The Projective Expression of Need for Achievement in Women

Robert S. Gibson

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THE PROJECTIVE EXPRESSION OF NEED FOR ACHIEVEMENT IN WOMEN

by

Robert S. Gibson

A Thesis Submitted to the Faculty of The Graduate College in partial fulfillment of the Degree of Master of Arts

Western Michigan University Kalamazoo, Michigan August 1974
ACKNOWLEDGEMENTS

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Robert S. Gibson
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CHAPTER I

INTRODUCTION

Psychologists generally assume that the motive to achieve is one of the major determinants to striving to succeed. A theoretically consistent body of data exists which enables one to predict achievement behavior as a function of the strength of the achievement motive, when it applies to men (Atkinson, 1958; Bardwick, 1971; Mc Clelland, Atkinson, Clark, & Lowell, 1953). However, when one attempts to find psychological data to predict achievement behavior in women, there is difficulty.

The few comparable studies of achievement motivation in females that have been made are neither consistent with the findings for males, nor even consistent with each other. In Atkinson's Motives in Fantasy, Action, and Society (1958, p. 77), women occupy only a footnote (the book is over 800 pages long) in which Atkinson says that the performance differences between the sexes is "perhaps the most persistent unresolved problem in research on need achievement." In The Achieving Society (1961), Mc Clelland makes no mention of achievement motivation in women, even though he deals with a comprehensive survey of evidence for motive to

Margaret Mead (1949) has observed that the adolescent girl in our society begins to realize that her attempts to achieve place her in competition with men and elicit negative reactions from them and our society. In adolescence it becomes apparent that competition with the male is ultimately unrewarding. The female role becomes more clearly defined as noncompetitive and achievement is assigned almost exclusively to the male role.

Another model that has been used to explain why women fail to achieve is the Psychoanalytic Theory postulated by Freud (1933). He theorized that the whole essence of femininity lies in repressing aggressiveness. A woman was threatened by success because unusual excellence in academic and intellectual areas was unconsciously equated with loss of femininity; as a result, the possibility of social rejection became very real. Freud and Mead believed that a woman who achieved success lost her self-esteem and her sense of femininity which were internalized standards, and which were acquired early in the socialization process. Regardless whether anyone else found out about her success, the inconsistency between
femininity and successful achievement was so deeply embedded that most women, as Rossi (1965) has indicated, believed that even wanting something more than motherhood was unnatural and reflected emotional disturbance.

Winterbottom (1958) has shown that when early self-reliance and mastery are expected and rewarded by the parents, the child internalizes these values and is prone to develop a high achievement motive (n Achievement). In The Achieving Society (1961), McClelland has carefully elaborated how certain attitudes affect childrearing practices that foster the development of achievement motivation.

What spells achievement for a woman is somewhat less universal. A woman's primary role has been defined as being a good wife, mother, and to make her family's life at home and in the community as pleasant and comfortable as possible. The results of studies have been so inconsistent that, instead of resolving the problems of achievement motivation in women, they have only further emphasized the vast complexity of the issue.

Lesser, Krawitz, and Packard (1963) conducted a study at Hunter High School for Girls in New York City. An interesting pattern of interaction was noted. The impact of the arousal condition on the Thermatic Apperception Test (TAT) responses of the girls who were doing well at the school, compared with those who were not, varied depending on whether the dominant stimulus figure
on the TAT cue was male or female. The "achievers" showed an increase in achievement motivation scores under arousal conditions only to pictures of females and the "underachievers" only to pictures of males. Studies of Alper (1957) and Morrison (1954) found that the sex of the principal TAT figure did affect the achievement scores of college women, but that under arousal conditions the increase in score was not always in response to the male pictures. The Morrison results (1954) showed that the pictures with high female achievement cues (female career pictures) did elicit as much achievement imagery as did similar pictures of males. This result again stresses the important role played by the content of the cue as well as the sex of the key figure. Veroff (1950), Wilcox (1951), and Atkinson and Feather (1966) found that women, unlike men, fail to show an increase in their achievement imagery score when they are exposed to experimental conditions by stressing "intelligence and leadership ability." Field (1951) suggests that achievement motivation in women can be aroused by referring to their social acceptability rather than to their "intelligence and leadership ability." On the other hand, Angelini's (1955) data on Brazilian University women argues that "intelligence and leadership" arousal is effective, provided the sample used is made up of highly competitive women who value intellectual accomplishment.

Kagan and Moss (1962) say that the female has greater anxiety
over aggressive and competitive behavior than the male. She, therefore, experiences greater conflict over intellectual competition which in turn leads to inhibition of intense strivings for academic excellence. Horner (1968, 1969) is arguing that in addition to the obvious and overt social rejection that a competitively achieving girl may experience, there is also an internal anxiety, a fear about one's femininity. Horner believes that women are defining their identities in terms of the traditional female role, and that a "fear of success" is an extremely important motive for women.

No one has been able to explain women's inconsistent pattern of responses on the TAT, which has been used to assess individual differences in strength of the achievement motive. Nor has anyone been able to account for the lack of any consistent relationship between achievement motivation and performance in female subjects. Explanations offered of what kind of striving behaviors are appropriate to their sex role have, at best, proven incomplete. This author agrees with French and Lesser (1964) that achievement scores for females seem as valid as those for males, in that they relate to performance in the same way. Both value competition with a standard of excellence, where there is an element of risk involved and where success is not certain.

General hypothesis

There is beginning a new feminine pattern, or perhaps a cul-
tural revolution among women in which interpersonal success and traditional behavior remain important while overt attempts at achievement success are becoming equally important. The purpose of this present study is to investigate if the presence of \textit{Achievement} is more than a surface phenomenon. The following specific hypotheses are postulated:

1. The mean \textit{Achievement} scores for all groups tested on stories written under Achievement Orientated Conditions, using pictures of both males and females, will be significantly higher than the mean \textit{Achievement} score on stories written under Relaxed Orientated Conditions.

2. Women's \textit{Achievement} will be expressed in greater frequency to pictures of men than those depicting women.

3. The \textit{intensity} of achievement-related responses in stories written by Older Females to pictures of male characters will be greater than Younger Females, but less than Male subjects.

4. The \textit{frequency} of achievement-related responses in stories written by Males to male characters will be greater than either Female group.

5. The \textit{intensity} of the mean \textit{Achievement} scores under arousal conditions will be greater for Males to both male and female characters than either Female group.

6. The mean number of words constructed on the Anagrams
task by the high _n_ Achievement groups will be significantly higher than the low _n_ Achievement groups.
CHAPTER II

METHOD

Subjects

The subjects were 181 male and female undergraduate students from Western Michigan University, Bronson Nursing School, and from the Continuing Education for Women program at Western Michigan University. The females were divided into two groups: (1) Young Females (YF) between the ages of 17 and 24 with the mean age of 19.5 years; and (2) Older Females (OF) with the age range of 25 to 53 years and the mean age of 37.7 years. The males were not divided into any specific age bracket. Their ages ranged from 17 to 51 years, with a mean age of 21.7 years.

Test materials

The subjects were presented with six 11 inches by 14 inches black and white photos or 2 inches by 2 inches black and white slides depicting achievement situations. The slides were used with larger groups. Of the six pictures comprising the measure of achievement motivation, two pictures contained males as dominant characters in achievement-related situations, two depicted pictures of females
in comparable achievement-related situations, and two depicted low cue pictures of two males in a neutral situation and another picture of two females in a comparable situation.

Procedure

In the Relaxed Orientated Group (RO), writing of the stories was preceded by a period in which the E appeared relaxed, friendly, and treated the experiment as a routine task of no particular importance. The purpose of this was to minimize the number of achievement motivating cues that might be present in the situation. McClelland et al. (1953) and Wilcox (1951) referred to this experimental condition as Relaxed Orientated Group (RO).

In the Achievement Orientated Group (AO), the writing of stories was preceded by an anagrams test. The emphasis was put on the importance of doing well. This was designed to maximize the extent to which achievement cues would affect the subjects before writing the stories.

The order in which the pictures were presented was randomly determined. This was done by shuffling the pictures and blindly choosing them. The pictures were presented in the same order to both the AO and RO groups. A brief description and order of the pictures is listed below:

1. Two men working in a shop (Male dominant, MM).
2. Two women, one seated at a desk and another standing in the foreground holding a folder (Female dominant, FF).

3. Father-son picture (Card 7BM from TAT) (Two males, Neutral, MMn).

4. A man leaning over the shoulder of a woman who is seated at a desk viewing some papers (Male-Female, Male more dominant, MF).

5. Two women, one older woman obviously conversing with a younger woman who is seated next to her (Two females, neutral, FFn).

6. A woman standing behind a desk, handing papers to a man who is seated (Female-Male, Female dominant, FM).  

Picture MM has been used before by Mc Clelland et al. (1953) and was found to be a valid measure of n Achievement for male college students. Picture MMn was taken from Murray Thematic Apperception Test and was used by Ricciuti (1954). Pictures FF and MF were taken from magazines. Pictures FFn and FM were developed by the E to balance out the other pictures. All of the pictures were selected by the E on the basis of the probable number of achievement cues in each picture (see Appendix A).

Experimental conditions  

1. Relaxed Orientated Condition (RO). The E was introduced
by the instructor at a regular class session as a graduate student
who is examining some tests. The E casually handed out the test
booklets while conversing with the students. The RO condition
was further reinforced by remarks by the E indicating that these
tests had been recently devised and were still very much in the
developmental stage, and that the data was being collected in order
to perfect them. Throughout this situation, the emphasis was clearly
indicated that the tests and not the students were being evaluated.

Following the procedures of Lowell (1952) and Mc Clelland et al.
(1953), these instructions were designed to create an easy relaxed
atmosphere in which the need for achievement is at a minimum.

The E met with groups of varying sizes (from 2 to 30 persons),
and at different places and times; for example, in dorms and in the
evening. As often as possible it was at their convenience, so that
the subjects would be more relaxed.

The following instructions were given to the Relaxed Orientated
Group (RO):

I want you to write some imaginative stories about the pic­
tures I am going to show you. You will have about 20 seconds
to look at the pictures and then 5 minutes to make up a story
about it. Notice that there is one page for each picture. The
same four questions are asked. They will guide your thinking
and enable you to cover all the elements of a plot in the time
allotted. Plan to spend about one minute on each question.
I will keep time and tell you when it is about time to go on to
the next question for each story. You will have a little time
to finish your story before the next picture is shown. Remem­
ber, the data being collected is for research purposes, and
you are not in any way going to be evaluated on them.
At this point the first slide was projected or the first picture held before the group for twenty seconds. For each picture, the E told the group when it was about time to go on to the next question, after each minute had elapsed. After the fourth minute, they were given a little time to finish up. Then the next picture was shown.

The most reliable results for story writing were found by Lindzey and Heinemann (1955) when a five minute time limit was used for each picture in the story writing process.

Both the AO and RO groups were given a personal questionnaire to complete requesting specific information (see Appendix C). The subjects were told that this information would be used for future research.

2. Achievement Orientated Condition (AO). As with the RO group, Subjects were comprised of Young Females, Older Females, and Males.

Under this condition, the E did not mingle with the subjects. The E presented a very formal approach with strong emphasis on doing well. This group was told that they were individually evaluated on the tests.

To get the subjects aroused, the AO group was first given the anagrams test with the following instructions:

A simple process of testing has been worked out that may be a method of determining selected men and women
for future leadership and high responsibility roles; and also may be proven to be a good predictor of intelligence. Other colleges in the state have been given the test; we would like to see how the students here do in comparison.

So do your best!

The first task will be to make as many words as possible out of another word. For example, if the master word was Washington, one possible smaller word would be "was" or "as," etc. This exercise will go on for twelve minutes. After each two-minute period, I will say "check" and you are to put a checkmark after the last word you have completed.

Now turn to the next page and put your name at the top. Do not start writing until I tell you.

At the top of the test blank was the master word, GENERATION.

Spaces were marked on the blank in which the subjects were to write anagrams constructed from the word. (Directions appear on the blank; see Appendix B.) This group was also requested to complete the personal questionnaire that asked for specific information (see Appendix C).

Administration of the projective measure of n Achievement

Experimental Groups I and II were given similar instructions in their test booklets. Each group was provided with six story blanks, one for each picture in the test booklet. One minute was allotted for the subjects to answer each question. They were advised when it was time to move on to the next question. An additional minute was allotted after the initial four minutes so that the subjects could complete any unfinished answers. Following Mc Clelland's (1953) procedure, the following standardized questions appeared on
1. What is happening? Who are the persons?
2. What has lead to the 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?

Scoring

Mc Clelland et al. (1953) and Atkinson's (1958) Scoring System C was used to score the 1,086 thematic stories for n Achievement Motivation. The scorer initially had to decide if the story contained any reference to an achievement goal, the presence of which would justify his going on and scoring the sub-categories as achievement related.

Achievement Imagery (AI)

Stories were scored for Achievement Imagery (AI) when it was clear that the attainment of an achievement goal was accompanied by feelings of personal success for the accomplishment or when non-attainment produced feelings of failure. To be scored for AI, one

After studying the scoring manual for n Achievement devised by McClelland et al. (1953) and Atkinson (1958), the E was able to score stories so that his overall estimate of individual n Achievement scores correlated highly with estimates in the manual. The final rank-order correlation was .86 for 60 practice protocols.
of the following criteria had to be met:

1. Competition with a standard of excellence. This is scored AI when one of the characters in the story is engaged in some competitive activity (other than pure cases of aggression) where winning or doing as well as or better than others is actually stated as the primary concern. Wanting to win an architectural award or an apprentice wanting to show the master that he, too, could fix the machine are typical examples.

2. Unique Accomplishment. One of the characters is accomplishing other than a run-of-the-mill daily task which would mark him as a personal success. Inventions, artistic creations, and other extraordinary accomplishments fulfill this criterion.

3. Long-term involvement. One of the characters is involved in attainment of a long-term achievement goal. Being a success in life, becoming a doctor, lawyer, or successful businessman or woman are all examples of career involvement which permit the inference of competition with a standard of excellence, unless it is made explicit that another goal is primary, for example, food for the family or personal security.

If any of the three main categories are met, a plus 1 (1+) is scored. Then the stories are further scored for the sub-categories of Need, Instrumental Activity, and so on. A more detailed explanation of the sub-categories can be found in Appendix D.
Doubtful Achievement Imagery (TI)

Stories containing some references to achievement but which fail to meet one of the three criteria for Achievement Imagery are scored Doubtful Achievement Imagery (TI) and are not scored further for achievement-related sub-categories. When the character is engaged in a commonplace task or solving a routine problem, or whenever there is doubt about whether or not one of the three criteria for Achievement Imagery has been met and the story is not totally unrelated to achievement, it would be classified TI. These stories are given a score of 0 and are not scored further.

Unrelated Imagery (UI)

Stories in which there is no reference to an achievement goal or no reference to any commonplace task are scored Unrelated Imagery. These stories are given a score of minus 1 (-1) and are not scored further.

The total Achievement score is the algebraic sum of all the categories that are scored. The possible range of scores for a single picture was -1 to +11.

The protocols were randomized and numbered and all identification marks indicating the individuals' sex or experimental group were removed. To help reduce the bias, the stories written in response to one picture were scored before going on to another picture. This was also done to help preserve the same mental set for
each picture.

Subjects who did not meet the criterion of at least 25 words per story were eliminated. This was done because no accurate achievement score can be made from limited responses.

After three weeks, the E rescored 550 of the original 1,086 stories to provide a score-rescore reliability check. There was a 91 per cent agreement on scoring of all categories between the first and second scoring.

Methods of analysis

A 2 x 2 analysis of variance with repeated measures and unequal N's (Winer, 1971, pp. 525-26) was employed to test the interaction effect of pictures and experimental conditions. A separate 2 x 2 factorial analysis of variance with unequal N's was used for each one of the six pictures because of the significantly high interaction. Without separate analysis no accurate interpretation could be made of the main effects tests for pictures and conditions. There can be many different conclusions drawn from the male and female subjects' responses to each picture while under the two experimental conditions.

Further analysis required the employment of t-tests to determine whether there was a significant difference between each group (Young Females, Older Females, and Males) under each experimental
condition (Relaxed Orientated and Achievement Orientated). For example, Young Females under RO conditions were compared to Young Females under AO conditions, Older Females under RO to Older Females under AO, and Males under RO to Males under AO. In addition, further comparison was made between Young Females under RO conditions to Older Females under RO conditions, and Young Females under AO to Older Females under AO. The combined group of Females under RO were compared to the Males under RO, and the combined group of Females under AO to Males under AO.

A 2 x 2 analysis of variance was employed for the Achievement Imagery category (AI) to test the frequency of achievement-related responses made by the Young Females, Older Females, and Males to each picture.

A simple analysis of variance was employed for comparing the high and low $n$ Achievers who were given the anagrams task. The analysis was made for Young Females, Older Females, Males, and the combined groups. $t$-tests were conducted to test for any significant differences between the two minute intervals. Each time interval was compared to every other time interval for Young Females, Older Females, Males, and the combined group. For example, high $n$ Achievers in the Young Female Group were compared with low $n$ Achievers of that group, etc. The high $n$ Achievers
of the combined groups were compared to the low n Achievers of the combined groups.
CHAPTER III

RESULTS

Table 1 presents the analysis of variance of the overall effect of the six subgroups' responses to pictures and experimental conditions for all six pictures. The results indicate that the pictures, conditions, and the interaction of pictures and conditions were all highly significant ($p < .01$).

TABLE 1. --Analysis of variance of $E$ Achievement scores of Young Females, Older Females and Males under relaxed and achievement orientated experimental conditions to six pictures containing female and male characters

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<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
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<tbody>
<tr>
<td>Between subjects</td>
<td>180</td>
<td>4.95</td>
<td></td>
</tr>
<tr>
<td>Condition (A)</td>
<td>5</td>
<td>30.79</td>
<td>7.32*</td>
</tr>
<tr>
<td>Subjects within gps.</td>
<td>175</td>
<td>4.21</td>
<td></td>
</tr>
<tr>
<td>Within subjects</td>
<td>905</td>
<td>2.21</td>
<td></td>
</tr>
<tr>
<td>Pictures (B)</td>
<td>5</td>
<td>82.76</td>
<td>48.59*</td>
</tr>
<tr>
<td>A X B</td>
<td>25</td>
<td>3.84</td>
<td>4.25*</td>
</tr>
<tr>
<td>B X Subjects within gps.</td>
<td>875</td>
<td>1.71</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,085</td>
<td></td>
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*p .01, two-tailed test
Table 2 shows the mean n Achievement scores for the subjects under both RO and AO conditions. The mean scores were near equal intensity under both experimental conditions for Picture MM. To determine if there is any significant difference in the mean n Achievement scores, a separate analysis of variance was employed for the groups. Table 3 presents the results of the analysis of variance made to test the hypothesis that there is a significant difference between RO and AO n Achievement scores. The overall effect of the experimental conditions was non-significant (F = 2.00, p > .05). However, the subjects' mean n Achievement scores for Picture MM as seen previously in Table 2 under both experimental conditions were high. This suggests that Picture MM used previously by Mc Clelland et al. (1953) is highly significant for males and for both groups of females.

| TABLE 2.—The mean n Achievement scores of Young Females, Older Females, and Males written in response to Picture MM under relaxed and achievement orientations |
|-------------------------------------------------|----------------|----------------|----------------|
|                                                   | Experimental Conditions |             |               |
|                                                   | Subjects              | N  | Relaxed | Orientation | N  | Achievement | Orientation |
| Young Females                                     | 35                 | 1.03 | 41     | 1.85        |
| Older Females                                     | 18                 | 1.22 | 22     | 2.36        |
| Males                                             | 30                 | 1.67 | 35     | 1.94        |
TABLE 3.--Analysis of variance of Young Females, Older Females, and Male _n_ Achievement scores obtained from thematic stories written in response to Picture MM under two conditions of achievement orientation

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<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cells</td>
<td>5</td>
<td>6.51</td>
<td>2.00</td>
<td>ns</td>
</tr>
<tr>
<td>Groups</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>175</td>
<td>3.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4 indicates a difference in the mean _n_ Achievement scores written in response to Picture FF. This Table shows that the _n_ Achievement scores of Young Females and Older Females are much higher under AO conditions than under RO conditions. The male subjects' responses under both experimental conditions were consistently low.

TABLE 4.--The mean _n_ Achievement scores of Young Females, Older Females and Males written in response to Picture FF under relaxed and achievement orientations

<table>
<thead>
<tr>
<th>Subjects</th>
<th>N</th>
<th>Relaxed Orientation</th>
<th>N</th>
<th>Achievement Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Young Females</td>
<td>35</td>
<td>.06</td>
<td>41</td>
<td>1.12</td>
</tr>
<tr>
<td>Older Females</td>
<td>18</td>
<td>.22</td>
<td>22</td>
<td>2.00</td>
</tr>
<tr>
<td>Males</td>
<td>30</td>
<td>-.03</td>
<td>35</td>
<td>.31</td>
</tr>
</tbody>
</table>
The analysis of variance for Picture FF appears in Table 5. The analysis indicates that Picture FF was highly significant ($F = 6.87, p < .01$). The mean achievement scores for Young Females under AO conditions was 1.12 and under RO conditions .06. The difference was shown to be significant ($t = 2.99, p < .01$). The Older Females responded to Picture FF in a similar fashion as did the Young Females. Under AO conditions the Older Females had a mean achievement score of 2.00 and under RO conditions a mean score of .22. The difference was significant ($t = 3.62, p < .01$). This evidence substantiates the hypothesis that Picture FF can be highly suggestive of achievement cues for both Young Females and Older Females. Males were not as responsive as the females. Under AO conditions, the mean achievement score for the Males was .31 and under RO conditions it was -.03. This difference proved to be non-significant ($t = .904, p > .05$).

As was indicated before, Picture FF was highly suggestive of achievement motivation for females. However, in comparing the intensity of both female groups under AO conditions, it was discovered that Older Females found Picture FF significantly more stimulating than did Young Females ($t = 2.15, p < .05$).

An analysis was made to see if there were any significant differences among the groups in the amount of Achievement Imagery (AI) responses to Picture FF. Table 6 indicates that the amount of
TABLE 5. --Analysis of variance of Young Females, Older Females and Male n Achievement scores obtained from thematic stories written in response to Picture FF under two conditions of achievement orientation

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cells</td>
<td>5</td>
<td>16.41</td>
<td>6.87</td>
<td>.01</td>
</tr>
<tr>
<td>Groups</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>175</td>
<td>2.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AI responses under the AO conditions was significant for both Young Females and Older Females. The difference for the Young Females was ($t = 3.39$, $p < .01$), and for Older Females it was ($t = 2.08$, $p < .05$). There were no significant differences for Males or between Younger Females and Older Females. The results in this Table indicate that there were a significant number of females writing achievement-related stories under AO conditions.

Table 7 shows that the mean n Achievement scores for Picture MM under both experimental conditions were low.

The analysis of variance in Table 8 indicates that the overall effect of Picture MM under AO and RO conditions was non-significant. This suggests that Picture MM contains relatively few achievement cues for males and females.
TABLE 6.--Analysis of variance of the amount of achievement imagery responses from thematic stories written in response to Picture FF under two conditions of achievement orientation

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cells</td>
<td>5</td>
<td>1.10</td>
<td>5.24</td>
<td>.01</td>
</tr>
<tr>
<td>Groups</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>175</td>
<td>.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 7.--The mean achievement scores of Young Females, Older Females, and Males written in response to Picture MMn under relaxed and achievement orientations

<table>
<thead>
<tr>
<th>Experimental Conditions</th>
<th>Subjects</th>
<th>Relaxed Orientation</th>
<th>N</th>
<th>Achievement Orientation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Young Females</td>
<td>.17</td>
<td>35</td>
<td></td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Older Females</td>
<td>.78</td>
<td>18</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Males</td>
<td>.43</td>
<td>30</td>
<td></td>
<td>35</td>
</tr>
</tbody>
</table>
TABLE 8. --Analysis of variance of Young Females, Older Females, and Males Achievement scores obtained from thematic stories in response to Picture MMN under two conditions of achievement orientation

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cells</td>
<td>5</td>
<td>3.94</td>
<td>2.06</td>
<td>ns</td>
</tr>
<tr>
<td>Groups</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>175</td>
<td>1.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9 presents the mean Achievement scores for Picture MF. Under AO conditions, both Young Females and Older Females had higher mean Achievement scores as compared to RO conditions. The Male subjects' mean scores under both experimental conditions were low by comparison.

TABLE 9. --Mean Achievement scores of Young Females, Older Females and Males written in response to Picture MF under relaxed and achievement orientation

<table>
<thead>
<tr>
<th>Experimental Conditions</th>
<th>Relaxed Orientation</th>
<th>Achievement Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Young Females</td>
<td>35</td>
<td>.17</td>
</tr>
<tr>
<td>Older Females</td>
<td>18</td>
<td>.78</td>
</tr>
<tr>
<td>Males</td>
<td>30</td>
<td>.43</td>
</tr>
</tbody>
</table>
The analysis of variance in Table 10 shows that Picture MF was significant at the .01 level of confidence. The intensity of responses of the Young Females between the AO and RO conditions was significant ($t = 3.72$, $p < .01$). This suggests that Picture MF contains many achievement cues for Young Females. The Older Females also showed a difference between the two experimental conditions, with a significantly higher mean score under the AO condition ($t = 1.98$, $p < .05$). There were no significant differences in the intensity of responses between the two female groups under AO conditions ($t = .66$, $p > .05$). The Male subjects did not show any increases in the intensity of their responses from RO to AO conditions ($t = .37$, $p > .05$).

**TABLE 10.** --Analysis of variance of Young Females, Older Females and Males Achievement scores obtained from thematic stories written in response to Picture MF under two conditions of achievement orientation

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cells</td>
<td>5</td>
<td>11.29</td>
<td>4.96</td>
<td>.01</td>
</tr>
<tr>
<td>Groups</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>175</td>
<td>2.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An analysis was made for AI responses to Picture MF and was
found to be significant \( (F = 3.06, p < .02) \). These results are found in Table 11. The significant difference was found in the amount of AI responses under AO conditions by Young Females \( (t = 3.00, p < .01) \). The Older Females and Males showed no significant difference in the amount of AI responses under both experimental conditions. The Males mean _n_ Achievement scores were low under both conditions. However, the Older Females' mean _n_ Achievement scores under AO conditions was 1.73 and under RO conditions was .78, which suggests that there were a reasonable amount of AI responses under RO conditions by Older Females.

**TABLE 11.---Analysis of variance of the amount of achievement imagery responses from thematic stories written in response to Picture MF under two conditions of achievement orientation**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cells</td>
<td>5</td>
<td>.71</td>
<td>3.06</td>
<td>.02</td>
</tr>
<tr>
<td>Groups</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>175</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The mean _n_ Achievement scores in Table 12 indicate that there was a difference in the response of Older Females to Picture FF. The analysis of variance in Table 13 indicated a significant differ-
ence (p < .02). The difference was between the Young Females and Older Females under RO conditions. The Younger Females' mean \( n \) Achievement score was -.54 and the Older Females' was .67. This difference was significant at the .01 level of confidence (\( t = 3.45 \)). This suggests that Picture FF\(_n\) is much less suggestive of achievement for Young Females. Under both experimental conditions, the Male subjects' mean scores were statistically non-significant (\( t = .38, p > .05 \)).

Few achievement cues were found by the subjects when viewing Picture FF\(_n\). Picture FF\(_n\) can be said to be a weak picture for depicting \( n \) Achievement Motivation for any of the groups.

### TABLE 12: Mean \( n \) Achievement scores of Young Females, Older Females and Males written in response to Picture FF\(_n\) under relaxed and achievement orientations

<table>
<thead>
<tr>
<th>Experimental Conditions</th>
<th>Relaxed Orientation</th>
<th>N</th>
<th>Achievement Orientation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Young Females</td>
<td>- .54</td>
<td>35</td>
<td>- .17</td>
<td>41</td>
</tr>
<tr>
<td>Older Females</td>
<td>.67</td>
<td>18</td>
<td>-.05</td>
<td>22</td>
</tr>
<tr>
<td>Males</td>
<td>-.40</td>
<td>30</td>
<td>-.51</td>
<td>35</td>
</tr>
</tbody>
</table>

As can be seen in Table 14, the mean \( n \) Achievement scores for Picture FM are higher under AO than under RO conditions for both female groups. Males did not show as great an increase in their
TABLE 13. --Analysis of variance of Young Females, Older Females and Males \( n \) Achievement scores obtained from thematic stories written in response to Picture FF under two conditions of achievement orientation

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cells</td>
<td>5</td>
<td>4.48</td>
<td>3.07</td>
<td>.02</td>
</tr>
<tr>
<td>Groups</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>175</td>
<td>1.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

mean score from RO to AO conditions. The Young Females' and Older Females' mean scores were near equal under AO conditions.

TABLE 14. --Mean \( n \) Achievement scores of Young Females, Older Females and Males written in response to Picture FM under relaxed and achievement orientations

<table>
<thead>
<tr>
<th>Experimental Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Subjects</td>
</tr>
<tr>
<td>Young Females</td>
</tr>
<tr>
<td>Older Females</td>
</tr>
<tr>
<td>Males</td>
</tr>
</tbody>
</table>

Table 15 shows the analysis of variance to be significant at the \( .01 \) level of confidence. The Young Females' scores under AO conditions were significantly higher than under RO conditions \( (t = 3.09, \)
The Older Females responded to Picture FM with almost equal vigor under AO conditions, yielding a $t$ of 2.34, $p < .05$. This indicates that Picture FM is a highly sensitive picture of Achievement Motivation for both female groups. The Male subjects did not pick up on the achievement cues in this picture ($t = 1.40$, $p > .05$).

### TABLE 15

Analysis of variance of Young Females, Older Females, and Males in Achievement scores obtained from thematic stories written in response to Picture FM under two conditions of achievement orientation

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cells</td>
<td>5</td>
<td>7.35</td>
<td>5.15</td>
<td>.01</td>
</tr>
<tr>
<td>Groups</td>
<td>2</td>
<td></td>
<td>1.43</td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td>1</td>
<td></td>
<td>1.43</td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>175</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The analysis of the AI responses in Table 16 was found to be significant ($F = 2.81$, $p < .05$). The increase in the AI responses was between the RO and AO conditions for Young Females ($t = 2.71$, $p < .01$), with the greater number of AI responses under the AO conditions. This suggests that a greater number of Young Females found achievement cues in Picture FM.
TABLE 16. --Analysis of variance of the amount of achievement imagery responses from thematic stories written in response to Picture FM under two conditions of achievement orientation

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cells</td>
<td>5</td>
<td>.52</td>
<td>2.81</td>
<td>.05</td>
</tr>
<tr>
<td>Groups</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>175</td>
<td></td>
<td>.18</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Anagrams

The Young Female, Older Female, and Male subjects under the Achievement Orientation Condition (AO) were given the anagrams task. The subjects were told that the task was presented as an indicator of intelligence and leadership ability, and, furthermore, that they were being compared with other students from other colleges. These instructions were given to raise the number of achievement cues in the situation and to motivate the subjects to do their best. Subjects with high _Achievement_ would be expected to work harder and produce more anagrams in this situation than subjects with low _Achievement_.

The subjects were divided into high and low _Achievement_ groups based on scores derived from Picture MM, which was the
only picture where both male and female groups had high mean n Achievement scores under AO conditions. Those subjects falling in the upper half of the n Achievement score distribution comprised the high n Achievement group, and those falling in the lower half comprised the low n Achievement group.

We have, therefore, a behavioral measure (anagrams word output) of the subjects need for achievement as well as their n Achievement scores. If there is any agreement between n Achievement scores and anagrams word output, we have some further evidence for the validity of n Achievement measure, particularly when applied to female subjects.

Table 17 shows the word output for Young Females. The high n Achievement group of Young Females was surpassed by the low n Achievement groups of Young Females during only the fourth two-minute period and was statistically non-significant. The high n Achievement group of Young Females produced significantly more words in the first two-minute period (t = 2.29, p < .02). This suggests that Young Females were highly motivated right from the beginning of the task to produce significantly more words in the first two minute interval. In addition, the Young Females produced significantly more words in total word output (t = 2.15, p < .02). When the task became even more difficult for the high n Achievement group because of the fewer words left to find, the Young Females still
produced more words than the low $n$ Achievement group.

The analysis which can be made for Young Females is that those scoring high on the $n$ Achievement measure also scored high on the behavioral measure (anagrams task) of $n$ Achievement. The difference was consistent and great enough that one could generalize about Young Females beyond this sample. These results provide further evidence of the validity of the scoring method as a measure of $n$ Achievement for Young Females.

TABLE 17. --Mean number of anagrams completed per two-minute period by Young Female subjects above and below the mean $n$ Achievement score based upon Picture MM containing male characters

<table>
<thead>
<tr>
<th>Two Minute Periods</th>
<th>N</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High $n$ Ach. Gp.</td>
<td>19</td>
<td>15.32</td>
<td>7.53</td>
<td>6.58</td>
<td>5.00</td>
<td>5.63</td>
<td>4.00</td>
<td>44.11</td>
</tr>
<tr>
<td>Low $n$ Ach. Gp.</td>
<td>21</td>
<td>12.10</td>
<td>6.29</td>
<td>5.38</td>
<td>5.33</td>
<td>4.86</td>
<td>3.86</td>
<td>37.86</td>
</tr>
<tr>
<td>Mean Differences</td>
<td></td>
<td>3.22</td>
<td>1.24</td>
<td>1.20</td>
<td>-.33</td>
<td>.77</td>
<td>.14</td>
<td>6.25</td>
</tr>
<tr>
<td>t</td>
<td></td>
<td>2.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p</td>
<td></td>
<td>.02*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.02*</td>
</tr>
</tbody>
</table>

*Direction predicted, one-tailed t-test

Table 18 shows the word output for high $n$ Achieving and low $n$ Achieving Older Females. The high $n$ Achieving Older Females group surpassed the low $n$ Achieving group in word output on all time periods except two and six. The mean difference did not reach
any acceptable level of confidence. However, the average word output for Older Females was just as high when compared with both Young Females and Male subjects' mean word output. This suggests that Older Females were motivated by the experimental instructions. When it came to projecting this Achievement Motivation to Picture MM, the Older Females were not able to do this with any consistency. Predicting high Achievers from low Achievers from the anagrams task can not be done from this sample of Older Females.

TABLE 18. --Mean number of anagrams completed per two-minute period by Older Female subjects above and below the mean Achievement score based upon Picture MM containing male characters

<table>
<thead>
<tr>
<th>Two Minute Periods</th>
<th>N</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High <em>n</em> Ach. Gp.</td>
<td>12</td>
<td>17.25</td>
<td>9.42</td>
<td>5.75</td>
<td>4.92</td>
<td>5.08</td>
<td>5.42</td>
<td>47.83</td>
</tr>
<tr>
<td>Low <em>n</em> Ach. Gp.</td>
<td>10</td>
<td>19.40</td>
<td>9.40</td>
<td>7.80</td>
<td>5.20</td>
<td>5.70</td>
<td>5.40</td>
<td>53.00</td>
</tr>
<tr>
<td>Mean Difference</td>
<td></td>
<td>-2.15</td>
<td>.02</td>
<td>-2.05</td>
<td>- .28</td>
<td>- .62</td>
<td>.02</td>
<td>5.17</td>
</tr>
<tr>
<td>t</td>
<td></td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
</tbody>
</table>

The output curve for male subjects can be seen in Table 19. The high _n_ Achievement group produced significantly more words in the first two minute interval (_t_ = 2.13, _p_ < .05). This is consistent with what was found in the high _n_ Achievement group of Young
Females. However, the low \( n \) Achievement of male subjects had significantly more words during the fourth interval \( (t = 2.04, p < .05) \). This coincides with the inconsistent responses of the male subjects to the TAT pictures.

### TABLE 19. -- Mean number of anagrams completed per two-minute period by Male subjects above and below the mean \( n \) Achievement score based upon Picture MM containing male characters

<table>
<thead>
<tr>
<th>Two Minute Periods</th>
<th>N 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High ( n ) Ach. Gp.</td>
<td>17</td>
<td>15.00</td>
<td>6.35</td>
<td>6.41</td>
<td>4.53</td>
<td>5.48</td>
<td>4.65</td>
</tr>
<tr>
<td>Low ( n ) Ach. Gp.</td>
<td>18</td>
<td>11.94</td>
<td>7.22</td>
<td>6.55</td>
<td>6.06</td>
<td>5.06</td>
<td>4.11</td>
</tr>
<tr>
<td>Mean Difference</td>
<td>3.06</td>
<td>- .87</td>
<td>.14</td>
<td>-1.53</td>
<td>.42</td>
<td>.54</td>
<td>1.36</td>
</tr>
<tr>
<td>( t )</td>
<td></td>
<td>2.13</td>
<td></td>
<td>2.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( p )</td>
<td></td>
<td>.02*</td>
<td></td>
<td>.05**</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Direction predicted, one-tailed \( t \)-test

**Direction not predicted, one-tailed \( t \)-test

The output curve for the combined groups can be seen in Table 20. The high \( n \) Achievement group consistently produced more words on the anagrams task than the low \( n \) Achievement group except for the fourth two minute interval. The difference in the mean word output for the first period was significant at the .02 level of confidence.

The combined groups performance appeared to be a more reliable measure of predicting high \( n \) Achievers for all subjects with the
possible exception of the Young Females.

TABLE 20. --Mean number of anagrams completed per two-minute period by combined groups above and below the mean \nAchievement score based upon Picture MM containing male characters

<table>
<thead>
<tr>
<th>Two Minute Periods</th>
<th>N</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High g Ach. Gps.</td>
<td>48</td>
<td>15.69</td>
<td>7.59</td>
<td>6.31</td>
<td>4.81</td>
<td>5.44</td>
<td>4.58</td>
<td>44.44</td>
</tr>
<tr>
<td>Low g Ach. Gps.</td>
<td>49</td>
<td>13.53</td>
<td>7.27</td>
<td>6.30</td>
<td>5.57</td>
<td>5.10</td>
<td>4.27</td>
<td>42.12</td>
</tr>
<tr>
<td>Mean Difference</td>
<td></td>
<td>2.16</td>
<td>.32</td>
<td>.01</td>
<td>.76</td>
<td>.34</td>
<td>.32</td>
<td>2.32</td>
</tr>
<tr>
<td>t</td>
<td></td>
<td>2.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p</td>
<td></td>
<td>.02*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Direction predicted, one-tailed \_\_t-test
CHAPTER IV

DISCUSSION

Hypothesis 1 stated that the mean \( n \) Achievement scores for all groups tested on stories written under Achievement Orientated conditions, using pictures of both males and females, will be significantly higher than the mean \( n \) Achievement score on stories written under Relaxed Orientated conditions. This hypothesis was supported only in regard to Female subjects.

These results, however, are contrary to the findings of other experimenters (Field, 1951; Veroff, Wilcox, & Atkinson, 1953). They found that AO conditions did not increase Female \( n \) Achievement scores. According to these experimenters, Achievement Motivation was linked to the need for "social acceptability," that is, the need to be liked. According to them, an appeal to this need to be liked was the only way to arouse \( n \) Achievement in women. Under the AO condition of this present study, "leadership" and "intelligence" were stressed. Subjects were in direct competition with each other and indirectly with other universities. (See Instructions, pp. 12-13.) These results agree with Angelini's (1955) findings, that an AO instructional setting could significantly increase the Achievement
Motivation scores of females as well as those of males.

Male subjects responded to Picture MM with significant intensity under both experimental conditions. The mean \(\bar{n}\) Achievement scores of male subjects in response to the other five pictures were consistently low. This suggests that the achievement cues provided were not relevant for males. It further suggests that the stereotypes about women losing their femininity when they assert themselves aggressively influenced the responses of male subjects. For example, male subjects responded to Picture FF by identifying the characters as a receptionist, Miss America, a secretary, or a telephone operator. Some male subjects made statements such as "women can't hold responsible roles," or "women can't handle power."

The group mean \(\bar{n}\) Achievement scores for Pictures MM\(_n\) and FF\(_n\) were low under both experimental conditions (see Tables 7 and 12). The Young Females found few achievement-relevant cues in these pictures. It can be stated that both Pictures MM\(_n\) and FF\(_n\) are weak pictures for predicting \(\bar{n}\) Achievement Motivation for Male subjects and for both groups of Female subjects.

Hypothesis 2 stated that women's \(\bar{n}\) Achievement will be expressed in greater frequency to pictures of men than those depicting women. This hypothesis was not supported.

Both Young Females and Older Females responded with signi-
significant frequency to Picture FF under AO conditions. Picture FF is a high cue picture (e.g., career orientated; see Appendix A). The E's findings agree with those of Alper (1957) and Morrison (1954) who found that the sex of the principal TAT figure affected the Achievement scores and that under arousal conditions the increased score was not always to the male pictures. However, both Young Females and Older Females under AO conditions also responded with significant frequency to Picture MM. This corresponds with previous findings that under intellectual arousal conditions, male stimulus figures probably arouse fewer avoidance tendencies in female subjects.

This same result was not found in relation to Pictures MF and FM. While Young Females under AO conditions responded with significant frequency, Older Females under AO conditions did not. The intensity of these Older Females' responses were significant. These factors will be discussed in greater detail when Hypothesis 5 is analyzed.

Hypothesis 3 stated that the intensity of achievement-related responses in stories written by Older Females to pictures of male characters will be greater than Younger Females, but less than Male subjects. This hypothesis was not supported.

Young Females, Older Females, and Males all responded to Picture MM with significant intensity, under both AO and RO conditions.
This would suggest that the Young Females, Older Females, and Males were aroused by the presence of male characters in traditional achievement-related situations. However, Male subjects did not respond with the highest intensity of achievement-related responses. With a mean Achievement score of 2.36, the Older Females surpassed both Younger Females with a score of 1.85 and Males with a score of 1.94.

The intensity of the responses of Older Female subjects can be partly explained in terms of Bardwick's (1971) hypothesis which states that the motivation to achieve returned by the time women had been out of school for fifteen years. The women she studied were most likely to have the highest need to achieve in the age group 35-39. This present sample's mean age is 37.7, which could possibly be one explanation for the intensity of the Older Female subjects' responses to this picture. This suggests that perhaps a few Older Females who were high Achievers were looking for something more than husband, children, and home. It may also indicate that they had definite goals in mind or were eager to resume careers.

Hypothesis 4 stated that the frequency of achievement-related responses in stories written by Males to male characters will be greater than either female group. This hypothesis was not supported.

It was found that the frequency of achievement-related responses to Picture MM was not significantly different between Young Females,
Older Females, and Males. Responses to Picture MM\textsubscript{n} for all groups were not significant. It would appear that the responses to Picture MM, reinforce the theory that the trend is changing for female subjects in their attempts to gain achievement recognition. This was demonstrated by both groups of Female subjects who, when responding to Picture MM, were able to obtain significant \textsubscript{n} Achievement scores while given the instructional cues emphasizing "intelligence" and "leadership" instead of those appealing to the need to be liked.

Hypothesis 5 stated that the intensity of the mean \textsubscript{n} Achievement scores under arousal conditions will be greater for Males to both male and female characters than either Female group. This hypothesis was not supported.

The Male subjects responded to all of the pictures, except Picture MM, with low mean \textsubscript{n} Achievement scores. This may indicate that the other five pictures provided few achievement-relevant cues for Male subjects. The overall intensity of the Male subjects' responses was non-significant. By intensity of responses, we are referring to the mean \textsubscript{n} Achievement scores. Picture MM, depicting male characters, provided the Male subjects with sufficient achievement-relevant cues to be significant.

The intensity of the responses of Older Females under AO conditions when compared to Older Females under RO conditions
was significant, particularly in response to Pictures FF, MF, and FM. The intensity of the responses of Young Females under AO conditions when compared to Young Females under RO conditions was also significant for Pictures FF, MF, and FM.

When the intensity of the achievement responses for Picture FF were compared between Young Females and Older Females under AO conditions, it was found that the Older Females had significantly higher mean achievement responses. Both Female groups made clear achievement responses to Picture FF, that depicted female characters. Some typical responses made by the females were that the characters were young business women, an editor of a newspaper, clothing buyer, and lawyer. In addition to identifying these characters in achievement-relevant terms, the Females wrote stories making reference to achievement situations. This suggests that since Young Females and Older Females found little difficulty in responding to Picture FF, that it is a highly sensitive picture in predicting high achievers. Furthermore, it would appear that the cues present in this picture were achievement-relevant for both groups of females.

The intensity of the responses to Pictures MF and FM by Young Females under AO conditions to Young Females under RO conditions was significant. The same was true when a comparison was made between Older Females under AO conditions with Older
Females under RO conditions. Only a few Older Females responded as high \textit{n} Achievers, indicating that there was no significance in the frequency of the number of subjects responding. However, the Young Females not only responded with significant intensity, but with significant frequency.

Many Older Females responded to Pictures MF and FM by identifying the female character is a submissive or subordinate role. For example, the male character was described as the boss, the female as the secretary, or they viewed the situation as routine task with a husband and wife planning a trip.

The high \textit{n} Achieving Older Females and the Young Females often responded to these Pictures in terms of the male and female characters engaged in a cooperative effort. For example, two architects working on plans to design a new shopping center, bank managers, or an architect and the mayor of a city working on urban renewal plans.

The Older Females found a conflict when responding to Pictures MF and FM and were unable to identify the achievement cues. It appears that many of the stereotypes described by Mead (1949), Freud (1933), and Kagan and Moss (1962) continue to be present in the minds of these Older Females. Although the intensity of the Older Females' responses was high, it appears that they still have greater anxiety over aggressive and competitive behavior than do
Males and that they believe that women are to repress aggressiveness or suffer a loss of femininity. These conclusions do not apply to the Young Females; therefore, we see a trend developing where many Young Females are viewing themselves in achievement-relevant situations.

Hypothesis 6 stated that the mean number of words constructed on the anagrams task by the high \( n \) Achievement groups will be significantly higher than the low \( n \) Achievement groups. This hypothesis was supported.

As discussed earlier, the anagrams task was presented as an aspect of intelligence that would be used to help predict individuals who would be future leaders. By their performance on this task, it appeared that the Young Females were highly motivated (see Table 17). The high \( n \) Achieving Young Females had a significantly higher number of words in the first two-minute interval and in total word output throughout the task than did the low \( n \) Achieving Young Females. This was true even when the task became more difficult for the high \( n \) Achievement group since there were relatively few words left to find. This is contrary to the studies of Kagan and Moss (1962) who suggest that intense intellectual striving is viewed as "competitively aggressive behavior," and the whole essence of femininity lies in repressing aggressiveness. However, the Young Female subjects' performance in response to the TAT pictures and to the anagrams
task did not bear out this theory. It appeared that Young Female
subjects in this sample responded in a fearless and highly competi­
tive fashion. Such behavior was displayed when Young Females
approached the E after the test situation, requesting that they be
given information on how well they did.

There was no significant difference in the mean word output
of Older Females when comparing high and low n Achievers. How­
ever, when the mean number of words per two minute intervals was
compared for the Young Females, Older Females and Males, little
difference was found in mean word output. This would suggest that
the Older Females were motivated by the experimental instructions
on the Anagrams task, but that they were unable to project this moti­
vation to the TAT pictures with any frequency.

The Male subjects' mean anagram score was significant for the
high n Achievers in the first two minute interval and for the low n
Achievers in the fourth two minute interval (see Table 19). The
significant word output in both groups indicated that they valued the
competition, with emphasis on intelligence and leadership ability.
This further reinforces the theory that Males were basically moti­
vated but that the stimulus figures of the TAT pictures held few
achievement cues for them. Also, the presence of past stereotypes,
depicting women in roles of low achievement, could have influenced
their responses to these pictures.
The combined groups of high achieving Young Females, Older Females, and Males showed a significant word output for the first two minute period (see Table 20). This finding suggests that the instructional factors did arouse those subjects. These results coincide with those obtained by Clark (1956) with men and Wilcox (1951) in a similar study of achievement with females. From these results we can conclude that the anagrams task when embedded with instructions designed to motivate can be used in predicting high achievers.

The results of this study show that the male role model of achievement motivation does not have to be used to arouse achievement motivation in females, especially Young Females. There appears to be a definite trend away from the idea that overt need to achieve is just a male attribute. Clear indication exists, especially for the Young Females, that the fear of social rejection about being in competition and the anxiety about losing one's femininity is beginning to dissipate. It has been the trend in our culture that men are not only expected to achieve, they are also expected to want to achieve. Likewise, women have neither been expected to achieve, nor want to do so. It now appears that both generalizations may be too broad, that indeed a reversal of attitudes may be taking place. There are indications that men now feel less interested in being achievers, and women more willing to recognize that achieve-
ment may be female appropriate as well as male appropriate. This author agrees with Alper (1974) who has reported these findings. Although the present study was not looking for the non-achieving Male, there is the possibility that this may have been a factor in the low achievement scores of some Males.

While traditional values continue to be important, it is equally as important to stress achievement. In order for both males and females to develop creativity, fulfillment, and personal growth, there must be a fusion of those traditional qualities described as masculine and feminine.
REFERENCES


APPENDIX B
Make as many different words as you can using only the letters in the word GENERATION. You may use long or short words and may include the names of persons, places, or slang words. In any of the words, do not use the letters more times than they appear in GENERATION.

1. ___________ 20. ___________ 39. ___________
2. ___________ 21. ___________ 40. ___________
3. ___________ 22. ___________ 41. ___________
4. ___________ 23. ___________ 42. ___________
5. ___________ 24. ___________ 43. ___________
6. ___________ 25. ___________ 44. ___________
7. ___________ 26. ___________ 45. ___________
8. ___________ 27. ___________ 46. ___________
9. ___________ 28. ___________ 47. ___________
10. ___________ 29. ___________ 48. ___________
11. ___________ 30. ___________ 49. ___________
12. ___________ 31. ___________ 50. ___________
13. ___________ 32. ___________ 51. ___________
14. ___________ 33. ___________ 52. ___________
15. ___________ 34. ___________ 53. ___________
16. ___________ 35. ___________ 54. ___________
17. ___________ 36. ___________ 55. ___________
18. ___________ 37. ___________ 56. ___________
19. ___________ 38. ___________ 57. ___________
QUESTIONNAIRE

1. Male ________ Female ________

2. Age at last birthday ________

3. School attending ____________________________

4. What curriculum are you presently in? ______________________

5. Classification: a. Freshman ________
   b. Sophomore ________
   c. Junior ________
   d. Senior ________
   e. Other ________

6. GPA (Be as accurate as possible.) ________

7. How do you consider yourself (above average, average, below average)? ________________

8. When you were little, what did you want to be when you grew up? __________________________

9. What did your father want you to be? __________________________
   (Step-father, uncle, guardian, other, please specify which):
   __________________________

10. What did your mother want you to be? __________________________
    (Step-mother, aunt, guardian, other, please specify which):
    __________________________

11. How would you rate your father's parental direction on what he wanted you to be?

    Democratic 1 2 3 4 5 6  Autocratic
    (circle one)

12. How would you rate your mother's parental direction on what she wanted you to be?

    Democratic 1 2 3 4 5 6  Autocratic
    (circle one)

13. If all goes well, what will you be doing five years from now?

    __________________________
14. If all goes bad, what will you be doing five years from now?

15. What famous person would you most want to be like?

16. Do you plan on going to graduate or professional school?
   Yes _______  No _________  Undecided _________

17. If yes, in what area of study?

18. Ages of older brothers _______  older sisters ________
    younger brothers _______  younger sisters _______

19. How do you feel about women's liberation?
   Totally agree _________
   Agree very much _______
   Agree ________________
   Disagree ______________ (Check one)
   Disagree very much _____
   Totally disagree ________

*Questions 8-10, 13-15 were abstracted from the Life Script Form of Eric Berne, M. D.

**Questions 11-12 were taken from questions used by Mc Clelland et al. (1953, pp. 276-84).
APPENDIX D
Scoring Projective Records for \textit{Achievement Imagery (AI)}

The scorer must first decide whether or not the story contains any reference to an achievement goal which would justify his scoring other categories as achievement related. The attainment of an achievement goal is accompanied by feelings of personal success for the accomplishment and non-attainment produces feelings of failure. Three criteria are used to establish the presence of an achievement goal:

A. \textit{"Competition with a standard of excellence."} One of the characters is engaged in some competitive activity (other than clear cases of aggression) where winning or doing well or better than others is the primary concern. \textit{"He wants to win the essay contest."} One of the characters is engaged in what might seem to be a routine task or everyday performance, but there is evidence with mastery of the task. \textit{"If he doesn't do a good job, he will be angry."}

B. \textit{Unique accomplishment.} One of the characters is involved in accomplishing other than a run-of-the-mill daily task which could mark him as a personal success. Inventions, artistic creations, and other extraordinary accomplishments fulfill this criterion.

C. \textit{Long term involvement.} One of the characters is involved in attainment of a long term achievement goal. Being a success in life, becoming a machinist, doctor, lawyer, successful businessman,
etc., are all examples of career involvement which allow the inference of competition with a standard of excellence, unless it is made explicit that another goal is primary, for example, food for the kids, personal security.

II. **Doubtful Achievement Imagery (TI)**

Stories containing some references to achievement, but which fail to meet one of the three criteria for Achievement Imagery are scored Doubtful Imagery and not scored further for achievement-related categories. The most frequent stories to be classified as doubtful are ones in which one of the characters is engaged in a commonplace task or solving a routine problem.

III. **Unrelated Imagery (UI)**

Stories in which there is no reference to achievement goal are scored Unrelated Imagery and not scored further.

IV. **Need**

Someone in the story expresses the desire to reach an achievement goal. Expressions such as "he wants to be a doctor," "he wants to finish the painting," "he hopes to succeed," are the clearest examples.

V. **Instrumental Activity with Various Outcomes**

Overt or mental activity by one of more characters in the story
indicating that something is being done attaining achievement goal is considered instrumental activity. There must be an actual statement of activity within the story, independent of both the original statement of the situation and the final outcome of the story.

VI. **Anticipatory Goal States (GA+, GA-)**

Someone in the story anticipates goal attainment or frustration and failure. The anticipatory goal state is scored positive (GA+) when someone is thinking about the success he will achieve, or negative (GA-) when someone is worried about failure, expects the worst, or is wondering whether or not he will succeed.

VII. **Obstacles or Blocks (BP, BW)**

Stories are scored for Obstacles when the progress of the goal-directed activity is blocked or hindered in some way, or things do not run smoothly, or there are obstacles to be overcome before the goal may be attained.

VIII. **Nurturant Press (NUP)**

Forces in the story, personal in source, which aid the character in the story who is engaged in ongoing achievement-related activity are scored Nurturant Press. Someone aids, sympathizes with, or encourages the person striving for achievement.

IX. **Affective States (G+, G-)**

Affective States associated with goal attainment, active mastery,
or frustration of the achievement-directed activity are scored:

A. Positive Affectives States (G+) are scored when there is indication of enjoyment, pride, or satisfaction.

B. Negative Affectives States (G-) are scored when there is failure to attain mastery of an achievement goal accompanied by effect. (He is worried about his failure."

X. Achievement Theme (ach TH)

Achievement Theme is scored when the Achievement Imagery is elaborated in such a manner that it becomes the central plot or thema of the story. Striving for an achievement goal and eventual attainment of the goal may be the central plot of the story.