	0.442	-0.052	0.231	0.363	-0.135	1.000
L	0.228	0.175	0.063	-0.131	0.009	0.230	-0.136	-0.001	0.078	-0.080	0.137
M	-0.323	-0.021	-0.034	0.338	0.208	0.095	0.079	0.154	0.175	-0.022	0.547
N	-0.169	0.077	-0.045	0.194	0.063	0.094	0.111	0.061	0.291	-0.233	0.124
O	-0.055	-0.018	0.064	-0.026	-0.110	-0.232	0.105	-0.038	-0.062	0.024	-0.174
P	0.055	0.063	0.097	0.080	0.025	0.170	0.072	-0.013	0.149	-0.165	0.169
Q	0.020	-0.014	-0.126	0.097	0.106	0.015	-0.047	-0.064	0.001	-0.065	0.112
R	-0.060	0.175	-0.010	0.201	0.234	0.265	-0.066	0.132	0.253	-0.122	0.155
S	-0.126	-0.058	0.069	0.046	0.025	-0.023	-0.002	0.140	0.115	0.025	-0.171
T	0.125	-0.106	0.105	-0.300	-0.165	-0.130	-0.118	-0.039	-0.223	0.185	-0.073
U	0.043	-0.128	0.133	-0.245	-0.137	-0.126	-0.109	0.042	-0.137	0.181	-0.160
V	-0.029	0.126	-0.127	0.250	0.278	0.232	-0.094	0.044	0.202	-0.159	0.229
W	-0.039	0.141	-0.145	0.276	0.236	0.205	0.003	0.003	0.190	-0.189	0.219

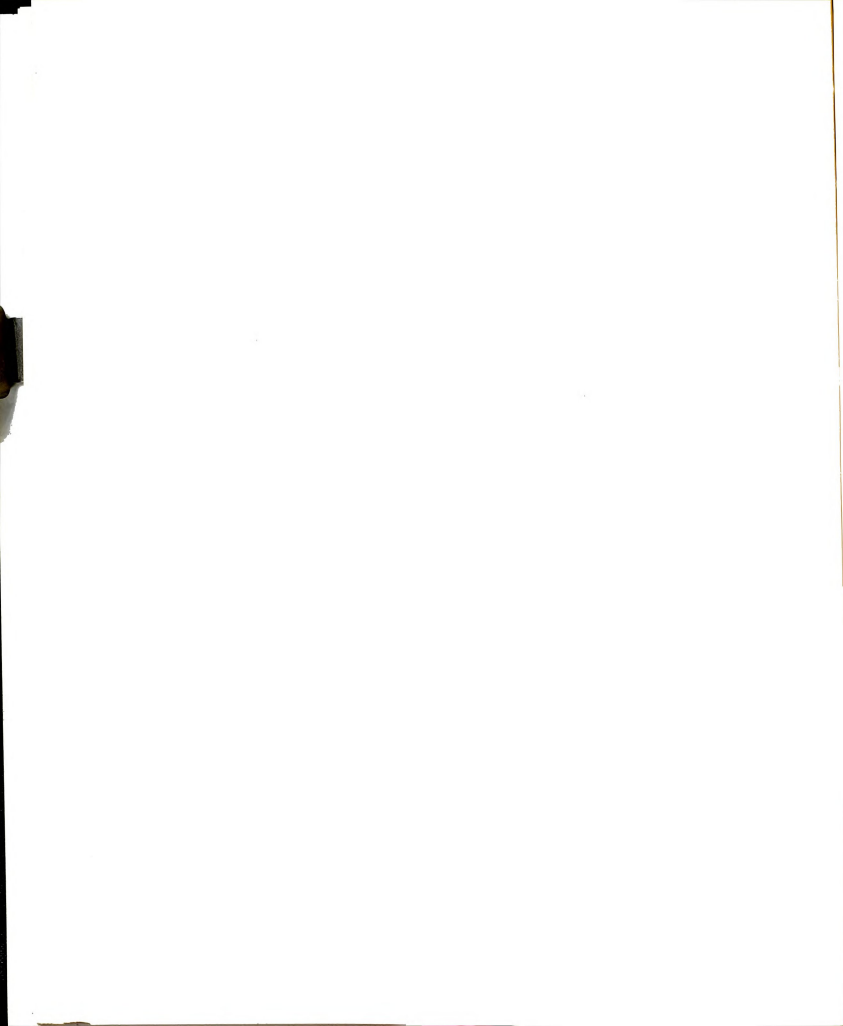


	L	M	N	O	P	Q	R	S	T	U	V	W
A	0.228	-0.323	-0.169	-0.055	-0.055	0.020	-0.060	-0.126	0.125	0.043	-0.029	-0.039
B	0.175	-0.021	0.077	-0.018	0.063	-0.014	0.175	-0.058	-0.106	-0.128	0.126	0.141
C	0.063	-0.034	-0.045	0.064	0.097	-0.126	-0.010	0.069	0.105	0.133	-0.127	-0.145
D	-0.131	0.339	0.194	-0.026	0.080	0.097	0.201	0.046	-0.300	-0.245	0.250	0.276
E	0.009	0.208	0.063	-0.110	0.025	0.106	0.234	0.025	-0.165	-0.137	0.278	0.236
F	0.230	0.095	0.094	-0.232	0.170	0.015	0.265	-0.023	-0.130	-0.126	0.232	0.205
G	-0.136	0.079	0.111	0.105	0.072	-0.047	-0.066	-0.002	-0.118	-0.109	-0.094	0.003
H	-0.001	0.154	0.061	-0.038	0.013	-0.064	0.132	0.140	-0.039	0.042	0.044	0.003
I	0.078	0.175	0.291	-0.062	0.149	0.001	0.253	0.115	-0.223	-0.137	0.202	0.190
J	-0.080	-0.022	-0.233	0.024	-0.165	-0.065	-0.122	0.025	0.185	0.181	-0.159	-0.189
K	0.137	0.547	0.124	-0.174	0.169	0.112	0.155	-0.171	-0.073	-0.160	0.229	0.219
L	1.000	-0.754	0.126	-0.110	0.168	0.131	0.031	-0.145	0.037	-0.047	0.149	0.112
M	-0.754	1.000	-0.024	-0.023	-0.029	-0.037	0.076	0.010	-0.079	-0.066	0.025	0.050
N	0.126	-0.024	1.000	0.021	0.080	0.082	0.185	0.028	-0.230	-0.191	0.225	0.233
O	-0.110	-0.023	0.021	1.000	-0.076	-0.064	-0.122	0.253	-0.095	0.056	-0.157	-0.121
P	0.168	-0.029	0.080	-0.076	1.000	0.053	-0.007	0.003	-0.144	-0.128	0.045	0.094
Q	0.131	-0.037	0.082	-0.064	0.053	1.000	-0.350	-0.206	-0.368	-0.447	0.667	0.626
R	0.031	0.076	0.185	-0.122	-0.007	-0.350	1.000	-0.069	-0.222	-0.239	0.464	0.397
S	-0.145	0.010	0.028	0.253	0.003	-0.206	-0.069	1.000	-0.121	0.448	-0.249	-0.383
T	0.037	-0.079	-0.230	-0.095	-0.144	-0.368	-0.222	-0.121	1.000	0.833	-0.525	-0.749
U	-0.047	-0.066	-0.191	0.056	-0.128	-0.447	-0.239	0.448	0.833	1.000	-0.612	-0.888
V	0.149	0.025	0.225	-0.157	0.045	0.667	0.464	-0.249	-0.525	-0.612	1.000	0.907
W	0.112	0.050	0.233	-0.121	0.094	0.626	0.397	-0.383	-0.749	-0.888	0.907	1.000



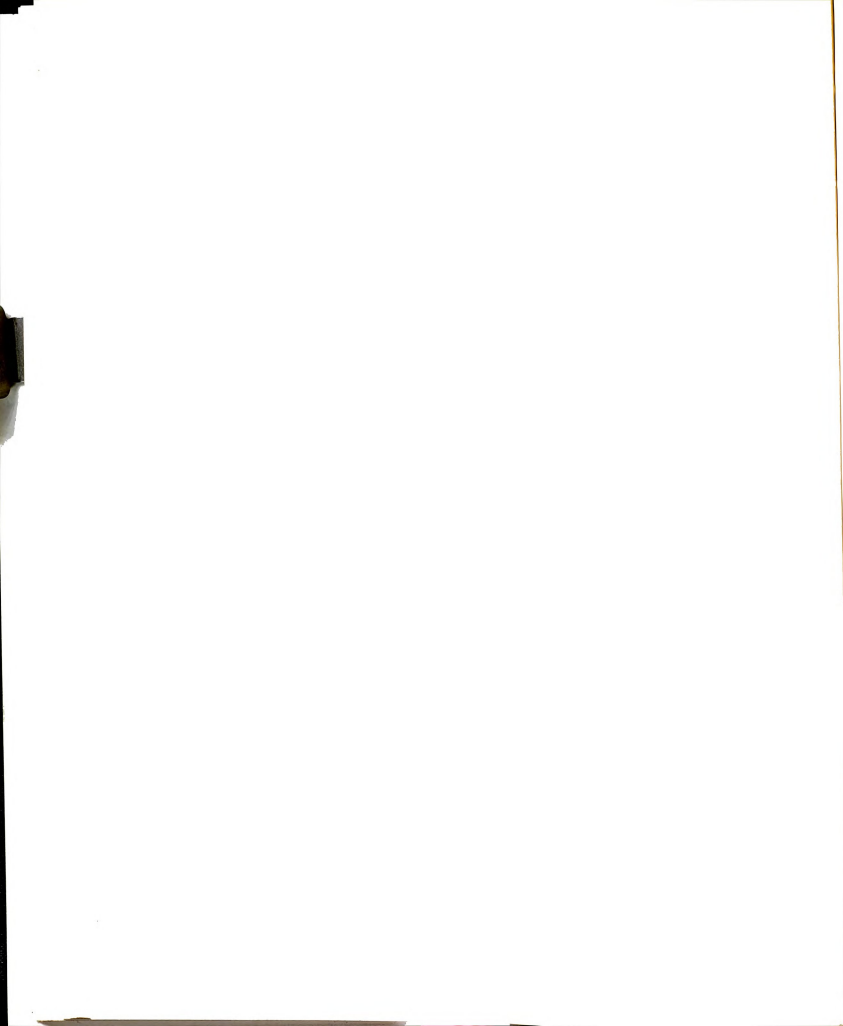
Legend

A:	Sex Role Orientation	
B:	Fear of Failure	
C:	Task Congruence	
D:	Anagram Total Score	
E:	Numerical Estimate of Anagrams Completed	
F:	Percentile Estimate of Anagrams Completed	
G:	Difference Between Actual and Estimated Number of Anagrams	
H:	Level of Aspiration in Percentiles	
I:	Level of Expectation in Percentiles	
J:	Difference Between Level of Aspiration and Level of Expectation	
K:	Estimated Percentile Score on a Test of Career Ability	
L:	Estimated Percentile Score on a Test of Homemaking Ability	
M:	Difference Between Estimated Percentile Score on a Test of Career Ability and Estimated Percentile Score on a Test of Homemaking Ability	
N:	Did you believe the experimenter?	
O:	Test Quality	
P:	Generalized Preference for Task Difficulty in Percentiles	
Q:	Attribution to Effort	
R:	Attribution to Skill	
S:	Attribution to Luck	
T:	Attribution to Task Difficulty	
U:	External Attribution	
V:	Internal Attribution	
W:	Difference Between Internal and External Attribution	



ch other. As would be expected because of the nature of their determination, scores for attribution to effort, skill, luck, task difficulty, internal attribution, external attribution, and the difference between internal and external attribution were highly intercorrelated. Scores for anagram performance, numeric estimate of anagram performance, percentile estimate of anagram performance, and difference between actual and estimated anagram performance were highly interrelated. Significant intercorrelations were found between level of aspiration, level of expectation, and the difference between the two.

An analysis and discussion of supplementary data including post-performance estimates (both numerical and percentiles), estimation of career ability and of home-making ability, and of performance attribution are contained in Appendices G, H, and I.





## CHAPTER IV

### DISCUSSION

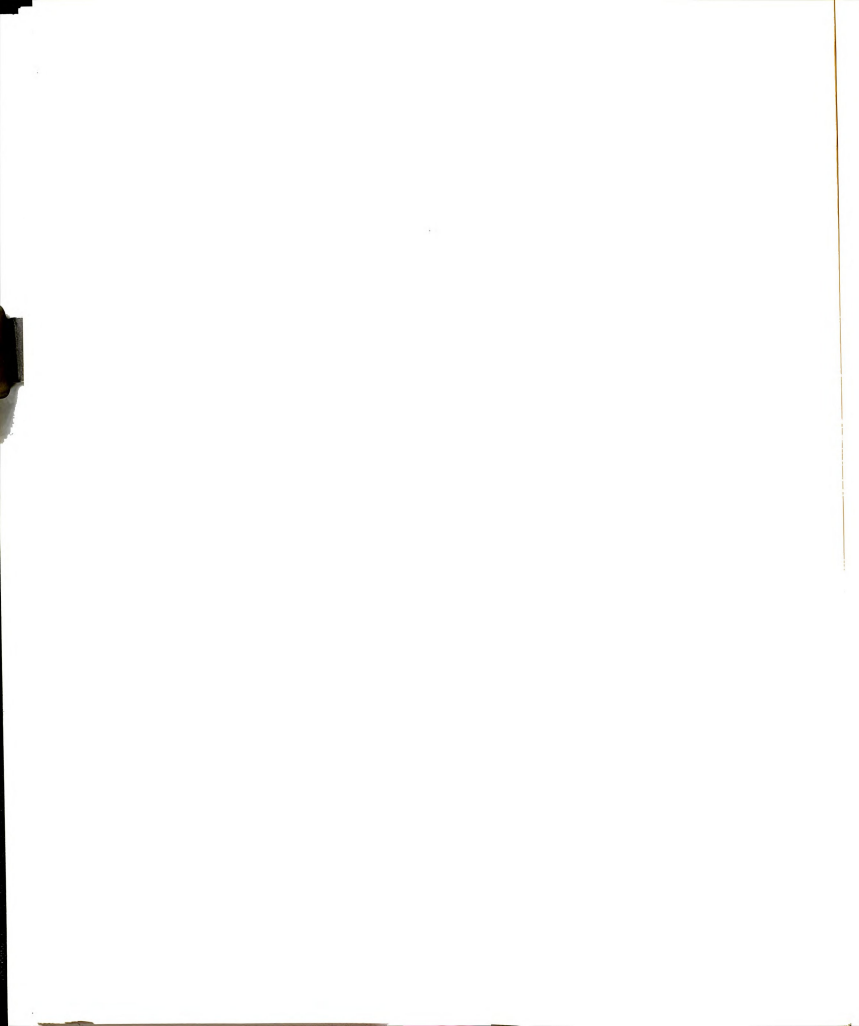
Interpretation of this study is difficult because over 30 different dependent variables were measured and analyzed. Each of these variables could be discussed separately, but this procedure would resemble the proverbial description of an elephant by six blind men. On the other hand, a global picture of each type of individual would exclude examination of level of aspiration, performance attribution, and performance estimate as variables of interest in their own right. This Discussion will borrow from both approaches.

#### Task Congruence

Hypotheses 1 through 3 concerned the combined effect of hope of success and fear of failure on performance. None of these hypotheses were confirmed. Hypothesis 1 predicted that low fear of failure subjects would perform significantly better in the congruent condition than in the incongruent condition. Although the hypothesis was not confirmed, the trend ( $t = 1.385$ ,  $df =$   $p < .173$ ) was in the appropriate direction. This



finding, though not significant, is important because it suggests that the subjects without fear of failure were more achievement-aroused by the task description similar to their sex role orientation than by a task description which was more dissimilar. Most likely this effect fell short of significance because the experimental manipulations were poorly accepted by the subjects. Contrary to the prediction of Hypothesis 2, fear of failure subjects performed significantly better in the congruent condition than in the incongruent condition. The inhibitory model of fear of failure, on which this hypothesis is based, assumes that the intensity of motivation to avoid failure is a function of the incentive value of success. It predicts that the performance of high fear of failure SS will be increasingly inhibited as the incentive value of success increases. In this experiment it has been assumed that the incentive value of success is higher in the congruent condition than in the incongruent condition. It appears that the performance of the high fear of failure subjects in the congruent condition was facilitated relative to their performance in the incongruent condition. This finding is inconsistent with the inhibitory model of fear of failure which hypothesizes that for individuals with fear of failure, when hope of success is high, fear of failure will inhibit performance. This finding raises serious doubts about the applicability



of the inhibitory model of fear of failure to a female sample. The results of a test of Hypothesis 3 add to these doubts. If fear of failure has an inhibitory effect on performance, when the incentive value of success is high, subjects with low fear of failure should perform better than subjects with high fear of failure. For this experiment it was predicted that in the congruent condition subjects with low fear of failure would perform significantly better than subjects with high fear of failure. While not significant ( $t = 1.063$ ,  $df = 47$ ,  $p < .294$ ), the trend was in the opposite direction. Again, it appears that fear of failure had a facilitating rather than inhibitory influence on performance.

Since the fear of failure predictions were not confirmed, the more basic hypothesis that performance is enhanced when the task description is congruent to the subject's personal definition of competency bears investigation. In planning the experiment it was assumed that the task would be relatively more congruent for the career-oriented subjects when it was described as a test of career ability and relatively more congruent for the homemaking-oriented subjects when it was described as a test of homemaking ability. Analysis of responses to the following questions which were not asked to assign sex role ideology suggests that this assumption was justified. When asked, "How important



do you feel that a professional career of your own is," subjects with a career orientation reported a significantly ( $t = 3.75$ ,  $p < .001$ ) higher mean level of importance (4.98) than did subjects with a homemaking orientation (4.52). When asked, "How important do you feel that marriage and a family are to you," homemaking-oriented subjects reported a significantly ( $t = 5.5$ ,  $p < .001$ ) higher mean level of importance (4.74) than did subjects with a career orientation (3.86).

The subjects did perform significantly better on the task when it was described as relatively more congruent to their personal definition of competency. On the scrambled words task, performance was significantly ( $p < .014$ ) better in the congruent condition than in the incongruent condition. Although not achieving conventional levels of significance, level of aspiration ( $p < .062$ ) was higher when subjects served in the congruent condition than when they served in the incongruent condition. Subjects' estimates of the number of anagrams completed were significantly ( $p < .019$ ) higher in the congruent condition than in the incongruent condition. The performance predictions of subjects with a homemaking orientation for a test of homemaking ability were significantly ( $p < .009$ ) higher than those made by subjects with a career orientation. While other variables estimated level of performance on a test of career





lity, level of expectation, post-performance percentage estimate) did not produce F ratios acceptable at conventional levels of significance testing, the trend in the results was still the same. In short, subjects predicted, estimate, and actually do perform better on tasks relatively more congruent to their personal goals.

The description of the experiment (that it was designed to detect differences between women who attend college and women who do not) was probably relatively achievement arousing for the career-oriented subjects than it was for the subjects with a homemaking orientation; career-oriented subjects were significantly ( $p < .03$ ,  $p < .05$ ) more certain that they would graduate college than subjects with a homemaking orientation. Perhaps the scrambled words task itself was perceived as relatively more congruent by the career-oriented subjects than it was by subjects with a homemaking orientation. If this was the case, the following results can be interpreted as reflecting a congruence effect: Career-oriented subjects performed significantly ( $p < .011$ ) better than homemaking-oriented subjects, aspired significantly ( $p < .035$ ) higher, expected to perform significantly ( $p < .006$ ) better, and estimated that they had performed better (numerical,  $p < .066$ ; percentile,  $p < .066$ ) than homemaking-oriented subjects. It is possible that the difference in ability between the two groups was



responsible for these results, but a chi-square test revealed no significant difference between the high school class standings as reported by the two groups of subjects ( $\chi^2 = 2.608$ ,  $p < .456$ ).

Task congruence as an independent in this experiment was confounded. The strength of the subjects' identification with a collegiate group was a confounding factor produced by the explanation of the experiment. Further confounding was a consequence of the significantly higher ( $t = 2.42$ ,  $p < .05$ ) level of importance attached by subjects to having a career in comparison to being married and having a family.

Because of this confounding, several congruence effects can be predicted: (1) The career task should have been relatively more congruent for all SS than the homemaking task. (2) The performance task, in general, should have been more achievement arousing for the career-oriented subjects than for the homemaking-oriented subjects. (3) The task described as congruent to the subject's sex role orientation should have been more achievement arousing than the task described as incongruent. If we conceive of each of these predictions as factors, we would predict that the level of performance, highest to lowest, should be: (1) Career SS on career task, (2) Homemaking SS on the career task, and (3) A tie between career and homemaking SS on the

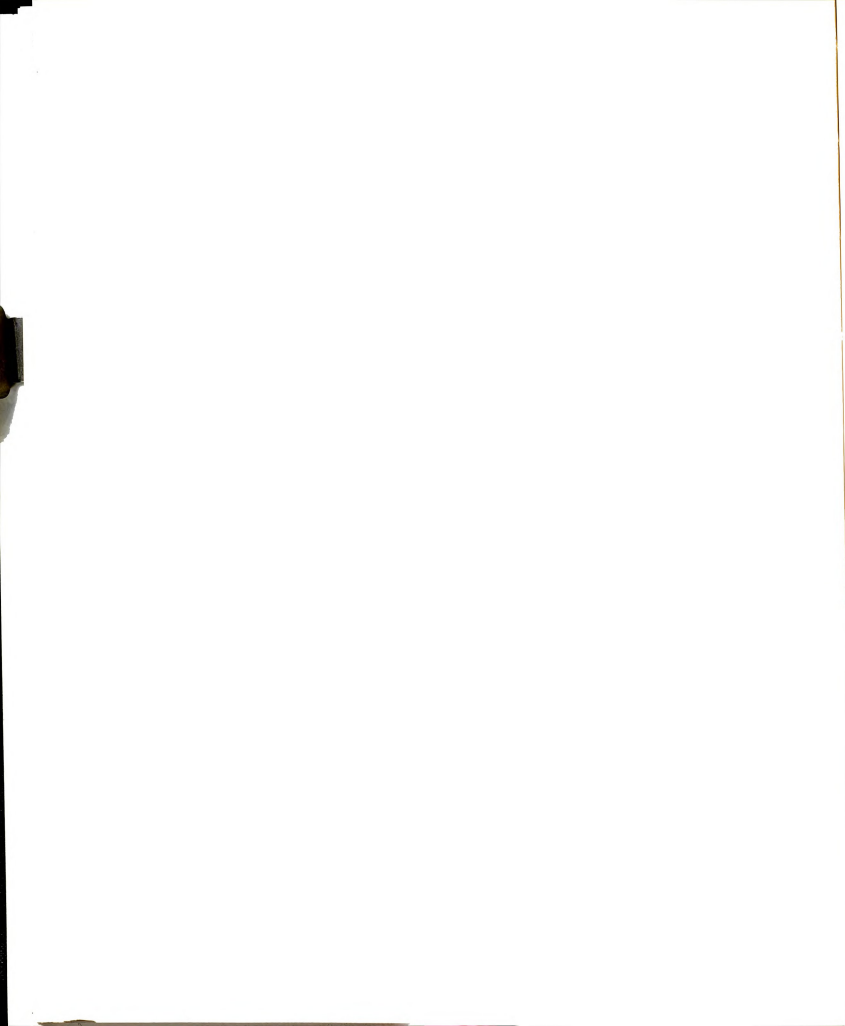


homemaking task. This, in fact, is the order of performance level for the subjects without fear of failure. Thus, we tentatively conclude that task congruence has significant effect on performance.

### Fear of Failure

None of the hypotheses concerning the effect of fear of failure on performance were confirmed. These hypotheses were based upon the inhibitory model of fear of failure. Since, on the homemaking test, subjects with fear of failure performed better than subjects without fear of failure at a level near conventional levels of significance ( $p < .051$ ), it seems possible that fear of failure had an excitatory effect on performance. This hypothesis, however, is inconsistent with the finding that on the career test the performance of homemaking-oriented subjects with fear of failure ( $\bar{X} = 82.133$ ) was lower (but not significantly) than that of homemaking-oriented subjects without fear of failure ( $\bar{X} = 82.143$ ). It appears that neither the inhibitory model of fear of failure motivation favored by McClelland (1966) nor the excitatory model motivation favored by Birney, Burdick, and Teevan (1969) explains the results.

In the Introduction it was suggested that the relative value of success at a task is determined in part by the relevance of success on the task to the



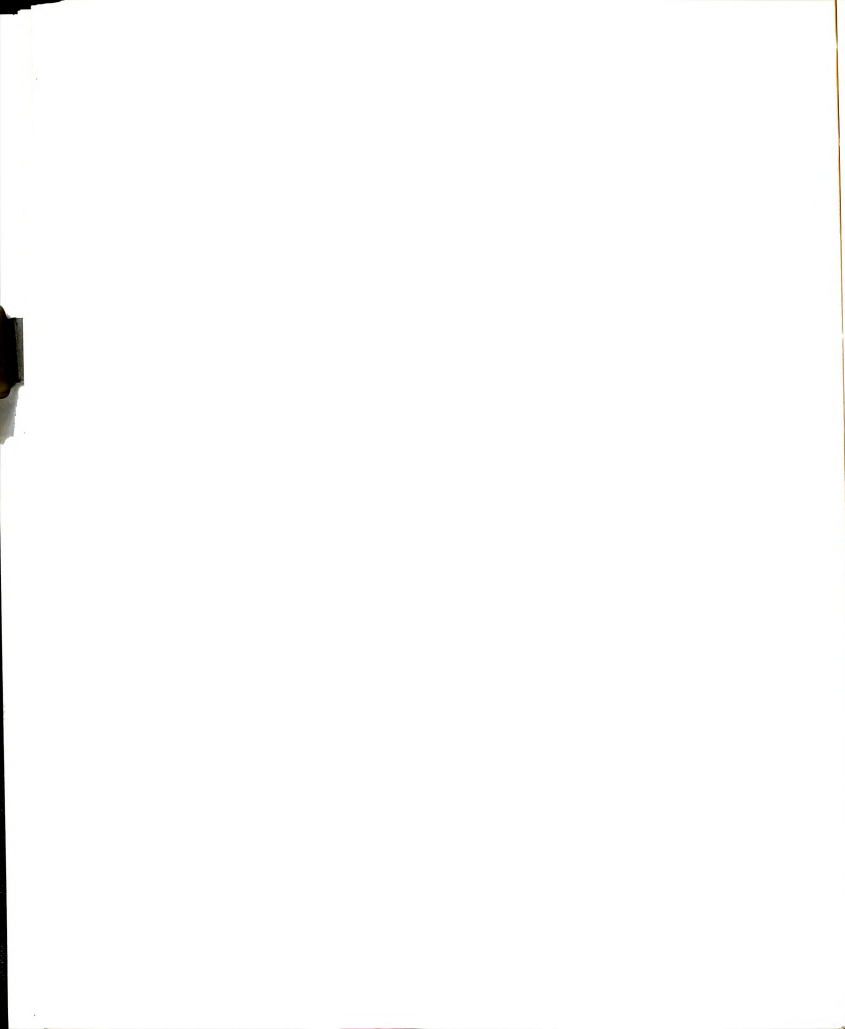
individual's personal definition of competency and in part by the implications of success on the task for gratification of the individual's interpersonal needs. It was pointed out that individuals may be disposed to value both components equally or may value one component more than the other. For the high fear of failure individual, the social consequences component of incentive value, we believe, has greater weight than the competency component. For the high n Achievement individual, we believe, the competency component of incentive value has greater weight than the social consequences component. The establishment and maintenance of a sense of personal competency is a primary goal for the high n Achievement individual and a secondary goal of the high fear of failure individual. The establishment and maintenance of a comfortable interpersonal environment is a primary goal of the high fear of failure individual and a secondary goal of the high n Achievement individual. Furthermore, we suggest that while the high n Achievement individual attempts to maximize social acceptance, the high fear of failure individual attempts to minimize social rejection.

This view of n Achievement and fear of failure differs from the traditional conceptions chiefly in its basis upon the social consequences of behavior. Achievement has been defined by McClelland, Atkinson,

tal., as a tendency to compare one's performance against a standard of excellence. Although this standard of excellence has theoretically been assumed to be objective, operationally it contains an element of social comparison. In their scoring manual for the achievement test, McClelland, Atkinson, Clark, and Lowell state, "Competition with a standard of excellence is perhaps most clear when one of the characters is engaged in competitive activity (other than pure aggression) where winning or doing as well or better than someone else is the primary concern (1953, p. 111)." Clearly, when the goal of performance is defined vis a vis another person, the purpose of activity is to enhance feelings of competency while increasing social esteem.

Like Achievement, fear of failure has not been theoretically defined as having a social comparison component, but the method by which it is assessed indirectly measures the extent to which an individual anticipates social rejection for failing at school. Traditionally, fear of failure has been assessed through a measure of test anxiety; i.e., the amount of anxiety admitted by subjects in a situation which has implications both for their personal sense of competency and for their social acceptance. Little attention has been devoted to the notion that felt anxiety may be irrational fear. Rational fears of failure in school can be accommodated either





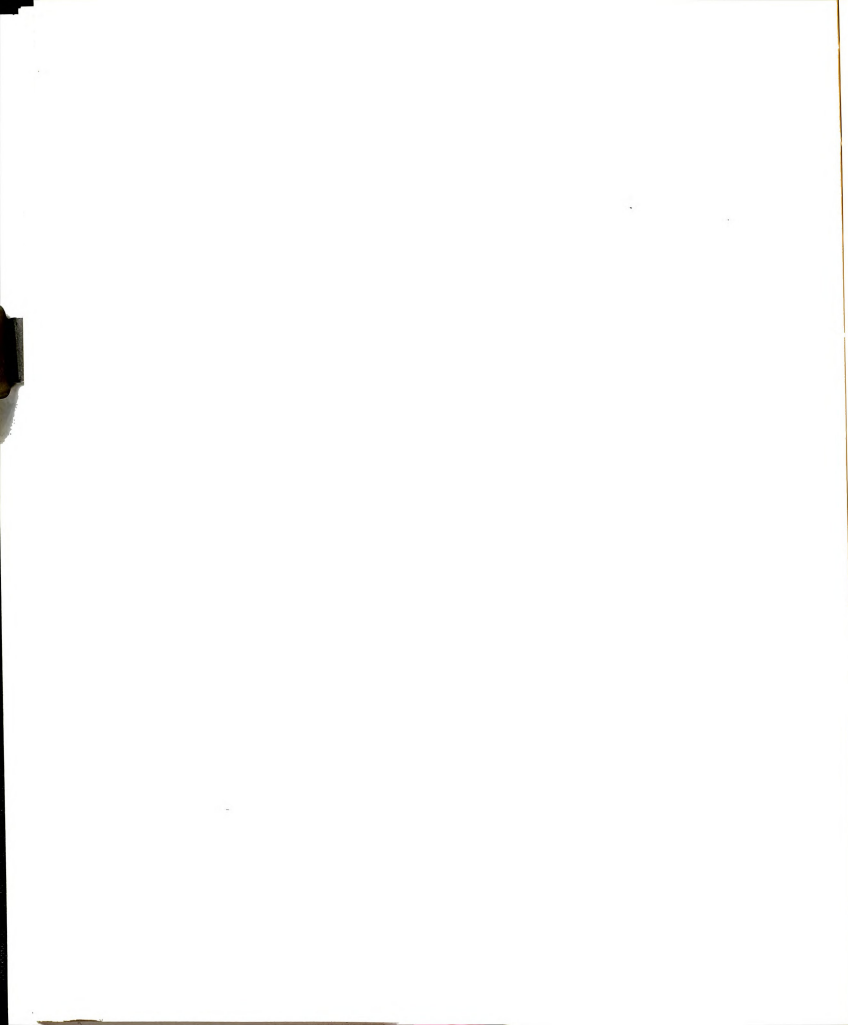
ough studying more (fighting) or lowering aspirations (flight). If an individual experiences a high level of test anxiety, it can be assumed that either his fears are irrational (not subject to modification by studying or lowering aspirations) or he is somehow constrained from taking adjustive action. For example, the college student who continually experiences a high level of test anxiety is prevented from avoiding the anxiety-provoking situation by his own desire to get a college degree. Even if he thinks he does not have the ability to successfully complete his program, he may persist because he wishes to please his parents or because a degree is necessary for the type of employment he desires. If an individual has an irrational fear of failure on school tests, i.e., one not justified by lack of preparation or inability, it can be assumed that he is somehow prevented from lowering his level of aspiration. It is clear that the social consequences of lowered aspirations most often prevent the high test anxiety individual from taking proper adjustive action.

Thus, it appears that operationally both achievement and fear of failure contain a social comparison component and that this component is greater in fear of failure than in achievement. It is also possible to conclude that the assessment method for achievement is sensitive to the tendency to maximize



ial acceptance through successful competition, while test anxiety assessment method for fear of failure sensitive to the tendency to minimize social rejection failure in school. The hostile press scoring system d in this study is sensitive to the tendency of the individual to anticipate social rejection.

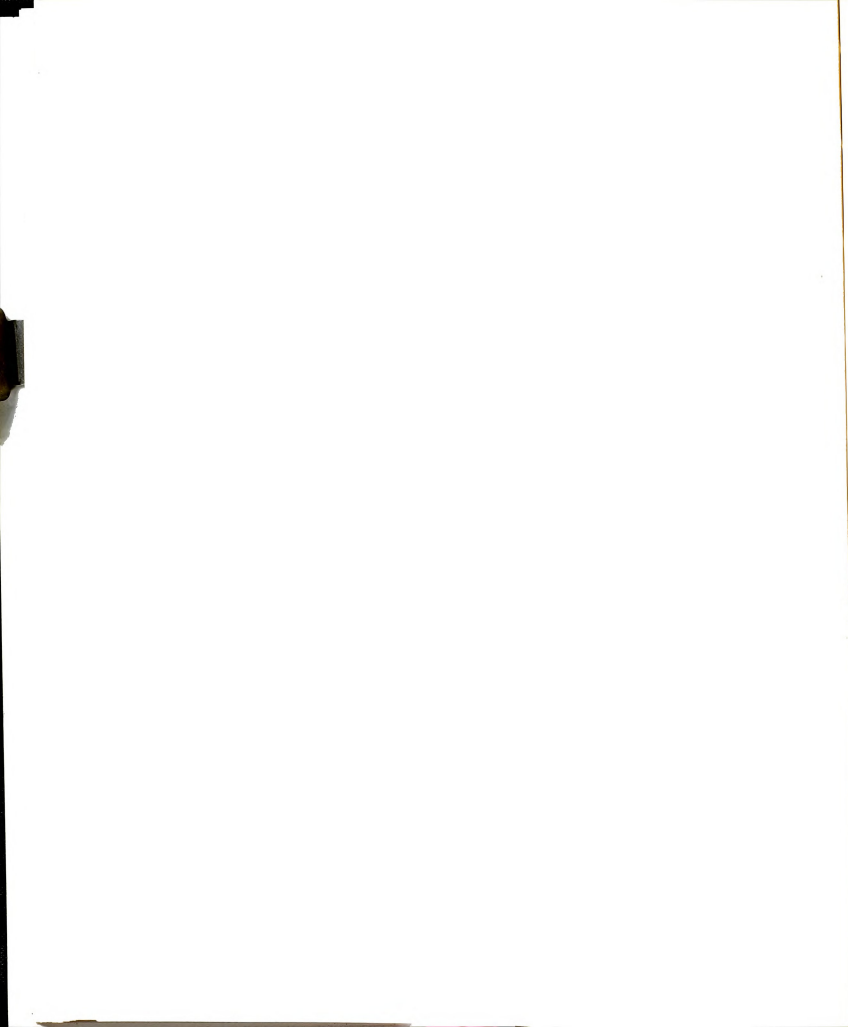
De Charms (1968) suggests that high fear of failure individuals may focus on the realistic obstacles difficulties in performance as a means of minimizing failures. We would like to expand this idea. High fear Failure individuals, we believe, are characterized by conservative strategy designed to minimize their losses social esteem. They avoid reasonable challenges, while the same time they maintain their personal sense of competence through a consistent pattern of success at tasks. This pattern is suggested by the reinforcement history of high fear of failure subjects found by an and McGhee (1972). The mothers of male high school students who had high levels of hostile press very tended to ignore successes and punish failures. The success at challenging tasks is likely to raise the performance expectations of socially reinforcing agents (mothers, fathers, teachers, etc.), the best strategy for an individual in this situation is to attempt only tasks on which success is likely. An alternate possibility is to attempt tasks on which failure is virtually



tain so that merely attempting the task is viewed as  
 itorious and failure is not punished. If the indi-  
 vidual is successful on an extremely difficult task, he  
 verbally attribute his performance to luck or suggest  
 the task was easier than he expected while silently  
 enjoying his increased feeling of personal competence.

Because the high fear of failure individual seeks  
 to avoid losses of social esteem, he must be especially  
 sensitive to the social consequences of his behavior.  
 If the positive consequences of success and the nega-  
 tive consequences of failure are greater than the nega-  
 tive consequences of success and the positive conse-  
 quences of failure, his performance will be facilitated.  
 If the negative consequences of success and the positive  
 consequences of failure are greater than the positive  
 consequences of success and the negative consequences of  
 failure, his performance will be inhibited.

Success on a particular task can have positive  
 social consequences if it confirms or raises the social  
 esteem of an individual and negative social consequences  
 if it implies deviation from normative behavior. For  
 example, an overwhelming victory at chess has positive  
 social consequences for the individual if he is partici-  
 pating in an international competition but has negative  
 social consequences for him if his opponent is a young  
 novice playing his first game of chess. The



conservative strategy adopted by fear of failure individuals allots success a positive value if it confirms other's expectations but not if it exceeds these expectations because such success will increase the expectations others have of his performance. Failure, also, may have positive social consequences if it is consistent with other's expectations and negative social consequences if it falls short of expectation. For example, an exceptionally bright child is likely to be better liked by his peer group if he sometimes fails, but the same individual will experience social rejection if he fails an important assignment as an adult. The performance of a high fear of failure individual, therefore, will be facilitated when success is expected and failure is strongly aversive. On the other hand, performance will be inhibited if success is unexpected and failure consistent with expectation.

This model can explain the behavior of the fear of failure subjects in this experiment. For the career-oriented subjects taking the career test, the positive consequences of success and the negative consequences of failure outweighed the negative consequences of success and the positive consequences of failure. One of the filler items in the Personal Characteristics Questionnaire asked the subjects to guess their parent's reaction should they drop out of college to get married.





career-oriented subjects with high fear of failure reported the highest mean level of disturbance (4.29), while homemaking-oriented subjects with high fear of failure reported the lowest mean level of disturbance (3.16). Failure on the career task was, therefore, probably viewed as more socially aversive to the career-oriented fear of failure subjects than it was to the homemaking-oriented fear of failure subjects. Furthermore, as indicated by their questionnaire answers success at a career was more important to career-oriented subjects than it was to homemaking-oriented subjects. Finally, the career-oriented subjects plan to have a career, while the homemaking-oriented subjects do not. To maintain social esteem, the career-oriented fear of failure subjects had to perform well on the career task; thus, in fact, is what they did.

The homemaking-oriented fear of failure subjects, who do not accept the traditional female role, probably perceive success at a career as interfering with their primary goal of acquiring a husband. Success at a career is probably viewed by these subjects as more difficult than success as a homemaker; certainly this is the view of most of our society. It seems likely that the choice of a homemaking orientation by a fear of failure individual (as will be explained in the section on level of aspiration) is part of a strategy of aiming low. These



Subjects would probably view success on a test of career ability as success at an appropriately challenging task. If the subjects were successful at this task, they might imagine that their teachers, friends, and boyfriends would expect a higher level of performance than the subjects felt they could easily produce. Clearly success on a test of career ability had strongly aversive social consequences for the homemaking-oriented subjects with fear of failure, while failure on the career test was not as aversive to the homemaking-oriented subjects as it was to the career-oriented subjects. It is entirely possible that the fear of failure subjects with a homemaking orientation displayed a relative decrement in performance when the task was described as a test of career ability.

When the task was described as a test of homemaking ability, the performance of fear of failure Ss was uniformly facilitated. Failure on a test of homemaking ability could have strongly aversive social consequences for these subjects. Unfortunately, the subjects were not able to estimate their parents' disturbance should they fail to marry. It seems reasonable to assume that nearly all of the subjects' parents would be disturbed if their daughters failed to marry, since marriage is normative for women in this culture. Ninety-three point five percent of the adult women living in the United States in



972 had been married at some time during their lives (U.S. Bureau of the Census, 1973). Furthermore, only four out of our 100 subjects do not plan to be married 5 years from now. Failure on this task would have been aversive to our subjects not only because women are expected to succeed as homemakers but also because it would have implied that the subjects were unable to perform well in comparison to a group of women who did not attend college. It is, therefore, consistent with our expectations that the performance of subjects with high levels of fear of failure was facilitated on the homemaking task.

#### Preference for Task Difficulty

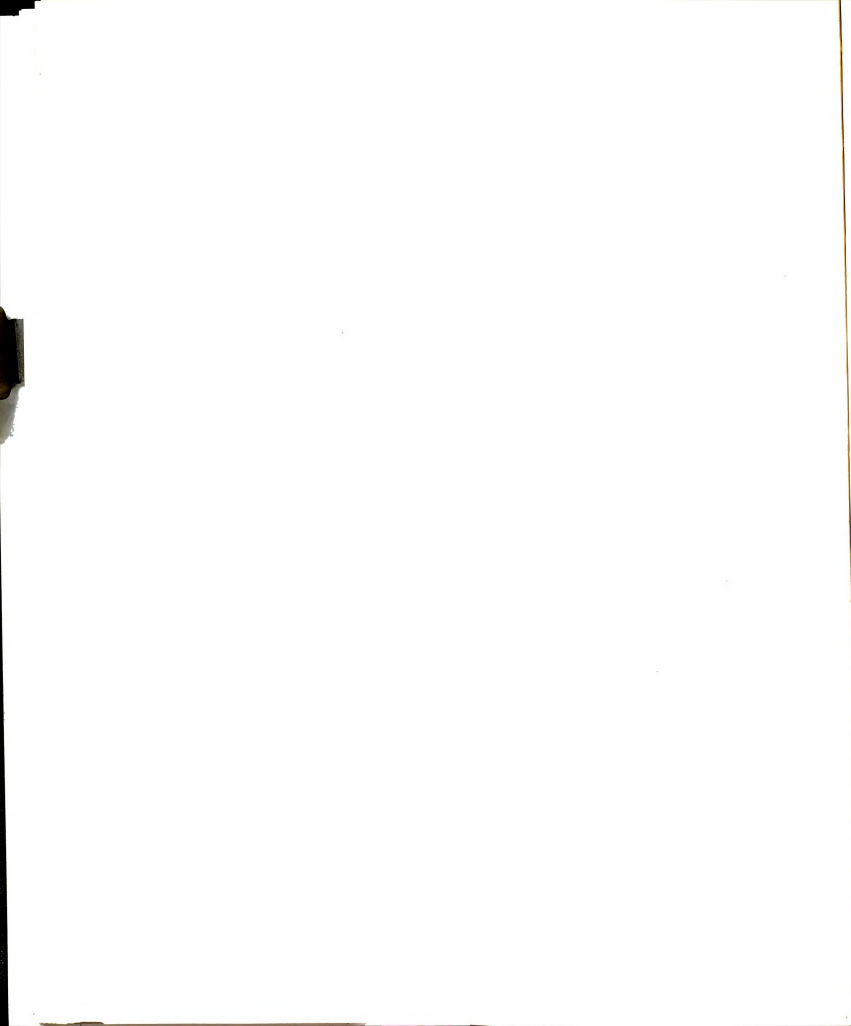
Five measures of level of aspiration were included in this study. The first of these questions asked the subjects their general preference for probability of success. Hypotheses 4 and 5 predicted that subjects with low fear of failure would prefer intermediate probability of success (30-70%), while subjects with high fear of failure would prefer extreme probability of success (0-29% and 71-100%). Neither of these hypotheses was confirmed; there was no difference between the probability preferences of subjects with high and low levels of fear of failure in terms of preference for intermediate and extreme probabilities of success ( $\chi^2 = .503$ ,  $p < .5$ ). A one-way analysis of variance examining sex role orientation



as well as fear of failure (see Table 13) also failed to produce significant effects. Perhaps the question was too vague to arouse the defensive operations of the fear of failure subjects. Another possibility is that the question, which is somewhat confusing, could have been interpreted by some subjects as asking for difficulty level ( $1-P_g$ ) and as asking for probability of success ( $P_g$ ) by others. If this were the case, we would expect a bi-modal distribution, but the combined distribution was a single mode at  $80\% P_g$ . It remains unclear why these groups were not significantly different. Perhaps the subjects misunderstood the question.

A more difficult result to explain is the mean level of 68.524. In the research literature on males, median level of aspiration is usually about .7; this is equivalent to a  $P_g$  of .3. Median level of  $P_g$  in this study was .80. These subjects apparently prefer tasks which success is highly likely. To the author's knowledge only in Horner's (1968) study have female subjects been asked to indicate their preference for task difficulty. In that experiment subjects serving the noncompetitive condition were asked to select one task from a group of seven specially selected tasks ranging in difficulty from very easy to very difficult. The median choice was task No. 5 ( $P_g$  about .29), and the mean was 4.63; this result is consistent with the male





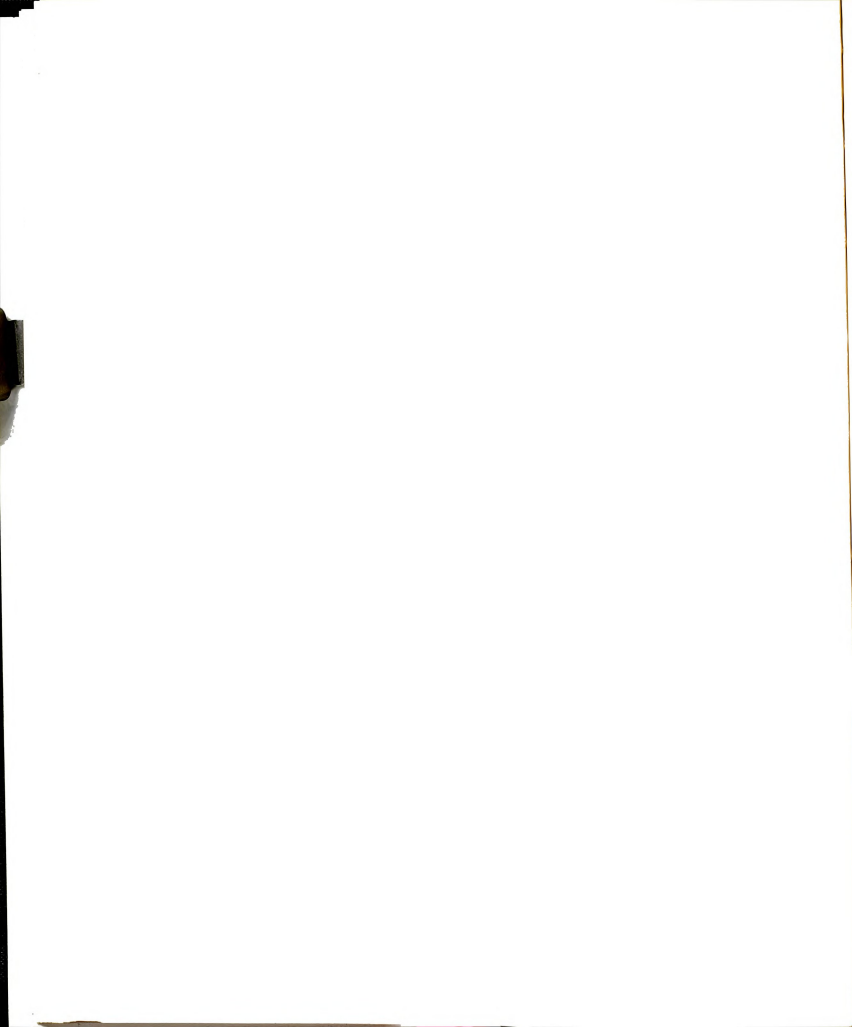
findings. The Horner study was conducted at the University of Michigan, which has a student body quite similar to that at M.S.U., so it seems likely that the Ss in the present study misread the question as asking for difficulty level. There is, however, another possibility. Horner's study and all the other level of aspiration (LA) studies reviewed by the author asked for difficulty preference in connection with a specific experimental task. In the present study subjects were asked to indicate their general preference for task difficulty. Raynor (1969) suggests that subjects may be highly motivated to succeed on tasks with high  $P_g$  if success on the task is perceived as instrumental to achievement of an important future goal. Since a probability preference question identical to the one used in this study has not previously been used, it is impossible to know whether this result is anomalous because the subjects misinterpreted the question or deviated from the norm or whether this finding is consistent with normative behavior.

#### Level of Aspiration

After receiving the task and condition instructions, subjects were asked to indicate the percentile in which they would try to have their performance fall. Hypotheses 6 and 7 predicted that in the congruent condition subjects with low fear of failure would have significant preference for intermediate levels of



aspiration (30th-70th percentiles), while subjects with high fear of failure would have a significant preference for extreme levels of aspiration (0-29th and 71-100th percentiles). These hypotheses were not confirmed because all but five SS aspired to what was defined as an extreme level of aspiration; the mean LA was 93.163. Hypothesis 8 was also not confirmed; on the congruent task career-oriented women with fear of failure did not aspire significantly higher than career-oriented women without fear of failure, but the trend was in the predicted direction. There was a significant ( $p < .041$ ) sex role by fear of failure interaction which appeared on analysis of variance (see Table 3). Relative to the whole group, fear of failure subjects with a career orientation aspired high ( $\bar{X} = 97.778$ ), while fear of failure subjects with a homemaking orientation aspired low ( $\bar{X} = 87.229$ ). The aspiration levels of subjects without fear of failure were intermediate (career  $\bar{X} = 93.910$ , homemaking  $\bar{X} = 93.736$ ). The difference between the levels of aspiration for the fear of failure subjects was significant ( $t = 2.2979$ ,  $df = 48$ ) beyond the .05 level using a two-tailed test of significance. It has consistently been reported in the literature on males (Arney, Burdick, & Teevan, 1969; Atkinson & Feather, 1966; Heckhausen, 1967) that individuals with high fear of failure tend to set their levels of aspiration either



extremely high or extremely low relative to the LA's of low fear of failure subjects. The present results suggest that this finding holds true for females.

Within this college population it appears that the defensive strategy of aiming high is preferred by women with a career orientation. Fear of failure subjects with a career orientation have a significant preference for aspiration to an extremely high level of performance ( $X^2 = 7.12, p < .01$ ). Fear of failure subjects with a homemaking orientation have no differential preference for defensive strategy ( $X^2 = .03, p < .90$ ). In other words, career-oriented fear of failure subjects have a significant preference for aiming high, while homemaking-oriented fear of failure subjects have an equal preference for high and low levels of aspiration. Among fear of failure subjects, those with a preference for the strategy of aiming low have a significant tendency to be classified as homemaking oriented ( $X^2 = 7.12, p < .01$ ). There was no opposite tendency for fear of failure ss who aim high to be career oriented ( $X^2 = .13, p < .80$ ). In other words, those fear of failure subjects who prefer low levels of aspiration tend to have a homemaking orientation, but the fear of failure ss who prefer high levels of aspiration were equally divided by sex role orientation. There were no significant differences in strategy or sex role assignment among



subjects without fear of failure. It appears that fear of failure subjects who have a consistently low level of aspiration tend to have a homemaking orientation. From a common sense point of view, this finding is reasonable because being a homemaker is usually perceived as easier than having a career; it is also the role least susceptible to social criticism.

It appears that selection of a career orientation by fear of failure subjects is independent of level of aspiration. Perhaps this result is a function of the harsh criteria used for identification as a career-oriented subject in this study. Remember that having a career was significantly more important than having a marriage and a family for our Ss in general. It was found that career-oriented Ss had a significant preference for high levels of aspiration. Had the sample been less restricted, it would probably have been found that fear of failure Ss who prefer high levels of aspiration tend to be career oriented, while fear of failure Ss who prefer low levels of aspiration tend to have a homemaking orientation.

While fear of failure subjects were significantly ( $\chi^2 = 4.08, p < .05$ ) more likely to be classified as having a homemaking orientation than as having a career orientation, there was no comparable trend for subjects without fear of failure ( $\chi^2 = .08, p < .80$ ). The finding





that the majority of fear of failure subjects select a homemaking orientation is consistent with our theory that fear of failure is a strategy designed to minimize social rejection; women are more likely to be viewed as socially deviant if they enter a career than if they become homemakers. Why do some fear of failure subjects prefer the strategy of aiming high? Actually this question (and the whole preceding discussion) assumes that individuals have a consistent preference for one defensive strategy; this assumption has never been tested experimentally. Should this be the case, however, it is possible that accelerated parental demands for independent behavior, a variable found by Teevan and McGhee (1972) to be significantly related to hostile press imagery, may be responsible. Some parents may not only have unrealistically high expectations for their children but may also punish their children if they do not attempt to satisfy these expectations. These parents might punish their child for low aspirations but not punish them if they fail to achieve the unreasonable high level of aspiration. An individual growing up under such a reinforcement system would continuously set his level of aspiration extremely high. Like the individual who prefers the strategy of aiming low, he would seek to avoid unexpected successes and tasks which constitute reasonable challenges because such successes might raise the expectations of the reinforcing agent.



There are three other levels of aspiration findings worthy of discussion. There was a significant ( $p < .05$ ) sex role effect for level of aspiration; career-oriented subjects aspired higher than subjects with a homemaking orientation. As previously suggested, if a woman plans to have a career, she is in a sense setting a high level of aspiration because of the obstacles which society sets in the path to her success. This explanation, alone, may be responsible for the sex role effect. On the other hand, the scrambled words task was perceived as a better test ( $p < .059$ ) when it was described as a test of career ability than when it was described as a test of homemaking ability; it may have been generally perceived as more related to success in a career than to success as a homemaker. Greater ego involvement on the part of the career-oriented subjects may have been responsible for this sex role effect. The task convenience variable probably failed to achieve conventional levels of significance ( $p < .062$ ) because the experimental populations were poorly accepted by the subjects.

Finally, the unusually high mean level of aspiration (93.163) requires explanation. The research literature on men and the results of Horner's (1968) study suggest that a level of aspiration of about 70-75% difficulty is typical of most subjects. In this study subjects were asked to indicate their level of aspiration



before they had any experience with the task and without reference to a specific group. Without such specific information, perhaps the subjects guessed that they would perform as well as they had previously on standardized tests of verbal ability. Cass and Birnbaum (1972) report the mean SAT verbal score for M.S.U. students to be 550; we might expect the scores of women alone to be slightly higher. The College Entrance Examination Board (1963) indicates that a verbal score of 550 is equivalent to placement at the 90th percentile for all female high school seniors. Our mean level of aspiration of 93.163, therefore, is consistent with the subjects' general level of verbal ability relative to all high school seniors.

#### Level of Expectation

Level of expectation is different from level of aspiration in that it reflects the subject's realistic estimate of her performance. As such, it is an indirect measure of subjective probability of success. Analysis of the level of expectation data (see Table 18) produced only one significant effect. Career-oriented subjects expected to perform significantly ( $p < .006$ ) better than homemaking-oriented subjects. Reported high school class standing, as an indication of ability, does not seem to account for this difference. It is, however, still possible that the career-oriented subjects had greater verbal ability than the subjects with a

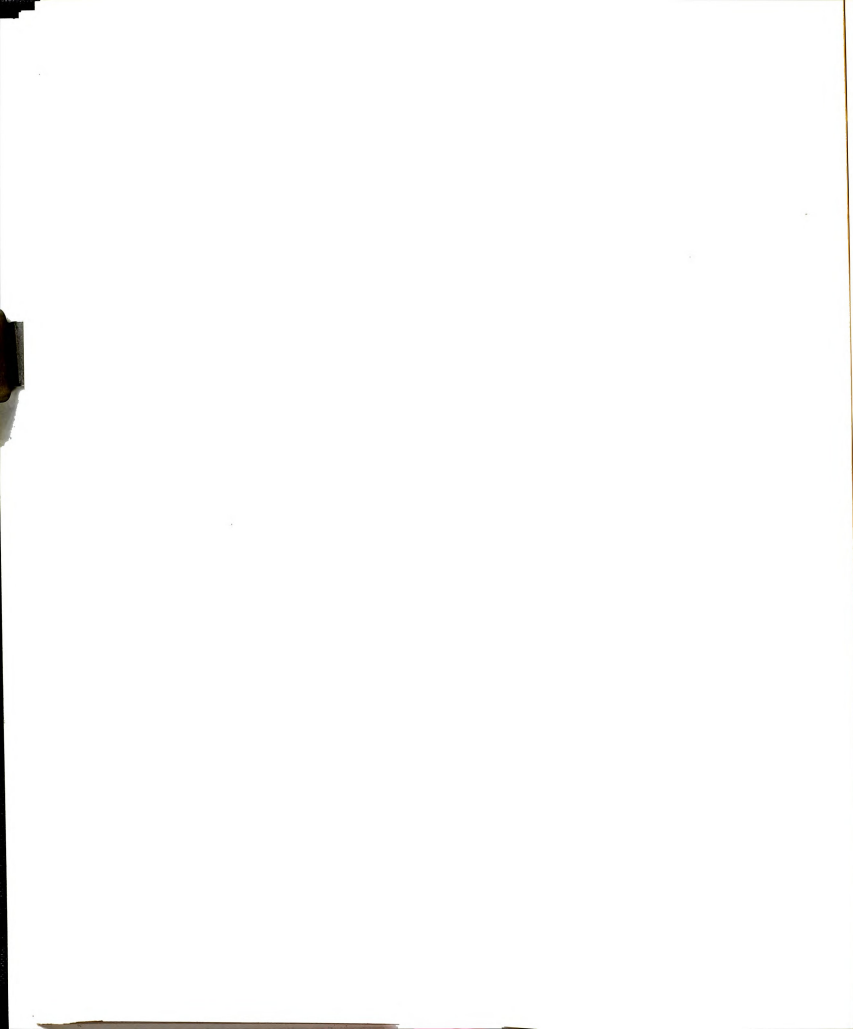


homemaking orientation. High school class standing is a function both of ability and effort. Furthermore, schools vary both in the mean ability level of their students and in the difficulty of the material taught; "A" average in one school might be equivalent to a "B" average in another. It is entirely possible, in spite of the fact that there were no significant differences in high school class standing between the two groups, that the average verbal ability of the career-oriented subjects was significantly greater than the average verbal ability of subjects with a homemaking orientation.

Another possibility is that the career-oriented subjects were more ego involved by the imaginary comparison of their performance to that of women not attending college. Since a t-test reveals that career-oriented subjects are significantly ( $t = 2.03, p < .05$ ) more certain about graduating from college than subjects with a homemaking orientation, this explanation seems supported.

There was no significant fear of failure effect at the level of expectation, but there was a tendency ( $p < .165$ ) for the expectation levels of subjects with a fear of failure to be lower than those of subjects without fear of failure. The direction of this finding is consistent with at least one published study using male subjects (Feather, 1965).





Fear of Failure vs. Fear of Success

One purpose of this experiment was to compare the hostile press scoring system for fear of failure to Horner's new (1973) scoring system for fear of success. As Table 21 indicates, significant ( $p < .001$ ) correlations were found between hostile press imagery and the categories of contingent and noncontingent negative consequences in the Horner scoring system. Since Horner has not, as yet, published this scoring system, it is possible that she has recognized the overlap between these two measures. Horner developed her new scoring system by comparing the stories of subjects who in competition demonstrated a decrement in performance to those produced by Ss who did not demonstrate a decrement. Because individuals with high levels of fear of failure tend to perform better when working alone than when working in competition (Ryan & Lakie, 1965), this procedure undoubtedly labeled high fear of failure subjects as having fear of success.

Because the leads used in this experiment did not include an instance of being successful, it is impossible to mathematically compare the hostile press imagery scores to Horner's old scoring system. Simply on the basis of content, however, they appear to have much overlap. The "negative consequences because of success" category in the fear of success scoring system is reminiscent of the hostile press of environment which



forms the basis of the hostile press scoring system. A major difference between the two systems is that while hostile press forces itself upon the protagonist, fear of success imagery may involve the protagonist's own reactions to her success.

### Fear of Failure in Women

In many ways this experiment can be regarded as an exploratory study of fear of failure in women. Because many different variables were examined, it is possible to develop a typological view of the fear of failure woman in comparison to a woman without fear of failure. The interpretations which we will make below are to be regarded as very hypothetical. Since this is the first comprehensive study of fear of failure in women, many replication studies will be required to establish the validity of these conclusions.

The woman with fear of failure appears to have less confidence in her abilities than a woman without fear of failure. Her level of expectation has a non-significant ( $p < .165$ ) tendency to be lower than that of subjects without fear of failure. Her ability estimates are lower than those of subjects without fear of failure both on a test of career ability ( $p < .109$ ) and on a test of homemaking ability ( $p < .024$ ). Her estimates of relative performance are significantly lower ( $p < .020$ ) than those of subjects without fear of failure in



spite of the fact that her performance tends ( $p < .154$ ) to be better than that of the subjects without fear of failure.

It is a mistake to lump all fear of failure women into one category because there are numerous differences between those with a career orientation and those with a homemaking orientation. Career-oriented women with fear of failure set their level of aspiration extremely high. They over-estimate the performance of others and under-estimate the relative level of their own performance. While they believe their ability to succeed at a career is above the average, they believe their ability to manage marriage and having a family is below the average. On the other hand, fear of failure subjects with a homemaking orientation set their level of aspiration extremely low. They estimate their performance, both numerically and relative to others, to be low. Although they believe their ability to succeed as a homemaker is slightly greater than their ability to succeed at a career, they believe they are above average on both abilities.

Examination of these data suggests that fear of failure subjects with a homemaking orientation have a generally low opinion of their abilities and behave in a manner designed to avoid loss of social esteem through failure. These subjects, we believe, would be labeled as having high fear of success by Horner's old (1968)



scoring system. Success on a role inappropriate task would probably be viewed by them as unlikely and not worth the risk of loss of social esteem. Although these women will most likely reduce threats to their social esteem by following the conventional female role model, they will never be as secure as their counterparts who do not possess high levels of fear of failure.

The career-oriented woman with fear of failure aspires to the role which is believed by the culture to be more difficult, but she feels that her ability to perform the traditionally female role activities is less than average. Her level of aspiration is extremely high relative to the aspiration levels of other women. She perceives others as much more capable than they actually are, and, as a result, she probably experiences constant anxiety over the possibility of social rejection and about her personal competence. Her high aspirations will force her to attempt tasks on which her chances of being successful are low. Because she misperceives the performance of others, she will strive for a standard of perfection which will make those around her uncomfortable. Finally, if she fails at her career, she will be forced into a role for which she feels inadequate, as a homemaker.

While all fear of failure women appear to lack confidence or feel inadequate, the two sex role



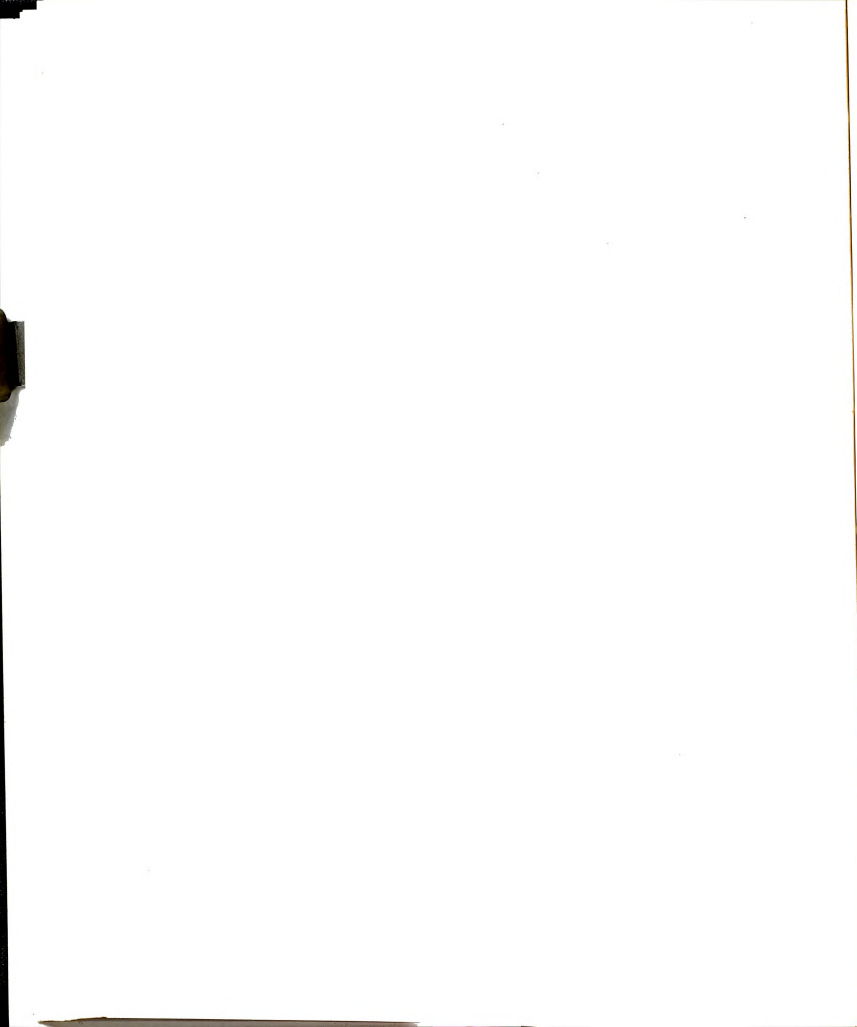


orientation groups appear to have adjusted to these feelings differently. It appears that those with a homemaking orientation view themselves as somewhat deficient in ability and, as a result, have chosen to gratify their achievement needs through social accomplishments. Those with a career orientation, on the other hand, appear to feel inadequate to fill the conventional female role but believe themselves to be capable in the traditionally masculine realm of the career. As we have previously hypothesized, it seems likely that they come from homes where the traditional female role is not valued as much as the traditional male role.

These neurotic characteristics are descriptive only of women with fear of failure. It should be pointed out that less than half of the career-oriented subjects were classified as having fear of failure. Those without fear of failure appeared to feel confident of their ability to succeed both in a career and as a homemaker.

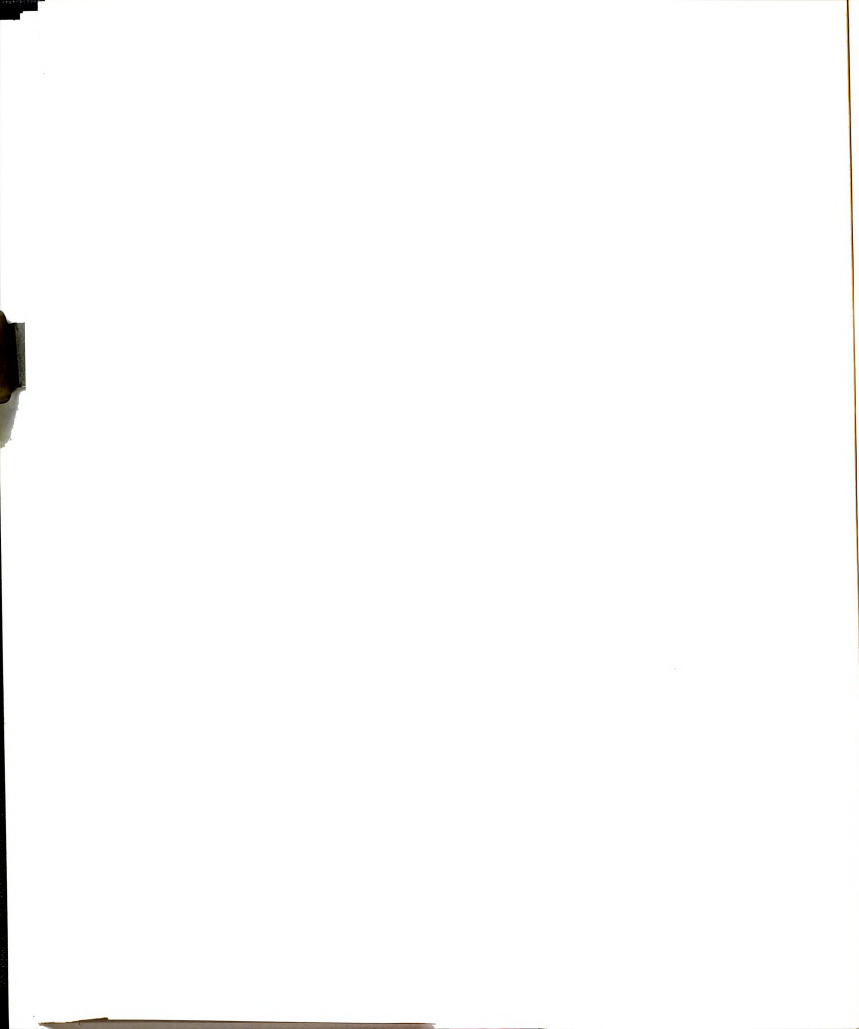
#### Fear of Failure: A Theoretical Conception

Throughout this discussion it has been asserted that fear of failure is a strategy designed to minimize social rejection. This assertion is a major deviation from the previous conceptions which have viewed it as a motive. As a motive, fear of failure has been conceived as either constantly inhibiting performance (Atkinson &



Feather, 1966) or facilitating performance up to some maximum (Birney, Burdick, & Teevan, 1969). Kukla (1972) suggests that the experimental results found in studies of fear of failure are artifacts produced by a simple difference in perceived ability level. None of these hypotheses seem adequate to account for the findings of the present study.

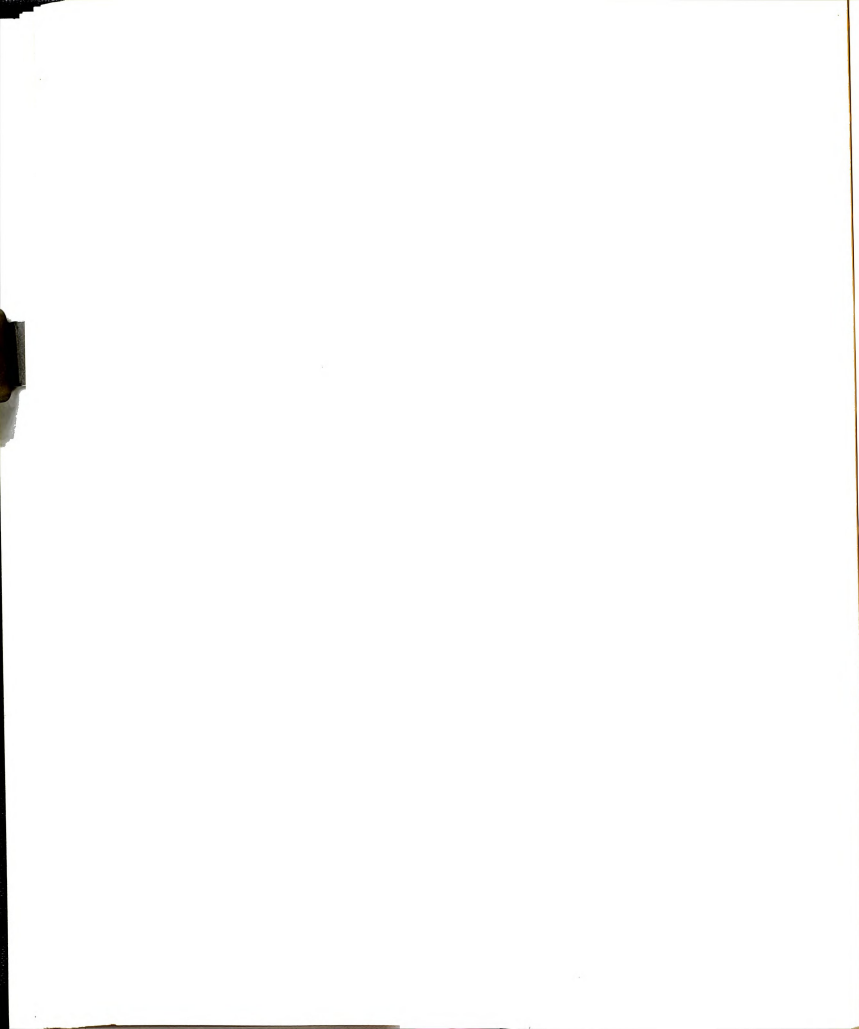
The strategy conception presented here suggests that fear of failure sometimes facilitates and sometimes inhibits performance. The function of the fear of failure strategy is to avoid social rejection while producing a low but consistent level of performance to maintain a personal sense of competence. Reasonable challenges as avoided by individuals utilizing this strategy because, as Mettee (1971) suggests, success at challenging tasks is likely to raise the level of performance expected by others. Extremely difficult tasks may be attempted as a means of demonstrating that the individual is not a coward. Failure at such tasks is likely to be acceptable to others, and success can be viewed by others as a turn of luck which does not reflect true ability while the individual secretly enjoys increased feelings of competency. These individuals should not persist in their attempts to solve an "easy" task which proves to be difficult because they expect to be rejected for their continued failure. On the other



hand, they may persist at a difficult task because success on this task can be secretly enjoyed but publicly disowned. Because the strategy aims at avoiding social rejection, the fear of failure subject will never have the self-confidence of the individual unburdened by this strategy. He cannot allow himself to attempt tasks of medium difficulty because of the risk of failing at what will appear to others as an appropriate challenge. Instead, he confines himself to easy successes which do little to increase his self-esteem. When he succeeds at a very difficult task, it is unclear to him whether his ability was responsible for his success.

What evidence is there to support this contention?

To begin with, if high fear of failure individuals seek to avoid social rejection, they should perform better when working alone than when working in competition. Ryan and Lakie (1965) found this to be the case. In Turner's (1968) experiment, male subjects with high resultant achievement motivation performed significantly better in competition than when working alone, while men with low resultant achievement motivation performed significantly better when working alone than when working in competition. Similarly, high fear of failure individuals should perform better under success feedback than under failure feedback; this finding has been well documented (Weiner, 1965; Schrauger & Rosenberg, 1970;



Karabenick & Marshall, 1974). They should exert more effort at succeeding on easy tasks than subjects without fear of failure, and they should be more concerned about obeying the letter of the law (Heckhausen, 1967). When presented with a difficult task, they should do better when the significance of failure is minimized than when it is made to seem important (Sarason, 1961).

#### Implications and Directions for Future Research

Clearly this study indicates that fear of failure is a relevant and important variable in the study of achievement behavior in women. Furthermore, it suggests that any study of the achievement behavior of women must take into account both the goals of the subject and the relevance of the experimental task to achievement of these goals. The supposedly inconsistent results in previous studies of achievement motivation in women most likely resulted from the experimenters' failure to recognize: (1) That success in a career and in leadership activities is an important goal only for some women; (2) That women who accept the conventional female role attempt to achieve excellence relative to that goal; (3) That failure in some situations can produce social rewards; and (4) That normative goals differ not only from subculture to subculture but also within the same subculture across time.





As a basically exploratory study, this dissertation is suggestive of many lines of research. The hypothesis that fear of failure is a strategy designed to minimize social rejection needs to be tested more directly. We have suggested that behavior which appears to be motivated by fear of success is actually mediated by the choice of goals incompatible with the success and/or by fear of failure; this hypothesis needs to be tested. A developmental study of career-oriented subjects with high fear of failure is needed. If, as we have hypothesized, these women grew up in families where the traditional female role was belittled, it is clear that some of the thrust of the women's liberation movement is misplaced. Women and men should be free to choose their place of work (in or out of the home) out of a sense of positive interest rather than a feeling that the alternate is undesirable.

#### Summary

This study was designed to demonstrate that the achievement behavior of women can be explained by the expectancy-value theory of achievement motivation without recourse to the concept of motive to avoid success. Predictions based upon the inhibitory model of motive to avoid failure and on previous studies relating ego involvement to performance were made about performance, level of aspiration, and level of expectation.



On the basis of their answers to three questions, female volunteers from introductory psychology classes were classified as having a career orientation, a homemaking orientation, or as being undecided about their sex role orientation. The undecided group was eliminated. Stories told to four relatively neutral sentences were scored for hostile press imagery. A median break classified subjects with any hostile press imagery as high fear of failure subjects. At a second session the 100 remaining subjects, divided into four groups on the basis of their sex role orientation and fear of failure classification, were administered a scrambled words test. Half of the subjects within each group were told that the task was a measure of homemaking ability, and half were told that the task was a measure of career ability. Before attempting the task the subjects were asked to indicate their levels of aspiration and expectation.

The level of aspiration, level of expectation, performance, and post-performance estimates of career-oriented subjects were significantly higher than those of subjects with a homemaking orientation. The task congruence variable produced significant F ratios for performance and numerical estimate of performance.

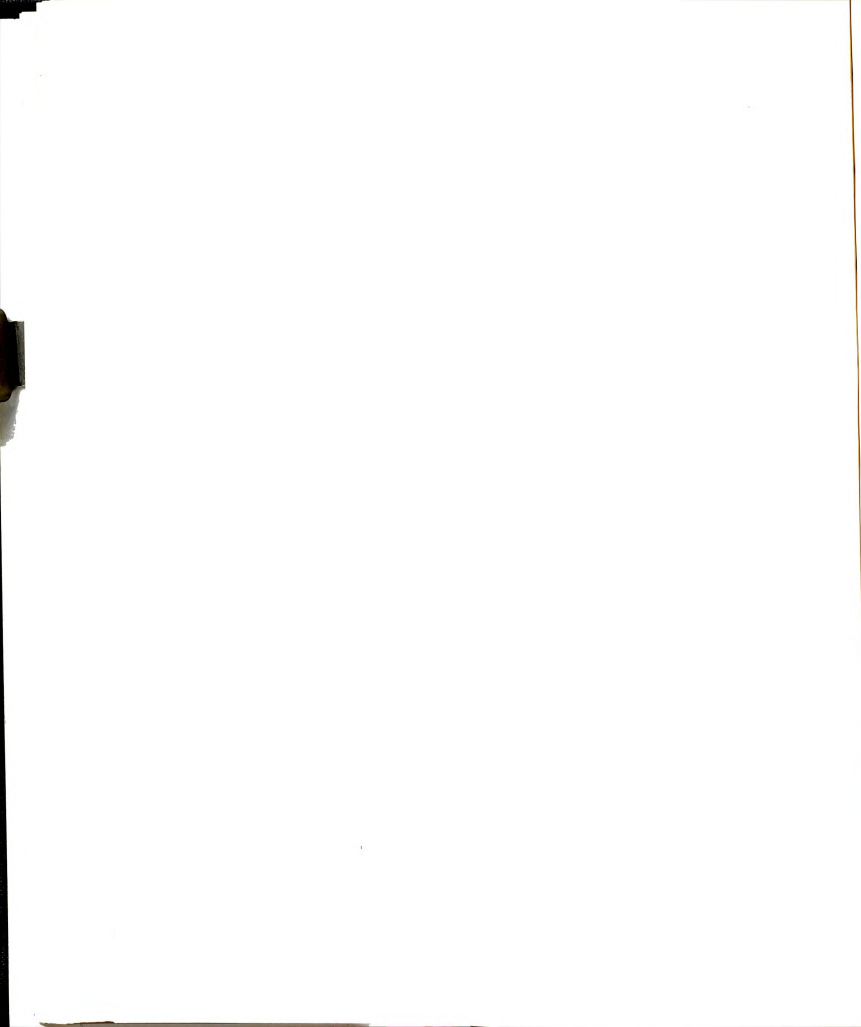
Although the fear of failure subjects had an overall nonsignificant tendency to perform better than subjects without fear of failure, their post-performance



percentile estimates had a significant tendency to be lower than those of subjects without fear of failure. When the task was described as a test of homemaking ability, subjects with fear of failure performed better than subjects without fear of failure ( $p < .051$ ).

Career-oriented subjects with fear of failure set their level of aspiration high and appeared to underestimate their own performance while over-estimating the performance of others. While they estimated that their ability to succeed at a career was well above the average, they estimated that their ability to be a homemaker was below average. Fear of failure subjects with a homemaking orientation, who were significantly more numerous than those with a career orientation, set their level of aspiration extremely low and estimated that their performance was extremely low. Relative to the other subjects, their estimates of ability on tests of career and homemaking ability were low, but there was little difference between their two ability predictions.

It is hypothesized that incentive value has both a competence and a social consequences component and that the relative weight of the social consequences component is greater for the fear of failure individual than for the individual without fear of failure. Fear of failure is conceived of as a strategy designed to minimize social rejection while maintaining a sense of personal competency.



## APPENDICES



APPENDIX A

CUE INTERPRETATIONS



## APPENDIX A

### CUE INTERPRETATIONS

#### Instructions

The following pages contain a series of verbal leads or cues. Your task will be to tell a story that is suggested to you by each cue. Try to imagine what is going on in each. Then tell what the situation is, what led up to the situation, what the people are thinking and feeling, and what they will do.

In other words, write as complete a story as you can -- a story with plot and characters.

You will have five minutes to write each story. Write your first impressions and work rapidly. I will keep time and tell you when it is time to finish your story and to get ready for the next cue.

There are no right or wrong stories or kinds of stories, so you may feel free to write whatever story is suggested to you when you look at a cue. Spelling, punctuation, and grammar are not important. What is important is to write out as fully and as quickly as possible the story that comes into your mind as you imagine what is going on in each cue.

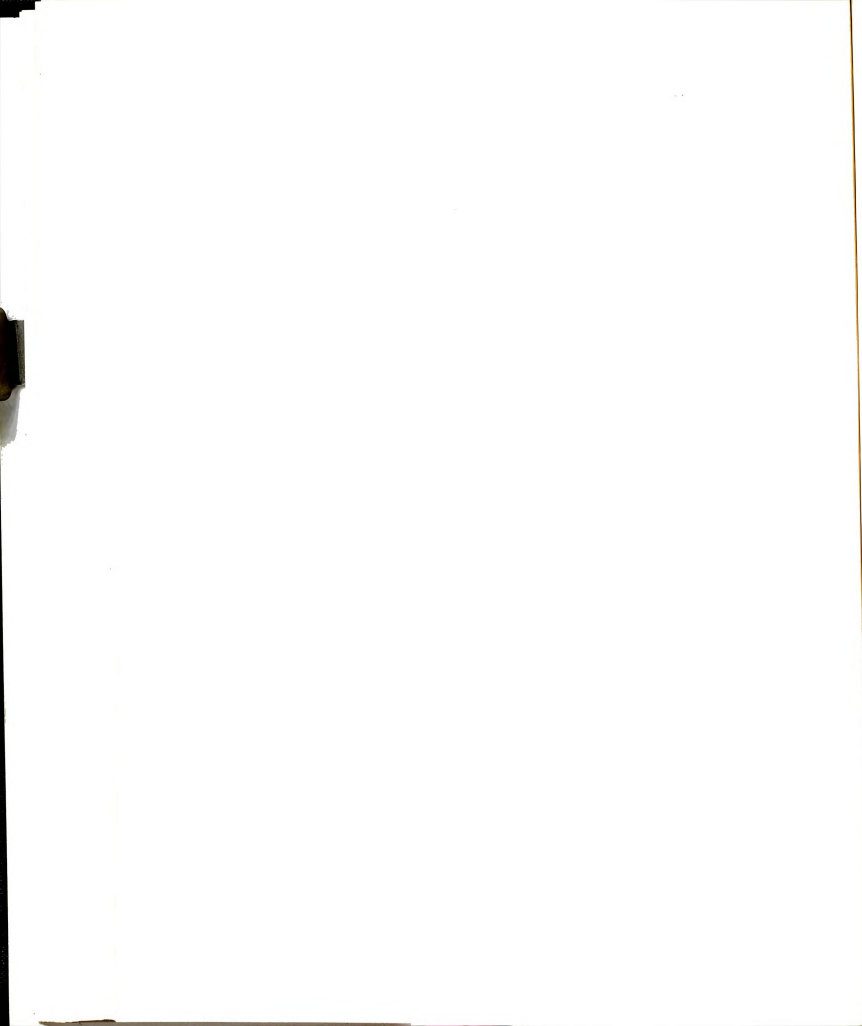
Notice that there will be one page for writing each story. If you need more space for writing any story, use the reverse side of the page. Do not turn or go on to the next page until I tell you to do so. Do not write your name or any other identifying marks on any of the pages.



Use these questions as a guide in writing your story:

1. What is happening? Who are the persons?
2. What has led up to this situation? That is, what has happened in the past?
3. What is being thought? What is wanted? By whom?
4. What will happen? What will be done?

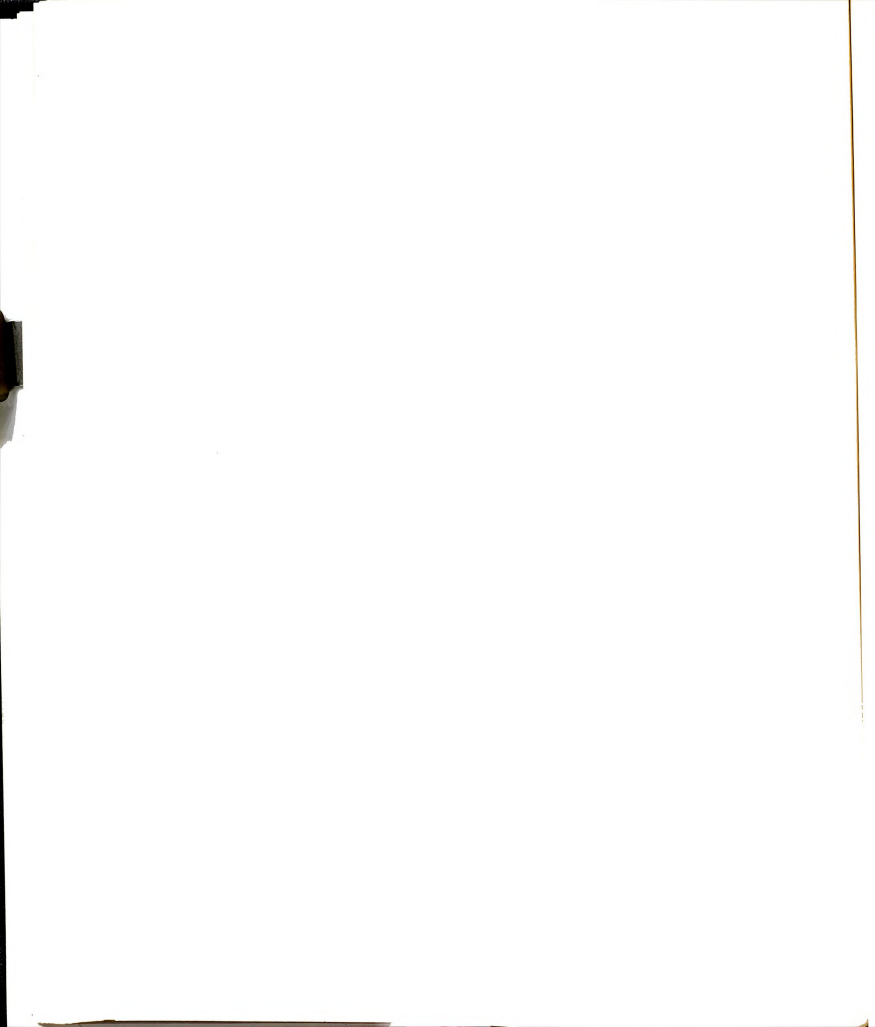
A WOMAN IS WORKING IN AN OFFICE.



Use these questions as a guide in writing your story:

1. What is happening? Who are the persons?
2. What has led up to this situation? That is, what has happened in the past?
3. What is being thought? What is wanted? By whom?
4. What will happen? What will be done?

A WOMAN HAS A SMILE ON HER FACE.

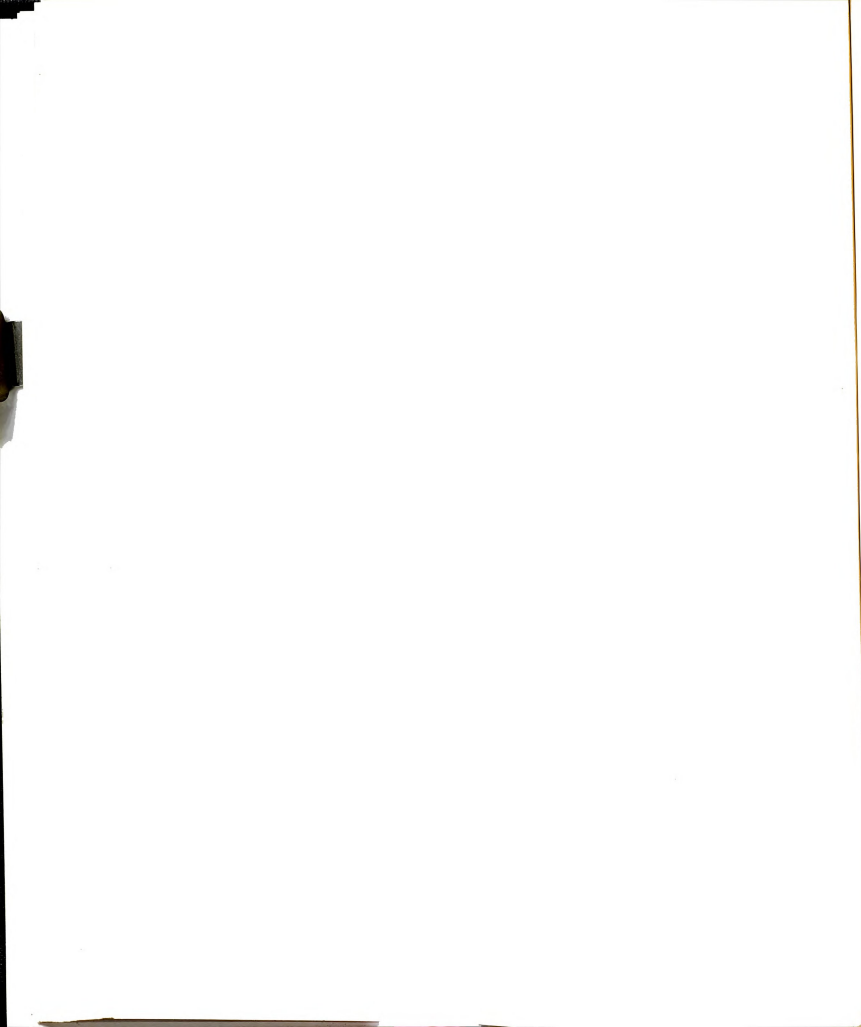




Use these questions as a guide in writing your story:

1. What is happening? Who are the persons?
2. What has led up to this situation? That is, what has happened in the past?
3. What is being thought? What is wanted? By whom?
4. What will happen? What will be done?

A WOMAN HAS A THOUGHTFUL LOOK ON HER FACE.



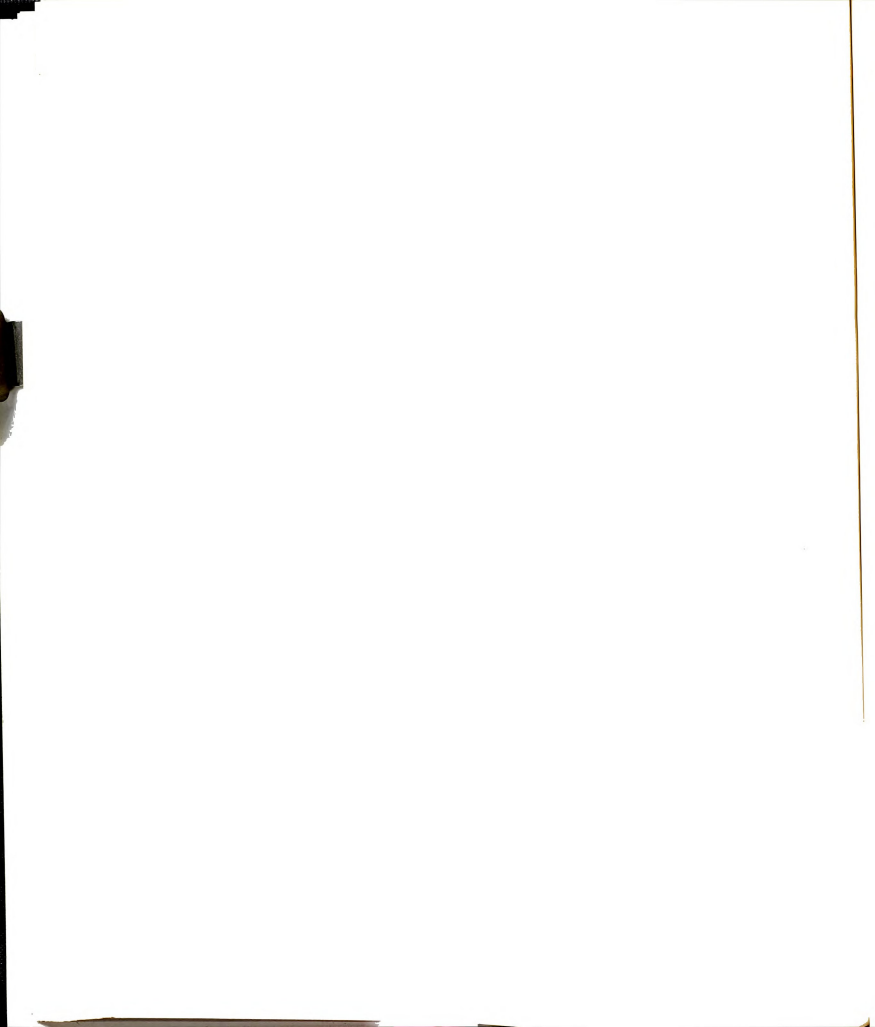
Use these questions as a guide in writing your story:

1. What is happening? Who are the persons?
2. What has led up to this situation? That is, what has happened in the past?
3. What is being thought? What is wanted? By whom?
4. What will happen? What will be done?

A WOMAN IS WORKING IN HER KITCHEN.

APPENDIX B

PERSONAL CHARACTERISTICS QUESTIONNAIRE

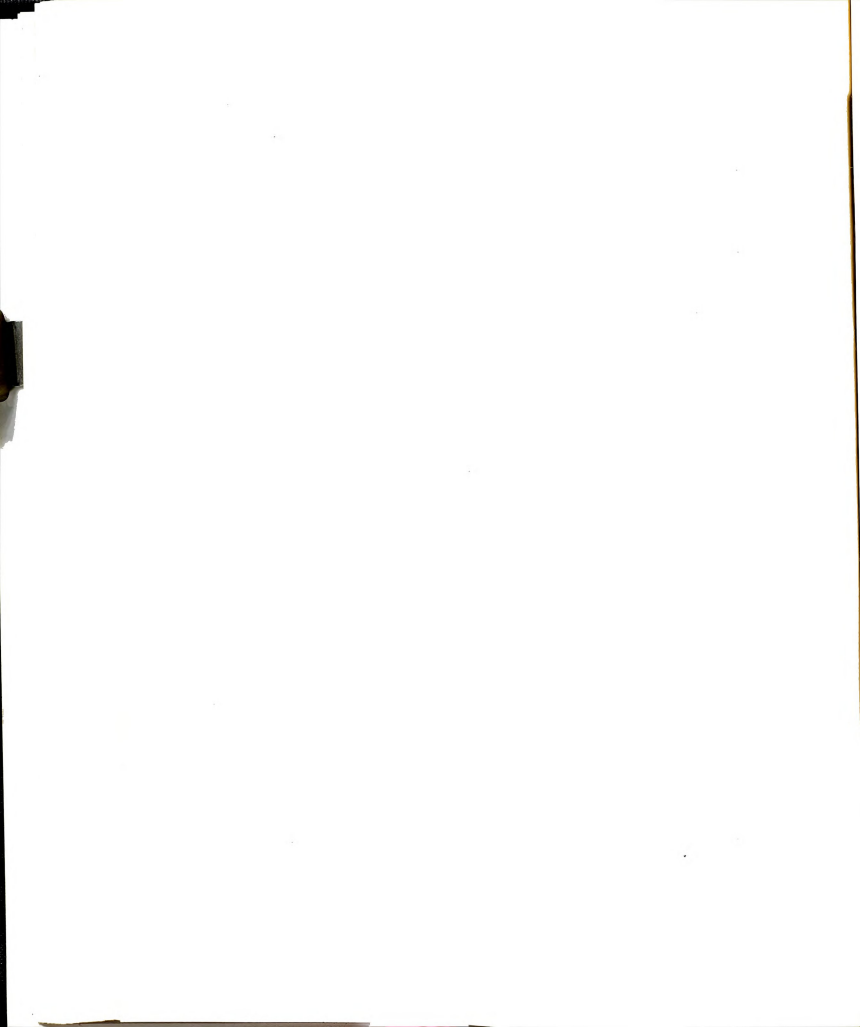


APPENDIX B

PERSONAL CHARACTERISTICS QUESTIONNAIRE

1. Name \_\_\_\_\_
2. Age \_\_\_\_\_
3. Year in school \_\_\_\_\_
4. Major \_\_\_\_\_
5. At what age did you decide that you wanted to attend college?  
\_\_\_\_\_
6. Do you plan to graduate?
  - a. Definitely yes
  - b. Probably yes
  - c. Undecided
  - d. Probably no
  - e. Definitely no
7. How important do you feel that a professional career of your own is?
  - a. Important
  - b. Probably important
  - c. Undecided
  - d. Probably unimportant
  - e. Unimportant
8. Race \_\_\_\_\_
9. In what country did you grow up? \_\_\_\_\_
10. Population of the general community in which you grew up.
  - a. Over 1 million
  - b. 500,000 - 1,000,000
  - c. 100,000 - 500,000
  - d. 25,000 - 100,000
  - e. Under 25,000
11. Marital status
  - a. Single
  - b. Engaged
  - c. Married
  - d. Separated or Divorced
  - e. Widow

12. When do you expect to get married? If already married, answer for when you had expected to marry.
- Age 18 or before
  - Age 18-21
  - Age 21-26
  - Age 26-30
  - Age 30 or older
13. If you could have only a career or only marriage, which do you think you would choose?
- Definitely career without marriage
  - Would probably prefer career rather than marriage
  - Undecided
  - Would probably prefer marriage without career
  - Definitely marriage without career
14. Children
- None
  - 1
  - 2
  - 3
  - 4 or more
15. Would you want to work under the following conditions?
- One child of school age, husband's salary adequate
    - Definitely yes
    - Probably yes
    - Undecided
    - Probably not
    - Definitely not
  - Two or more children of school age, husband's salary adequate
    - Definitely yes
    - Probably yes
    - Undecided
    - Probably not
    - Definitely not
16. Live
- In dorm
  - With roommate(s) in apartment
  - With husband
  - With parent(s)
  - In sorority or communal house
  - Alone
17. If not married or engaged, do you
- Have a steady boyfriend
  - Date several different men
  - Date sometimes
  - Seldom go out with men except in a group
  - Prefer not to date men





18. How important do you feel that marriage and a family are to you?
- a. Important
  - b. Probably important
  - c. Undecided
  - d. Probably unimportant
  - e. Unimportant
19. Father's occupation \_\_\_\_\_
20. Mother's occupation \_\_\_\_\_
21. Father's education \_\_\_\_\_
22. Mother's education \_\_\_\_\_
23. How do you think your parents would feel if you stopped going to college (temporarily or permanently) in order to get married?
- a. Extremely disappointed, worried, or disapproving
  - b. Somewhat disappointed, worried, or disapproving
  - c. No effect
  - d. Somewhat relieved, pleased, approving
  - e. Extremely relieved, pleased, approving
24. Number of brothers and sisters \_\_\_\_\_
25. Position in family
- a. Only child
  - b. Oldest
  - c. Middle child
  - d. Youngest
  - e. Other \_\_\_\_\_
26. Sex of next older sibling
- a. None
  - b. Male
  - c. Female
27. Sex of next younger sibling
- a. None
  - b. Male
  - c. Female
28. How many of your brothers and sisters have gone, are going, or plan to go to college? \_\_\_\_\_
29. I was most strongly urged to go to college by
- a. My mother
  - b. My father
  - c. Sisters or brothers
  - d. Other relatives
  - e. Teachers
  - f. Friends
  - g. No one

30. Fifteen years from now would you like to be
- A housewife with no children
  - A housewife with one or more children
  - An unmarried career woman
  - A married career woman without children
  - A married career woman with children
  - Other \_\_\_\_\_

31. Parents' religion \_\_\_\_\_

32. Your religion \_\_\_\_\_

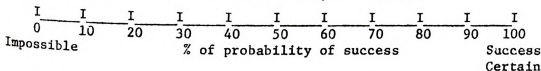
33. What effect did your religious education have on your choice to attend college?
- Extremely strong influence
  - Moderately strong influence
  - Some influence
  - Little influence
  - No influence at all

34. High school class standing
- Top 10%
  - Top quartile
  - Second quartile
  - Third quartile
  - Fourth quartile

35. Assume that you are trained for the occupation of your choice, that you will marry and have children, and that your husband will earn enough so that you will never have to work unless you want to. Under these conditions, which of the following would you prefer?
- To participate in clubs or volunteer work
  - To spend time on hobbies, sports, or other activities
  - To work part-time in your chosen occupation
  - To work full-time in your chosen occupation
  - To concentrate on home and family
  - Other \_\_\_\_\_

36. People differ in terms of how difficult they like tasks to be, whether academic, sports, hobby tasks, etc. Sometimes people think of task difficulty in terms of their estimated probability of success. In general, how difficult do you like tasks to be, that is, what is your general estimated probability of success on the kinds of tasks you most prefer?

(Circle the "I" mark closest to your choice).

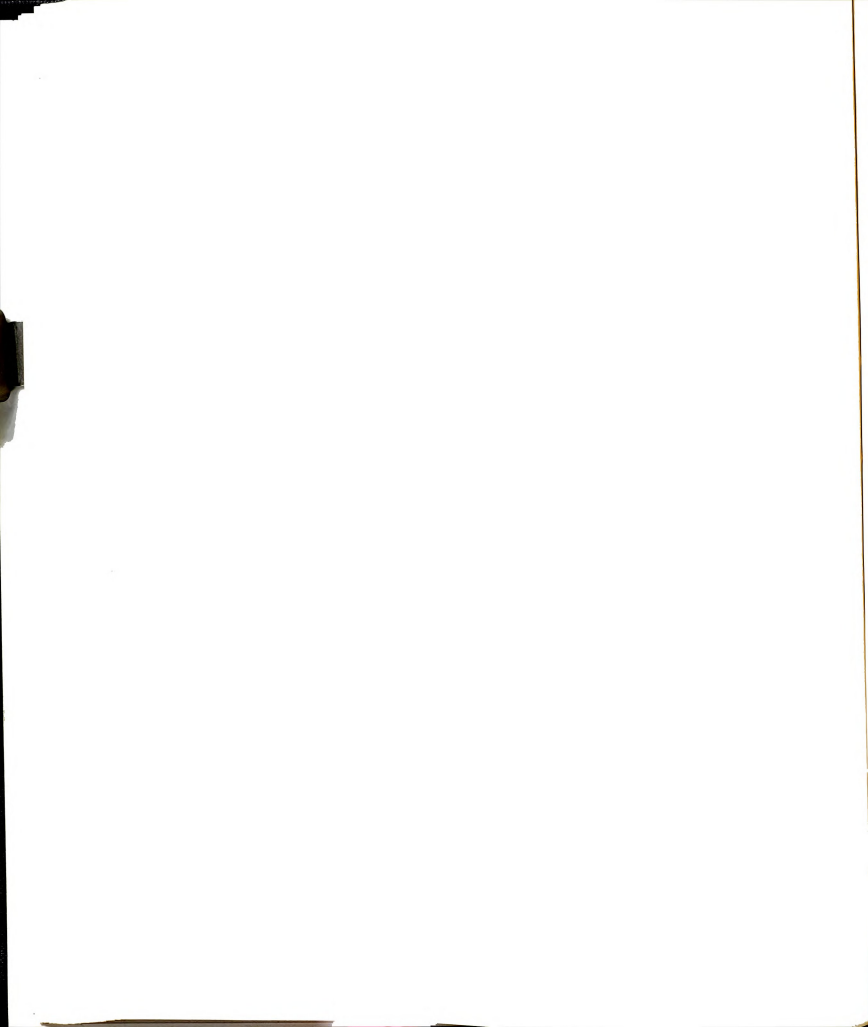


37. Do you have any objection to serving in the second session of this experiment? Yes \_\_\_\_\_ No \_\_\_\_\_

38. Your telephone number \_\_\_\_\_

APPENDIX C

SCRAMBLED WORDS TEST



## APPENDIX C

DO NOT OPEN THE TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO!

This is a scrambled words test. On the following pages you will find four-letter words which have had the letters scrambled around. Your task is to unscramble the letters so that they form a word. For example, if the letters OESH were given, they could be rearranged to form the word SHOE. Some of the letters will form more than one word, but you are to write only one word on the line to the right of the letters. For example, if the letters STOL were given, you could write either LOTS or SLOT, but not both. No slang, foreign words, proper nouns, or abbreviations are allowed.

This is a timed test. I will tell you when to start. When I say begin, turn the page and start working. When I say to stop, put your pencils down. There are six pages. Each page is timed separately. For each page, I will tell you when to start and when to stop. You will not be able to do all of the words in the time allowed, but do as many as you can. You may do the words in any order; there is no penalty for skipping around as long as you do not turn the page.

STOP!

Wait until you are told to begin.

---

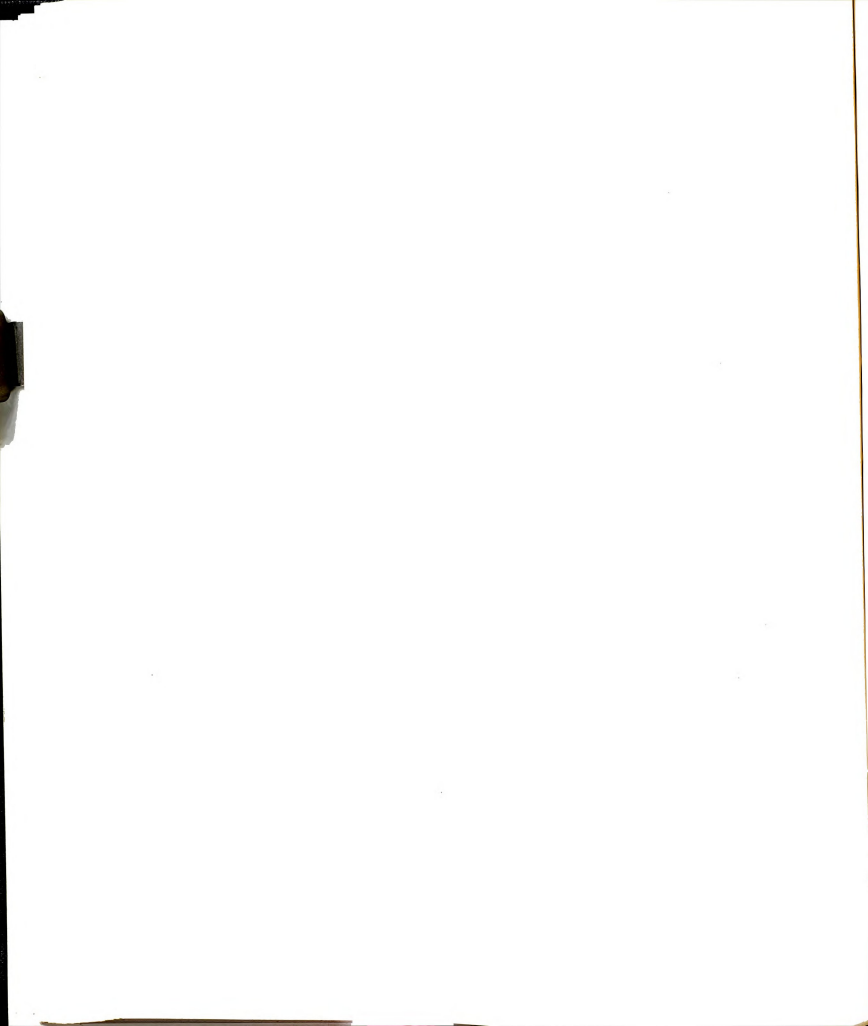
code

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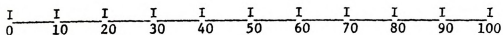
score

---

group

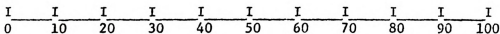


How well will you try to do on this test?



CIRCLE THE "I" MARKER CLOSEST TO THE PERCENTILE IN WHICH YOU WILL TRY  
TO HAVE YOUR PERFORMANCE FALL.

How well do you think you will do on this test?



CIRCLE THE "I" MARKER CLOSEST TO THE PERCENTILE IN WHICH YOU EXPECT  
TO HAVE YOUR PERFORMANCE FALL.

STOP!

Wait until you are told to begin.

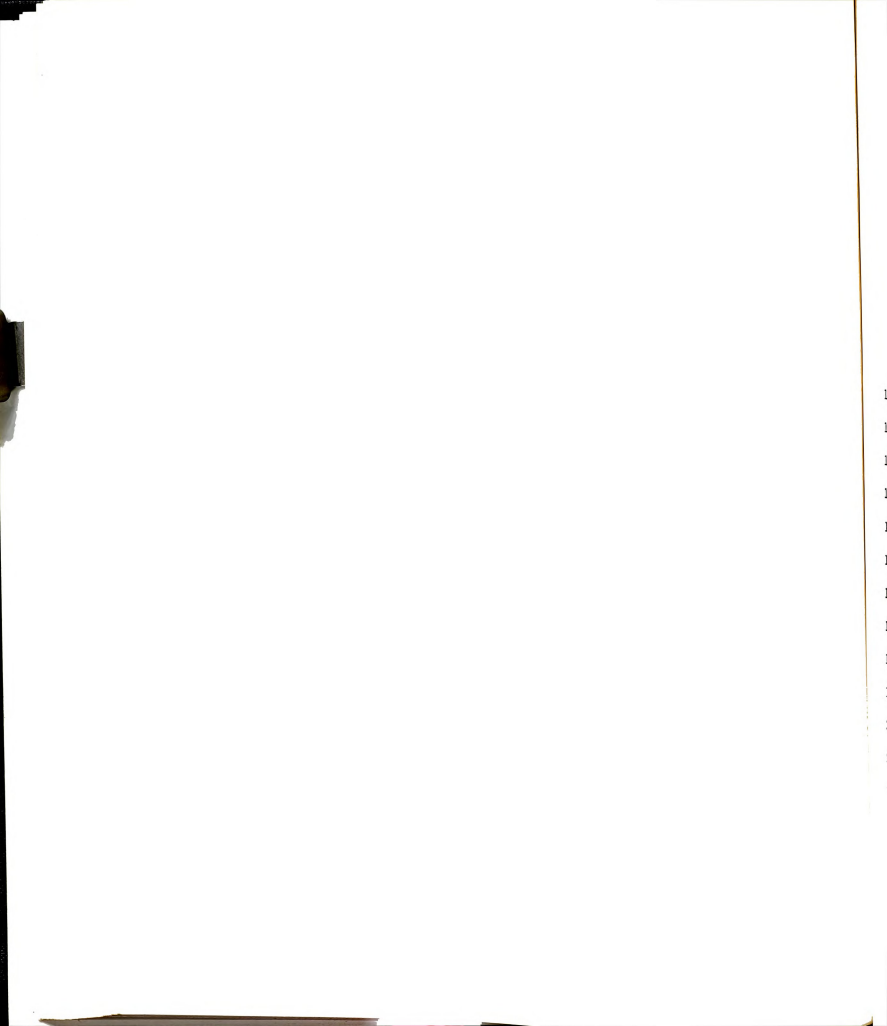


1. okob	_____	26. plac	_____
2. tspo	_____	27. eesa	_____
3. acem	_____	28. eidr	_____
4. ayts	_____	29. choe	_____
5. esnw	_____	30. aehv	_____
6. rcta	_____	31. adie	_____
7. kcra	_____	32. flte	_____
8. msee	_____	33. ahtt	_____
9. rgud	_____	34. oruy	_____
10. kema	_____	35. erat	_____
11. adys	_____	36. aepl	_____
12. iksd	_____	37. oodr	_____
13. cied	_____	38. npta	_____
14. rbmi	_____	39. plas	_____
15. oras	_____	40. kwla	_____
16. aplc	_____	41. oopl	_____
17. inrg	_____	42. omse	_____
18. yzla	_____	43. nifd	_____
19. mlpu	_____	44. hcri	_____
20. oesr	_____	45. ofru	_____
21. lpto	_____	46. desu	_____
22. acer	_____	47. aedm	_____
23. amro	_____	48. stte	_____
24. ogta	_____	49. rahd	_____
25. acto	_____	50. tjsu	_____



1. letl \_\_\_\_\_  
 2. lrea \_\_\_\_\_  
 3. abne \_\_\_\_\_  
 4. refi \_\_\_\_\_  
 5. ndab \_\_\_\_\_  
 6. scpu \_\_\_\_\_  
 7. rokC \_\_\_\_\_  
 8. orpd \_\_\_\_\_  
 9. psat \_\_\_\_\_  
 10. engo \_\_\_\_\_  
 11. elub \_\_\_\_\_  
 11. lilp \_\_\_\_\_  
 13. oorm \_\_\_\_\_  
 14. aedt \_\_\_\_\_  
 15. imte \_\_\_\_\_  
 16. alst \_\_\_\_\_  
 17. ubst \_\_\_\_\_  
 18. tlod \_\_\_\_\_  
 19. aesc \_\_\_\_\_  
 20. oebn \_\_\_\_\_  
 21. ahss \_\_\_\_\_  
 22. rhia \_\_\_\_\_  
 23. dinw \_\_\_\_\_  
 24. tgea \_\_\_\_\_  
 25. leka \_\_\_\_\_

26. lawl \_\_\_\_\_  
 27. gihh \_\_\_\_\_  
 28. enpo \_\_\_\_\_  
 29. isph \_\_\_\_\_  
 30. yamn \_\_\_\_\_  
 31. kdco \_\_\_\_\_  
 32. efca \_\_\_\_\_  
 33. nwdo \_\_\_\_\_  
 34. ofro \_\_\_\_\_  
 35. dwna \_\_\_\_\_  
 26. ahsh \_\_\_\_\_  
 37. ezro \_\_\_\_\_  
 38. psil \_\_\_\_\_  
 39. eaht \_\_\_\_\_  
 40. deha \_\_\_\_\_  
 41. ande \_\_\_\_\_  
 42. olbt \_\_\_\_\_  
 43. adry \_\_\_\_\_  
 44. kcbu \_\_\_\_\_  
 45. cfat \_\_\_\_\_  
 46. alcf \_\_\_\_\_  
 47. nael \_\_\_\_\_  
 48. efle \_\_\_\_\_  
 49. alfo \_\_\_\_\_  
 50. cikt \_\_\_\_\_



1. ikkc	_____	26. rean	_____
2. eitr	_____	27. kecd	_____
3. octl	_____	28. alir	_____
4. luct	_____	29. efte	_____
5. eitl	_____	30. tase	_____
6. uhal	_____	31. gueh	_____
7. nipt	_____	32. ekli	_____
8. enli	_____	33. tafe	_____
9. obss	_____	34. knta	_____
10. iest	_____	35. bceu	_____
11. nadh	_____	36. pmla	_____
12. nrho	_____	37. ihts	_____
13. aemf	_____	38. aefl	_____
14. sifh	_____	39. olca	_____
15. edhs	_____	40. nyra	_____
16. clko	_____	41. srie	_____
17. eppi	_____	42. hcae	_____
18. acsn	_____	43. isck	_____
19. eipn	_____	44. wlob	_____
20. sogd	_____	45. sewt	_____
21. ivle	_____	46. nbed	_____
22. lwfo	_____	47. gsno	_____
23. omrf	_____	48. lkat	_____
24. sunp	_____	49. kjac	_____
25. loeh	_____	50. gkni	_____



1. eman \_\_\_\_\_  
2. indm \_\_\_\_\_  
3. ysea \_\_\_\_\_  
4. sebt \_\_\_\_\_  
5. dato \_\_\_\_\_  
6. lmie \_\_\_\_\_  
7. ivge \_\_\_\_\_  
8. awns \_\_\_\_\_  
9. abht \_\_\_\_\_  
10. daiv \_\_\_\_\_  
11. pcea \_\_\_\_\_  
12. ntiy \_\_\_\_\_  
13. dlina \_\_\_\_\_  
14. reno \_\_\_\_\_  
15. uohr \_\_\_\_\_  
16. rutn \_\_\_\_\_  
17. obnr \_\_\_\_\_  
18. stos \_\_\_\_\_  
19. iptr \_\_\_\_\_  
20. trse \_\_\_\_\_  
21. lwka \_\_\_\_\_  
22. cpka \_\_\_\_\_  
23. ogse \_\_\_\_\_  
24. htac \_\_\_\_\_  
25. tras \_\_\_\_\_

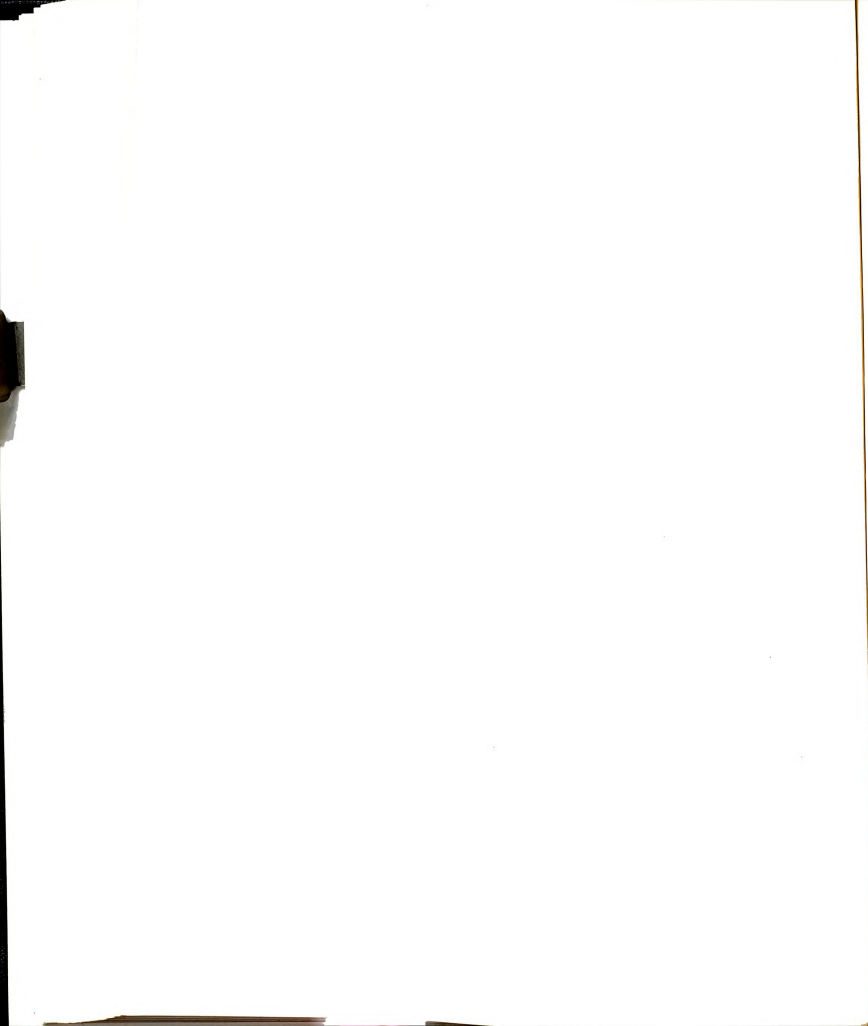
26. loen \_\_\_\_\_  
27. reev \_\_\_\_\_  
28. aded \_\_\_\_\_  
29. enke \_\_\_\_\_  
30. ohfo \_\_\_\_\_  
31. tdsu \_\_\_\_\_  
32. mceo \_\_\_\_\_  
33. alht \_\_\_\_\_  
34. tnxe \_\_\_\_\_  
35. rhee \_\_\_\_\_  
36. lafl \_\_\_\_\_  
37. nolg \_\_\_\_\_  
38. adel \_\_\_\_\_  
39. elfl \_\_\_\_\_  
40. krco \_\_\_\_\_  
41. reva \_\_\_\_\_  
42. reow \_\_\_\_\_  
43. sbta \_\_\_\_\_  
44. idsa \_\_\_\_\_  
45. gepa \_\_\_\_\_  
46. injo \_\_\_\_\_  
47. aekb \_\_\_\_\_  
48. itrd \_\_\_\_\_  
49. gsle \_\_\_\_\_  
50. oelp \_\_\_\_\_





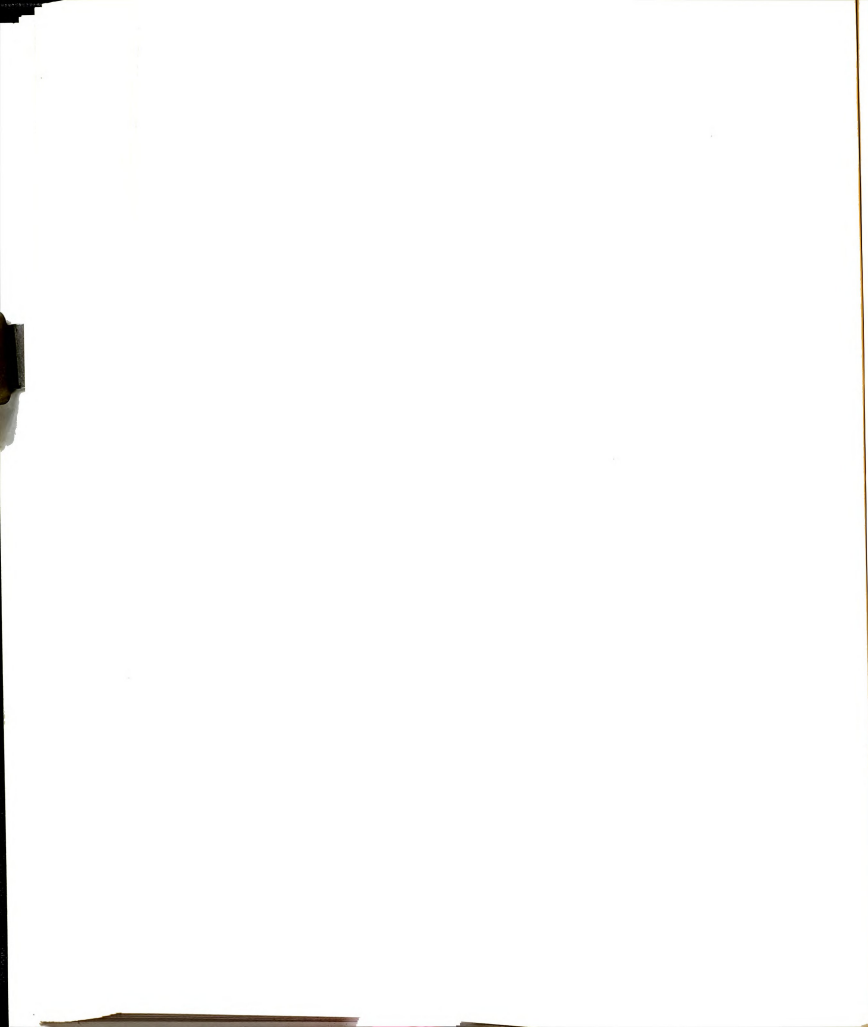
1. dege \_\_\_\_\_  
 2. etem \_\_\_\_\_  
 3. kpca \_\_\_\_\_  
 4. osno \_\_\_\_\_  
 5. netw \_\_\_\_\_  
 6. lcoo \_\_\_\_\_  
 7. pjum \_\_\_\_\_  
 8. nsda \_\_\_\_\_  
 9. aflp \_\_\_\_\_  
 10. emas \_\_\_\_\_  
 11. dgoo \_\_\_\_\_  
 12. neap \_\_\_\_\_  
 13. nrga \_\_\_\_\_  
 14. emta \_\_\_\_\_  
 15. ncoe \_\_\_\_\_  
 16. aetd \_\_\_\_\_  
 17. eaar \_\_\_\_\_  
 18. wille \_\_\_\_\_  
 19. rdbi \_\_\_\_\_  
 20. frta \_\_\_\_\_  
 21. abto \_\_\_\_\_  
 22. ekyo \_\_\_\_\_  
 23. rwno \_\_\_\_\_  
 24. lohda \_\_\_\_\_  
 25. dero \_\_\_\_\_

26. edhe \_\_\_\_\_  
 27. suht \_\_\_\_\_  
 28. rsfu \_\_\_\_\_  
 29. ihed \_\_\_\_\_  
 30. raeb \_\_\_\_\_  
 31. ciem \_\_\_\_\_  
 32. ulcb \_\_\_\_\_  
 33. afgl \_\_\_\_\_  
 34. blia \_\_\_\_\_  
 35. lasi \_\_\_\_\_  
 36. atsm \_\_\_\_\_  
 37. stoh \_\_\_\_\_  
 38. ikdn \_\_\_\_\_  
 39. elsa \_\_\_\_\_  
 40. glas \_\_\_\_\_  
 41. uppm \_\_\_\_\_  
 42. buet \_\_\_\_\_  
 43. eipp \_\_\_\_\_  
 44. aild \_\_\_\_\_  
 45. mboc \_\_\_\_\_  
 46. nggo \_\_\_\_\_  
 47. sneo \_\_\_\_\_  
 48. pmro \_\_\_\_\_  
 49. msae \_\_\_\_\_  
 50. osgn \_\_\_\_\_



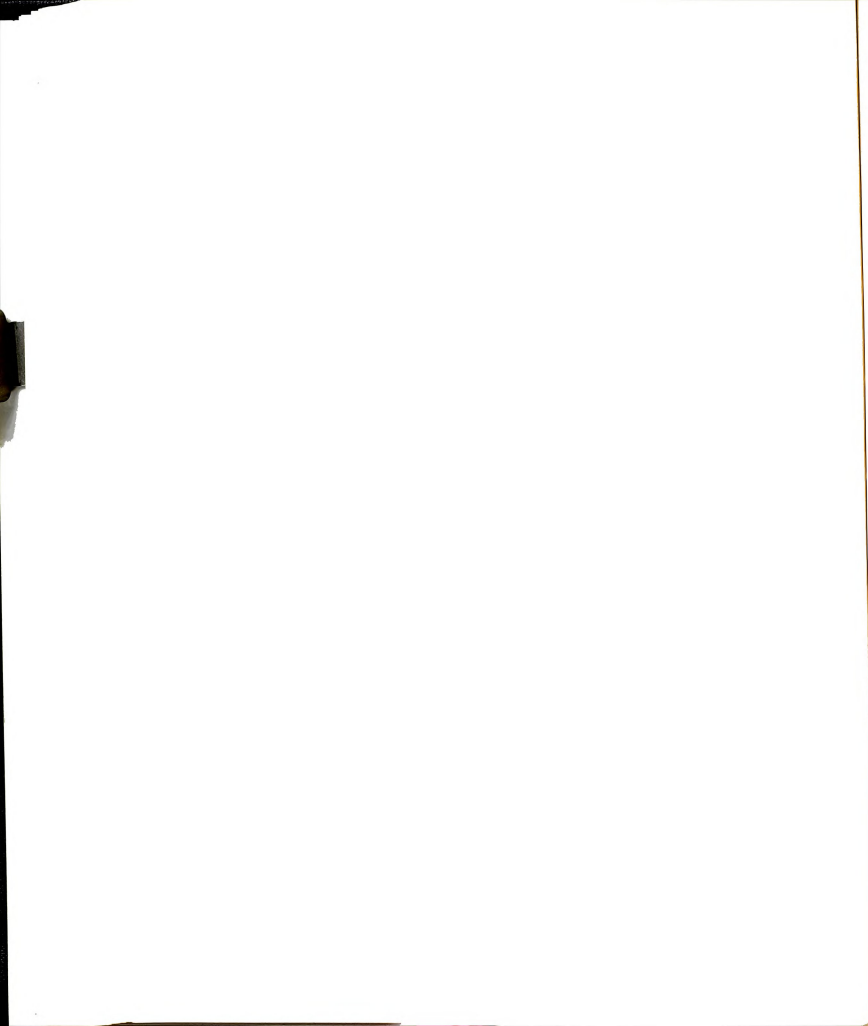
1. etsn \_\_\_\_\_  
2. ukdc \_\_\_\_\_  
3. wnas \_\_\_\_\_  
4. mibl \_\_\_\_\_  
5. adrc \_\_\_\_\_  
6. oard \_\_\_\_\_  
7. ogld \_\_\_\_\_  
8. kclu \_\_\_\_\_  
9. hsac \_\_\_\_\_  
10. rtya \_\_\_\_\_  
11. ovel \_\_\_\_\_  
12. ptea \_\_\_\_\_  
13. docr \_\_\_\_\_  
14. stca \_\_\_\_\_  
15. kosc \_\_\_\_\_  
16. icen \_\_\_\_\_  
17. rwge \_\_\_\_\_  
18. mide \_\_\_\_\_  
19. illb \_\_\_\_\_  
20. uorf \_\_\_\_\_  
21. fecv \_\_\_\_\_  
22. nwot \_\_\_\_\_  
23. noil \_\_\_\_\_  
24. lsw0 \_\_\_\_\_  
25. lide \_\_\_\_\_

26. olto \_\_\_\_\_  
27. sfta \_\_\_\_\_  
28. asef \_\_\_\_\_  
29. anli \_\_\_\_\_  
30. vihe \_\_\_\_\_  
31. ngto \_\_\_\_\_  
32. nfei \_\_\_\_\_  
33. aybb \_\_\_\_\_  
34. nswa \_\_\_\_\_  
35. shbu \_\_\_\_\_  
36. artp \_\_\_\_\_  
37. stpa \_\_\_\_\_  
38. aysh \_\_\_\_\_  
39. otls \_\_\_\_\_  
40. itls \_\_\_\_\_  
41. enct \_\_\_\_\_  
42. rion \_\_\_\_\_  
43. tswo \_\_\_\_\_  
44. mahs \_\_\_\_\_  
45. lfie \_\_\_\_\_  
46. almb \_\_\_\_\_  
47. olis \_\_\_\_\_  
48. ss pa \_\_\_\_\_  
49. gnha \_\_\_\_\_  
50. osli \_\_\_\_\_



APPENDIX D

DATA QUESTIONNAIRE



# APPENDIX D

## DATA QUESTIONNAIRE FORM C

1. Name \_\_\_\_\_
2. Approximately how many anagrams do you think you unscrambled? \_\_\_\_\_
3. In what percentile do you think your performance fell on this test?

I	I	I	I	I	I	I	I	I	I	I
0	10	20	30	40	50	60	70	80	90	100
Below Average				Average			Above Average			

4. What percentage of your performance do you attribute to:

Effort _____	Luck _____
Skill _____	Task Difficulty _____

5. How good a test of career ability do you think this task was?

- a. Excellent
- b. Good
- c. Fair
- d. Poor

6. Estimate your performance in percentiles on a test predicting success in a career.

I	I	I	I	I	I	I	I	I	I	I
0	10	20	30	40	50	60	70	80	90	100
No Talent				Average			Brilliant Potential			

7. Estimate your performance in percentiles on a test predicting success as a homemaker.

I	I	I	I	I	I	I	I	I	I	I
0	10	20	30	40	50	60	70	80	90	100
No Talent				Average			Brilliant Potential			

OVER





PLEASE DO NOT RETURN TO THE PREVIOUS PAGE

1. What do you think this experiment was about?

2. Did you believe the experimenter when she told you that the scrambled words test correlated with success in a career?

Yes      No      Somewhat

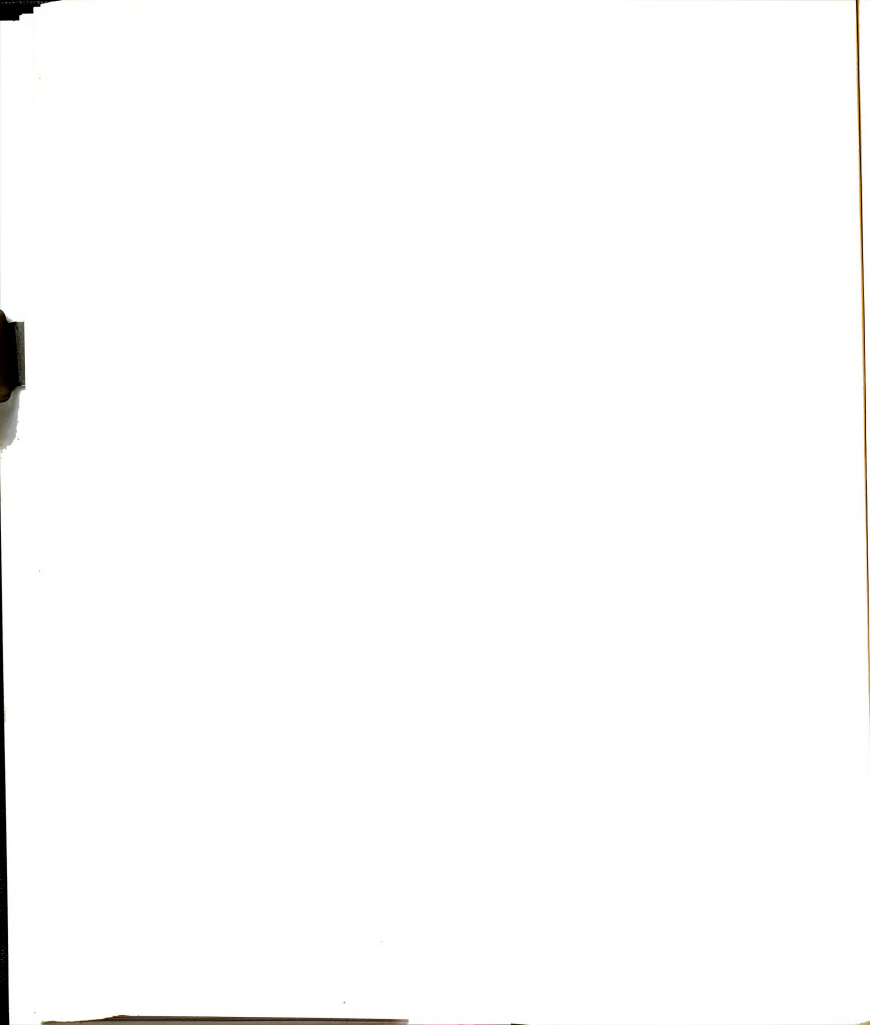
Why?

IF YOU WOULD LIKE TO RECEIVE A LETTER EXPLAINING THE PURPOSE AND RESULTS OF THIS STUDY, PLEASE WRITE YOUR NAME AND ADDRESS ON THE BACK OF THIS SHEET OF PAPER.



APPENDIX E

SESSION I INSTRUCTIONS

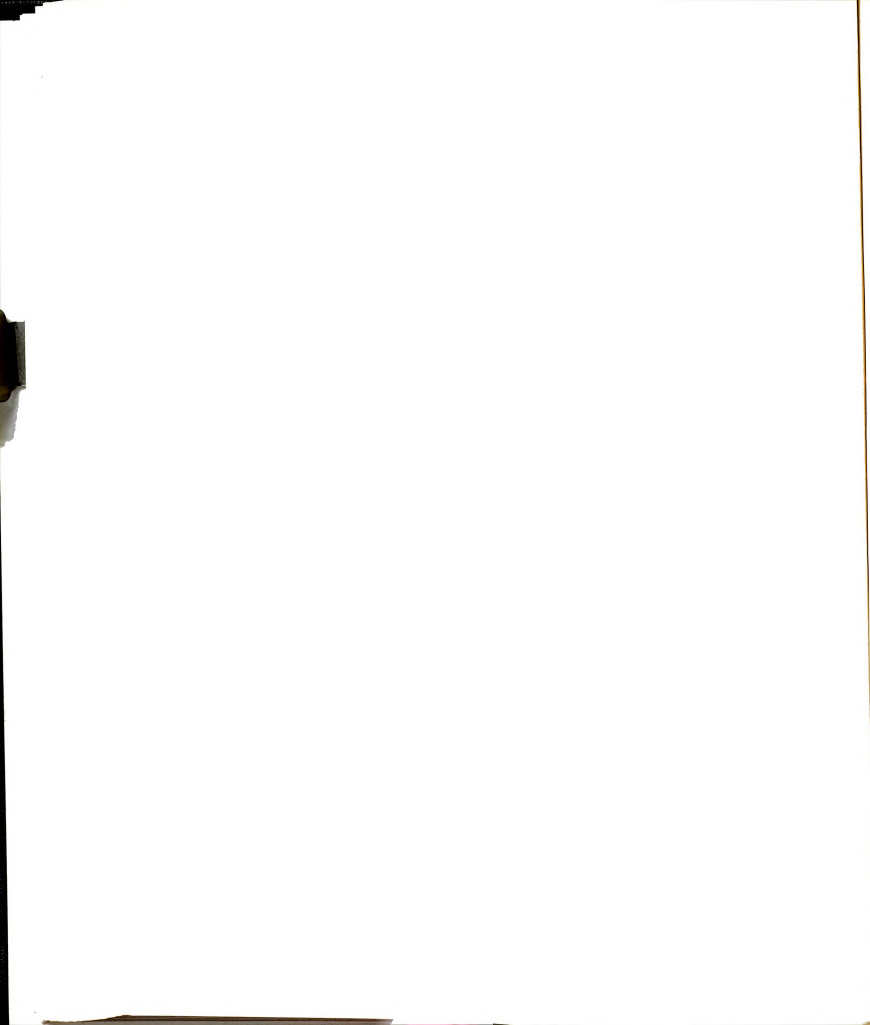


## APPENDIX E

### Session I Instructions

"Thank you for coming today. My name is \_\_\_\_\_, and I am one of the experimenters for this study. As you probably know, psychologists have recently become more interested in the psychology of women. In this experiment we are trying to find differences in personal characteristics between women who attend college and women who do not. The results produced by this group will be compared to those produced by women of the same age who do not attend college. I'd like us to start by having you read the instructions on the booklet entitled, 'Cue Interpretations.'" After all the S's had read the instructions the E said, "As indicated in the instructions, I will time you while you write the stories. I will tell you when you have a minute left. At the end of that minute, I'll say 'finish up,' and if you are not done by then, just finish the sentence you are writing. Do not begin the next story until I tell you to go ahead. You will have five minutes for each story. Ready, begin."

After the S's had completed all four stories, E said, "For the next part of the experiment there is no time limit. Just answer the questions to the best of



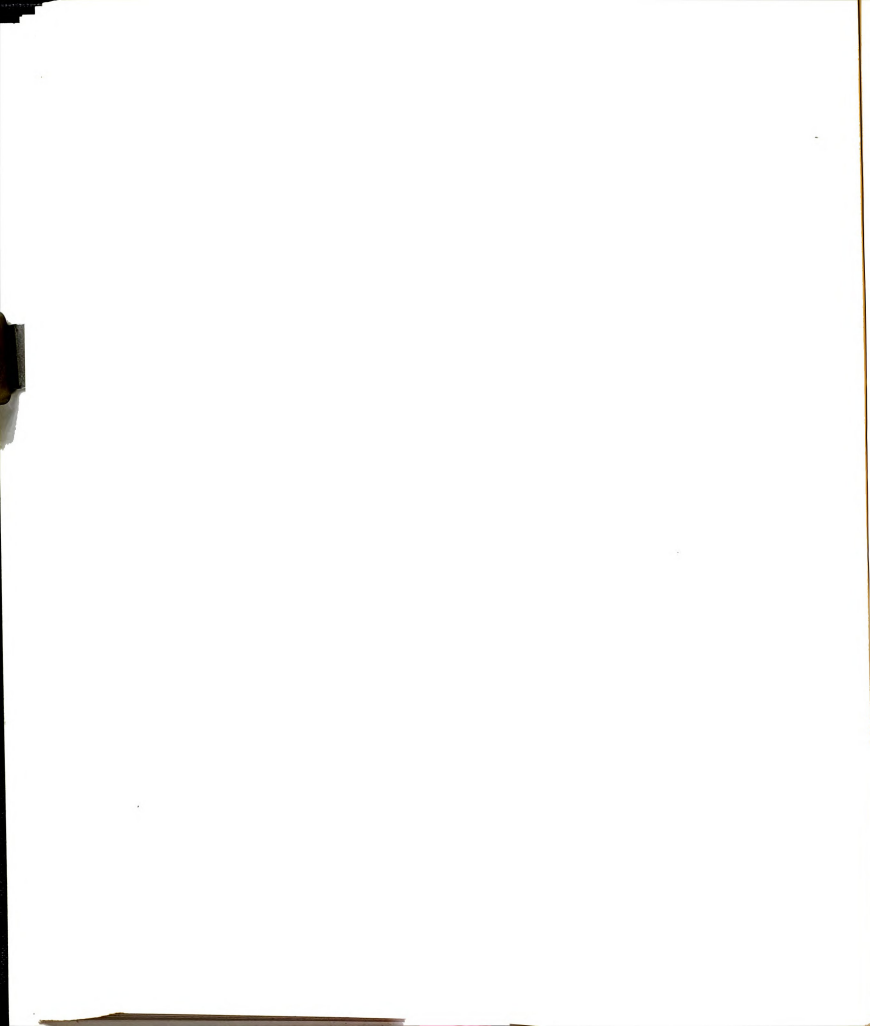
your ability. Some of you will be asked to participate in the second part of this experiment, and for this reason I would like you to indicate on the last page if you would not be willing to participate in a second session for additional credit. When you are finished, please bring your booklets up to me. You can go ahead."





APPENDIX F

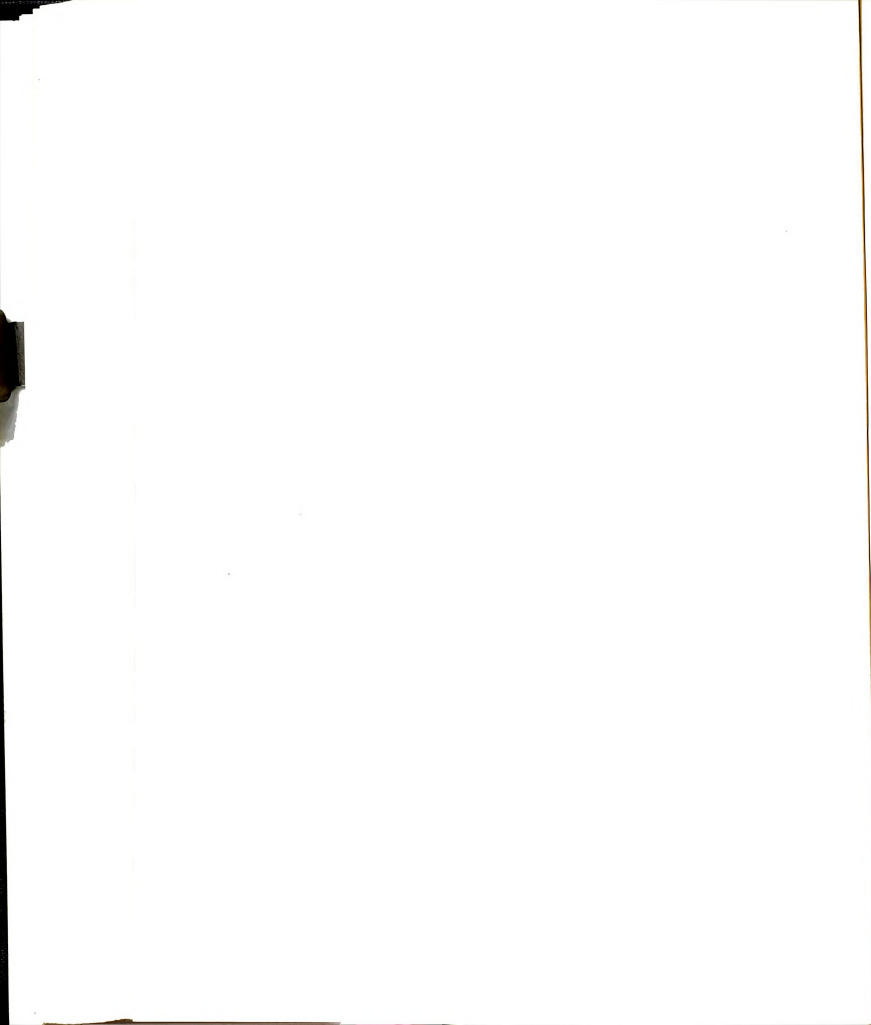
SCRAMBLED WORD INSTRUCTIONS



## APPENDIX F

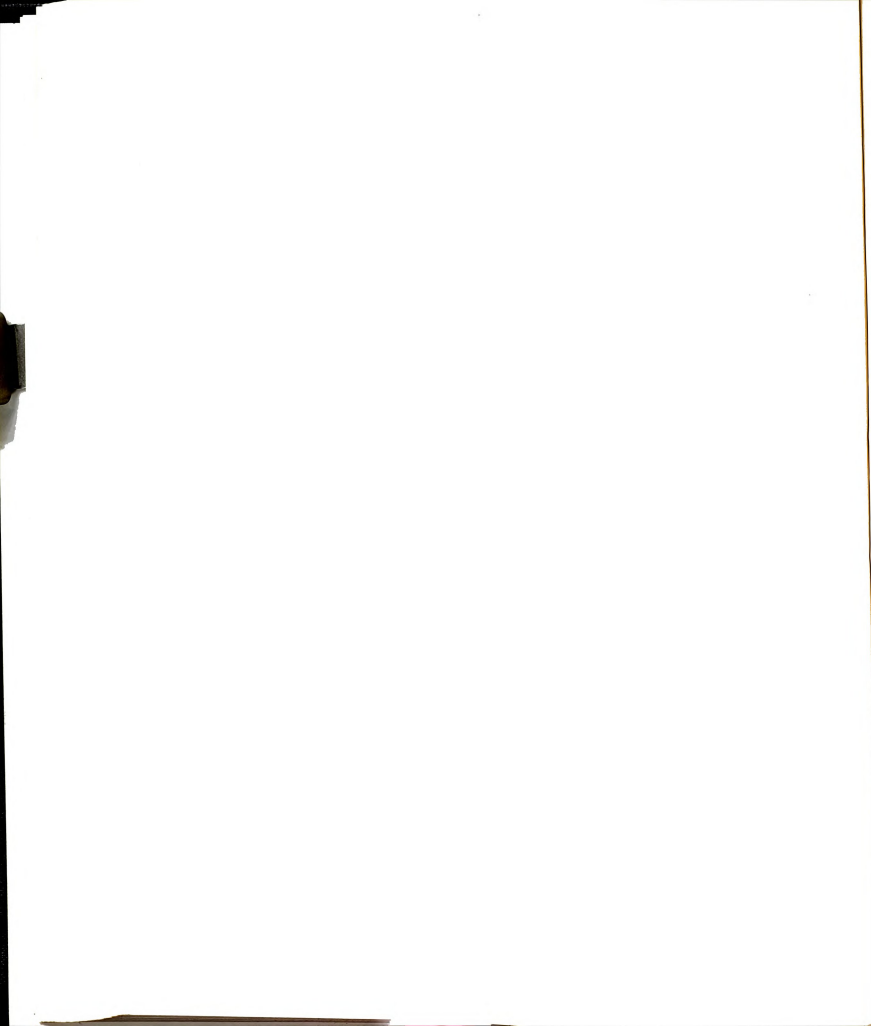
### SCRAMBLED WORD INSTRUCTIONS

"Thank you for returning for the second session. Today we would like to get some additional data from you which will help us in our comparison of college and non-college women. The test which I would like you to take discriminates between women who will be homemakers and women who will have careers. The test consists of a series of scrambled four letter words, 300 in all, and your task will be to unscramble as many as you can within the time limit."



APPENDIX G

POST-PERFORMANCE ESTIMATES



## APPENDIX G

### Post-Performance Estimates

After completing the anagram task, subjects were asked to estimate the number of anagrams that they had completed and the percentile in which they thought their performance had fallen. One might expect that the findings on these two measures would be identical. While they were for the most part, there was one surprising difference. Both measures were subjected to a three-way analysis of variance, using the unweighted means model. As Table 23 indicates, the numerical estimates of subjects in the congruent condition ( $\bar{X} = 98.129$ ) were significantly ( $p < .019$ ) higher than those of subjects in the incongruent condition ( $\bar{X} = 75.861$ ). This effect was not significant ( $p < .202$ ) for the percentile estimates (see Table 24), but the direction was still the same. For both types of estimates, the sex role effect approached significance ( $p < .066$  for numerical,  $p < .053$  for percentile) with the career-oriented subjects' estimates being higher (numerical  $\bar{X} = 95.86$ , percentile  $\bar{X} = 52.329$ ) than those of the homemaking-oriented subjects (numerical  $\bar{X} = 78.305$ , percentile  $\bar{X} = 45.839$ ). It is when we examine the fear of failure data that a rather perplexing contradiction becomes apparent. When subjects estimated their performance in percentiles, the estimates of subjects

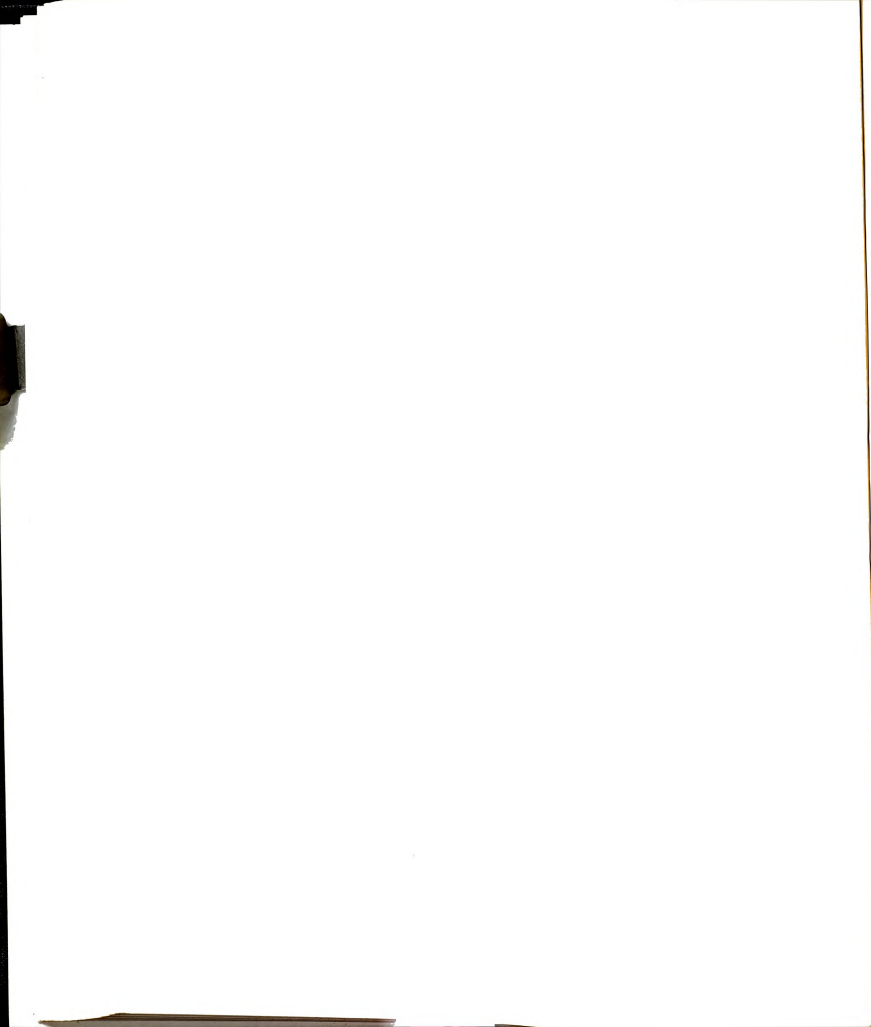




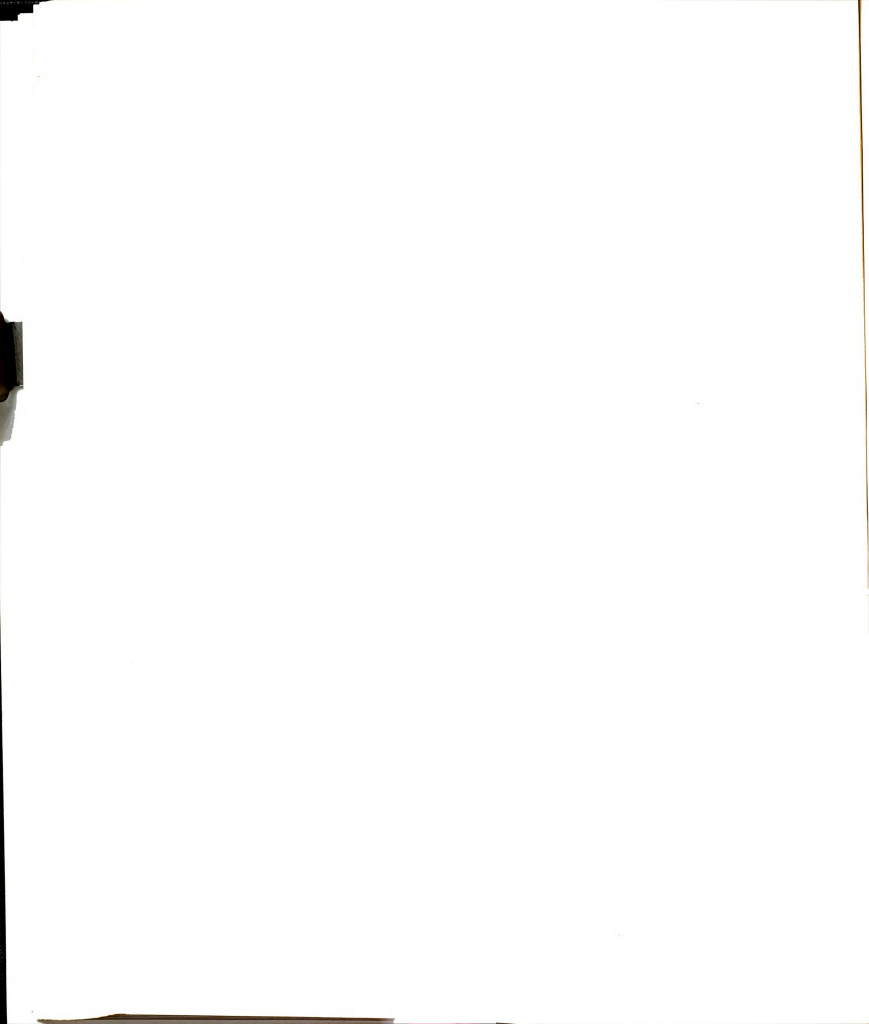
Table 23  
Three-Way Anova--Numerical Anagram Estimate

	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	6,693.586	1	6,693.586	3.491	.066	3.45
Fear of Failure	2,538.638	1	2,538.638	1.324	.254	1.31
Task Congruence	10,986.762	1	10,986.762	5.730	.019*	5.66
S.R. X F.F.	7,842.801	1	7,842.801	4.090	.047*	4.04
S.R. X T.C.	48.871	1	48.871	.025	Over .5	.03
F.F. X T.C.	627.976	1	627.976	.327	Over .5	.32
S.R. X F.F. X T.C.	555.043	1	555.043	.289	Over .5	.29
Error	164,910.125	86	1,917.560			84.90
Total	194,203.563	93	2,088.210			100.00



Table 24  
Three-Way Anova--Percentile Anagram Estimate

	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	982.936	1	982.936	3.846	.053	3.58
Fear of Failure	1,437.722	1	1,437.722	5.626	.020*	5.24
Task Congruence	423.041	1	423.041	1.655	.202	1.54
S.R. X F.F.	405.903	1	405.903	1.588	.211	1.48
S.R. X T.C.	8.483	1	8.483	.033	Over .5	.03
F.F. X T.C.	473.859	1	473.859	1.854	.177	1.73
S.R. X F.F. X T.C.	704.458	1	704.458	2.757	.101	2.73
Error	22,999.496	90	255.550			83.73
Total	27,435.887	97	282.844			100.00

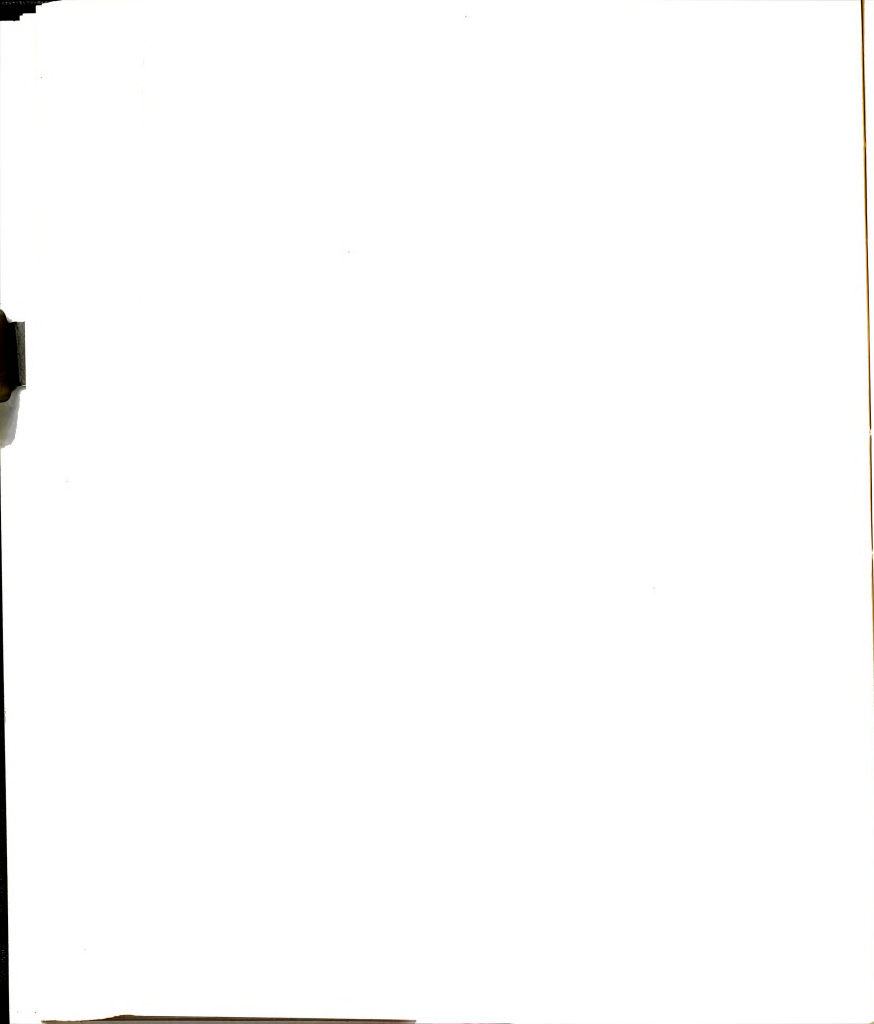


with no fear of failure ( $\bar{X} = 53.009$ ) were significantly higher ( $p < .020$ ) than those of subjects with fear of failure ( $\bar{X} = 45.160$ ). On the numerical estimates, however, the direction was reversed (fear  $\bar{X} = 92.347$ , no fear  $\bar{X} = 81.643$ ). Although not significant ( $p < .254$ ), there was a tendency for subjects with fear of failure to make higher numerical estimates than did subjects without fear of failure. Actually, there was a significant ( $p < .047$ ) sex role by fear of failure interaction for the numerical data. This interaction effect is chiefly attributable to the significant ( $p < .001$ ,  $t = 4.8778$  with 44 df) difference between the fear of failure subjects with differing sex role orientations. While the mean numerical estimate of fear of failure subjects with a career orientation was 110.444 ( $n = 16$ ), that of the fear subjects with a homemaking orientation was 74.250 ( $n = 28$ ). There was very little difference between the two groups of subjects with no fear of failure; the mean for career-oriented Ss was 80.927 ( $n = 23$ ), while the mean for homemaking-oriented Ss was 82.360 ( $n = 27$ ).

The data were also analyzed to examine the accuracy of the post-performance numerical estimates. A three-way analysis of variance using the unweighted mean model was performed on the difference between S's actual performance and her numerical estimate of her performance. Table 25 reveals that there was a

Table 25  
Three-Way Anova--Difference Between Anagram Performance and the Numerical  
Post-Performance Estimate

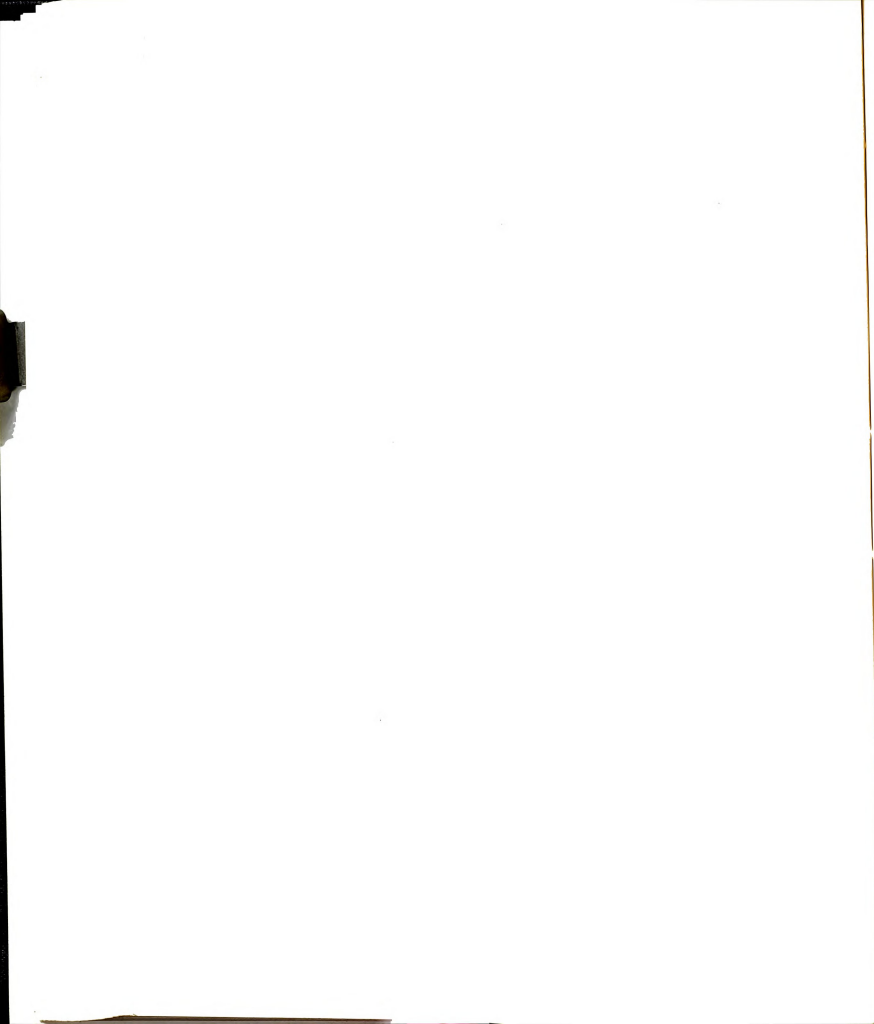
	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	4.679	1	4.679	.004	Over .5	.00
Fear of Failure	62.023	1	62.023	.059	Over .5	.06
Task Congruence	1,164.716	1	1,164.716	1.111	.295	1.16
S.R. X F.F.	5,404.285	1	5,404.285	5.157	.026*	5.38
S.R. X T.C.	1,286.286	1	1,286.286	1.227	.272	1.28
F.F. X T.C.	30.501	1	30.501	.029	Over .5	.03
S.R. X F.F. X T.C.	3,363.395	1	3,363.395	3.210	.077	3.35
Error	89,072.250	85	1,047.909			88.74
Total	100,387.938	92	1,091.173			100.00



significant ( $p < .026$ ) sex role by fear of failure interaction. Career-oriented subjects with fear of failure and homemaking-oriented subjects without fear of failure tended to overestimate their performance, while homemaking-oriented subjects with fear of failure and career-oriented subjects without fear of failure tended to underestimate their performance.

The author was able to find only one study (Ziskin, 1966) which included estimation of performance as a dependent variable. There have been many studies examining the Zeigarnik effect in connection with fear of failure but apparently none examining either accuracy of judgment or perception of the performance of other subjects. In Fear of Failure (1969) Birney, Burdick, and Teevan suggest that high fear of failure individuals may overestimate performance as a means of defending against failure. Ziskin (1966), however, found that subjects with low test anxiety rated their performance as significantly higher than did subjects with high levels of test anxiety. Our conception that fear of failure is a defensive strategy designed to minimize social rejection predicts that fear of failure subjects who habitually aim low should set their performance estimates low. In this fashion they can avoid being ridiculed for bragging about poor performance. On the other hand, fear of failure subjects who habitually aim high should set their





estimates high. This strategy allows the individual to avoid rejection by making others believe that she has made her best attempt. If performance is not as good as the subject has indicated, she can suggest that the task was impossible.

The data are only partially consistent with this hypothesis. For the numerical estimates there was a significant ( $p < .001$ ) difference between the estimates of career-oriented subjects with fear of failure ( $\bar{X} = 110.444$ ) and those of homemaking-oriented subjects with fear of failure ( $\bar{X} = 74.250$ ). There was virtually no difference between the estimates of subjects without fear of failure. We can conclude that in an ambiguous situation, in which the individual does not know how others will perform, a fear of failure individual will follow her characteristic pattern of estimating high or estimating low.

When the subjects were asked to estimate their performance relative to others (in percentiles), this pattern did not hold up. Instead, the estimates of fear of failure individuals ( $\bar{X} = 45.160$ ) were significantly ( $p < .020$ ) lower than those of subjects without fear of failure ( $\bar{X} = 53.009$ ). Perhaps the fear of failure individual has a generally low estimate of her abilities relative to other's but has a characteristic extreme pattern of self-evaluation in an ambiguous situation.

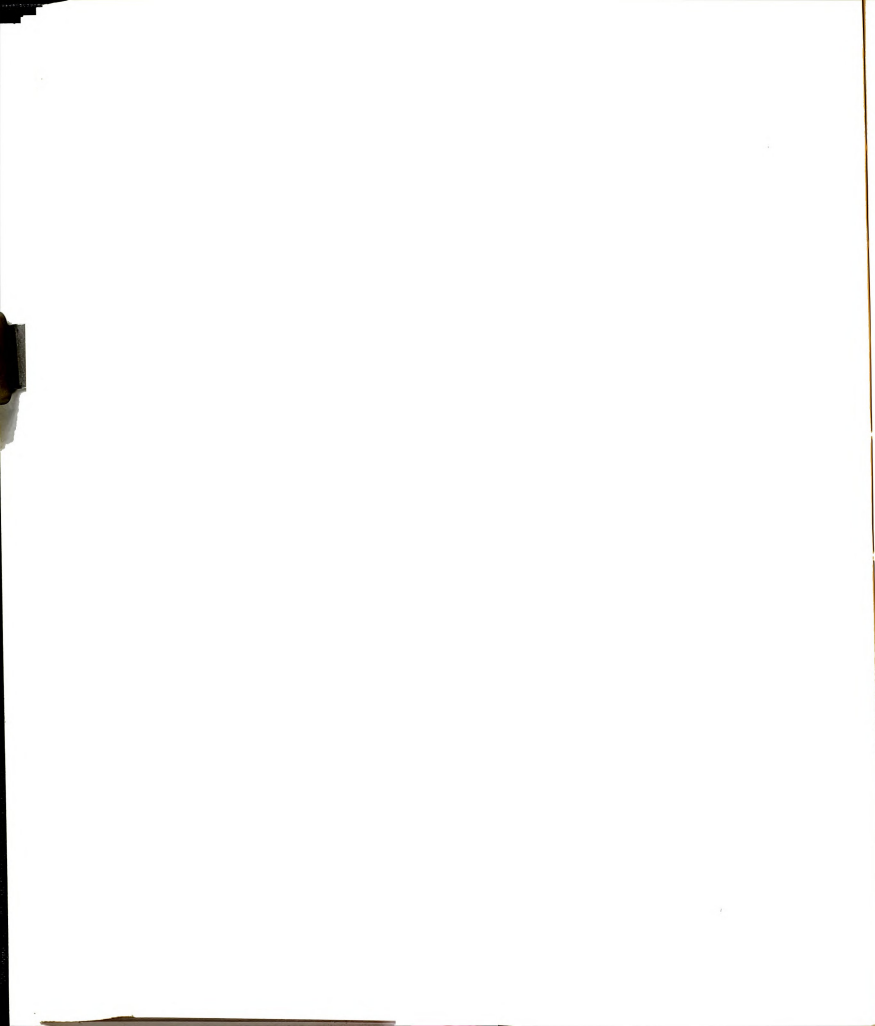
This hypothesis is supported by the similar extreme patterns in the level of aspiration and numerical estimate data and by the poor self-confidence expressed in the level of expectation and in the post-performance percentile estimate data.

Except for the behavior of career-oriented subjects with fear of failure, it could be said that fear of failure subjects had generally low estimates of their abilities. Relative to the other groups, homemaking-oriented Ss with fear of failure had the lowest mean performance estimates for both the numerical and the percentile data. The mean numerical estimate of career-oriented subjects with fear of failure, on the other hand, was nearly one standard deviation above the means of the other groups. The mean percentile estimate of this group, however, was second lowest. It appears that the career-oriented women with fear of failure overestimated the performance of the other subjects. Although they estimated that their performance fell, on the average, in the 46.319th percentile, they estimated that they had completed 110.444 words. The percentile equivalent of this number of words for this sample is placement in the 74th percentile, nearly 28 percentile points higher than their percentile estimate.

To complete our discussion of performance estimates, we must examine the effects of sex role and task

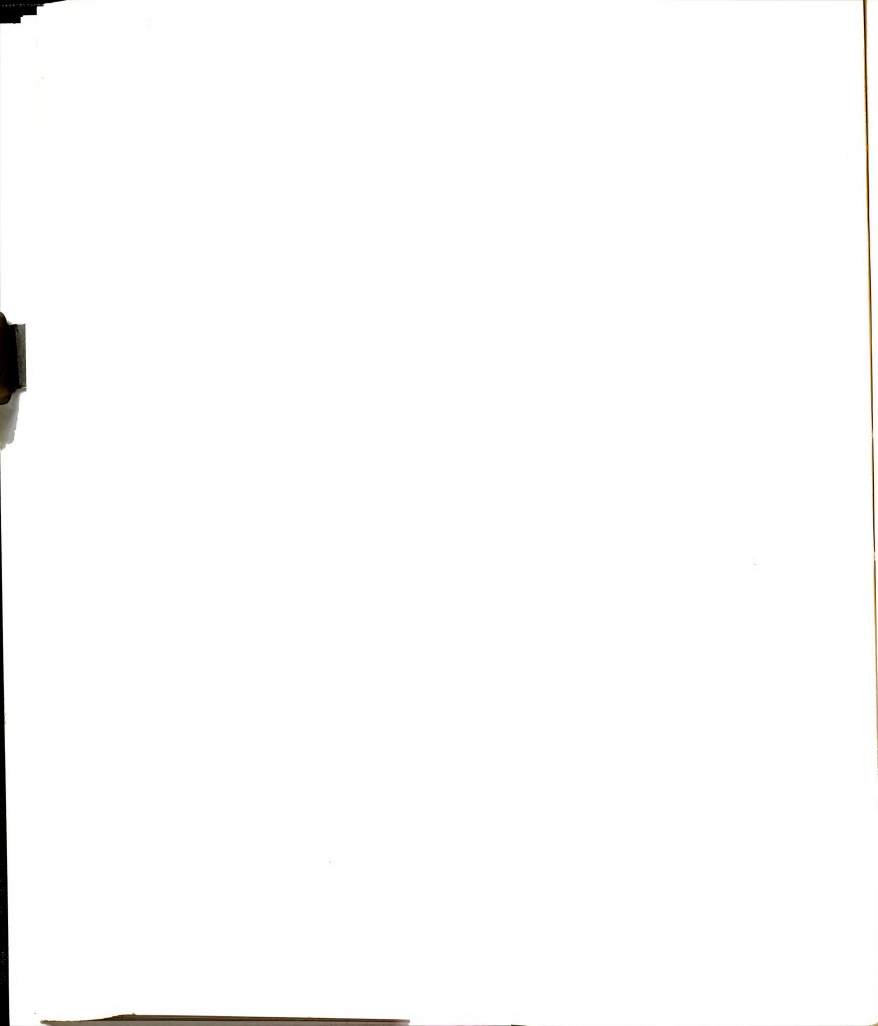


congruence. Although failing to achieve conventional levels of significance, the estimates of career-oriented subjects were higher than those of subjects with a homemaking orientation for both measures. This finding is consistent with the fact that the performance of career-oriented Ss was significantly higher than that of subjects with a homemaking orientation. The performance estimates of subjects in the congruent condition were higher than those of subjects in the incongruent condition, but this effect achieved conventional levels of significance only for the numerical data. This finding is also consistent with the performance data.



APPENDIX H

PREDICTION OF ABILITY ON TESTS OF CAREER  
AND HOMEMAKING ABILITY





## APPENDIX H

### Prediction of Ability on Tests of Career and Homemaking Ability

In the questionnaire administered after completion of the Scrambled Words Test, subjects were asked to predict their relative level of performance on a test of career ability and on a test of homemaking ability. Analysis of responses to the career question failed to produce any significant F ratios (see Tables 26 and 27). There was, however, a trend ( $p < .078$ ) for career-oriented subjects to predict a higher level of performance ( $\bar{X} = 67.073$ ) than did homemaking-oriented subjects ( $\bar{X} = 61.156$ ). Since sex role orientation assignment was based, to a great extent, upon subjects' commitment to a career orientation, the lack of significance is somewhat problematical. The restricted range of our sample is probably responsible for this lack of significance. As previously noted, all the subjects in this sample can be regarded as more career oriented than homemaking oriented; mean importance level for having a career was significantly ( $p < .001$ ) higher than the mean importance level for having a marriage and a family. Had the experiment included women who were not attending college, this effect may have achieved conventional levels of significance.

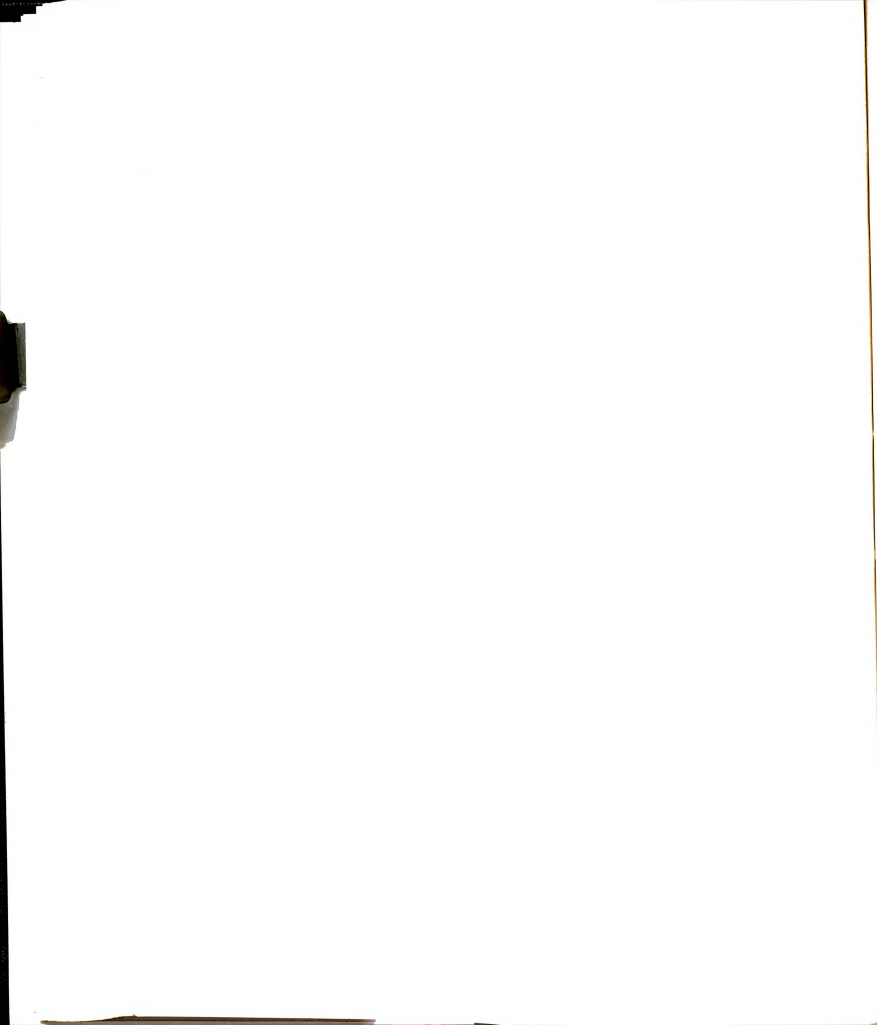


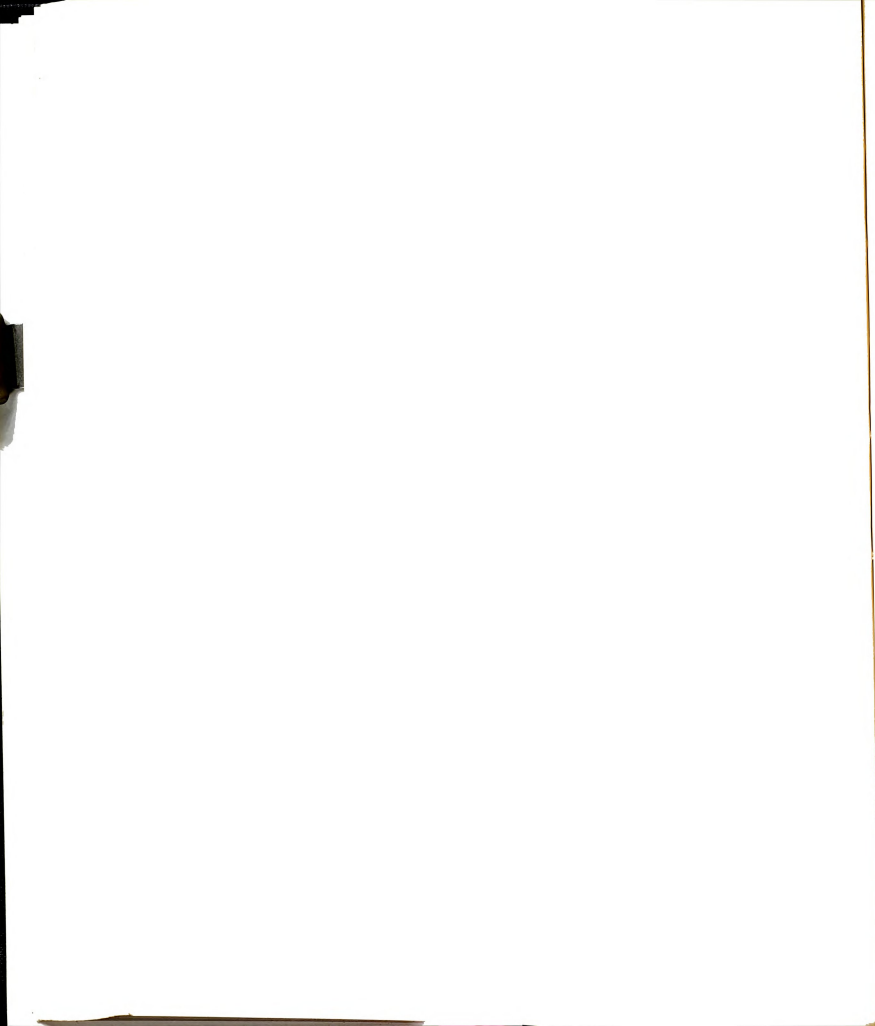
Table 26

## Three-Way Anova--Estimated Percentile--Career Ability Test

	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	831.086	1	831.086	3.195	.078	3.19
Fear of Failure	682.337	1	682.337	2.623	.109	2.62
Task Congruence	7.335	1	7.335	.028	Over .5	.03
S.R. X F.F.	.713	1	.713	.003	Over .5	.00
S.R. X T.C.	180.428	1	180.428	.694	.408	.69
F.F. X T.C.	416.390	1	416.390	1.601	.209	1.60
S.R. X F.F. X T.C.	.000	1	.000	Very Small		.00
Error	23,929.504	92	260.103			91.87
Total	26,047.781	99	263.109			100.00

Table 27  
 Estimated Career Ability--Means and  
 Standard Deviations

		Fear of Failure		No Fear of Failure	
		Mean	S.D.	Mean	S.D.
Congruent Condition	Career	67.500	15.811	68.846	10.831
	Homemaking	59.000	11.370	60.000	15.275
Incongruent Condition	Career	61.111	16.915	70.833	14.434
	Homemaking	58.125	22.867	67.500	16.956



On the other hand, there was a significant ( $p < .009$ ) sex role effect on the homemaking ability question (see Tables 28 and 29). The ability estimates of homemaking-oriented subjects were higher ( $\bar{X} = 63.704$ ) than those of career-oriented subjects ( $\bar{X} = 52.791$ ). This finding is consistent with the discovery that the importance of having a marriage and a family was significantly ( $p < .001$ ) higher for subjects with a homemaking orientation than it was for subjects with a career orientation. While all subjects predicted that their performance would fall above the mean on the career test, career-oriented subjects with fear of failure predicted that their performance would fall slightly below the mean ( $\bar{X} = 45.282$ ) on a test of homemaking ability. This is an important finding which we shall expand upon shortly. When an analysis of the differences between predictions on the two tests was computed (see Tables 30 and 31), it was found that the differences, while in the expected direction, were significantly ( $p < .022$ ) larger for the career-oriented subjects than for the homemaking-oriented subjects. Here again, we see the effects of our restricted sample which as a whole can be characterized as more career oriented than homemaking oriented.

Up to now, the effect of fear of failure on these predictions has not been examined. For both the career test and the homemaking test the predictions of subjects



Table 28  
Three-Way Anova--Estimated Percentile--Homemaking Ability Test

Sex Role	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Fear of Failure	2,827.433	1	2,827.433	7.158	.009*	6.52
Task Congruence	2,109.295	1	2,109.295	5.340	.024*	4.87
S.R. X F.F.	46.665	1	46.665	.118	Over .5	.11
S.R. X T.C.	638.210	1	638.210	1.616	.207	1.47
F.F. X T.C.	1,252.115	1	1,252.115	3.170	.079	2.89
S.R. X F.F. X T.C.	37.148	1	37.148	.094	Over .5	.09
Error	87.396	1	87.396	.221	Over .5	.20
Total	36,340.527	92	395.006			83.85
	43,338.773	99	437.765			100.00



Table 29  
Estimated Homemaking Ability--Means and  
Standard Deviations

		Fear of Failure		No Fear of Failure	
		Mean	S.D.	Mean	S.D.
Congruent Condition	Career	48.750	25.319	62.692	21.469
	Homemaking	55.667	13.211	63.077	17.974
Incongruent Condition	Career	42.222	24.889	57.500	23.012
	Homemaking	65.500	18.074	68.571	18.232

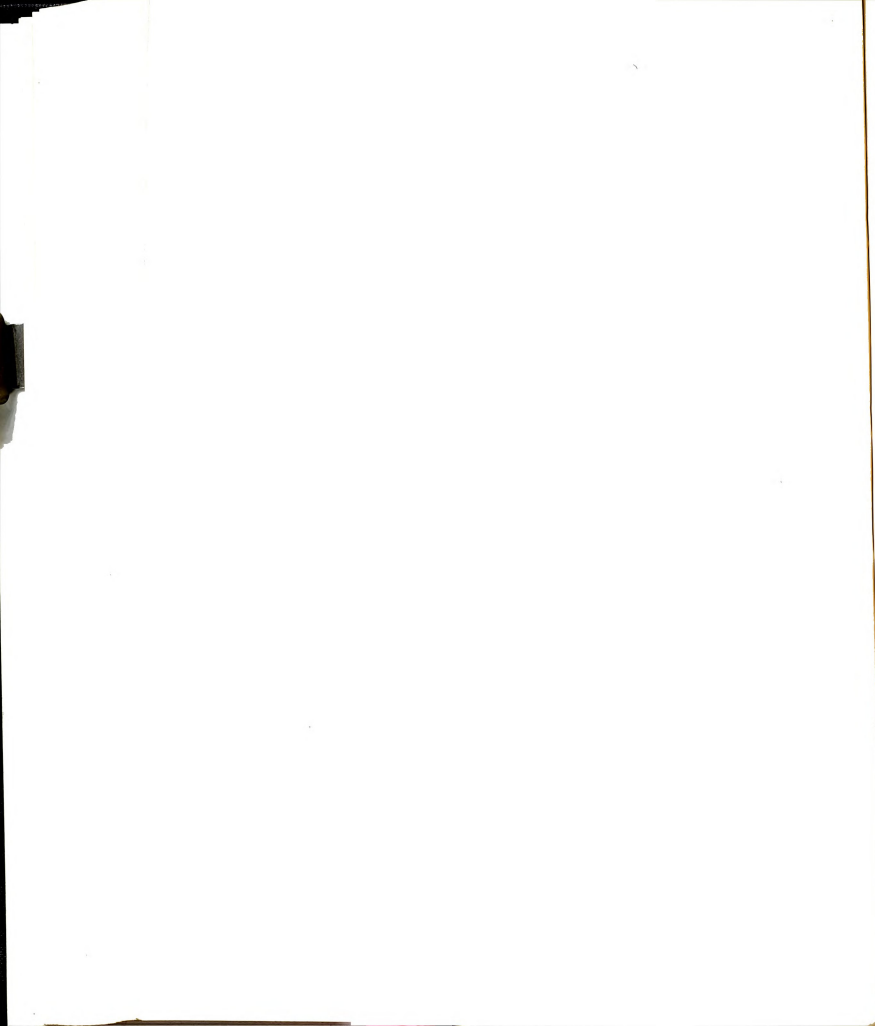


Table 30

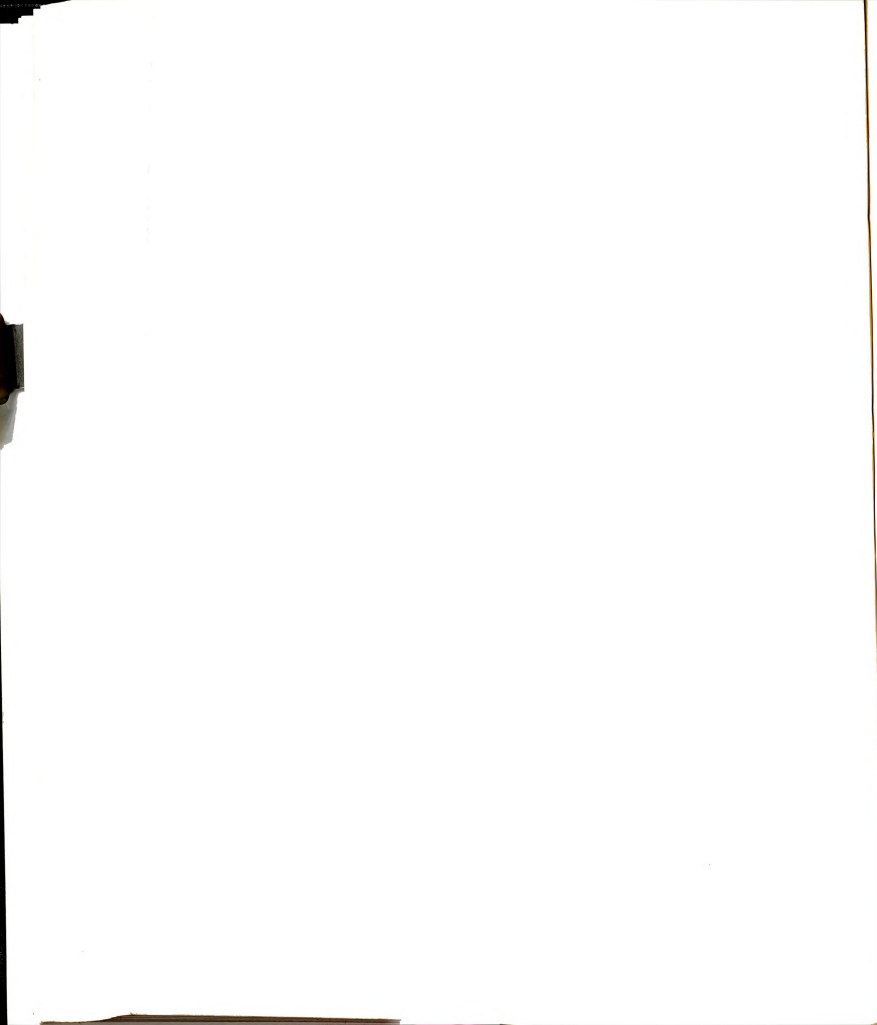
Three-Way Anova--Difference Score: Estimated Percentile on Test  
Of Homemaking Ability and on Test of Career Ability

	Sum of Squares	DF	Mean Square	F	Signif.	$\frac{1}{2}$ Sum of Squares
Sex Role	6,724.355	1	6,724.355	12.115	.001*	11.20
Fear of Failure	392.255	1	392.255	.707	.403	.65
Task Congruence	16.998	1	16.998	.031	Over .5	.03
S.R. X F.F.	596.248	1	596.248	1.074	.303	.99
S.R. X T.C.	481.926	1	481.926	.868	.354	.80
F.F. X T.C.	702.277	1	702.277	1.265	.264	1.17
S.R. X F.F. X T.C.	87.371	1	87.371	.157	Over .5	.15
Error	51,063.672	92	555.040			85.01
Total	60,065.094	99	606.718			100.00

Table 31

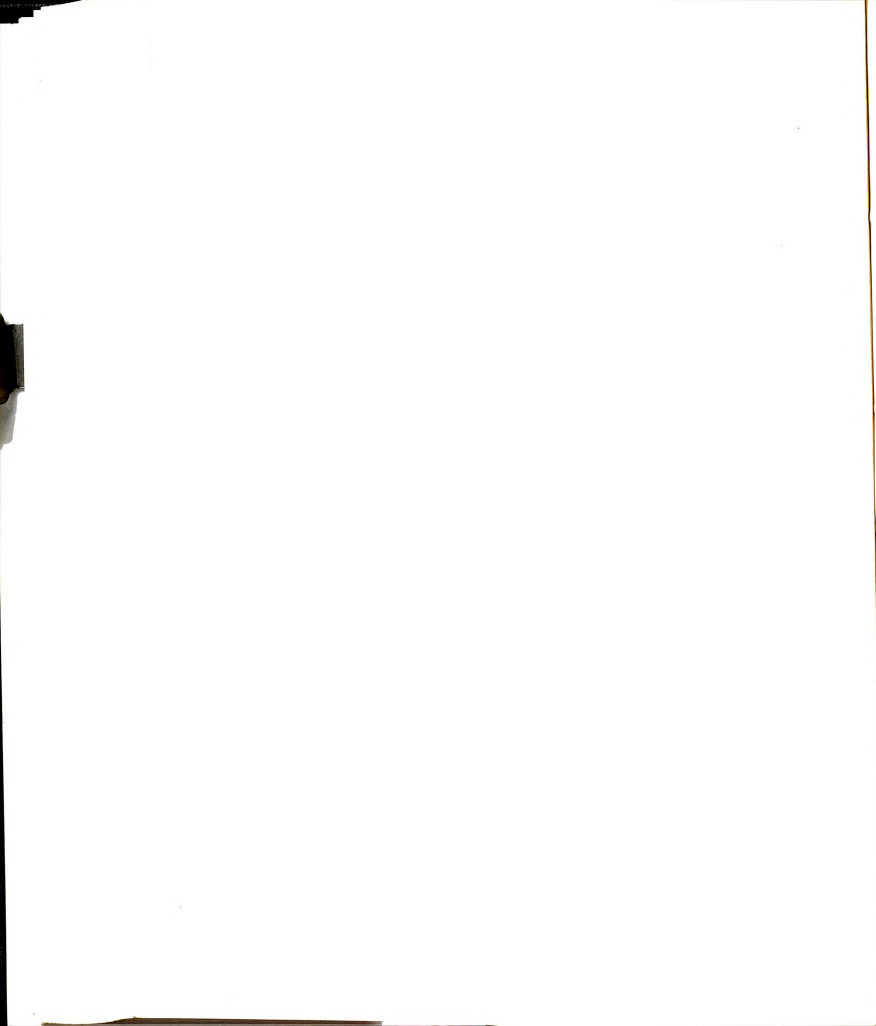
Three-Way Anova--Absolute Value of Difference Score: Estimated Percentile on Test of Homemaking Ability and on Test of Career Ability

	Sum of Square	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	1,732.480	1	1,732.480	5.449	.022*	5.10
Fear of Failure	212.618	1	212.618	.669	.416	.63
Task Congruence	830.726	1	830.726	2.613	.110	2.45
S.R. X F.F.	1,221.655	1	1,221.655	3.842	.053	3.60
S.R. X T.C.	190.536	1	190.536	.599	.441	.56
F.F. X T.C.	102.211	1	102.211	.321	Over .5	.30
S.R. X F.F. X T.C.	419.201	1	419.201	1.318	.254	1.23
Error	29,250.602	92	317.941			86.13
Total	33,960.012	99	343.030			100.00



without fear of failure (career test  $\bar{X}$  = 66.795, homemaking test  $\bar{X}$  = 62.960) were higher than those made by subjects with fear of failure (career test  $\bar{X}$  = 61.434, homemaking test  $\bar{X}$  = 53.535). This effect was significant only for the homemaking prediction ( $F$  = 5.340,  $p$  < .024); the  $F$  ratio did not achieve conventional levels of significance on the career test ( $F$  = 2.623,  $p$  < .109). These findings are consistent with the hypothesis suggested by the level of expectation data that subjects with fear of failure have less confidence in their abilities than subjects without fear of failure. A far more intriguing finding is the nearly significant ( $p$  < .053) sex role by fear of failure effect on the absolute value of differences between the two predictions. Career-oriented subjects with fear of failure tended to indicate more difference in ability level ( $\bar{X}$  = 27.153) than did career-oriented subjects without fear of failure ( $\bar{X}$  = 16.987). Homemaking-oriented subjects without fear of failure tended to indicate more difference in ability ( $\bar{X}$  = 15.618) than did homemaking-oriented subjects with fear of failure ( $\bar{X}$  = 11.438).

Perhaps these results can resolve the contradictory findings reported by other experimenters on career salience in women. As noted by Almquist and Angrist (1970), explanations of female career salience have tended to employ either a deviance or an enrichment



hypothesis. Their data partially supported both hypotheses. Career salient subjects in their sample were significantly less likely to be going steady, engaged, or married as seniors or to belong to a sorority than subjects who were not career salient. On the other hand, career salient subjects were significantly more likely to have had working mothers than noncareer salient subjects. They also had had more and more various jobs and had been more influenced in their occupational choice by professors or members of the occupation than had non-career salient subjects. Kagan and Moss (1962) found significant associations between maternal hostility and acceleration of development during the first three years of life and the appearance of "masculine" interests in adulthood. They did note, however, that the raters used in their study may have misinterpreted the mothers' attitudes because of their subjective biases about normative child-rearing practices. It is interesting to note that Kagan and Moss view working mothers as negative role models, while Almquist and Angrist view them as an enriching influence. White's (1959) and Lipman-Blumen's (1972) research tended to support the deviance hypothesis.

The results of this study suggest that both hypotheses are valid. Some women (those without fear of failure) may choose a career orientation because they

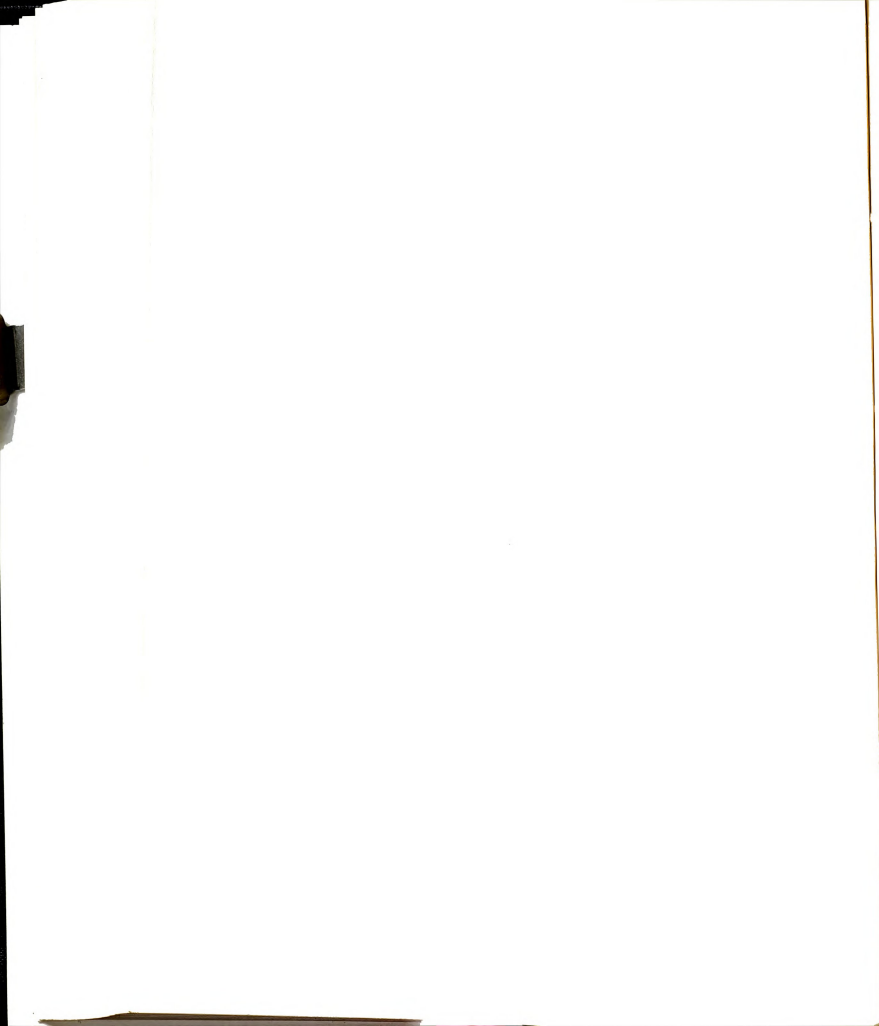


are self-confident (significantly higher level of expectation, high predictions on both career and homemaking tests) and are encouraged by their successful parents (significantly higher socio-economic status) to actualize their goals directly rather than vicariously through their husbands. Other women (those with fear of failure) may choose a career orientation as part of a life-long pattern of high aspiration designed to avoid parental rejection. These high fear of failure women believe that they have less than average ability to perform traditionally female role activities ( $\bar{X} = 45.282$ ). Perhaps these women come from families where the traditional female role is devalued and where their attempts to master female role activities were ridiculed. As a result they adopted a career orientation as a means of avoiding social rejection.

While the difference between the two estimates was greater for the fear of failure subjects with a career orientation than for the career-oriented subjects without fear of failure, the opposite was true for the subjects with a homemaking orientation. The mean difference for subjects with a homemaking orientation was greater for subjects without fear of failure than for subjects with fear of failure. Actually, the mean difference for homemaking-oriented subjects without fear of failure ( $\bar{X} = 15.618$ ) was about the same as the mean

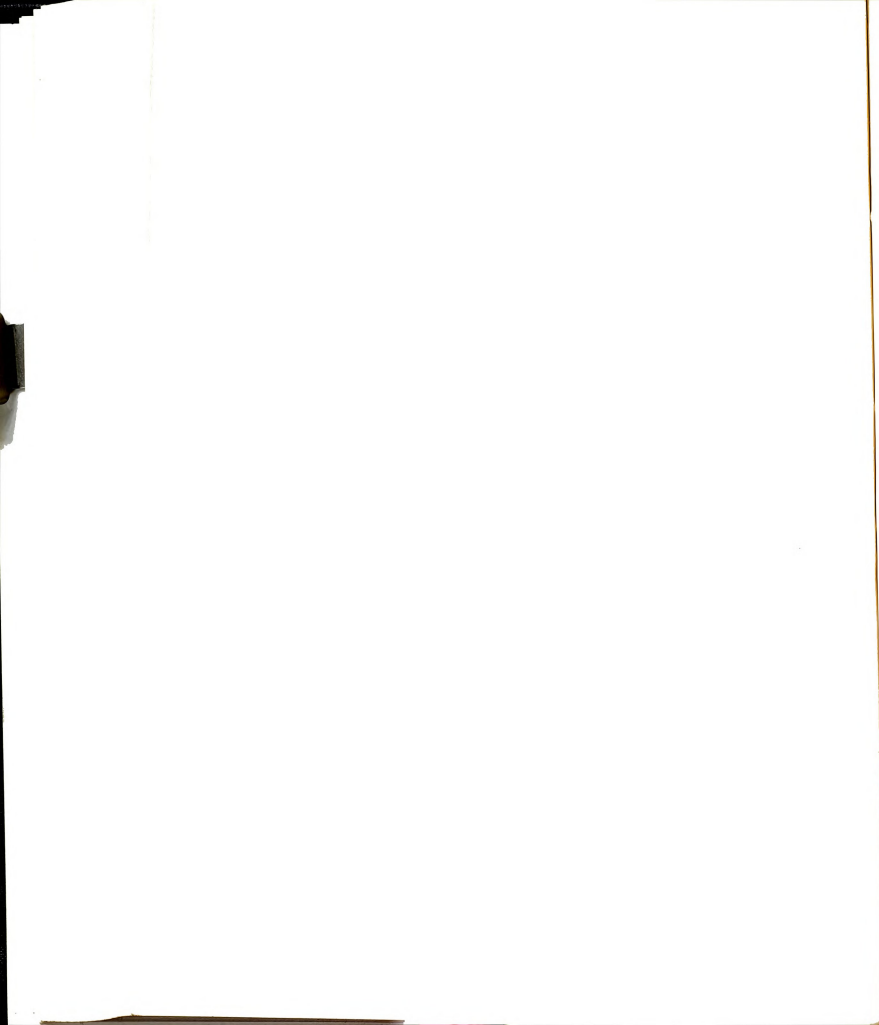


difference for career-oriented subjects without fear of failure ( $\bar{X} = 16.987$ ). The problem is to account for the small mean difference ( $\bar{X} = 11.438$ ) of the fear of failure subjects with a homemaking orientation. It seems likely that this finding is a consequence of the generally low level of aspiration of fear of failure subjects with a homemaking orientation. They had the lowest mean estimate of ability for a test congruent with their sex role orientation; mean prediction was 61.6 for this group and 66.656 for the other three groups. In addition, the homemaking-oriented subjects with fear of failure had the lowest mean level of aspiration for the Scrambled Words Test.



APPENDIX I

ATTRIBUTION OF PERFORMANCE



## APPENDIX I

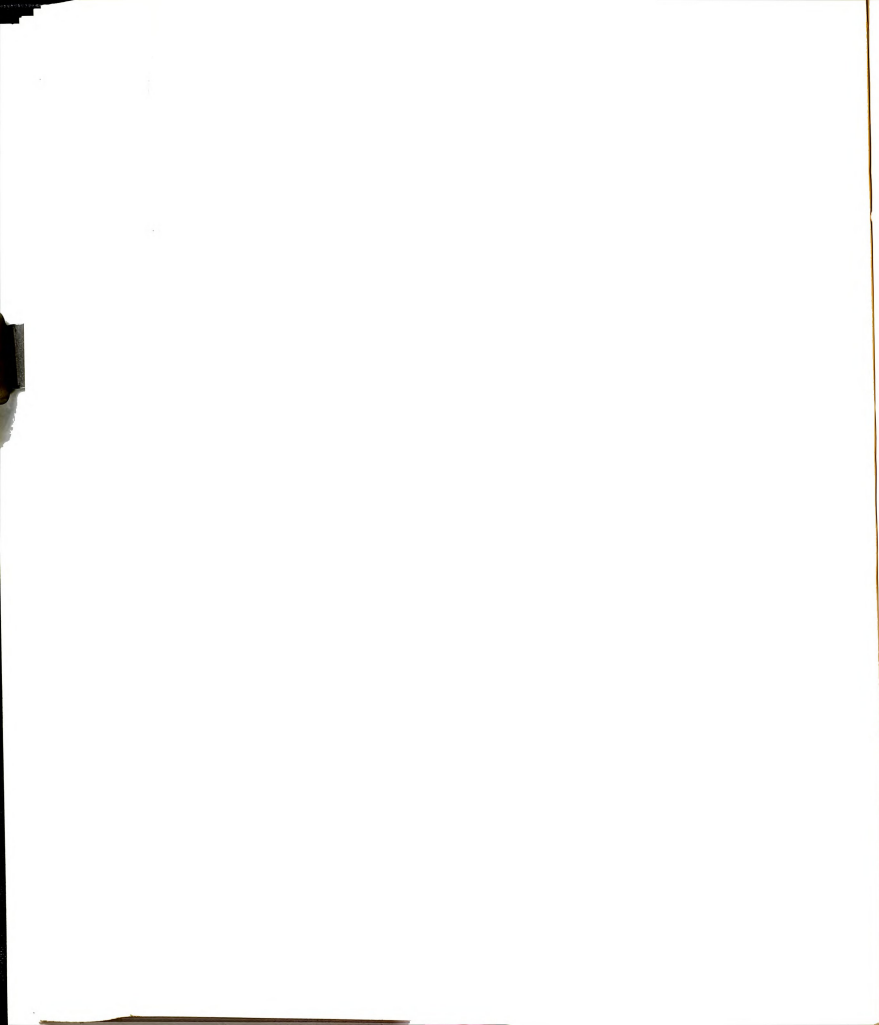
### Attribution of Performance

Performance attribution is one of the few areas of achievement motivation research in which more than a few studies have included women. This research is based upon Heider's (1958) "naive analysis of action" which concludes that the disposition to perform an activity is a combination of the personal factors of effort and ability and of the environmental factors of luck and task difficulty. Feather (1968) has attempted to relate subjects' dispositional attributions of performance to their locus of control. More recently (1969), he has hypothesized that attribution is relatively more external for unexpected outcomes and relatively more internal for expected outcomes. This hypothesis has been confirmed in three experiments which included female subjects (Feather, 1969; Simon & Feather, 1973; Feather & Simon, 1974). It has also been reported (Feather, 1969; Simon & Feather, 1974) that female subjects are significantly more likely to attribute their performance to external (environmental) factors than are males. This finding is perplexing in light of Crandall, Katkovsky, and Crandall's (1965) discovery that girls in grades 6 through 12 claim significantly ( $p < .001$ ) more personal responsibility for school grades than do boys. In another study

(Deaux & Emswiller, 1974) the focus was attribution of another person's performance. Once again, the connection between expectation and attribution was confirmed; success on the masculine task was attributed to skill for males and luck for females ( $p < .001$ ). Males were also rated as significantly ( $p < .05$ ) more skillful than females.

In the present study subjects were asked to indicate the percentage of their performance which they attributed to effort, skill, luck, and task difficulty. This question was included as an afterthought and was not an essential part of the experiment. Because the question was unclear and the significance levels of most of the effects discussed below only approach conventional levels of acceptability, these findings are to be regarded as highly tentative. Perhaps they can be best used to direct future research. The subjects were, unfortunately, not asked to indicate whether they felt they had done better or worse than they had expected, so analysis of the attribution responses is difficult. We shall proceed on the assumption that groups with mean post-performance estimates below the 50th percentile experienced their performance as a failure. Those groups whose mean post-performance percentile estimates were above the 50th percentile must be regarded as being in an uncertain area. While they failed relative to their levels of





expectation, they still believed that their performance was above the average. Another problem affecting interpretation of these results is the fact that many subjects misinterpreted the instructions. A goodly number merely checked one of the four attributional factors, and two subjects gave attributions which added up to more than 100%.

Given all these problems, perhaps the best method of examining these results is a chi square test. The category which received the largest numerical attribution was used as the classificatory category. Effort was seen as the most important factor by the majority of subjects (50), with skill second (17), task difficulty third (12), and luck fourth (4). Most of the subjects, therefore, took a large amount of personal responsibility for their performance. Internal factors were rated as the most important contributors significantly ( $X^2 = 15.8$ ,  $p < .001$ ) more often than the external factors. The direction of these effects were the same for the numerical data; mean attribution was greatest for effort (42.233), second for skill (25.908), third for task difficulty (19.901), and fourth for luck (11.844). Apparently the subjects correctly perceived that performance (at least within this sample) was more a measure of effort than of ability.

The four attribution factors were subjected to chi square analysis for the two subject variables.

While there were no significant differences in main source of attribution by sex role orientation, there was a significant ( $X^2 = 8.17$ ,  $df = 3$ ,  $p < .05$ ) difference by fear of failure. Significantly ( $p < .05$ ) more subjects without fear of failure considered skill the main source of their performance than did subjects with fear of failure. There was a tendency ( $p < .10$ ) for more subjects with fear of failure to consider luck as the main source of their performance than did subjects without fear of failure.

The numerical attribution scores were each separately subjected to an unweighted means analysis of variance. The attribution to effort analysis (see Tables 32 and 33) produced no significant F ratios. There was, however, an insignificant ( $p < .077$ ) fear of failure by task congruence interaction. This tendency becomes understandable when it is compared to the insignificant ( $p < .084$ ) fear of failure by task congruence interaction for skill. Fear of failure subjects attributed to effort more in the congruent condition (congruent  $\bar{X} = 52.271$ , incongruent  $\bar{X} = 33.299$ ) and to skill more in the incongruent condition (congruent  $\bar{X} = 17.250$ ; incongruent  $\bar{X} = 25.052$ ). In other words, they felt their effort (or lack of it) had a greater influence on performance in the congruent condition and that their ability (or lack of it) had a greater influence on performance in the incongruent condition.

Table 32  
Three-Way Anova--Attribution to Effort

	Sum of Squares	DF	Mean Square	F	Signif.	$\frac{1}{2}$ Sum of Squares
Sex Role	44.531	1	44.531	.042	Over .5	.04
Fear of Failure	28.623	1	28.623	.027	Over .5	.03
Task Congruence	1,142.983	1	1,142.983	1.081	.302	1.11
S.R. X F.F.	.218	1	.218	Very Small		.00
S.R. X T.C.	2,283.359	1	2,283.359	2.160	.146	2.22
F.F. X T.C.	3,387.323	1	3,387.323	3.205	.077	3.29
S.R. X F.F. X T.C.	6.700	1	6.700	.006	Over .5	.01
Error	96,185.625	91	1,056.985			93.30
Total	103,079.125	98	1,051.828			100.00

Subjects without fear of failure attributed their performance to effort more in the incongruent condition ( $\bar{X} = 44.196$ ) than in the congruent condition ( $\bar{X} = 39.167$ ).

Table 33

## Attribution to Effort--Means and Standard Deviations

		Fear of Failure		No Fear of Failure	
		Mean	S.D.	Mean	S.D.
Congruent Condition	Career	46.875	26.584	33.333	30.625
	Homemaker	57.667	34.271	45.000	30.208
Incongruent Condition	Career	37.222	30.116	48.750	40.121
	Homemaker	29.375	29.770	39.643	34.276

It has previously been pointed out that fear of failure subjects had lower opinions of their abilities in general than subjects without fear of failure. Quite possibly they expected to succeed on the congruent task and to fail on the incongruent task. If they perceived their performance as failing on both types of tasks (and this seems likely because their mean post-performance percentile estimate was 45.160), they experienced expected failure on the incongruent task and unexpected failure on the congruent task. Their attributions, in line with previous research, suggest that they blamed

unexpected failure on the variable factor of effort and expected failure on the invariant factor of skill.

Explaining the attributions of the subjects without fear of failure is somewhat more difficult because it is unclear whether this group experienced their performance as a success or as a failure. Since these subjects have a generally positive view of themselves, we might guess that any performance above the mean would be viewed by them as a success. Although they would expect to be successful on both tasks, their expectations would be higher for the congruent task. In line with previous research, less expected success (on the incongruent task) is more attributed to the variable factor of effort, while expected success (on the congruent task) is more attributed to the stable factor of ability.

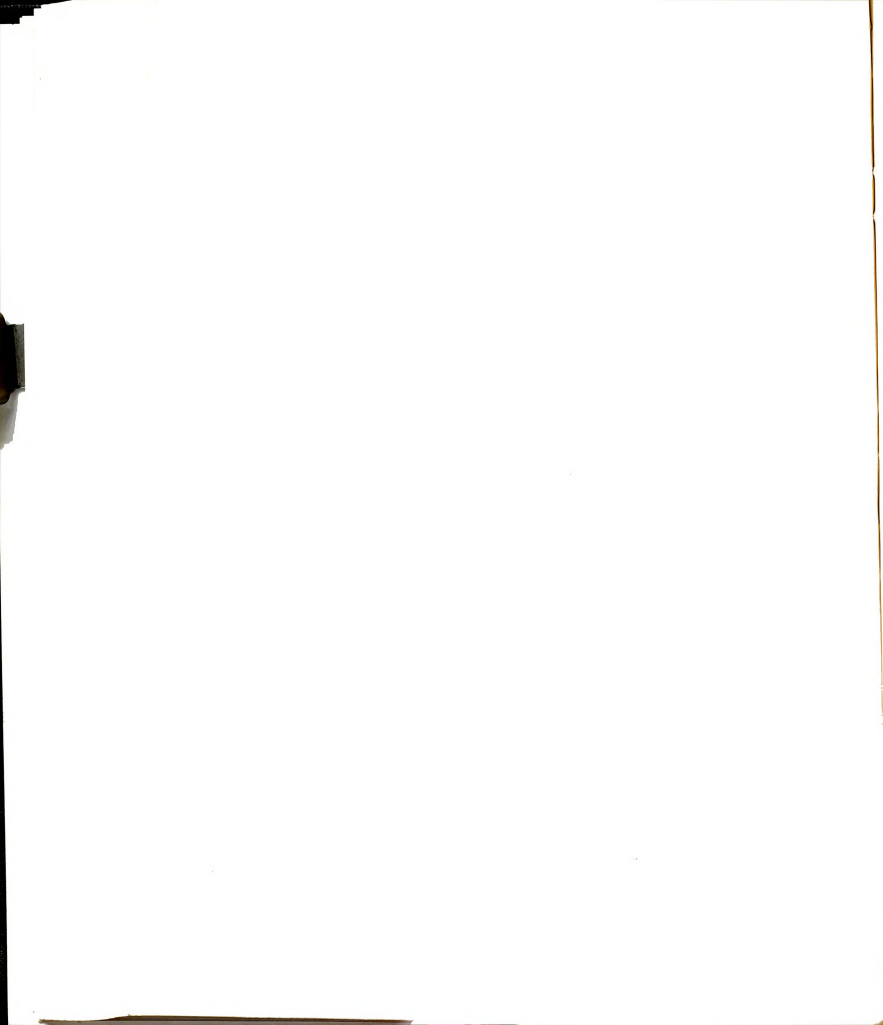
One significant F ratio was produced when the attribution to skill data was analyzed (see Tables 34 and 35), the sex role by task congruence interaction. This effect probably reflects the subjects' belief that a test of career ability demands more skill than a test of homemaking ability. For the career test, mean attribution to skill was 34.167 for the career-oriented subjects and 30.004 for the homemaking-oriented subjects. Attribution to skill for the homemaking test was lower--20.000 for the career-oriented subjects and 19.462 for the subjects with a homemaking orientation. Another



Table 34  
Three-Way Anova--Attribution to Skill

	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	129.922	1	129.922	.183	Over .5	.18
Fear of Failure	2,128.977	1	2,128.977	2.998	.087	2.91
Task Congruence	77.211	1	77.211	.109	Over .5	.11
S.R. X F.F.	5.550	1	5.550	.008	Over .5	.01
S.R. X T.C.	3,589.990	1	3,589.990	5.055	.027*	4.91
F.F. X T.C.	2,173.828	1	2,173.828	3.061	.084	2.98
S.R. X F.F. X T.C.	325.359	1	325.359	.458	Over .5	.45
Error	64,630.625	91	710.227			88.45
Total	73,061.188	98	745.522			100.00





interesting finding, which did not achieve conventional levels of significance ( $p < .087$ ), was that subjects without fear of failure attributed their performance to skill more ( $\bar{X} = 30.665$ ) than did subjects with fear of failure ( $\bar{X} = 21.151$ ). This finding is consistent with the interpretation that subjects with fear of failure view themselves as less skillful than do subjects without fear of failure.

Table 35

Attribution to Skill--Means and Standard Deviations

		Fear of Failure		No Fear of Failure	
		Mean	S.D.	Mean	S.D.
Congruent Condition	Career	22.500	17.728	45.833	31.249
	Homemaking	12.000	15.213	26.923	29.898
Incongruent Condition	Career	21.667	26.220	18.333	23.290
	Homemaking	28.438	32.027	31.571	28.916

Analysis of the attribution to luck data (see Tables 36 and 37) produced two significant F ratios, the sex role by fear of failure interaction ( $p < .008$ ) and the three-way interaction ( $p < .026$ ). Actually, both of these effects reflect the strong interaction of sex role and fear of failure in the incongruent condition. The attribution to luck made by career-oriented subjects

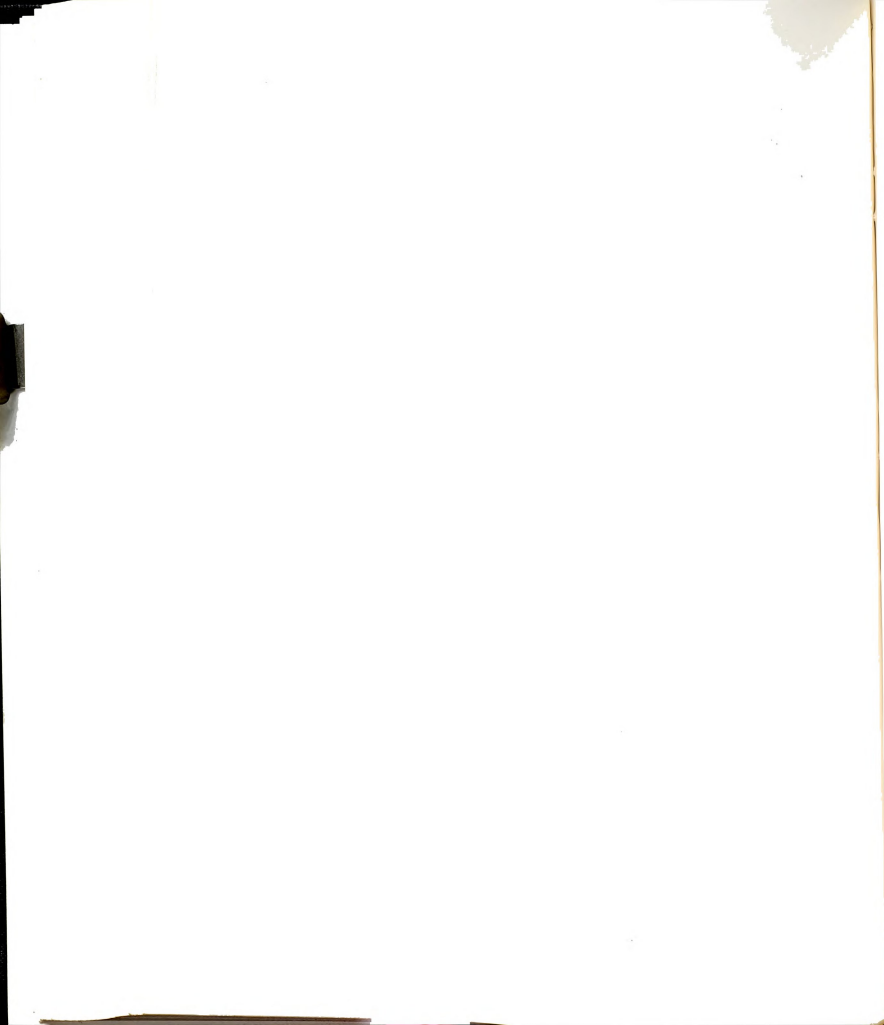
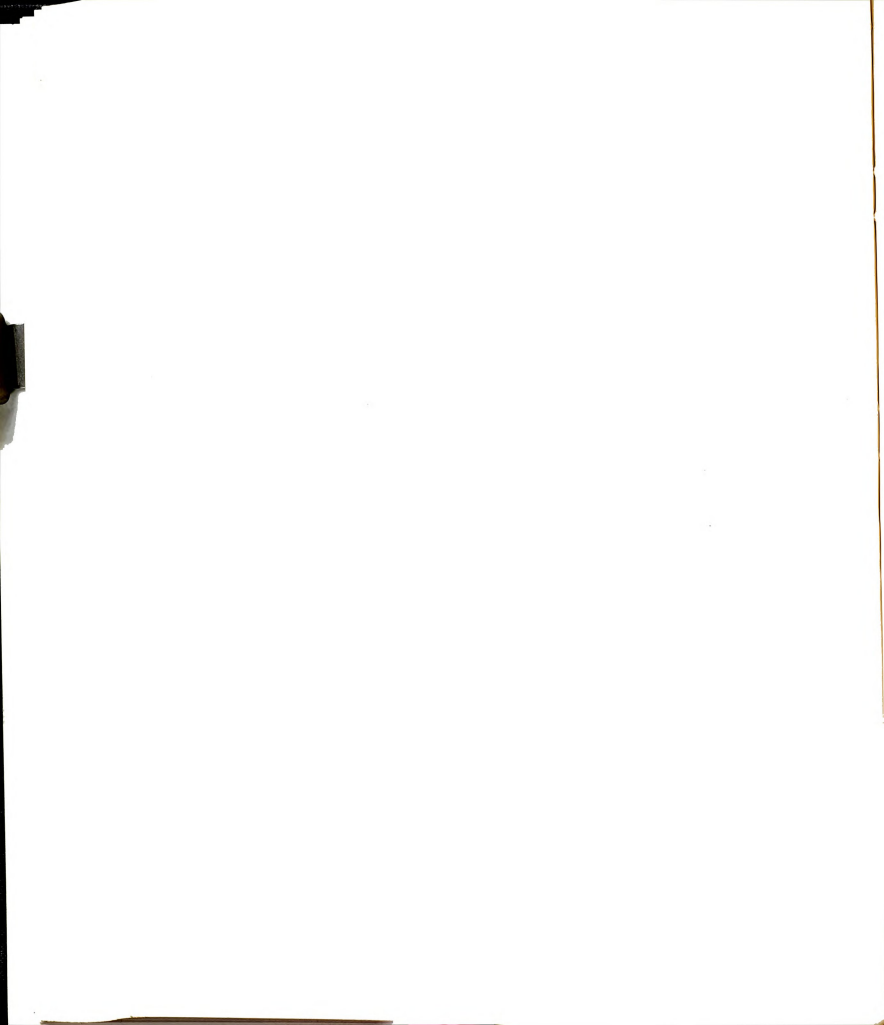


Table 36  
Three-Way Anova--Attribution to Luck

	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	619.535	1	619.535	2.251	.137	1.99
Fear of Failure	391.574	1	391.574	1.423	.237	1.26
Task Congruence	397.306	1	397.306	1.444	.233	1.27
S.R. X F.F.	2,043.996	1	2,043.996	7.428	.008*	6.56
S.R. X T.C.	521.604	1	521.604	1.896	.172	1.67
F.F. X T.C.	752.720	1	752.720	2.735	.102	2.41
S.R. X F.F. X T.C.	1,410.985	1	1,410.985	5.128	.026*	4.53
Error	25,040.813	91	275.174			80.31
Total	31,178.520	98	318.148			100.00



with high fear of failure ( $\bar{X} = 32.222$ ) in this condition was nearly three times the size of the attribution to luck made by the next smaller group ( $\bar{X} = 12.643$ ) homemaking-oriented subjects without fear of failure. The attributions to luck made by the other groups were nearly equal ( $\bar{X} = 5.417$  for career-oriented Ss without fear of failure and  $\bar{X} = 5.313$  for homemaking-oriented subjects with fear of failure).

Table 37

Attribution to Luck--Means and Standard Deviations

		Fear of Failure		No Fear of Failure	
		Mean	S.D.	Mean	S.D.
Congruent Condition	Career	10.000	11.650	10.000	11.481
	Homemaker	8.000	15.675	11.154	12.274
Incongruent Condition	Career	32.222	39.220	5.417	9.876
	Homemaker	5.313	10.242	12.643	13.703

To interpret these findings, we must examine the nearly significant ( $p < .056$ ) three-way interaction for the attribution to task difficulty data (see Tables 38 and 39). In the incongruent condition, the attribution to task difficulty for fear of failure subjects with a homemaking orientation ( $\bar{X} = 36.875$ ) was much higher than that of fear of failure subjects with a career orientation

Table 38  
Three-Way Anova--Attribution to Task Difficulty

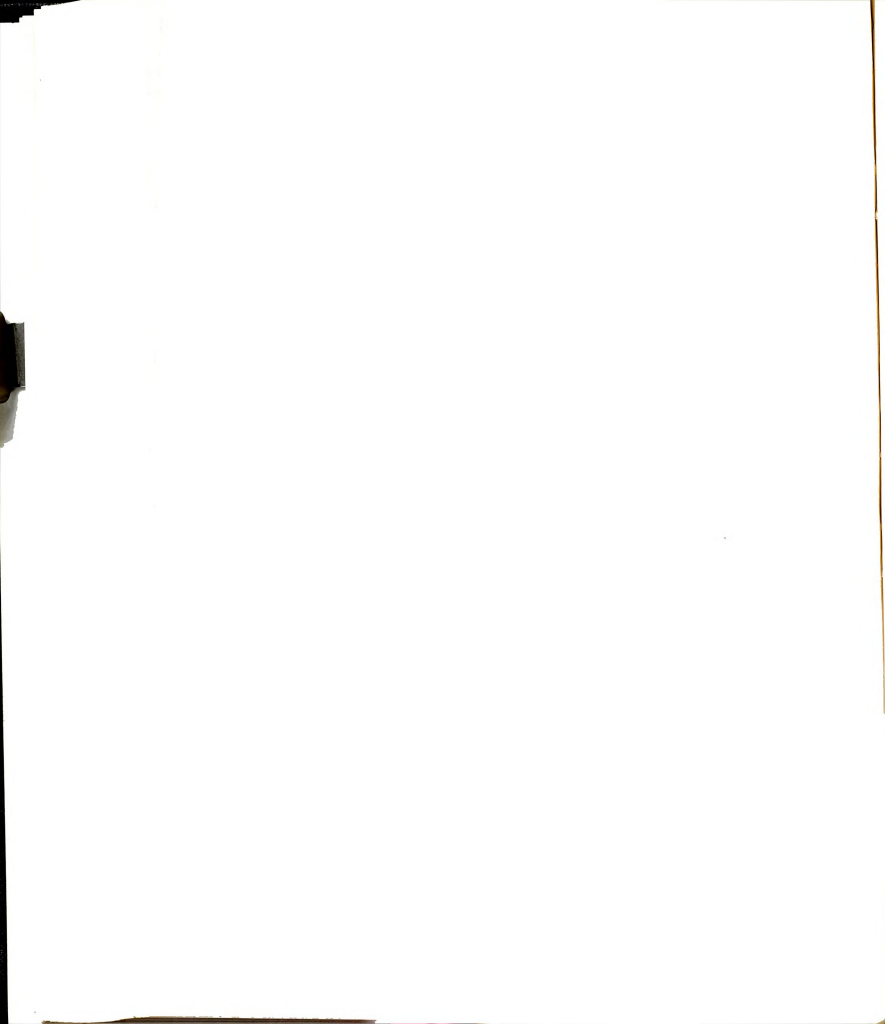
	Sum of Squares	DF	Mean Square	F	Signif.	% Sum of Squares
Sex Role	1,016.275	1	1,016.275	1.280	.261	1.30
Fear of Failure	447.917	1	447.917	.564	.455	.57
Task Congruence	348.456	1	348.456	.439	Over .5	.45
S.R. X F.F.	469.551	1	469.551	.591	.444	.60
S.R. X T.C.	492.979	1	492.979	.621	.433	.63
F.F. X T.C.	30.608	1	30.608	.039	Over .5	.04
S.R. X F.F. X T.C.	2,979.311	1	2,979.311	3.752	.056	3.82
Error	72,264.563	91	794.116			92.59
Total	78,049.375	98	796.422			100.00





( $\bar{X} = 10.000$ ). If, as we have previously assumed, the fear of failure subjects experienced their performance on the incongruent task as expected failure, it appears that the Ss with a homemaking orientation blamed their failure more on a fixed factor, task difficulty, while the Ss with a career orientation blamed their failure more on a variable factor, luck. This conclusion is consistent with our earlier discussion of the differences between career and homemaking-oriented subjects with fear of failure. The homemaking-oriented fear of failure subject believes she is generally of low ability, and her expected failure on the career task is a consequence of this lack of ability; i.e., the task was too difficult. The career-oriented subject with fear of failure, on the other hand, hopes that she is of generally high ability but has a lacuna in the homemaking area. Thus, although she expected to fail on this task, failure is generally inconsistent with her self-image. As a result, she blames her failure on the homemaking task on bad luck.

Since we are unsure of the subjects' interpretations of their performance, we shall not examine the individual attribution sources further. As previously mentioned, examination of the attributions along the internal-external dimension failed to produce any significant F ratios. For all groups internal attribution was much greater ( $\bar{X} = 67.966$ ) than external attribution



( $\bar{X}$  = 31.764), suggesting that the subjects felt highly responsible for their performance. There was a non-significant trend for internal attribution to be greater for subjects without fear of failure ( $\bar{X}$  = 72.347) than for subjects with fear of failure ( $\bar{X}$  = 63.936) ( $p < .250$ ) and for external attribution to be greater for subjects with fear of failure ( $\bar{X}$  = 35.967) than for subjects without fear of failure ( $\bar{X}$  = 27.523) ( $p < .203$ ). These trends are suggestive of greater defensiveness on the part of subjects with fear of failure. As might be expected, there was a trend for external attribution to be greater in the incongruent condition ( $\bar{X}$  = 35.724) ( $p < .230$ ) than in the congruent condition ( $\bar{X}$  = 27.765) and for internal attribution to be greater in the congruent condition ( $\bar{X}$  = 72.533) ( $p < .229$ ) than in the incongruent condition ( $\bar{X}$  = 63.750).

Table 39

Attribution to Task Difficulty--Means and Standard Deviations

		Fear of Failure		No Fear of Failure	
		Mean	S.D.	Mean	S.D.
Congruent Condition	Career	23.125	13.611	10.833	10.188
	Homemaker	36.875	41.708	17.929	19.117
Incongruent Condition	Career	10.000	23.452	22.500	37.689
	Homemaker	18.333	26.027	19.615	28.097

APPENDIX J

HISTORY OF THE PROBLEM

## APPENDIX J

### History of the Problem

It has frequently been asserted that the results of studies on achievement motivation in women are inconsistent with each other and do not correspond to the findings in studies utilizing male subjects. This review of the literature will attempt to demonstrate that the reported inconsistencies are few and that the behavior of women in achievement situations is consistent with the expectancy-value theory of achievement motivation. The concept of motive to avoid success, it is hoped, will be revealed as unsubstantiated.

Only a narrow range of achievement-related topics has been examined using female subjects. Much attention has been devoted to the arousal of achievement imagery and the performance of subjects differing in level of achievement, but almost no research has been conducted on fear of failure, level of aspiration, level of expectation, and preference for probability of success. Recently, considerable attention has been devoted to the motive to avoid success, and several studies have appeared which focus on an apparent decrement in performance which appears when women compete with men.

### Arousal

The earliest and most frequent concern of achievement motivation researchers working with female subjects was the arousal of n Achievement imagery. Field (1951) found that there was no difference in the amount of achievement imagery produced by his female subjects in a relaxed condition and in an achievement-aroused condition when the achievement arousal instructions emphasized intellectual and leadership ability. When the T.A.T. n Achievement stimuli were administered after a highly arousing speech about social acceptability, however, the level of n Social (his variable) was significantly greater than that produced in a relaxed condition. In contrast, his male subjects produced more n-Ach imagery after hearing the instructions which appealed to intellectual and leadership ability than they did in the relaxed condition, but their increase in n Social after social acceptability arousal did not achieve conventional levels of significance. These results suggest that in Field's University of Maryland sample the women measured their behavior against a standard of excellence which focused upon social behavior as the basis of competition, while the men compared their behavior chiefly against a standard of excellence which focused upon intelligence and leadership ability as the basis of competition. Note that both the male and the female subjects were



attempting to achieve a standard of excellence. Although some authors have suggested that the women in this study were attempting to gratify affiliation needs, a careful examination of the methodology indicates that social acceptability was described to the subjects as a skill essential to success in adulthood. The goal, success in adulthood, was the same for both sets of instructions. It appears that the men viewed intelligence and leadership ability as the skills necessary for their success in adulthood, while the women viewed social acceptability as the skill necessary for their success in adulthood.

Field's study was conducted at a southern university during the height of the post-war "baby boom." Orso (1959), also working at a southern university (Susquehanna), found an increase in the amount of achievement imagery produced by his female subjects after affiliation arousal. Other studies have drawn their samples from populations which place greater or lesser emphasis upon social acceptability as a standard of excellence and/or view intelligence and leadership ability as necessary for female success in adulthood. A study by Veroff, Wilcox, and Atkinson (1953) revealed no significant differences in the n-Ach imagery produced by female subjects in a neutral or relaxed condition as compared to an achievement aroused condition which emphasized intelligence and leadership ability. Another

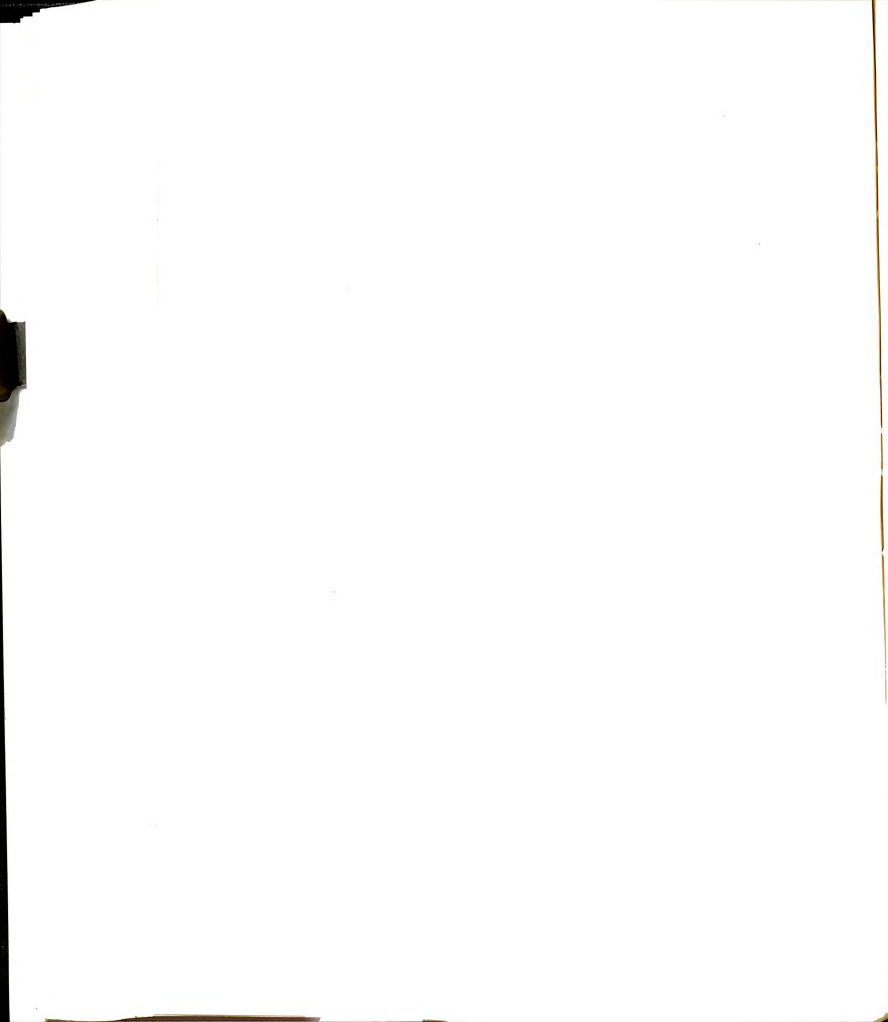


University of Michigan study (Fontana, 1970) found no significant differences between the amount of achievement imagery produced by female subjects in the neutral and the achievement aroused (intelligence and leadership ability) conditions. At the University of Michigan, as at the University of Maryland, women did not view intelligence and leadership ability as their standard of excellence. In Brazil (Angelini, 1955) where, during this time period, only extremely competitive women attended college, the n-Ach imagery produced by a group of coeds after administration of intelligence and leadership ability arousal instructions was significantly greater than that produced under neutral conditions. Lipinski, working with University of Cincinnati students in 1965, found an increase in the amount of achievement imagery produced by her subjects after intelligence and leadership ability arousal.

Lesser, Krawitz, and Packard (1963) recognized that women may differ in the standard of excellence against which they measure their behavior. They found that gifted, female, high school achievers demonstrated a significant increase in the amount of n-Ach imagery produced to female stimuli after hearing intelligence and leadership ability arousal instructions. Under-achievers drawn from the same sample were found to have a significant increase in the amount of n-Ach produced

to male stimuli. The achievers produced less achievement imagery to the male stimuli after arousal than they had in the neutral condition, while the under-achievers produced less n-Ach imagery to the female stimuli after achievement arousal. In a second (1964) study Lesser, along with Elizabeth French, specifically manipulated the arousal conditions and studied their interaction with the women's role orientation of the subjects' colleges. The dependent variable in this study was the number of achievement responses produced to French's Test of Insight. A highly significant interaction effect was discovered; women who attended colleges where the female students greatly valued intellectual achievement produced more achievement responses after intellectual arousal than after women's role arousal, but women who attended colleges where the women greatly valued social and homemaking skill produced more achievement responses after women's role arousal than after intellectual arousal. Alper (1973) found that women with a nontraditional sex role ideology told significantly more stories in which the success of female figures was unambivalently valued than did women with a traditional sex role ideology. The stimuli in this study were administered under neutral conditions.

Clearly, women, like men, demonstrate more achievement imagery after achievement arousal than in



a neutral or relaxed condition. The problem in comparing the results of the male studies to the results of the female studies has been that instructions emphasizing intelligence and leadership ability were assumed to be universally achievement arousing. In reality the standard of excellence valued by a group of individuals may vary within the group, across sexes, and within the same individual across time.

It has consistently been found that women produce significantly more achievement imagery to male stimuli than they do to female stimuli (Field, 1951; Veroff, Wilcox, & Atkinson, 1953; Lesser, Krawitz, & Packard, 1963; French & Lesser, 1964; Lipinski, 1965; Cowan & Goldberg, 1967; and Wellens, 1973). This finding has usually been interpreted as indicating that women perceive achievement as more appropriate for men than for women. Even if this is the case, this finding in no way challenges the applicability of the expectancy-value theory to women. Perhaps men also perceive achievement as more appropriate for men than for women; this hypothesis has never, to the author's knowledge, been tested.

### Performance

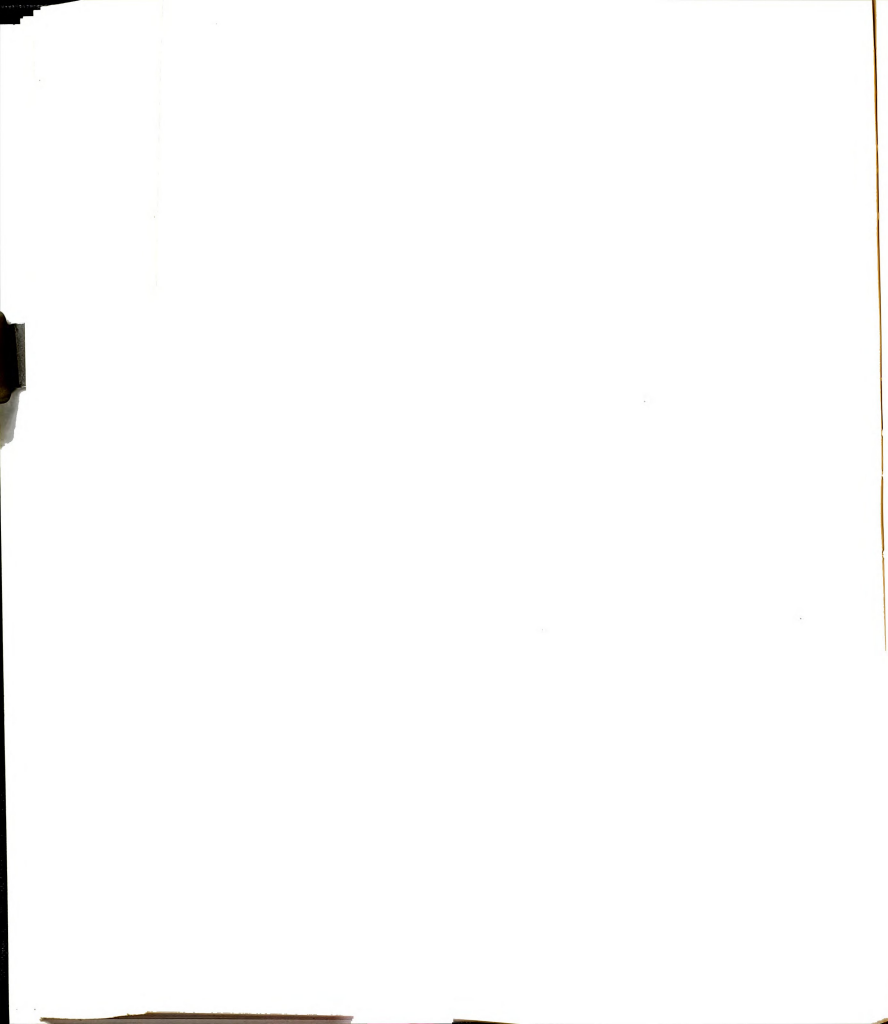
The results of studies using female subjects which relate Achievement to performance have been consistent, despite popular belief to the contrary.

Veroff, Wilcox, and Atkinson (1953) found that in two middle time intervals the scrambled words performance of women with high n Achievement was significantly better than that of women with low n Achievement. Morrison (1954) also found that high n-Ach women performed significantly better on a scrambled words task than did women with low n-Ach. A significant relationship between n-Ach and skill attainment in swimming was found by Daugert (1966).

More complicated results have been found when task description, type of subject, competition condition, type of feedback, and sex of competitor have been varied. It is quite clear that performance is enhanced when the task description emphasizes aspects of the task which are relevant to the subject's typical activities or goals. Milton (1959) found that women performed significantly better than men on arithmetic story problems which had typically female content. When the same arithmetic problems were written as stories with typically male content, the male subjects performed significantly better than the female subjects. French and Lesser (1964) attempted to demonstrate that female subjects perform better on a task described as relevant to their sex role orientation than on one irrelevant to their sex role orientation. Although the results confirmed their hypothesis, they must be discounted because two unrelated

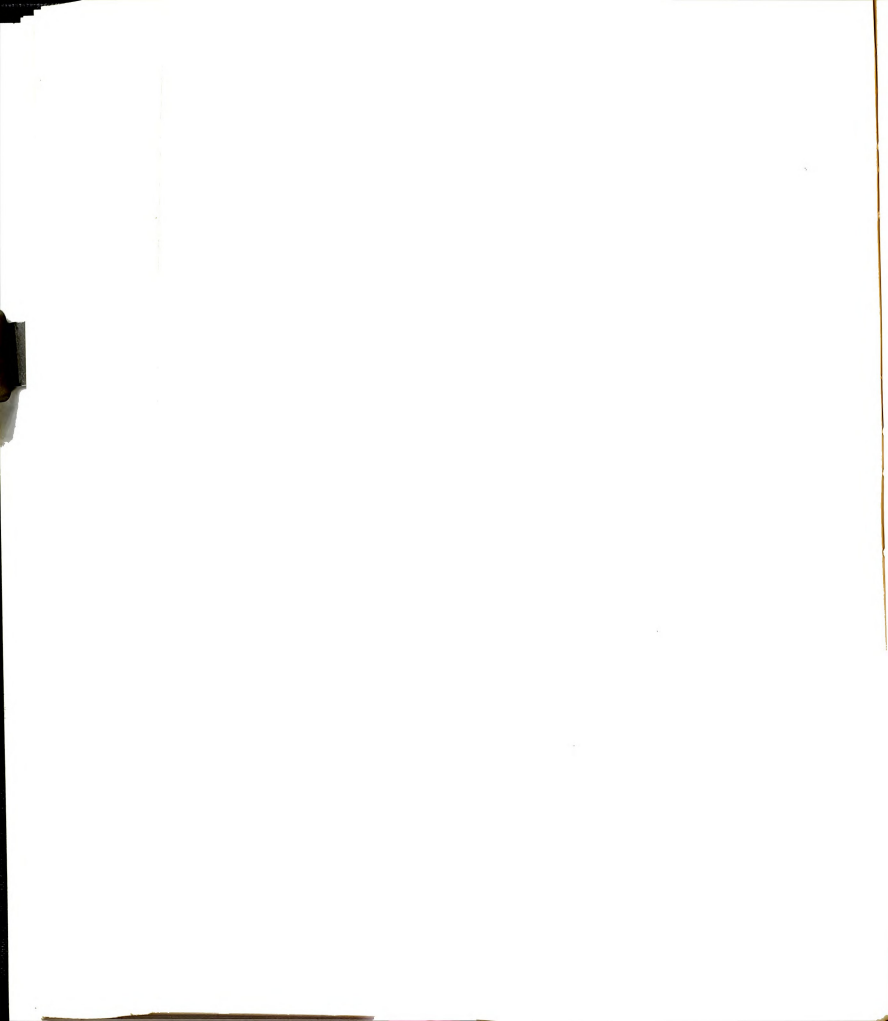
performance measures were used in the two experimental conditions. Houts and Entwisle (1968) found that, when verbal ability was controlled, the combined English and Social Studies grades of 10th-grade girls who valued getting higher grades than boys were significantly higher than those of girls who did not value getting higher grades than boys. In another study (Maxwell and Gonzalez, 1972) subjects were asked to select endings for vignettes which involved a woman in either a career or homemaking setting. For subjects with either a career or a homemaking orientation, there was a significant preference for the ending requiring less mastery on the task which was incongruent with the subject's sex role orientation.

A number of studies have demonstrated that in situations which emphasize cooperation some women display a decrement in performance when they compete against a man whose prior performance seems to have been inferior to that of the woman. Weiss (1962) found that women displayed a significant decrement in the amount of pressure exerted on a hand dynamometer when competing against a man relative to their performance when competing against a woman. It is important to note that the task in this experiment was described as an experiment about the acquaintanceship process. In another experiment in which subjects were asked to cooperate with each other (Morgan



& Mausner, 1973) female high school students who discovered that their embedded figure performance in a first session was superior to that of their male partners in the second session displayed a decrement in performance relative to their performance in the first session. The male subjects in this study who had had low scores in the first session displayed a relative increment in their performance. It should be noted that male subjects with high scores displayed a decrement in performance. These results suggest that in a cooperative situation women and, to a lesser extent men, try to equalize their performance with that of their partner. A study by Walker and Heyns (1962) suggests that women are more responsive than men to requests for decreased performance if the decreased performance will have the effect of increasing the success of the partner while having a negative effect on the subject's own task success. Fisher, O'Neal, and MacDonald (1974) found that success or failure feedback coupled with apparently unintentional feedback about the partner's liking or dislike for the subject affected performance on a second task. Female subjects with male partners displayed a relative decrement when they were accepted after failure or rejected after success. Subjects with female partners displayed a relative decrement after they were accepted after success or rejected after failure. The behavior of the subjects who had male





partners suggests that their goal was to be liked by the male partner, but the behavior of the subjects with female partners suggests a resistance to the desires of the partner. When the results of this study are combined with those of Weiss's (1962) study, it appears that women in general reduce their performance to affiliate with males but affiliate through competition with females.

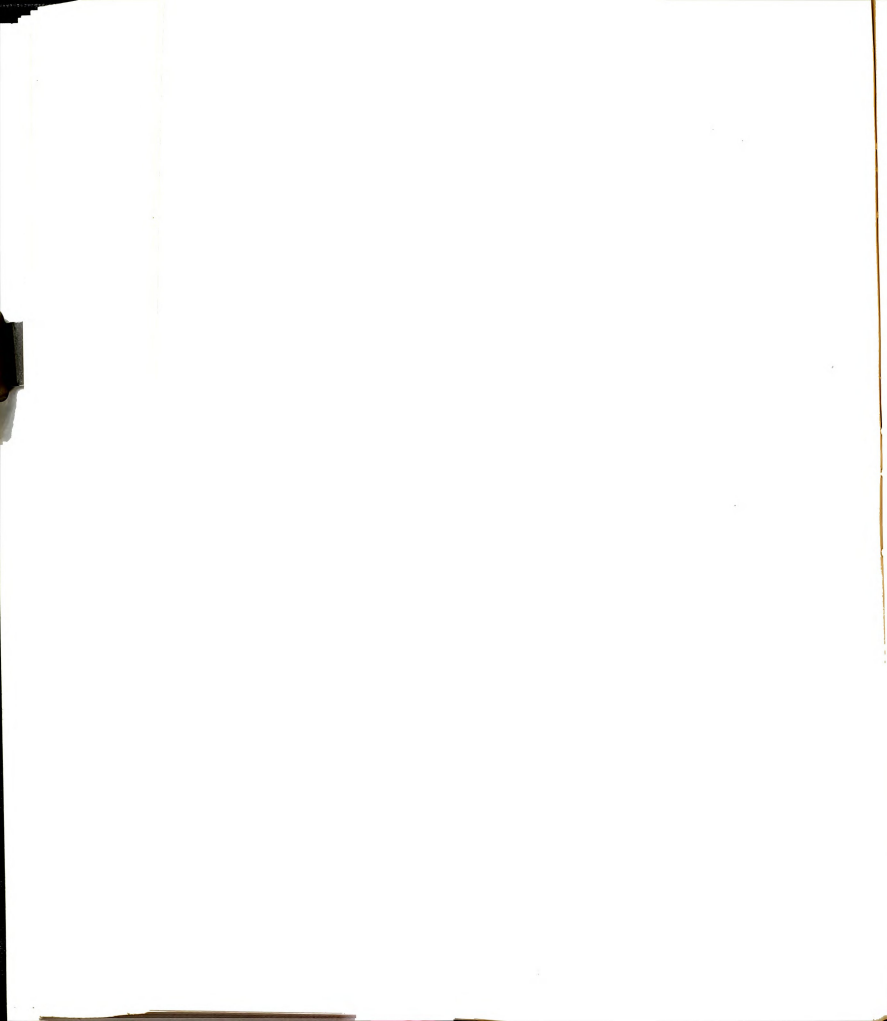
The findings described above are consistent with the hypothesis that many women value following conventional patterns of female behavior more than they value task achievement. As previously suggested by the research of French and Lesser (1964) and Houts and Entwisle (1968), this tendency is apparent only in some women. Dickstein and Brown (1974) found that women with a traditional sex role orientation performed significantly lower on two W.A.I.S. subtests when they were told that their scores would be compared to those of men than they had on another subtest when told that they were being tested to develop norms for the test. Women with a nontraditional sex role orientation, on the other hand, performed better when they thought they were in competition with men than when they thought their performance would be used to develop norms. This finding is similar to Houts' and Entwisle's (1968) discovery that girls who value successful competition with boys in school get better grades than girls who do not.

What conclusions can be drawn from these studies?

It appears that women, when their attention is drawn to the cooperative aspects of a situation, tend to sacrifice their own performance for the sake of the joint effort. This pattern appears to be less characteristic of men than of women, but it is displayed by men of superior ability (Crandall, Katkovsky, & Preston, 1969; Morgan & Mausner, 1973). In an ambiguous situation some women (those with a nontraditional sex role orientation) seem to opt for a superior position relative to a male competitor, while others (those with a traditional sex role orientation) seem to opt for an inferior position relative to a male competitor. Perhaps women in the first group feel that they should try their best on every task, while the women in the second group feel that women should appear to be inferior to a male competitor when competing in a traditionally male realm. These stances suggest different standards of excellence.

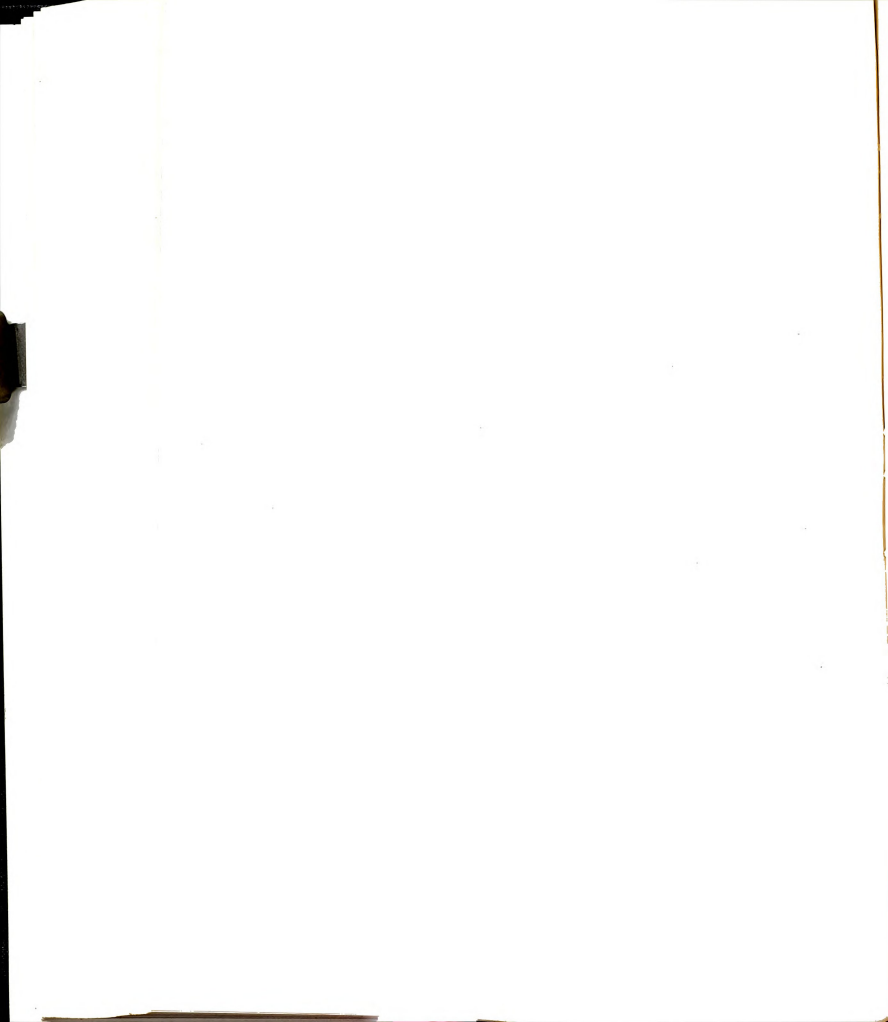
#### Motive to Avoid Success

Horner (1968, 1971, 1972, 1973a, 1973b) has hypothesized that some women have a motive to avoid success which inhibits their performance in competition. She postulated "a woman is threatened by success because unusual excellence in academic intellectual areas is unconsciously equated with loss of femininity, the consequence of which may be social rejection (1968, p. 16)."



This feared loss of femininity, she suggested, is a consequence of the aggressive overtones of success via competition and is thus more likely to be active when competition is against another individual than when the competition is against an internal standard.

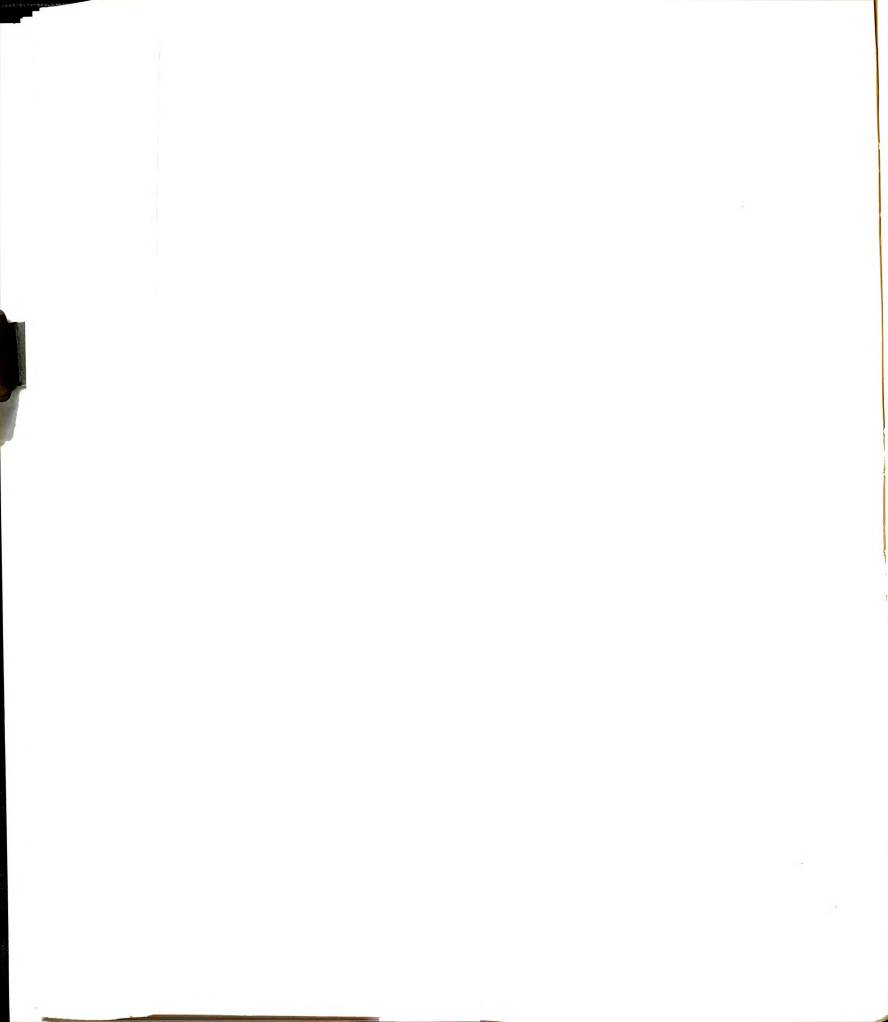
She developed a scoring system for motive to avoid success and applied it to stories told to the stimulus, "After first term finals, Ann finds herself at the top of her medical school class." The major findings of her study relative to motive to avoid success were that women with fear of success performed better when working alone than when working in competition and that women demonstrated more fear of success than men. The first result seems invalidated by Burghardt's (1973) finding that women with fear of success performed significantly better on an anagram task, whether working alone or in competition, than did women without fear of success. Feather and Simon (1973) found no significant differences in performance in a group setting between women who told fear of success stories and those who did not. This finding also does not support Horner's contention that fear of success inhibits performance in competition. Several studies have found the same or a higher incidence of fear of success imagery among men than women when the "Anne" stimulus was used (Morgan & Mausner, 1973; Burghardt, 1973; Feather & Raphelson, 1974; Monahan,



Kuhn, & Shaver, 1974). The incidence of fear of success imagery has been found to vary widely with the sample, sex of stimulus figures, and content of the stimulus (Weston & Mednick, 1970; Kresjevich, 1972; Burghardt, 1973; Breedlove & Cicirelli, 1974; Feather & Raphelson, 1974; Jackaway, 1974; Tomlinson-Keasey, 1974).

In spite of these indications that the concept is invalid or at least that the technique for assessing the motive is unreliable, considerable research has utilized fear of success as an independent variable. Moore (1972) found no relationship between fear of success and female curricular choice in graduate school. Hertzog and Walker (1973) failed to discover any relationship between experimenter bias and fear of success. The incidence of fear of success stories was found to be greater in pre-menstrual than inter-menstrual women by Patty and Ferrell (1974). Good and Good (1973) have developed a questionnaire measure of motive to avoid success but have not, up to this point, demonstrated its validity.

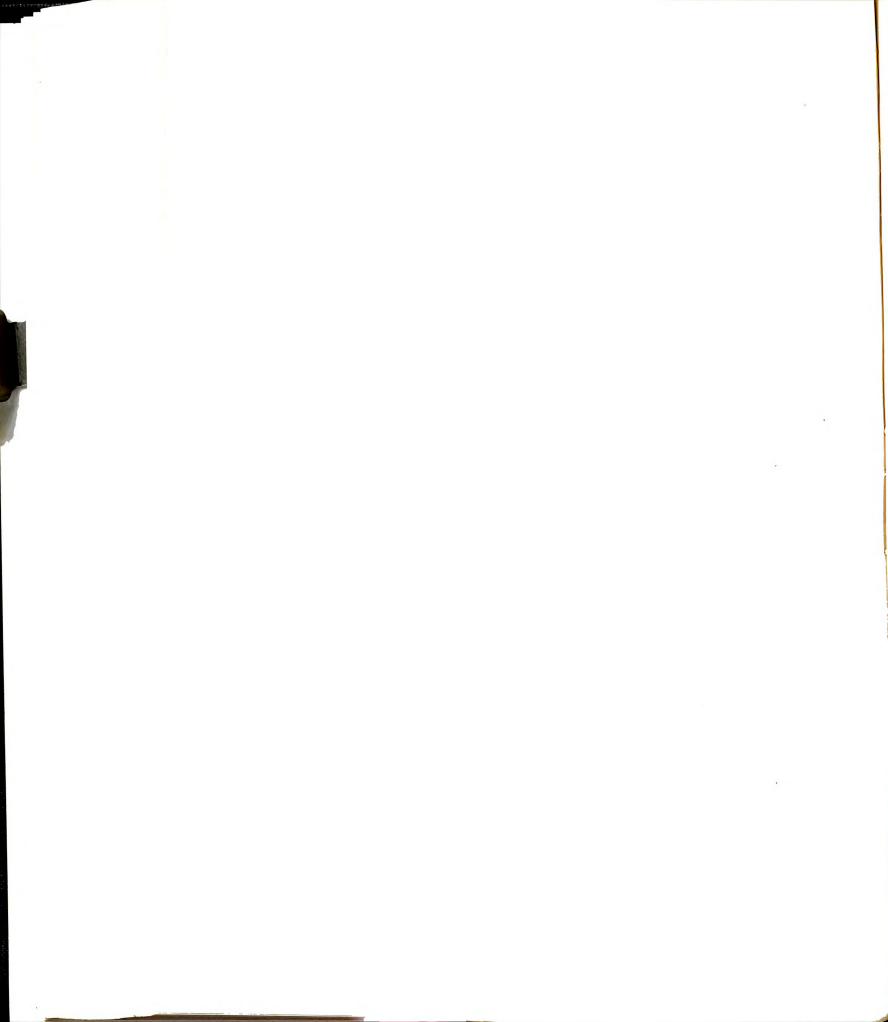
There have been some interesting research findings relative to fear of success which are probably to some extent a function of the atypical (for a woman) success depicted in the "Anne" stimulus. Makosky (1972) found that women with fear of success performed significantly better in competition with a woman or when working alone than they did when competing against a man.





Women without fear of success performed significantly better when competing against a man than they did when working alone or competing against a woman. A study by Karabenick and Marshall (1974) failed to replicate this relationship.

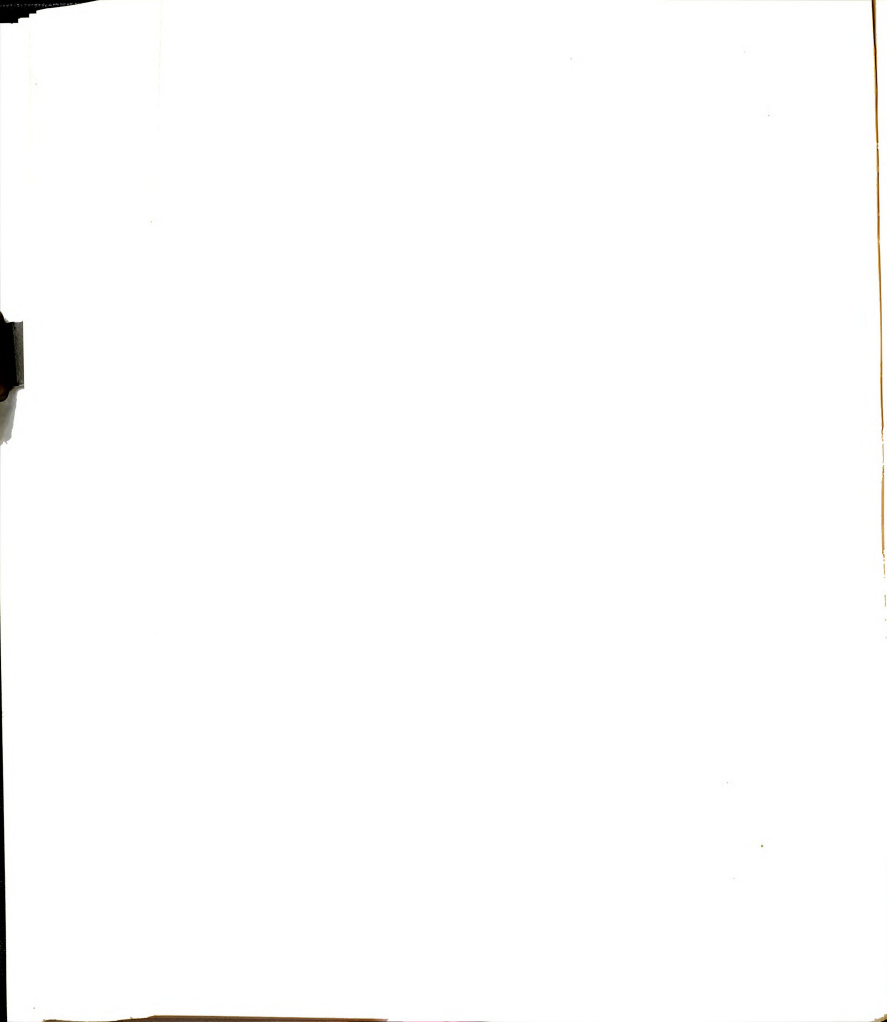
Makosky (1972), Tomlinson-Keasey (1974), and Feather and Raphelson (1974) suggest that fear of success responses reflect the subject's feeling that Anne's success is inconsistent with her conception of appropriate female role behavior. Parker (1971) found that women with high fear of success were significantly more concerned with homemaking than women with low fear of success. Women with low fear of success were significantly more interested in having a career than were women with high fear of failure. On a scrambled words task, high fear of success subjects performed significantly better when the task was described as feminine than when it was described as masculine, while low fear of success subjects performed significantly better on the task when it was described as masculine than when it was described as feminine. It appears that women who tell fear of success stories to the "Anne" stimulus favor competition against women (Makosky, 1972) on traditionally feminine tasks, while women who do not tell fear of success stories to the "Anne" stimulus favor competition against men on traditionally male activities. Horner, herself, reports



(1972) that 88.9% of the fear of success subjects in her original (1968) study were majoring in the humanities (a traditional refuge of noncareer-oriented women), while 56% of the low fear of success women were majoring in the natural sciences. There appears to be little evidence for Horner's assertion that fear of success is a motive.

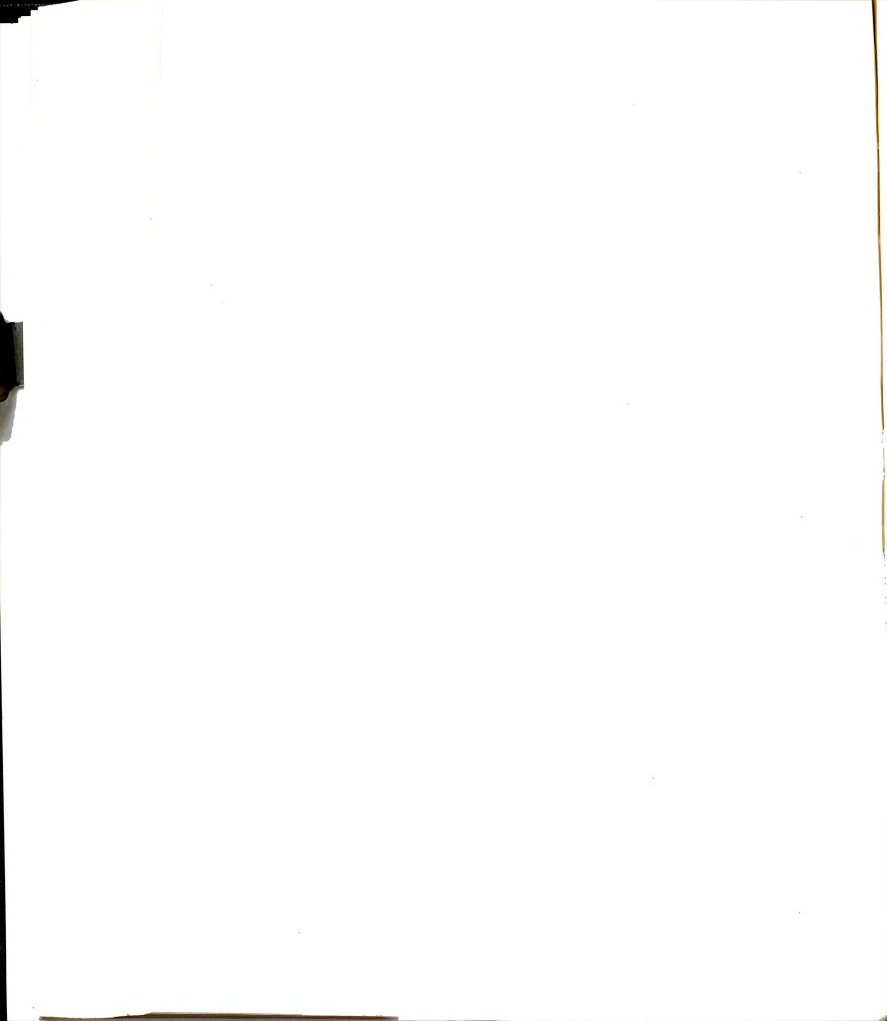
### Fear of Failure

As pointed out by Stein and Bailey (1973) and Karabenick and Marshall (1974), little attention has been devoted to the effect of motivation to avoid failure on achievement behavior in women. The belief that the expectancy-value theory is not applicable to women is probably at least partially responsible for this deficiency. Then, too, there have been several studies utilizing the test anxiety measure of fear of failure which have failed to produce significant results. Daugert (1966) found no significant relationship between test anxiety and acquisition of swimming skill. Horner (1968) found no significant relationship between Debilitating Achievement Anxiety scores and performance for her female subjects. A Norwegian study (Gjesme, 1973) of seventh-grade girls revealed no significant relationship between the school grades of girls with the four different combinations of n-Ach and test anxiety. Issacson (1964) was unable to find significant differences in difficulty of area of curricular choice between women with high n-Ach



and low test anxiety and women with low n-Ach and high test anxiety. On the other hand, King-Fun Li (1974), working in Hong Kong, found that high levels of test anxiety were associated with certain parental attitudes.

The author was able to find only four studies with female subjects which used a projective measure of the motive to avoid failure. Vollmer (1973), working in Norway, found a significant negative correlation between a Holtzman ink blot measure of personality definition and fear of failure as measured by Heckhausen's system. Three validation studies for the hostile press scoring system for fear of failure add to the impression that fear of failure in women has a negative relationship to personality integration. Hostile press imagery was found to have a significant negative relationship to self-ideal congruence as measured by a Q-sort (Smith & Teevan, 1964). When related to the F scale, hostile press imagery was found to have a significant negative relationship with anti-intracception and a significant positive relationship to destructiveness and cynicism (Teevan & Hartsough, 1964). In the same study it was found that hostile press imagery had a significant positive relationship to the esthetic sub-scale of the S-V scale. In a related study (Teevan & Hartsough, 1964) hostile press imagery was found to have a nearly significant negative correlation with the MF scale of the MMPI. In other words, women



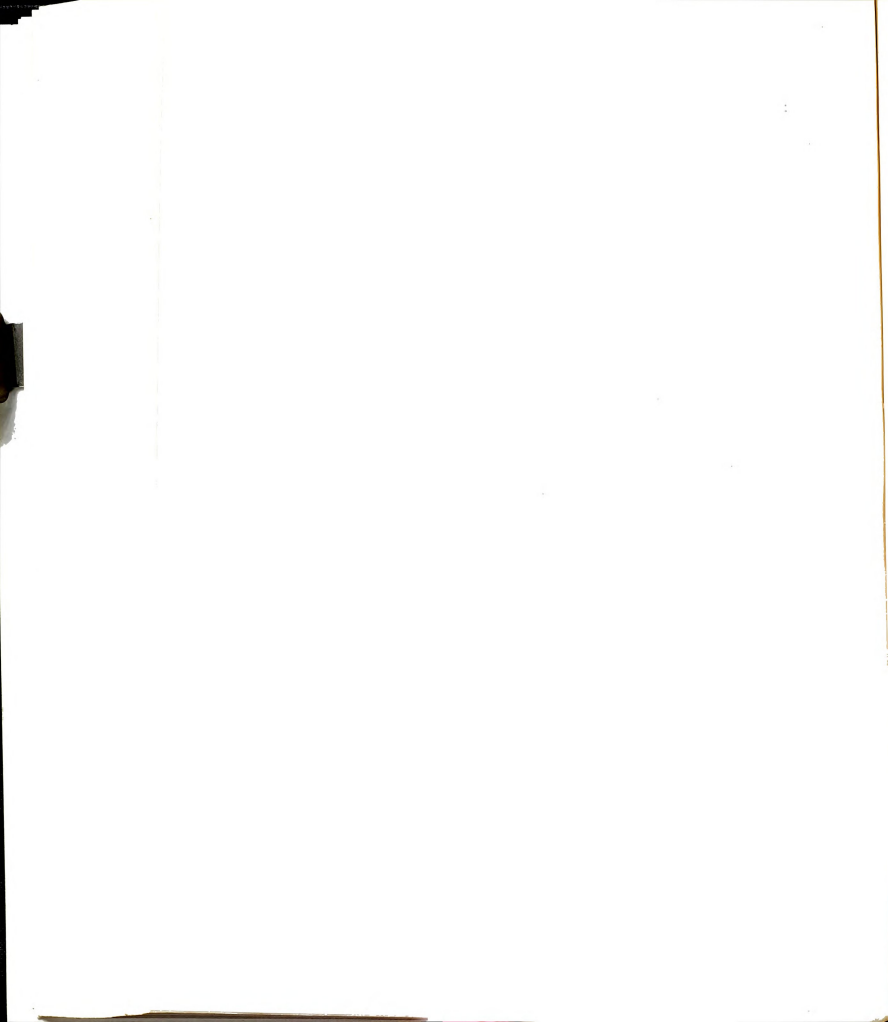
with high levels of hostile press imagery tend to have traditionally female interests and attitudes. Also in the same study it was found that, as measured by the A-S reaction study, high hostile press imagery women tended to be ascriptive. Hostile press imagery was also found to have a significant association with manifest anxiety. Because Teevan found that hostile press imagery was associated with a different pattern of personality variables in women than in men, no further research using this measure was conducted.

The importance of investigating the effects of fear of failure on achievement behavior in women has recently been reinforced by the findings of Karabenick and Marshall (1974). Using the Haber-Alpert Achievement Anxiety Test, these experimenters found a significant three-way interaction between fear of failure, fear of success, and type of opponent, on improvement in a digit substitution task. Subjects with low fear of success and low fear of failure and those with high fear of success and high fear of failure improved most when competing against a man. Subjects with low fear of success and high fear of failure improved most when competing against a woman, while those with high fear of success and low fear of failure improved most when working alone. The meaning of these findings is unclear for two reasons: (1) As previously discussed, fear of success seems to

reflect sex role stereotypes rather than motivation level, and (2) The Achievement Anxiety Test scores may reflect anxiety about the possible negative consequences of success as well as the possible negative consequences of failure.

A more meaningful finding in this study was that subjects with high fear of failure improved to a significantly greater extent after success feedback than did subjects with low fear of failure. Subjects with low fear of failure improved significantly more after failure feedback than did subjects high in fear of failure. These findings are important because they are similar to the findings of studies using male subjects. Additional findings of interest were that high fear of failure subjects were significantly more affected by feedback and thought others were significantly more affected by their performance than were low fear of failure subjects. Clearly these findings are only a beginning.

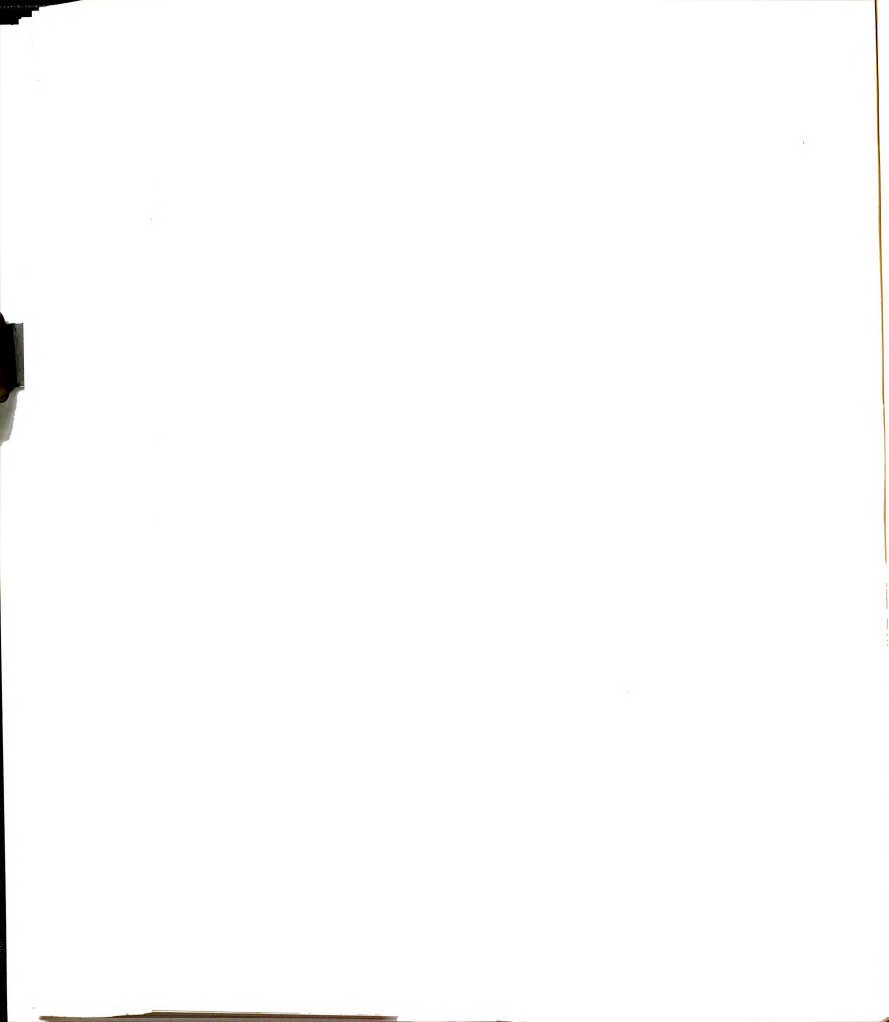




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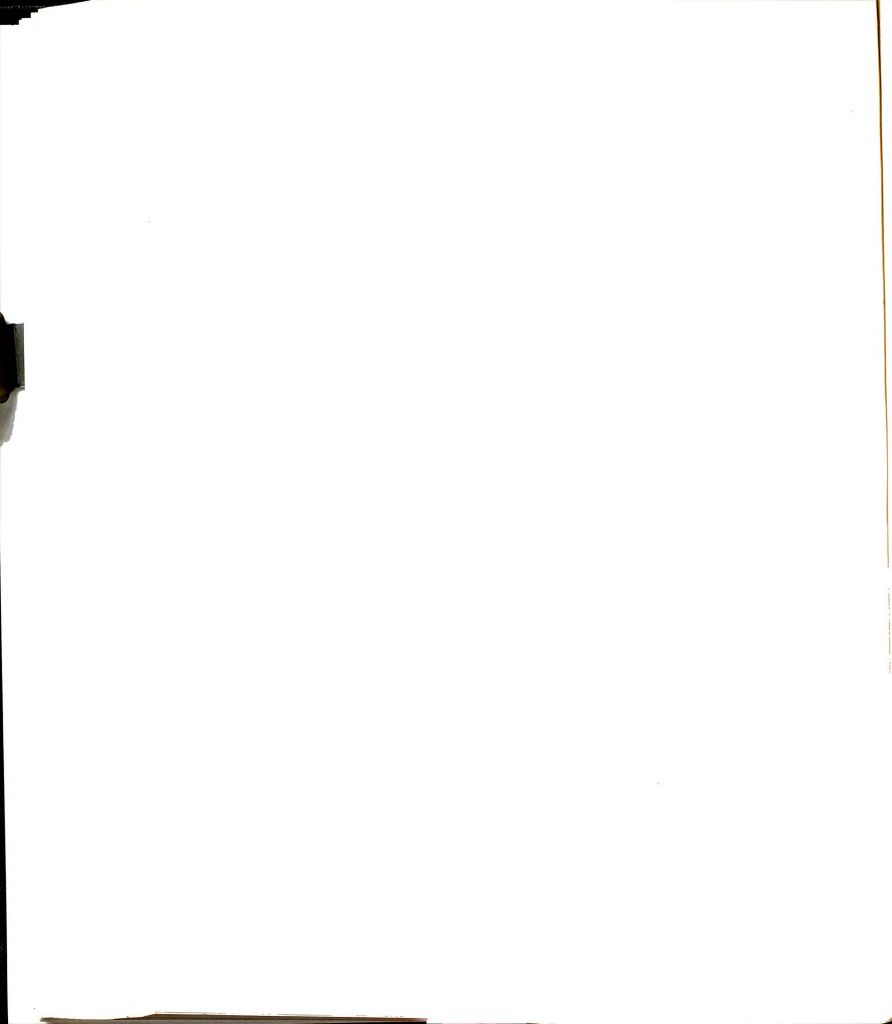
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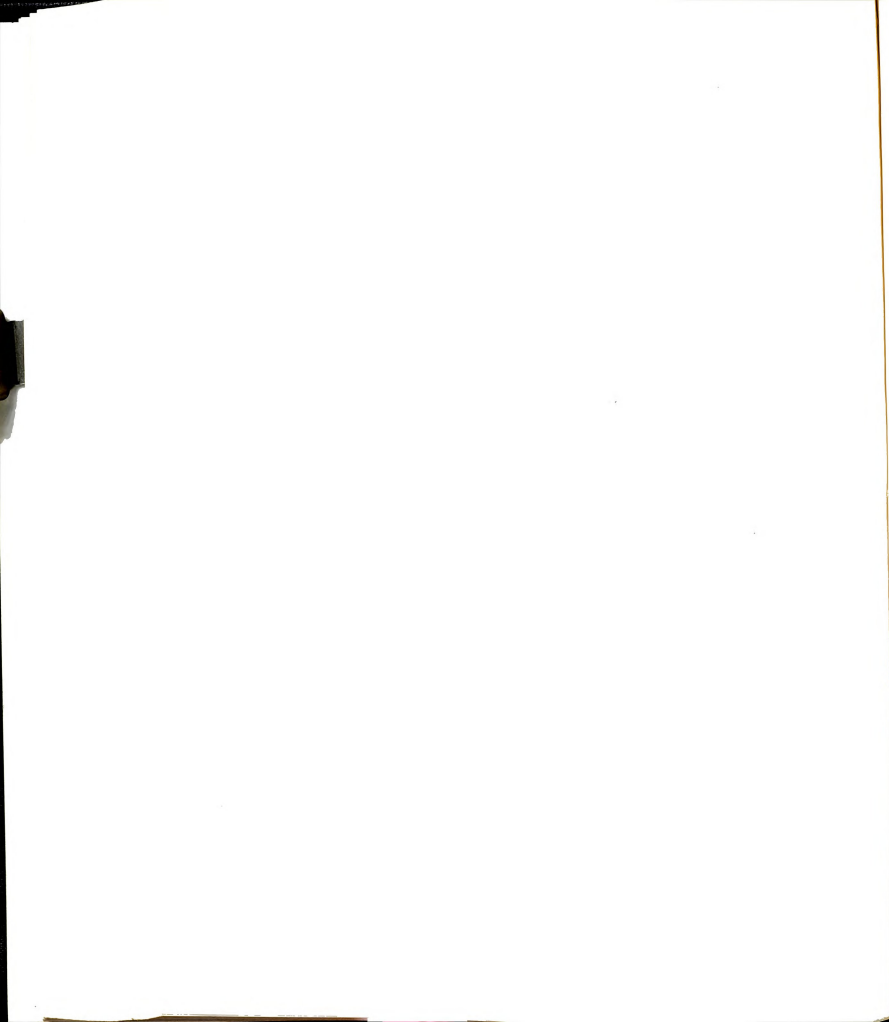
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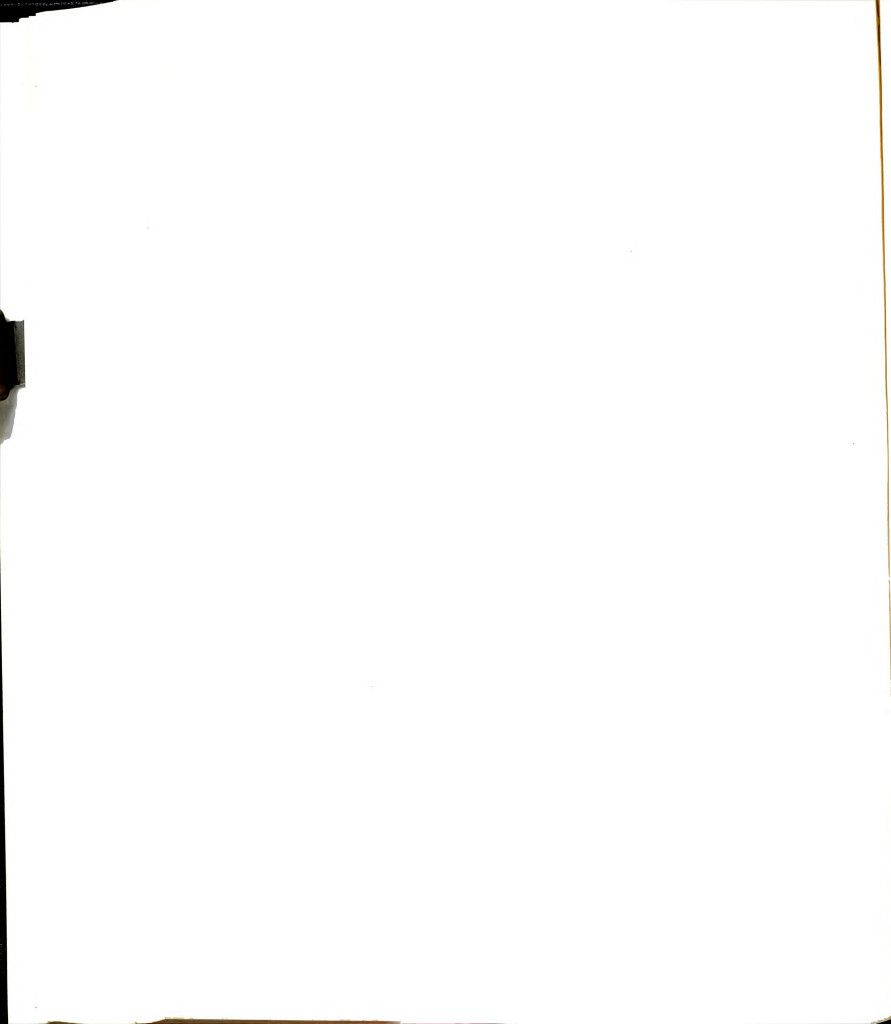
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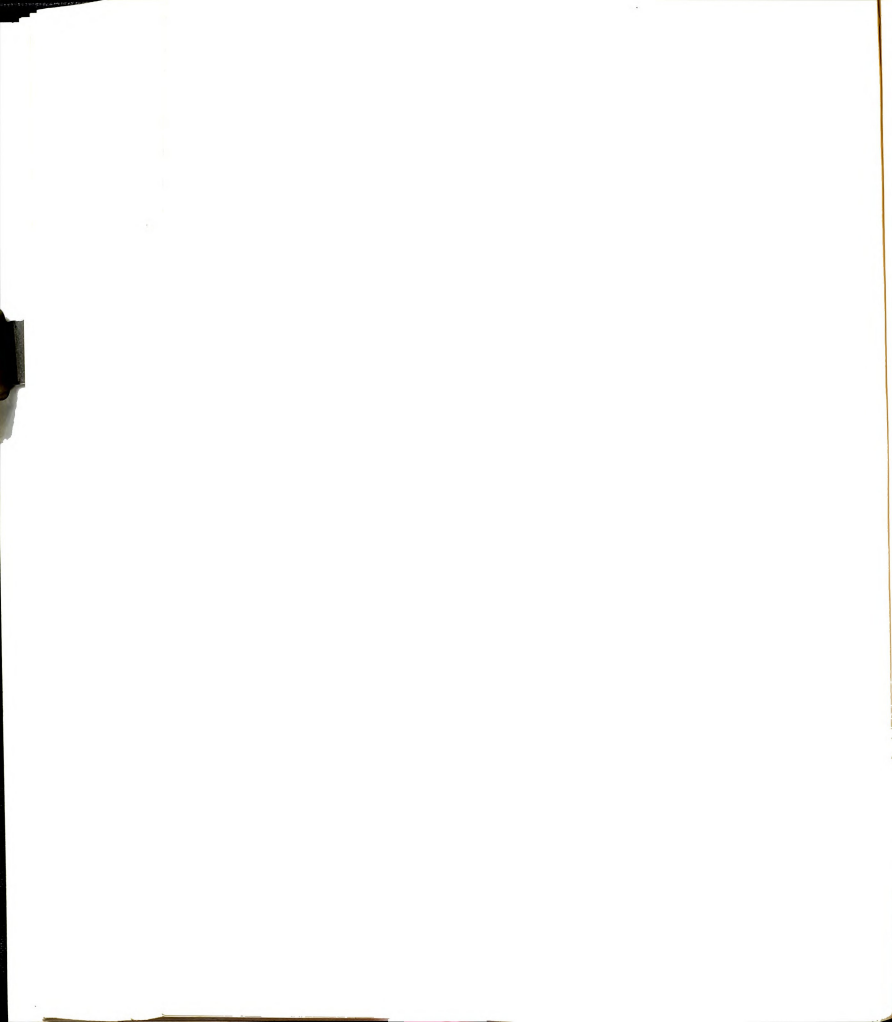
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