

1953

The projective expression of the achievement motive in relation to career orientation and social satisfaction in home economics freshmen.

John Warner Davenport
University of Massachusetts Amherst

Follow this and additional works at: <https://scholarworks.umass.edu/theses>

Davenport, John Warner, "The projective expression of the achievement motive in relation to career orientation and social satisfaction in home economics freshmen." (1953). *Masters Theses 1911 - February 2014*. 1438.

Retrieved from <https://scholarworks.umass.edu/theses/1438>

This thesis is brought to you for free and open access by ScholarWorks@UMass Amherst. It has been accepted for inclusion in Masters Theses 1911 - February 2014 by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.

UMASS/AMHERST



312066013579479

THE PROJECTIVE EXPRESSION OF THE ACHIEVEMENT
MOTIVE IN RELATION TO CAREER ORIENTATION AND
SOCIAL SATISFACTION IN HOME ECONOMICS FRESHMEN

DAVENPORT - 1953

THE PROJECTIVE EXPRESSION OF THE ACHIEVEMENT
MOTIVE IN RELATION TO CAREER ORIENTATION AND
SOCIAL SATISFACTION IN HOME ECONOMICS FRESHMEN

By

John W. Davenport

Thesis submitted in partial fulfillment of the
requirements for the degree of
Master of Science

University of Massachusetts, Amherst

1953

TABLE OF CONTENTS

I.	INTRODUCTION.....	1
	A. The Development of McClelland's Method for Measuring Motivational States.....	2
	B. Validity of the <u>n</u> Achievement Score.....	5
	C. Generality of the <u>n</u> Achievement Score.....	6
	D. Aims and Methods of the Present Investigation.....	12
II.	PROCEDURE.....	15
	A. Apparatus and Materials.....	15
	B. Subjects.....	16
	C. Administration.....	17
	D. Scoring.....	18
	E. Reliability of Scoring.....	20
	F. Coding.....	21
III.	RESULTS.....	24
	A. The Distribution of <u>n</u> Achievement Scores.....	24
	B. The Composite Index of Career and Mar- riage Orientation.....	25
	C. Sub-Indices of Career and Marriage Orientation.....	33
	D. The Composite Index of Social Satis- faction.....	41
	E. Sorority Acceptance-Rejection.....	46
	F. Sub-Indices of Social Satisfaction.....	48
	G. Summary of Results.....	52

JUL 7 1953 G:ft

IV. CONCLUSIONS.....	54
A. Career Orientation.....	54
B. Social Satisfaction.....	59
REFERENCES.....	63
APPENDICES	
Appendix A	
Instructions for the Administration of the TAT and Questionnaire.....	65
Appendix B	
A Reproduction of the TAT Test Booklet.....	69
Appendix C	
A Reproduction of the Questionnaire....	75
Appendix D	
The Method Used to Guarantee Confi- dentiality of Subjects' Responses to the TAT and Questionnaire.....	84
Appendix E	
Supplemental Statistics and Tables.....	86
ACKNOWLEDGEMENTS.....	93

I. INTRODUCTION

The absence of satisfactory techniques for identifying and measuring human motivational states has long been a stumbling block in the field of psychology. However in the past five years a new approach to this problem has been developed by McClelland and his associates (12) at Wesleyan University, and this line of inquiry has begun to attract a great deal of attention in the departments at Michigan, Pennsylvania, Yale, Minnesota, and here at the University of Massachusetts. The method seems to hold promise as an objective experimental approach to the problems of human motivation.

Basically, this technique consists of the inference of needs from content analysis of verbal responses to the Thematic Apperception Test (TAT). The procedure usually involves presenting subjects with a set of pictures, and asking them to make up brief, imaginative stories about them. The fundamental hypothesis upon which this method stands is that a need will result in fantasy reflecting the presence of that need, or as White (20, p. 236) states it, "that the need is father to the fantasy, and from the needs and situations appearing in the story one can infer important strivings in the narrator."

2

A. The Development of McClelland's Method
for Measuring Motivational States

The quasi-objective means for scoring TAT responses was introduced by McClelland in 1948. Since then, a number of experimental studies have demonstrated the effect on thematic apperception of various experimentally aroused needs. The original work of McClelland and Atkinson (3, 10) showed that subjects deprived of food for one, four, and sixteen hours wrote TAT stories that were increasingly concerned with food deprivation, hunger, food-getting activities, and the like. The changes in fantasy which took place were classified into such categories as Imagery, Instrumental Activity, Obstacles, Goal Anticipation, Affective Goal States, and others. In this purely empirical fashion a scoring system was built up from the data, without the necessity of resorting to a priori assumptions as to what characteristics of fantasy indicate the presence of a certain motive. The algebraic sum of weighted values for characteristics was taken as a rough measure of the intensity of the motive.

The McClelland group has since directed much of its attention to the achievement motive. Many significant relationships between achievement motivation and imaginative behavior, as well as other types of behavior, have

been found and are summarized in "The Achievement Motive" (12). The method of measuring motivation has been applied by Shipley and Veroff (17) to the need for social affiliation also. An even more recent extension by Clark (4) deals with imaginative changes presumably resulting from experimentally induced levels of sexual motivation and sex-related guilt.

The projective expression of the achievement motive, which shall be referred to as n achievement after Murray (16), is our concern in this study. Murray defines the need for achievement as a need:

"To accomplish something difficult. To master, manipulate, or organize physical objects, human beings, or ideas. To do this as rapidly, and as independently as possible. To overcome obstacles and attain a high standard. To excel one's self. To rival and surpass others. To increase self-regard by the successful exercise of talent." (16, p. 164)

The broad definition employed by McClelland in his most recent work is competition with a standard of excellence. The latest n achievement scoring system (C), which will be employed in the present study, has this as its basic definition of Achievement Imagery. This definition may be broken down into: a) content explicitly stating concern over competition with a standard, e.g., "He wants to do his best at the task"; b) long term involvement, in which a character is engaged in activity directed toward the attainment of a

goal such as becoming a doctor, obtaining the Ph. D. degree, being successful in business; and c) unique accomplishment, such as becoming a famous inventor, a hero in battle, etc.

A number of experimental conditions differing in type and intensity of induced achievement motivation have been shown to affect the TAT responses of human subjects. That experimentally induced "ego-involvement", "success", "failure" and "success-failure" result in higher n achievement scores for college males as compared with "relaxed" or "neutral" groups has been consistently demonstrated by the McClelland group (9, 11, 12, 13, 14) and by Field (6). These variations in intensity of achievement cues have usually been produced by giving the subjects supposed "intelligence" tests and quoting faked norms for performance on the tests so high that nearly all subjects were apt to experience feelings of failure. A detailed analysis of the resulting changes in imaginative characteristics for these six experimental criterion groups is presented in McClelland's book mentioned above (12). Atkinson (2, 12) has contributed a wealth of meaningful data dealing with the factors which play a part in producing a given TAT story, attempting to separate achievement cues existing in the pictures themselves, cues "in the individual", and cues in the experimental manipulations; McClelland's book shows statistically and graphically how these factors interact.

B. The Validity of the n Achievement Score

The validity of this projective measure, or what might be called the relation of n achievement scores to behavior, is hardly questionable in view of the many significant findings reported. Many workers in this line of research now feel that a simple, quick way of "validity-checking" the n achievement measure is to give the tested subjects a twelve-minute anagrams test. If subjects with high n achievement scores produce significantly more words during the middle portion of the task (when new anagrams become increasingly difficult to make up) than do subjects with low n achievement scores, it may be reasonably concluded that the achievement motive has been reflected in the scores. This simple validity test is based on McClelland and Clark's factor analytic study of the anagrams task (5), and several additional demonstrations. The presumed "effort" factor also results in significant differences between the performance of high and low n achievement groups on simple verbal and arithmetic tests, as Lowell (8) has shown. In Lowell's study was one task on which learning could be demonstrated, the high n achievement group showing more rapid learning than the low n achievement group. We are here reminded of Miller's statement (15) that "the decisive criterion for determining whether a motive is involved in

learning is whether or not it can produce learning". That it is the achievement motive in college males that is measured by the n achievement score is further supported by significant relationships between n achievement and the following: tachistoscopic recognition of achievement-related words; college grades; scholastic aptitude scores; level of aspiration measures; completion of tasks, and recall of completed and interrupted tasks; number of Rorschach responses and certain other Rorschach indices; linguistic behavior; sentence-completion tests; the aesthetic scale of the Allport-Vernon Study of Values; the interest maturity scale of the Strong Vocational Interest Inventory; and clinical indices of severity of discipline in childhood; preference for mother over father, and rejection by one's father. (12)

C. The Generality of the n Achievement Score

The present research is secondarily concerned with adding to this list of meaningful relationships, but its main purpose deals with the generality of the n achievement score. In introducing this topic, McClelland, et al (12) state:

"The broad definition of achievement imagery in the scoring manual in terms of competition with a standard of excellence emphasizes our view that affective changes early in life accompanying doing well or failing to do well in various learning situations provide the basis for motivation to

7

succeed and to avoid failure. We have argued that our scoring categories are independent of any specific, culturally determined goals or culturally determined methods of attaining these goals. Thus, we expect that the measure, as presently obtained, will reflect with a fair degree of accuracy differences in achievement motivation in subjects whose age, sex, or cultural background differs from that of our original college male criterion groups. A number of studies have been undertaken that can be used to test this hypothesis. In each of them the crucial question is, do the stories written continue to show the same characteristic changes when achievement motivation is aroused in different populations." (Chap. VI, p.1)

When we refer to the generality of the n achievement score, we ask, is the measure valid and meaningful when applied to groups other than upper middle-class college males? If so, what are the achievement goals in these other groups? Need for achievement of what? Do n achievement scores remain consistent when ego involvement is directed toward goals other than achievement in the intellectual or occupational sphere?

Concerning the age factor, Veroff (18, 19) has provided evidence that the method of obtaining a n achievement score on a population of male college students is valid when applied to a population of high school males. It should be noted that this latter group represented a broader socioeconomic base also. Field's study (6) of older and presumably more mature males in post-graduate evening classes indicated that the measure is applicable in higher age ranges. Lowell (12) presents evidence concerning the valid-

ity of the measure in another culture—ninth grade Navaho males in New Mexico—leading to the conclusion that the scoring system is sufficiently general to measure differences in induced achievement motivation in subjects whose values, social learning experiences, and thought patterns differ markedly from those of middle-class American males. As McClelland points out (12), the scoring categories are such that Achievement Imagery, for example, is still scored whether the goal in a story is becoming a good shepherd (Navaho) or a famous doctor (college student). The differences in content are of great interest for future exploration.

All the studies mentioned thus far in this review have been based on male subjects. When the n achievement measure is applied to females, however, the neat, consistent pattern of relationships between scores and experimental conditions disappears. The high school girls in Veroff's study failed to produce stories which showed increased n achievement scores from "neutral" to "ego-involved" conditions, as has been the case in all the male studies. Field demonstrated similar findings for college women and older female subjects, comparing scores of those "failing" an "intelligence" test with a "relaxed" group. Wilcox's results (19) showed the same lack of increase for college women. Scores for females have a tendency to be slightly higher

than those for males. Females have responded to pictures containing male characters significantly more than to pictures of female characters, as have male subjects. But the status of the applicability of the n achievement measure to females is uncertain.

There have been a few meaningful relationships demonstrated with women subjects, however, Wilcox (19) found that her college females with high n achievement scores produced significantly more words during the third and fourth minutes of an anagrams test than did the girls with low n achievement scores. The anagrams task was the same as the one mentioned above and even the raw data for Wilcox's females at Michigan was almost identical to that for McClelland and Clark's males at Wesleyan (5). Thus, though the females have failed to respond to experimentally induced differences in achievement motivation levels as males have, their scores do seem to bear some relation to the need for achievement.

The experiments by Field (6) point out even more significant features of n achievement projection in females. Field was interested in determining whether the n achievement score remains consistent when ego-involvement is directed toward goals other than achievement in the intellectual spheres. Hence, in addition to using failure and success on an "intelligence" test as a means of inducing differences

in achievement motivation, he used artificially contrived social failure and success as well, with both males and females. Social failure and success were induced by employing a sociometric procedure similar to Shipley and Veroff's (17).

Field confirmed the results of previous experiments dealing with ego-involvement directed toward intellectual achievement; n achievement scores for males were increased by the need arousal, female scores were not. The effects of social failure were the reverse, however; the males did not show a significant increase in n achievement scores, whereas the females did.

The results point to the conclusion that, for some females, achievement "means" attaining a social goal, among other things. Another implication is that the males may respond to intellectual failure conditions more than females because, in part, males tend to be more oriented toward success in their occupations after graduation. Field concluded that males are more likely to be oriented toward intellectual or vocational achievement goals, females toward nurturance or social acceptance goals, due mainly to the cultural definition of male and female roles.

How then do n achievement scores of females whose goals more closely resemble those of males compare with females having goals less similar to the cultural definition of male

roles? This is our main concern in the present investigation. The hypothesis set forth here is that college girls who are more career-oriented should have higher n achievement scores than girls who are more marriage-oriented. It is assumed that in our culture career-minded girls more closely resemble typical males in their role-taking and goal orientation, whereas girls who wish to marry without having careers are less similar. Hence, since the n achievement score apparently measures goal-directed motivation, the imaginative behavior of "career girls" should be more similar to the thematic apperception of males than should that of "marriage girls". If it can be shown that the hypothesized relation exists, a rather crucial question in this line of research will have been answered, the generality of the n achievement score will have been more precisely defined, and the validity of the McClelland method further supported.

We are also interested in further definition of the relation between n achievement scores and social achievement goals of females. Field has demonstrated the effect of experimentally induced social failure. How do the scores of females with differences in "real-life" social success compare with Field's experimental arousal scores? In investigating this question, special attention will be focused on what is probably a real-life social frustration—rejection in bid for sorority membership—in freshman home economics

girls. There is something of parallel here to experimental social failure, although the author will not claim to be studying the effects of sorority rejection, but rather the subjects themselves who have experienced the frustration. Relevant here is Shipley and Veroff's study (17), demonstrating a higher n affiliation (need for social affiliation) score in Wesleyan males who were rejected in fraternity bids than in those accepted, one month following the college's rushing program.

In this second major aim dealing with social satisfaction, there is no specific hypothesis being tested. We are merely attempting to discover relations, and compare the findings with Field's social frustration experiment. The result expected here are not clear, since in Field's experiment girls who were voted by fellow students as "unpopular" scored significantly lower in achievement imagery than did "popular" girls in a relaxed, non-experimental testing. Various hypotheses, such as whether the n achievement score is function of time since failure or success, or a function of repression, or deprivation, may be looked at in the light of our results.

D. Aims and Methods of the Present Investigation

Specifically, we attempting to answer two main questions in this investigation:

1) Do career-oriented home economics girls in college show a significantly higher n achievement score than do non-career-oriented girls under neutral (non-arousal) testing conditions?

2) What relationships, if any, exist between n achievement scores and social satisfaction, and how do these results compare with Field's experimental arousal of social success and failure?

Two approaches will be made to the first question. "Career orientation" will be determined first by a composite index combining the responses of subjects to a number of career- and marriage-related items on a questionnaire. We have here conceptualized "career orientation" as a continuum, ranging from no expectation or desires of a given subject concerning employment after graduation to expectations and/or desires of a subject to be employed in a specific occupation 3 to 4 or more years after graduation. This definition in terms of expectations and desires and amount of time devoted to a career will be roughly approximated by "career orientation" as it is defined operationally by the particular procedures in this study.

The broader operational definition will become clearer in the second approach, in which n achievement scores will be compared for each separate question presumably related to the "career vs. marriage" issue.

The second question will be approached from three different angles. First will be a composite index of social satisfaction, dividing subjects into "satisfied" and "unsatisfied" groups. Then one question, on the sorority-rejection issue, will be singled out for special attention. Finally, individual questions relating to social satisfaction will be analyzed. In all three approaches, the differences between means and variances of n achievement scores will be studied.

II. PROCEDURE

This section will be divided into the following parts: A) apparatus and materials, B) subjects, C) administration, D) scoring of the stories, E) measures of reliability of scoring, and F) coding methods. The methods of categorizing subjects into the various groups such as "career girls", "socially satisfied", etc., will be explained in Section III, since it would be difficult for the reader to understand the results for each particular comparison made without remembering how the subjects were classified.

A. Apparatus and Materials

The apparatus and materials in this study included two slide projectors and screens, four 2 x 2 TAT slides, TAT test booklets, and a questionnaire. The slides were those employed in Field's studies (6), two of which have been used in most of McClelland's work (TAT 7BM and 8BM), another of Murray's original TAT pictures (TAT 2), and one showing a boy and girl lying on a beach.

The questionnaire, consisting of 33 questions, was constructed for the purpose of determining which subjects could be placed in the various categories such as "career girls", "socially satisfied", etc. The author and his advisor attempted to include a number of items which could be expected to bear a relation to the issues of career

orientation and social satisfaction. Some of the questions used were taken directly from the questionnaires used in gathering information about Cornell undergraduates and medical students. After several revisions, the questionnaire was mimeographed in its final form. A sample copy of the questionnaire used in this study appears in Appendix C.

Test booklets, each consisting of four pages for the four TAT stories, were constructed. Each page bore the four guide questions that have been used in previous studies in this series:

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?

Code numbers were stamped on an unnoticeable place near the stapled part of the back of each test booklet page. The entire test booklet, reproduced in Appendix B, consisted of the cover page, four pages for stories, and a blank page for the subject's name.

B. Subjects

The subjects were 97 freshman home economics students at the University of Massachusetts. They were chosen on the basis of their availability, their naivete with respect to the purposes of the investigation, and their suitability regarding career-marriage plans. The author and advisor

felt that, being freshmen, the Ss might have clearer, more definite ideas concerning their life plans, and, being home economics students, they would be apt to have plans varying widely along a career-marriage continuum.

C. Administration

The subjects were divided into Group I (N=48) and Group II (N=49) in two different classrooms. The administration of the thesis materials was part of a larger testing program being given the subjects, and as a result Group II took the TAT immediately after taking the Kuder Preference Record, whereas Group I received the TAT an hour earlier, at the start of the two-hour period of testing. (These differences in testing conditions did not result in a significant difference in n achievement scores between the groups, although the mean score for group II was somewhat lower than that for Group I. Possible differences in testing conditions were constantly kept in mind during the analysis of data.)

The instructions for the administration of the TAT and questionnaire can be found in Appendix A. Summarily, the administration consisted of passing out test booklets, making sure that each S had the same code number on all of her materials. The author gave the instructions, identical to those used in most of McClelland's studies, in an appar-

ently extemporaneous fashion. Ss were told that they were being given a test of creative imagination, that there were no right or wrong answers, that they could make up any kind of story that they chose. They were urged to make their stories vivid and dramatic, to tell a story about each picture, rather than merely describe it.

None of the Ss looked at the questionnaire until after the TAT was administered. They were assured of the confidentiality of their TAT responses. Each of the four pictures was exposed on a screen for 20 seconds, after which the Ss had four minutes and forty seconds in which to write a story based on the picture. After the last picture Ss wrote their names on the blank page of the booklet, tore off this page, and passed it in to the administrator. Then they followed the instructions to take out the questionnaires from the envelopes, read the cover page, and fill them out. Again, confidentiality was assured.

D. Scoring

The latest revision of the McClelland scoring system was used in this study, following as carefully as possible the scoring manual set forth in "The Achievement Motive" (12). To outline briefly, there are three main categories in which a story may be placed: Achievement Imagery (AI), Doubtful or Task Imagery (TI), and Unrelated Imagery (UI). Generally

speaking, a story is scored AI if someone in the story is involved in activity that explicitly (or implicitly, in the case of long-term involvement) represents competition with a standard of excellence, as was pointed out in Section I. If the imagery does not clearly fall under the definition of AI specified in scoring system C, or if a mere task is being performed in a story with no explicit statement of the task's relation to an achievement goal, TI is scored. If a story contains no reference to achievement imagery, it is scored UI.

If a story is scored UI, it is scored -1 and is not scored further. If it is scored TI, it receives a score of 0 and is not scored further. If AI is decided upon, plus 1 is scored, and the story is examined for sub-categories, each of which adds 1. In the present system there are the following ten subcategories:

1. Need (N)--explicit statement of desire for an achievement goal, as shown by such words as "wants", "desires", "is determined to". N is not inferred from instrumental activity.

2. Instrumental Activity (I)--actual attempt(s) by a character to attain an achievement goal.

I/ = successful instrumental activity.

I? = activity of doubtful outcome.

I- = unsuccessful instrumental activity.

3. Positive Goal Anticipation (Ga/)--someone in a story anticipates, expects, has a feeling of surety, that an achievement goal will be attained.

4. Negative Goal Anticipation (Ga-)--concern by

a character over possible failure, anticipation of failure, scored whenever the anticipation is not clearly positive.

5. Positive Affective State (G~~/~~)--explicit statement of affect over, or observable benefits from, attainment of an achievement goal.

6. Negative Affective State (G-)--Explicit statement of negative affect over, or negative consequences of, failure to attain an achievement goal.

7. Nurturant Press (Nup)--someone in a story aids or sympathizes with a character engaged in achievement striving.

8. Personal Obstacle (Sp)--a barrier blocking goal attainment existing in the person striving for achievement, such as lack of confidence, inability to make decisions.

9. Environmental Obstacle (Bw)--a barrier, personal or impersonal in source, that exists in the world at large.

10. Achievement Thema (Ach Th)--scored when the major, dominant theme of a story is concern or activity directed toward an achievement goal, successful or unsuccessful.

It should be understood that this is merely a brief description of each subcategory to aid the reader in his understanding of the n achievement score. The scoring manual itself specifies in much greater detail and exactness how to score the stories, thus approaching the ideal of true objectivity and perfect inter-scorer reliability.

E. Reliability of Scoring

The author scored all 388 stories once for practice. Then he scored them a second time, while the four stories

for each S remained stapled together in booklet form. After the second scoring, all the pages of each booklet were separated and thoroughly shuffled. Since the code numbers were stamped on the back of each page, the scorer had no way of telling which S's story was being scored or what her other stories were like. Since about 10 days intervened between the first and second and second and third scorings, it was virtually impossible for the scorer to remember how he had previously scored a given story. A Pearson product-moment correlation between the second and third scorings was computed, comparing the total n achievement scores for each S. This coefficient of reliability turned out to be .95. Thus intra-scorer reliability was clearly demonstrated.

Another measure of scoring reliability was used, in which a sample of stories was taken randomly from the 388, and the n achievement score for each story was determined by the thesis advisor, Dr. Wm. F. Field, who has had extensive experience in scoring TAT stories for n achievement, and has demonstrated his scoring reliability in his Ph.D. dissertation research. Dr. Field's scoring was compared to that of the author for this sample of stories and the inter-scorer reliability coefficient was .

F. Coding

All of the questions relevant to this study which

appeared on the questionnaire were coded in such a way that the responses for each S could be put on one side of a 5 x 8 card. This enabled one to sort the Ss into the various categories for statistical comparisons in an efficient manner. All data handled by the author was labeled with code numbers, so that only the thesis advisor could associate personal identities of Ss with any categories.

The source of all data for comparisons between groups was the questionnaire, except for the sorority-rejection data. In this case, the code numbers of Ss who checked "yes", "no" or "undecided" on a questionnaire concerning desire for sorority membership were obtained from the files of the Dean of Women. This questionnaire, which shall be referred to as the summer questionnaire, was given to the Ss through the mail, about five months prior to the administration of this research, one month before the Ss entered college in September, and four months before sorority rushing on campus. The author did not regard this summer questionnaire as being a valid index of desire for sorority membership however, since, as will be shown, many Ss revised their ambitions after coming to college.

The validity of the other method of determining desire for sorority membership can hardly be questioned. At

the end of the rushing period in the fall, freshman girls who desired to join sororities and were eligible (having grades of 70 or better) attended what is called "pledge chapel" and filled out "pledge ballots" on which they stated which sorority or sororities they wished to join. Some of these were girls who very likely had received indications in the preceding days that they would not be accepted but nevertheless were "determined to the bitter end". Unfortunately, only 9 of these girls were in the group of 97 Ss in this study. An additional 10, however, indicated on the questionnaire accompanying the TAT administration that they desired to join sororities in the days before or during rushing, and thus the N for "sorority-rejects" became 19.

The categorizing for other questions dealing with career orientation and social satisfaction will be explained as we proceed in the next chapter.

III. RESULTS

This section will be divided into the following parts: A) description of the distribution of n achievement scores; B) the composite index of career and marriage orientation; C) sub-indices of career and marriage orientation, taking individual questions one by one for all subjects; D) the composite index of social satisfaction; E) serority acceptance-rejection; F) sub-indices of social satisfaction, taking the relevant questions one by one for all subjects; and G) summary of results. The major findings will be presented in table form and considered more carefully. Supplementary statistics may be found in Appendix L.

A. The Distribution of n Achievement Scores

The distribution of n achievement scores was essentially normal, with a slight positive skew in both groups. Scores ranged from 0 to 23.* The mean for the 97 Ss was 8.25, the SD was 4.58. The mean for Group I was 8.92; the mean for Group II was 7.57; the difference was not significant ($P < .14$), but enough to warrant caution in the treat-

* Previous studies in this line of research have presented scores in raw data form; that is, ranging from the lowest possible score, -4, to beyond $\frac{1}{2}$ 20. In this study, -4 has been set equal to 0, and the constant 4 has been added to every raw score to eliminate signs and make statistical computations more free from error. This transformation, of course, does not influence the magnitude of statistical measures other than means. Any of the means here presented can be compared directly with those in other studies, after subtracting the constant of 4 from the means of this study.

ment of the data.

B. The Composite Index of Career and Marriage Orientation

From the start of this research it was never expected that there would be a sizeable group of Ss who could be considered "purely career-oriented", that is, who would say that they didn't want to marry at all and to whom a career would be the most "important" thing in life. As a matter of fact, there were only two Ss of the 97 who checked "career only" as a first choice and only two other Ss who checked this response as a second choice in the key item of the questionnaire.

Thus a decision as to where to draw lines defining "career orientation" and "marriage orientation" relatively, had to be made. In some items it seems reasonable to assume a continuum running from "pure" marriage orientation through various combinations of career and marriage to "pure" career orientation. In other cases, we have categories rather than continua.

It was also evident from the start that no one single question would fulfill the desired definition of career orientation. Thus for each S a composite index was determined. Hence career orientation was defined in terms of the responses to eight different questions (Q's 13, 14, 15,

16, 17, 18, 19, and 22 on the questionnaire), and these responses were weighted as follows:

Q 16 -- "After college, which of the following would you most prefer to do for the rest of your life?"

	<u>First choice</u>	<u>Second choice</u>
"Career only".....	/8	/4
"Career for 3 or 4 years and then marriage, with career continued".....	/6	/3
"Career and marriage, with career stopped when children arrive, resumed when children are in school."....	/4	/2
"Career for 3 or 4 years and then marriage, but career discontinued".....	/2	/1
All others.....	0	0

There were 41 Ss who checked one of these sub-items for a first and/or second choice. All other sub-items contributed no weight to the CI (career-orientation index) for a given S.

Q15: "Listed below are several common reasons for coming to college...Number in order of importance to you...which best express your reasons for coming to college."

54 Ss checked "To obtain vocational training; develop skills and techniques directly applicable to my career" as a first choice; 11 as a second choice; and 10 as a third choice. A weight of / 3 was given for a first choice, / 2 for a second choice, / 1 for a third choice.

Q 14: "Do you plan to prepare for a specific vocation or occupation while at the University of Massachusetts?"

If the response was YES, / 1 was contributed, 0 for

NO, or UNDECIDED. 79 Ss checked Yes, 14 NO, and 4 UNDECIDED.

Q 13: "Have you chosen a major yet?"

If the response was YES, $\neq 1$ was contributed, if NO, 0 weight. There were 71 Ss in the YES group, 26 in the NO group.

Q 17: "Are you planning of considering going to graduate school?"

Again, $\neq 1$ for YES (N=20), 0 for NO (N=77).

Q 18: "If it were up to you, at what age would you like to get married?"

A weight of $\neq 1$ was given for AGE 24-30 (N=25), 0 weight for 21-23 (N=56), and - 1 for 18-20 (N=16).

Q 19: "Looking at things realistically, how old do you think you will be when you do get married?"

The weighting here was the same as for Q 18. The N's, however, were 35, for AGE 24-30, 36 for AGE 22-23, and 17 for AGE 20-21, weighted $\neq 1$, 0, and - 1 respectively.

Q 22: "What three things or activities in your life do you expect to give you the most satisfaction?"

8 Ss checked "your career or occupation" as a first choice (weight $\neq 3$), 44 as a second choice (weight, $\neq 2$), and 29 as a third choice (weight, $\neq 1$).

The CI for each S was the algebraic sum of the weights for her responses to these eight questions. Thus a CI could be as low as -2 or as high as $\neq 22$. Actually the CI's ranged from -1 to $\neq 19$.

The crudeness of this measure of "career-orientation",

as most psychologists might define the term, is readily admitted. We cannot say that a subject with a CI of 12 is more "career-oriented" than a subject with a CI of 11, if we insist on a definition independent of the operations used in this study. We do not have equal intervals. We cannot meet the assumptions necessary for a correlation coefficient between n achievement scores and CI scores. However there should be little quarrel with the purpose and use of the CI in this study.

What is here labeled as "career-oriented" or "marriage-oriented" is relative to the group of subjects in this study. The purpose of the CI scale is to clearly separate the "most career-oriented" girls (by any definition) from the rest of the 97 subjects. Thus while the difference between a CI of 11 and one of 12 is meaningless, the difference between CI's of 18 and 12 is a meaningful discrimination, and a difference between CI's of 18 and 6 is even more so; in other words, the CI scale does discriminate in a rough fashion that is suitable for our purposes.

All Ss with a CI of 10 or higher were placed in the category that shall be called "Career Girls". All Ss who, in Q 16, checked "marriage only" as a first or second choice and had CI's of less than 10 composed the category "Marriage Girls". There were 27 Ss in each group. It was desired to have a larger number in each group, but there were many Ss with inconsistencies in questionnaire responses (such as

checking "marriage only" for a first choice and "career for 3 or 4 years, then marriage" for a second choice in Q 16). Because these were difficult to categorize, and because it is perhaps more meaningful to have a complete separation between the "career girls" and "marriage girls" categories, the N's of 27 in each group were decided upon.

A glance at Table 1 shows that the difference in mean n achievement scores between the career girls and the marriage girls almost reaches the level of significance ($P < .055$) in the predicted direction. In Group I the difference was significant at beyond the .01 level (Mean, 17 career girls = 10.53; mean, 14 marriage girls = 6.42; diff. = 4.11, $t = 2.51$.) In Group II, the difference did not even approach significance, but there were only 10 career girls and 13 marriage girls.

If 13 additional Ss who indicated that they wanted to or expected to marry before graduation are added to the "marriage girls", their mean becomes 7.57, $N = 40$. The difference between career and marriage girls is then 2.13, but t becomes 1.88 and $P < .05$.

The fact that 17 of the 27 career girls were in Group I may partially explain why the mean for Group I is higher than Group II's. Added to this is the fact that the testing conditions in Group II were probably more relaxed, the Ss having been there for an hour, and boredom and fatigue having

Table 1

Frequencies of Scored Thematic Subcategories and Mean n Achievement Scores for "Career" and "Marriage" Girls as Determined by the Composite Index. All F Values are Based on a One-tailed Test of Significance.

<u>Subcategory</u>	<u>CAREER GIRLS</u> ($N = 27$)	<u>MARRIAGE GIRLS</u> ($N = 27$)	<u>P Value</u>
UI	30	45	<.06
TI	30	30	...
AI	48	33	<.07
N	25	20	<.35
I/	23	14	<.10
I?	6	0	...
I-	2	6	...
Ga/	8	4	...
Ga-	1	1	...
G/	10	7	...
G-	3	3	...
Nup	11	5	<.12
Bp	5	8	...
Bw	9	11	...
Ach Th	27	23	<.35

Total n Achievement Scores:

Mean	9.70	7.44
S.D.	4.09	4.49
Diff.	2.26	
σ diff.	1.38	
t	1.63	

set in.

The mean for the 43 Ss not included in the "marriage" or "career" categories was 7.81, the SD was 4.87. These measures were not significantly different from those of the two major categories. Thus, this unclassified group was in the middle, "between" the career scores and the marriage scores. The incompleteness of the data for these unclassified Ss does not permit us to regard them as a truly "middle group" on the career-marriage continuum except with extreme caution. These Ss should not be labeled "middle" or "career and marriage girls", because many of them may conceivably be more career-oriented than some in the "marriage" category. Others in this group are simply unclassifiable because of weaknesses in the method of determining career orientation, or Ss' failure to answer certain items on the questionnaire.

It will be noted in Table I that the differences between frequencies of scored thematic subcategories are not as striking as that between mean total n achievement scores. Four subcategories had differences approaching significance in the predicted direction--Unrelated Imagery, Achievement Imagery, Instrumental Activity, and Nurturant Press. All others were in the predicted direction except for Personal Obstacle and Environmental Obstacle. McClelland (12) has

noted the lack of consistency for these latter two subcategories in other studies, and has suggested that perhaps they should be dropped from the scoring system.

C. Sub-Indices of Career and Marriage Orientation

This section will take up a series of comparisons dealing with the separate questions relevant to career and marriage orientation. It is in this section that we shall find even weightier evidence for the conclusion that n achievement scores and career orientation are related. Tables presenting some of the following data in more detail can be found in Appendix E.

Q 13: ("Have you chosen a major yet?")

The 71 Ss answering YES to this question had a mean need score of 8.27, the 26 NO's had a mean of 8.19, an insignificant difference of 0.08 in the predicted direction. Of those who answered YES, 25 choosing home economics without specifying a particular branch of the field had the highest mean, 9.12; 11 choosing home economics teaching, 8.45; 9 choosing child development, 8.67; 7 choosing foods and nutrition or dietetics, 7.71; and 19 in miscellaneous majors, 7.06. No differences were significant.

Q 14: ("Do you plan to prepare for a specific vocation while at the University of Massachusetts?")

The figures here:

	<u>N</u>	<u>Mean</u>	<u>SD</u>
YES.....	79	8.30	4.67
NO.....	14	7.78	4.47

The difference between means yielded a t of .382, $P > .35$, in the predicted direction.

Q 15: (Reasons for coming to college).

In treating these data, it seemed most meaningful to divide Ss into two categories: (A) those Ss checking "obtain vocational training" as a first or second choice, without checking "prepare myself for a happy marriage and family life" as a first or second choice, and (B) those Ss checking the latter as a first or second choice. The figures:

	<u>N</u>	<u>Mean</u>	<u>SD</u>
(A) "Obtain vocational training"	52	8.19	4.17
(B) "Prepare myself for marriage"	22	7.69	5.20

The difference of 0.50 between means yielded a t of .435, $P < .35$, again in the predicted direction.

Q 16: ("After college, which of the following would you most prefer to do for the rest of your life?")

Ss were categorized thus:

- (A) Ss checking "marriage only" as a first or second choice without checking "career only" or "career for 3 or 4 years" as a first or second choice.
- (B) Ss checking "career and marriage (at graduation time or shortly thereafter) with career stopped when children arrive" as first or second choice without checking "marriage only".
- (C) Ss checking "career only" or "career for 3 or 4 years" as first or second choice without checking "marriage only".

In this fashion three independent groups of subjects were formed, including all except 6 Ss who fell into more than one category.

Table 2

Means and Standard Deviations
for Three Groups of Subjects
Categorized on the Basis of
Responses to Question 16.

	Category		
	(A) "Marriage only"	(B) "Career and marriage"	(C) "Career for 3 or more years"
N	24	47	20
Mean.....	7.46	9.15	8.45
SD	4.58	5.00	4.68

Differences between means:

	<u>Diff.</u>	<u>σdiff.</u>	<u>t</u>	<u>P</u>
(B) - (A)	1.69	1.24	1.37	<.10
(C) - (A)	0.99	1.43	0.69	<.25

Both of the above comparisons support our hypothesis, and the data for this question suggest additional points of significance. Of special note is the difference (B) - (C), which a two-tailed t test shows to be .60. If there is anything "real" to this difference, it suggests that while careergirls have higher scores than marriage girls, girls who want to achieve the goals of graduation, then immediate marriage with successful career as well, may have stronger achievement strivings than career girls who place

less emphasis on early marriage. This is understandable, even though marriage is not scored as an achievement goal in the McClelland system. Although it is not the aim of this study to demonstrate the point, we might expect the highest n achievement scores to be found in girls who wish to graduate from college, marry soon afterward, and successfully combine career and marriage, this being a fusion of the intellectual and career-related goals of males and the typical social achievement goals of females.

Q 17: ("Are you planning or considering going to graduate school?")

In this question, the (A) group consisted of 20 Ss responding YES; in the (B) group 71 answered NO; and 6 in the (C) group checked, "no, but would like to if I could have my own way".

	<u>N</u>	<u>Mean</u>	<u>SD</u>
(A) YES	20	8.90	4.89
(B) NO	71	7.96	4.46
(C) NO, but like to....	6	9.33	3.98

Again, all differences were in the predicted direction. The difference between means of the YES and NO groups yielded a P value of $<.25$. When the (A) and (C) groups are combined, P becomes $<.15$. 14 of the 26 girls in the (A/C) category were classified as "career girls" by the composite index, whereas 7 would be the expected number if there were no re-

relationship between career orientation and plans or desires for graduate school.

Q 18: ("If it were up to you, at what age would you like to get married?")

Ss were categorized into three groups: (A) those desiring to marry at ages 18-20; (B) those desiring to marry at ages 21-23; and (C) those desiring to marry at age 24 or over. The figures here:

	<u>N</u>	<u>Mean</u>	<u>SD</u>
(A) 18-20	16	7.42	4.65
(B) 21-23	56	8.27	4.63
(C) 24 or over	22	8.82	4.89

The difference of 1.38 between the means of (A) and (C) yielded a t of .852 and a P value of $< .20$ in the predicted direction.

Q 19: ("Looking at things realistically, how old do you think you will be when you do get married?")

Here the categorization was: (A) Ss expecting ages 20-21; (B) Ss expecting ages 22-24; (C) Ss expecting age 25 or over.

	<u>N</u>	<u>Mean</u>	<u>SD</u>
(A) 20-21	17	7.00	5.13
(B) 22-24	53	9.15	4.82
(C) 25 or over	16	6.75	4.01

The difference of 2.15 between the means of (A) and (B) yielded a P of $< .065$ in the predicted direction. The

difference between "22-24" and "25 or over", however, was nearly significant in the opposite direction ($P > .10$ in a two-tailed test).

The assumption was that the higher the age of marriage-expectancy, the greater the likelihood of strong career orientation. The hypothesis was, therefore, that Ss expecting to marry at 25 or over would have higher scores than those expecting marriage at ages 22-24, who in turn would be higher than those in the 20-21 group. Question 18 (desired age of marriage) fit this pattern, though the differences were not significant. Question 19 (expected age of marriage) did not fit the pattern. One might venture the interpretation that the drop in scores for the higher ages here possibly indicates that the n achievement scores measure true achievement motivation, rather than protective motives underlying career orientation, forced upon a girl because her expectations of marrying early are low. These speculations, however, need to be tested in a more detailed, precisely defined study, and represent only incidental ad hoc hypothesizing here.

Q 18-19: (Discrepancies between "want to marry" and "expect to marry").

Another suggestion along this line comes from the

examination of discrepancies between responses to Questions 18 and 19. Three categories were formed thus: (A) positive discrepancy, those Ss who indicated that they expected to marry at an age later than that at which they wanted to marry; (B) no discrepancy, Ss who indicated that they both wanted and expected to marry at the same age; (C) negative discrepancy, Ss who indicated that they expected to marry earlier than they wanted to marry.

	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>t</u>	<u>P</u>
(A) "Expect" > "Want"	41	8.93	4.51	1.84	<.09
(B) No discrepancy	39	7.05	4.54	2.28	<.03
(C) "Want" > "Expect"	6	12.33	4.08		

A two-tailed t test shows the difference (A)-(B) to yield a P of <.09, a finding which is in accord with the original hypothesis apparently contradicted by Question 19 alone. Although the N in the (C) group is only 6, a two-tailed test of the difference (C)-(B) shows a P value of <.03. It is interesting to note that all of the 6 Ss in the (C) group were classified as "career girls" by the composite index, and five of the six said that they were not "going steady", "pinned", or "engaged". One might reason that the fact that they are all career girls accounts for the negative "expect-minus-want" discrepancy, and that their motives concerning careers are truly ^{achievement} motives, hence their high scores. Thus the results here

support both the original hypothesis and the ad hoc hypothesis advanced in dealing with Question 19 alone. Certainly a direction for future research is indicated here.

Q 1-18-19: (Marriage before graduation).

Taking responses to Questions 1 (age), 18 (desired age of marriage), and 19 (expected age of marriage), a group of Ss who indicated that they expected or wanted to marry before graduation was formed. The mean need score for these 31 Ss was 7.55, for the 66 others it was 8.56; the SD's were identical for both groups--4.55. The difference of 1.01 yielded a t of 1.01, for a P value of $<.16$ in the predicted direction.

Q 22: ("What three things or activities in your life do you expect to give you the most satisfaction?")

Since 93 of the 97 Ss checked "family relationships" for a first or second choice, it was decided to categorize as follows: (A) Ss who checked "family relationships" as a first choice (N = 78, mean = 8.15, SD = 3.38); and (B) Ss who did not check this as a first choice (N = 18, mean = 8.66, SD = 4.52). The difference between means was 0.51, $t = .425$, $P <.35$, again in the predicted direction.

Thus, though most of these sub-indices did not yield significant differences, all except one of the comparisons

in this section were in the predicted direction. The exception, as was noted, might be explained by a hypothesis that should be easily testable, and this exception does not seem to represent a contradiction of our general findings.

D. The Composite Index of Social Satisfaction

In a manner quite similar to that used for separating subjects with strong career orientation from "marriage girls", a composite index was employed for distinguishing girls who were more satisfied with their social life in college from those who were less satisfied. This composite index shall be referred to as the SSI (Social Satisfaction Index).

The items used in this scale were Questions 23, 24, 25, 26, 28, 29, 30, 31, and 33, with additional sources of information concerning desire for sorority membership noted in Section II. It should be pointed out that each of these questions (with the exception of Q 24) correlated well with the total SSI scores for the Ss, and were of greater consistency than expected by the author. This internal consistency of the SSI scale provides an argument for its validity in determining social satisfaction.

In the weighting of the questions, Q 24 was first

examined for each S. If the S indicated that she had a "steady" boy friend or fiance who was not a student at the University of Massachusetts, a check was recorded and that S was reserved for special consideration, since several weighted questions dealt with dating on campus. Thus the data given in Questions 23, 24, and 25 do not include this group of 26 Ss which shall be called "locals", referring to the fact that most of their dates are with boys in their home towns on weekends or during vacations.

Q 23, on frequency of dates, was weighted thus:

✓ 3 for "twice a week or more", ✓ 2 for "once a week",
 ✓ 1 for "twice a month or less", 0 for "don't date".

Q 28, on relations with other girls, was weighted ✓ 2 for "very well" and ✓ 1 for "moderately well". The responses to Q 31 (satisfaction with social life) were put on a five-point weighting scale, ranging from "extremely unsatisfied" (✓ 1) to "extremely satisfied" (✓ 5). On the sorority-rejection issue, an S was given ✓ 1 if she was a sorority member, - 1 if she was a "reject", and 0 if she was "ineligible" or "indifferent".

All the other questions--25, 26, 29, and 30--were weighted ✓ 3, ✓ 2, and ✓ 1, the highest weight given the response representing social satisfaction and the lowest weight given the response representing social dis-

satisfaction.

The SSI score for each S was the algebraic sum of the weights for her responses to these eight questions. Thus an SSI score could be as low as $\neq 5$ or as high as $\neq 23$. The actual range in this study was from $\neq 8$ to $\neq 23$. The distribution of SSI scores was negatively skewed, i.e., the scores tended to crowd the upper end of the scale.

33 Ss with SSI scores of 18 or higher were placed in the category that shall be labeled "satisfied"; 33 other Ss with SSI scores of 17 or lower comprised the "unsatisfied" group. Table 3 shows the comparisons of total g achievement scores for the two groups. The P value for the difference between the means does not even approach the significance level. Neither are there any significant differences between frequencies of separate thematic subcategories for the two groups. When the categories I \neq and G \neq are combined, however, the "satisfieds" outweigh the "unsatisfieds", 38 to 21, for a difference that is significant at the .05 level. One possible interpretation of this finding is that the "unsatisfied" girls were more reluctant to allow themselves happy endings in their stories, since I \neq represents successful instrumental activity and G \neq positive affect over

Table 3

Frequencies of Scored Thematic Subcategories and Mean n Achievement Scores for "Satisfied" and "Unsatisfied" Subjects as Determined by the Composite Index. All P Values Are Based on Two-Tailed Tests of Significance.

<u>Subcategory</u>	<u>SATISFIED</u> (N=33)	<u>UNSATISFIED</u> (N=33)	<u>P Value</u>
UI	43	51	<.50
TI	39	32	<.50
AI	50	49	...
I/	24	16	<.30
I?	5	5	...
I-	2	4	...
N	28	29	...
Ga/	5	8	...
Ga-	3	4	...
G/	14	5	<.08
G-	2	3	...
Nup	10	7	...
Bp	9	7	...
Bw	16	13	...
Ach Th	32	25	<.50
I/ and G/	38	21	<.05
<u>Total n Achievement Scores:</u>			
Mean	8.36	7.82	
S.D.	6.08	3.62	
Diff., means	0.54		
σ diff.	1.23		
t	0.44		
P	<.60		

attainment of an achievement goal. Perhaps the disillusionment of social dissatisfaction has curtailed the optimism of these Ss.

Several other methods of categorizing the SSI scores were tried and no differences between means were found. A three-way breakdown into "satisfied" (N = 18), "middle" (N = 27), and "unsatisfied" (N = 22) yielded means of 8.72, 8.04, and 7.64, respectively, the difference of 1.08 between the first and third being insignificant at $P > .40$. A 4×2 chi-square contingency table, taking frequencies of n achievement scores above and below the mean for four SSI categories showed a random distribution.

It should be recalled that the Ss we are here dealing with do not include the 26 who were "going steady" off campus ("locals"), and 5 for whom questionnaire data were insufficient for classification. The mean n achievement score for the 26 "locals" was insignificantly below that for the "satisfied" and "unsatisfied" groups in Table 3. When these 26 are themselves divided 13-13 into "satisfied" and "unsatisfied" on the basis of a special composite SSI scale, there is a difference of 3.00 between the respective means of 6.15 and 9.15, which is in the opposite direction from that in Table 3. This difference has a t of 1.55, $P > .15$.

The difference of 2.46 between the SD's of the 33 "satisfied" and 33 "unsatisfied" Ss in Table 3 has a z value of 2.83 and is significant at beyond the .01 level. A glance at the raw data (Appendix E) shows far greater variability for the "satisfied" Ss; their scores tended to be either very high or very low, ranging from 1 to 23, whereas scores for the "unsatisfieds" tended to group about the mean. The three-way breakdown mentioned above yielded a similar significant difference between SD's.

E. Sorority Acceptance-Rejection

The information on sorority membership is one of the sub-indices of social satisfaction in the frame of this study, but is here presented separately since it has important parallels to the fraternity study of Shipley and Veroff (17) and some of Field's results (6).

Ss were first categorized into "members" (N = 27) and "non-members" (N = 70). Then non-members were classified into "rejected", those who were eligible and indicated their desire to join before rushing on the pledge ballot and questionnaire; "indifferent", those who were eligible but did not indicate a desire to join; and "ineligible", those who did not achieve grade averages of 70 or better before rushing.

The data are presented in Table 4. Only ^{one} difference

Table 4

Means, Standard Deviations, and Comparisons of Total n Achievement Scores for Subjects in the Various Categories Relating to the Sorority-Rejection Issue.

	<u>MEMBERS</u>	<u>REJECTED</u>	<u>INDIFFERENT</u>	<u>INELIGIBLE</u>
N	27	19	35	15
Mean	8.59	9.58	8.11	6.20
S.D.	5.33	4.50	4.39	3.83
Diff., means	0.99		1.47	
σ diff.	1.53		1.27	
t (2-tail)	0.65		1.16	
P	>.50		<.30	

between mean n achievement scores (rejected-ineligible) is significant ($P < .05$), but most of them are in what might be considered as expected directions. Since in Field's study, female Ss who experienced induced social frustration had significantly higher n achievement scores than did those in a "relaxed" group, (paralleling the increase in males' scores as a result of induced intellectual frustration), we might expect females who have experienced the social frustration of sorority-rejection to have higher scores than those who were indifferent toward sorority membership or were ineligible.

Incidentally, the "ineligibles" had a mean score almost significantly lower ($P < .10$) than the mean for all

other groups combined. The data from the summer questionnaire had too many "undecideds" to yield an N of "rejects" that was worthy of consideration. Furthermore, only about half of the 20 non-members who said in the summer that they wanted to join sororities appeared on the list of girls in the "rejected" group based on the pledge ballot and winter questionnaire. These 20 had a mean of 7.15, but there were no significant differences with the summer questionnaire as a source of data.

F. Sub-Indices of Social Satisfaction

Since few differences of any significance were revealed in analyzing the separate questions relating to social satisfaction, the treatment of this section will be brief.

Q 23: (Frequency of dates).

As one can see in Table 5, there seems to be a more or less linear relationship between n achievement scores and frequency of dates. These data do not include the 26 Ss "going steady off campus".

It will be noted also that we again have significant differences at the .05 level between SD's: between those of the (A) and (C) groups, and between those of

Table 5

Means and Standard Deviations of \bar{n} Achievement Scores for Groups Categorized on the Basis of Responses to Question 23 (Frequency of dates).

	(A) <u>Twice a month or less</u>	(B) <u>Once a week</u>	(C) <u>Twice a week or more</u>
N	22	19	28
Mean	6.82	8.21	10.04
S.D.	3.48	3.34	5.50

Differences between means:

	<u>(B)-(A)</u>	<u>(C)-(A)</u>	<u>(C)-(B)</u>
Diff.	1.39	3.22	1.83
σ diff.	1.09	1.36	1.44
t	1.27	2.36	1.27
P	>.20	<.03	>.20

(B) and (C). Thus there is greater scatter in the scores of the more frequently dating girls.

Q 25: (Attitudes toward dates).

The 10 Ss who responded to the effect that not many, very few, or none of their dates were enjoyable, and who were not "locals", had a mean need score of 7.60 and SD of 3.04, both insignificantly lower than the rest of the 97 subjects'. This is in the same direction, toward lower \bar{n} achievement scores with less variability for the social-

ly "unsatisfied", as were the data presented in Tables 3 and 5.

Q 26: ("Have you had as many dates this year on campus as you would have liked?")

Again, excluding the "locals",

	<u>N</u>	<u>Mean</u>	<u>SD</u>
YES.....	46	8.69	5.01
NO.....	22	7.23	4.50

The difference between means was insignificant ($P > .20$), as was the difference between SD's ($p > .60$).

Q 28: ("In general, how well would you say that you get along with other girls?")

Taking all Ss except two who left the item blank,

	<u>N</u>	<u>Mean</u>	<u>SD</u>
"Very well"	66	8.04	4.75
"Moderately well"....	29	8.59	3.92

No differences between means or SD's approached significance. The direction of the difference between the means was inconsistent with the preceding tendency; the lower SD for the "moderately well" group was consistent with the trend, however.

Q 29: (Popularity, college vs. high school).

Again there were no significant differences, but the mean for the "more popular now" group (8.50, N=22) was higher than for the "about the same" group (8.09, N=66) and the "less popular now" group (8.40, N=6).

Q 30: (Satisfaction, pre-college expectation).

The figures here:

	<u>N</u>	<u>Mean</u>	<u>SD</u>
(A) "More than I expected"	22	7.68	4.42
(B) "About what I expected"	50	8.90	4.11
(C) "Less than I expected"	20	7.30	4.26

No differences between means were significant, difference (B)-(A) having $P < .30$ and difference (B)-(C) having $P < .20$.

Q 31: ("In general, how satisfied with your social life in college as a whole do you feel?")

	<u>N</u>	<u>Mean</u>	<u>SD</u>
(A) "Extremely satisfied" ..	24	7.75	4.07
(B) "More satisfied than unsatisfied"	29	8.38	5.33
(C) "Neither Satisfied nor unsatisfied"	28	9.04	5.04
(D) "More unsatisfied than satisfied"	14	7.29	2.65

No differences approached significance at closer than the .40 level, except for difference between SD's of (B) and (D), which was significant at the .02 level.

The data for this question include all Ss except three who did not answer the question. When the "locals" are removed, the direction of differences between means and SD's becomes essentially the same as that seen in Table 3 (the composite index).

G. Summary of Results

1. "Career girls", as defined by the composite index, had significantly higher n achievement scores than did "marriage" girls, as defined by the composite index and responses to Question 16.

2. "Career girls" expressed more achievement imagery, need, instrumental activity, positive goal anticipation, and aid in attaining achievement goals in their stories than did "marriage girls".

3. All except one of the comparisons in the individual questions related to career orientation yielded differences which were in the predicted direction; the one exception was not necessarily a contradiction of the general findings.

4. None of the comparisons in the individual questions had significant differences except the following:

- a. Girls who said that they expected to marry at ages 22-24 had higher need scores than those answering "20-21" in this question.
- b. Six subjects (all of them "career girls") who said that their expected age of marriage was earlier than the age at which they desired to marry had significantly higher n achievement scores than those subjects with no "expect-minus-want" discrepancy concerning age of marriage.

5. There was no significant difference between mean need scores of "satisfied" and "unsatisfied" subjects, as these categories were defined by the composite index of social satisfaction.

6. "Satisfied" subjects expressed more successful instrumental activity and positive affect over goal attainment than did "unsatisfied" subjects in their stories.

7. Subjects who said that they dated twice a week or more had significantly higher need scores than subjects who said that they dated twice or month or less.

8. None of the other individual questions, including the data for sorority acceptance-rejection, yielded differences between means that were significant. There was a tendency, however, toward higher scores for socially satisfied subjects, as in the composite index data.

9. "Satisfied" subjects had significantly greater variability in need scores than did "unsatisfied" subjects in the composite index data. This relationship held in all of the sub-indices of social satisfaction, though not significant at the .05 level in some cases.

IV. CONCLUSIONS

The fruitfulness of the McClelland procedure for identifying and measuring human motivational states is once again indicated by the present investigation. However, merely presenting further evidence of the method's validity has not been the major aim here; we are more interested in the applicability of the method to female subjects. Specifically the aims have been to test the hypothesis of a positive relation between n achievement scores and career orientation, and to investigate any possible relationships between n achievement scores and social satisfaction.

A. Career Orientation

Summarizing our results relating to the career orientation hypothesis, we find 1) significantly higher need scores for "career" girls, as compared to "marriage" girls, using the composite index for classification of subjects; and 2) almost perfect consistency in direction of differences between groups categorized on the basis of their responses to a series of questions presumably related to career orientation. In view of this strong evidence, it is here concluded that a positive relationship exists between projective expression of the achievement motive and

career orientation in home economics freshman females.

There are several reservations which must be kept in mind, however. First, our subjects were home economics freshmen at the University of Massachusetts. We may reasonably expect the relationship to hold for home economics students at other colleges, but the present study tells us nothing about subjects in other majors, with goals in other fields. It may be that, for girls planning secretarial work, for example, there is no relationship between projective behavior and occupational aims, although we have no particular reason to believe this. The point is that additional research, using non-home economics females, is needed to confirm or deny the generality of this relationship.

We should also consider the fact that the subjects in the present study do not represent the extreme ends of the career-marriage continuum. Our N of 33 "career girls" included only two or perhaps three girls who might be thought of as "purely career-oriented", whose ambitions concerning careers completely overshadow thoughts of marriage to the point of no expectation of marriage. Similarly, there were probably few subjects in this study at the other extreme, who wanted marriage immediately with no career and no college education at all.

On the surface we would expect that, if two groups representing these extremes could be found, there would be an even wider difference in n achievement scores. This might not be the case, as some of the data suggests that perhaps the girls we should expect to have the highest need scores are those who wish to combine the goals of career and marriage, fusing the intellectual and career-related goals of males and the typical social achievement goals of females, since both types of goal-orientation appear to be reflected positively in the n achievement measure. In other words, perhaps the girl who has a "dream" of graduating from college, marrying soon afterward, and successfully combining career and marriage is more achievement-motivated (in the broadest sense of the term) than the girl who has the more narrow goal of success in career only. Whether or not this is true has not been the aim of this investigation to demonstrate, however; we have merely been concerned with whether the most career-oriented girls in our sample projected more achievement imagery in the TAT than did the most marriage-oriented girls, and our results show this to be the case.

Another point to bear in mind concerning the present study is that the testing conditions were non-experimental, non-arousal, or what has been called "neutral". Another

"next step" is this line of inquiry would be to arouse achievement motivation in an experimental group of career and marriage girls, using failure or ego-involvement on a supposed "intelligence" test as a means of inducing motivation, and following this with administration of the TAT. Our prediction would be that the career girls would respond to the arousal by scoring higher in n achievement than would the marriage girls. If this were the result, it would even more conclusively demonstrate the relationship between n achievement scores and career orientation.

In this study we have not bothered to consider the possible motives underlying females' orientation toward careers, although this is an important point that should be investigated. There are many factors which may account for the particular career ambitions that a girl in our culture has. These factors may be such things as the need for recognition, desire for fame, the wish to excel one's self or increase one's self-regard by demonstrating talent. Or there may be such factors as pressure from parents, fear of never marrying, or the wish to be prepared to support oneself in case of the death or absence of one's husband. Undoubtedly there are some girls who are career-oriented for protective purposes rather than for purposes of increasing self-regard. Such factors as these may partially account

for the fact that a girl can have elaborate plans for a career and still have a low n achievement score. It would be interesting to compare the scores of girls who were known to have predominantly "self-regard" motives with those known to have protective motives underlying their plans for careers. If the n achievement score is truly a measure of motivation, it would perhaps follow that the former group should have higher scores, because of the self-esteem factor that apparently makes up a large part of achievement motivation. A suggestion along this line was seen in examining Questions 18 and 19 in Section III. Girls who said that they wanted to marry at age 24 or over had scores higher than those answering "18-20" and "21-23", but those who indicated that they expected to marry at age 25 or over had lower scores than those answering "23-24". The examination of the discrepancies between desired and expected ages of marriage produced a significant difference between those "expecting" before "wanting" marriage and those with no discrepancy. Here, at least, is some evidence that may bear on the question of motives underlying career orientation. Should this lead be followed up, it might be possible to demonstrate even more clearly the ability of the TAT to "get under the surface".

Thus, with the completion of the present investigation along with those of Wilcox (19) and Field (6), we now have

three studies indicating that the n achievement measure is applicable to female subjects.

B. Social Satisfaction

In the data concerned with social satisfaction we found no significant differences between mean n achievement scores of the composite index categories, the sorority acceptance-rejection groups, or of subjects classified on the basis of responses to the individual questions, with one exception--it was found that the most frequently dating girls had significantly higher need scores than the least frequently dating girls. In spite of the general absence of significant differences between means, however, there was a definite pattern here as in the career orientation data. The composite index and all except two of the individual questions yielded differences in the direction of higher n achievement scores for socially satisfied girls. Most of the P values ranged from .20 to .80, but, taken together, they amount to some degree of importance, especially when we consider that Field's female subjects who were voted by their classmates as "accepted" had higher scores than those voted as "rejected" in a "relaxed" testing.

The most outstanding finding in this study of social satisfaction was the significantly greater variability in scores of socially satisfied girls. The composite index and

Questions 23 and 27 yielded such differences, and all of the other questions showed insignificant differences in the same direction. Thus the more satisfied girls had scores that tended to be either very high or very low, while the unsatisfied girls had scores hovering about the mean.

The present study of social satisfaction and n achievement scores does not seem to contradict any previous findings, nor any theoretical assumptions made by McClelland in his two-factor theory of motivation (12). In comparing these results with Field's we should bear in mind that his study was not concerned with general social satisfaction but rather acceptance by one's classmates. It is possible for a "popular" girl to be socially dissatisfied or an "unpopular" one to be satisfied. Perhaps the closest parallel in this study is the data for Question 23 on frequency of dates, indicating that acceptance by members of the opposite sex in female subjects.

At any rate, the conclusion seems justified, on the basis of these data and Field's together, that the n achievement score is related to the striving for social goals in female college students. This is understandable when we consider the broad definition of n achievement (competition with a standard of excellence) on which the scoring system is based, and how, according to McClelland at least, the achievement motive is acquired. McClelland's

theory postulates that the achievement motive originates in affective changes accompanying learning situations which involve evaluated performance. There is a great deal of variation as to the type of performance that is evaluated in terms of personal and cultural standards of excellence. Evidence from Mead (7) and several sociologists and social psychologists indicates that social acceptability is one area of "performance" that may be of great concern for females in our culture, just as success in business or career may be for males (and "career girls"). Therefore one might expect to find a relation between social acceptance and n achievement scores. And, McClelland says (12), we should expect girls who are successful in competition with social standards of excellence to have relatively high scores, since performance that comes close to expectations yields positive affect, which intensifies a motive such as the need for achievement.

Thus, with the completion of the present study along with those of Wilcox (19) and Field (6), we now have several bits of evidence to indicate that the n achievement measure is applicable to female subjects. It is beginning to look as though McClelland's scoring system is sufficiently general to measure differences in achievement motivation whether the goals involved relate to success

in career or social success and whether the subjects are males or females. Perhaps we should not expect the imaginative behavior of these groups to be identical in the first place, because, as several of the McClelland workers have suggested, we are dealing with acquired drives, roles, and goals, and there are apparent differences in the cultural definitions of male and female roles.

REFERENCES

1. Atkinson, J. W. Recall of successes and failures related to differences in need for achievement. Amer. Psychologist, 1951, 6, 315 (abstract).
2. Atkinson, J. W. Studies in projective measurement of achievement motivation. Unpublished doctoral thesis, Univ. of Michigan, 1950.
3. Atkinson, J. W., and McClelland, D. C. The projective expression of needs, II. The effect of different intensities of the hunger drive on thematic apperception. J. exp. Psychol., 1948, 38, 643-658.
4. Clark, R. A. The projective measurement of experimentally induced levels of sexual motivation. J. exp. Psychol., 1952, 44, 391-399.
5. Clark, R. A., and McClelland, D. C. A factor analytic integration of imaginative performance and case study measures of the need for achievement. Unpublished manuscript, Wesleyan University, 1950.
6. Field, W. F. The effects on thematic apperception of certain experimentally aroused needs. Unpublished doctoral thesis, Univ. of Maryland, 1951.
7. Mead, Margaret. Male and female: a study of the sexes in a changing world. William Morrow and Co., New York, 1949.
8. Lowell, E. L. The effect of need for achievement on learning and speed of performance. J. Psychol., 1952, 33, 31-40.
9. McClelland, D. C. Personality. William Sloane Associates, New York, 1951.
10. McClelland, D. C., and Atkinson, J. W. The projective expression of needs, I. The effect of different intensities of the hunger drive on perception. J. Psychol., 1948, 25, 205-222.
11. McClelland, D. C., Atkinson, J. W., and Clark, R. A. The projective expression of needs, III. The effect of ego-involvement, success and failure on perception. J. Psychol., 1949, 39 27, 311-330.

12. McClelland, D. C., Atkinson, J. W., Clark, R. A., and Lowell, E. L. The achievement motive. Manuscript prepared for publication, 1953.
13. McClelland, D. C., Clark, R. A., Roby, T. B., and Atkinson, J. W. The projective expression of needs, IV. The effect of the need for achievement on thematic apperception. J. exp. Psychol., 1949, 39, 242-255.
14. McClelland, D. C., and Liberman, A. M. The effect of need for achievement on recognition of need-related words. J. Pers., 1949, 18, 236-251.
15. Miller, N. E., and Dollard, J. Social Learning and Imitation. McGraw-Hill, New York, 1941.
16. Murray, H. A. Explorations in personality. Oxford Univ. Press, New York, 1938.
17. Shipley, T. E., Jr., and Veroff, J. A projective measure of the need for affiliation. J. exp. Psychol., 1952, 43, 349-356.
18. Veroff, J. A projective measure of the achievement motivation of adolescent males and females. Unpublished honor's thesis, Wesleyan University, 1950.
19. Veroff, J., Wilcox, Sue, and Atkinson, J. W. The achievement motive in high school and college age women. J. abn. soc. Psychol., 1953, 48, 108-119.
20. White, R. W. Interpretation of imaginative productions. Chap. 6, Vol. I in Personality and the behavior disorders. Edited by J. McV. Hunt, Ronald Press Company, New York, 1944.

APPENDIX A

INSTRUCTIONS FOR THE ADMINISTRATION OF THE
TAT AND QUESTIONNAIRE

ADMINISTRATION INSTRUCTIONS

While an assistant passes out the TAT test booklets and sealed envelopes containing the questionnaire, the administrator says:

"We are passing out a test booklet and an envelope to each one of you. Please do NOT open the test booklet OR the envelope until you are told to do so."

When the assistant has finished passing out the test booklets and envelope, the administrator says:

"Is there anyone who has not received the test booklet and the envelope that goes with it? If any of you has a test booklet that does not bear the same number on the front of it as the envelope, will you please raise your hand? All right. Now, will you all please turn to page one of the test booklet."

"This test is a test of creative imagination. A number of pictures will be projected on the screen before you. You will have 20 seconds to look at the picture and then five minutes to make up a story about it. Notice that there is one page for each picture (demonstrating). The same four questions are asked. They will guide you in your thinking and enable you to cover all the elements of a plot in the time allotted. Plan to spend about a 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."

"Obviously there are no right or wrong answers so feel free to make up any kind of a story that you choose. Try to make them vivid and dramatic, for this is a test of creative imagination. Do not merely describe the picture you see. Tell a story about it. Work as fast as you can in order to finish in time. Make them interesting. Are there any questions? If you need more space for any question, use the reverse side."

"Go ahead with the first picture."

The administrator turns off the lights, as the assistant exposes picture 1 (boy-surgeon, TAT 8BM) on the screen for 20 seconds. While turning the lights back on, the administrator says:

"All right, go ahead and write a story about this picture on page 1."

"You should be on question 2" (at the end of one minute).

"You should be on question 3" (at the end of two minutes).

"You should be on question 4" (at the end of three minutes).

"Finish up your story" (at the end of four minutes).

"Now turn to the next page and be ready for the next picture" (at the end of five minutes).

The same procedure is used for the remaining three pictures. Picture 2 is one showing a boy and girl lying on a beach, picture 3 is a farm scene (TAT 2), and picture 4 shows two men's heads (TAT 7 BM). After the fourth picture the administrator says:

"Now will you all please turn to the last page of the test booklet, which is the blank page, and write your name on this page (administrator demonstrates where). After you have done this, tear off this sheet with your name on it from the rest of the test booklet, and pass in this sheet only. Do not pass in the test booklet or the envelope, just the page with your name on it."

The assistant collects the name-sheets, while the administrator says:

"We are doing this in order to keep all the test records you have just completed absolutely secret and confidential. So none of you will have to worry about your personal identity or name being connected with any of the material you have just written or that which is about to follow."

"Now will you all open the envelope that was passed out with the test booklet. Inside this envelope you will find a questionnaire, and on the first page of this questionnaire, some instructions. Just to make sure that we all understand these instructions, let me read them along with you."

The administrator reads aloud the instructions on the cover page of the questionnaire (see Appendix C). When this is finished, he says:

"All right, go ahead now, and fill out the questionnaire."

After about fifteen minutes:

"When you finish the questionnaire, put both the questionnaire AND the test booklet inside the envelope, and please wait patiently while the others finish."

When all have finished, the administrator reminds them to put the questionnaire and test booklet inside the envelope. Then the subjects are told to seal the envelopes, and pass them in.

APPENDIX B

A REPRODUCTION OF THE TAT TEST BOOKLET

TEST BOOKLET

Directions

1. Please do not turn to page 1 until you are told to do so.
2. This information is absolutely confidential. Please do not write your name on this page or any of the following pages that has printing on it.
3. Listen carefully for further instructions from the administrator.

PAGE ONE

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?

PAGE TWO

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?

PAGE THREE

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?

PAGE FOUR

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?

APPENDIX C

A REPRODUCTION OF THE QUESTIONNAIRE

"CAREER VS. MARRIAGE QUESTIONNAIRE

This questionnaire is part of a program to find out whether the personal goals of girls in college tend more toward careers or toward marriage. We are also interested in certain information related to these areas.

Try to answer all questions as honestly and completely as possible.

There are a few points which you should bear in mind while filling out the questionnaire:

- (A) Your personal identity will not be revealed, and your answers will be kept confidential. Do not put your name on this questionnaire.
- (B) This questionnaire is not a "test". There is no "grade" or other mark, and the only "right" answers to the questions are those which best describe your attitudes, reasons, experiences, and background.
- (C) Read every question carefully before answering. Do not linger too long over any one question.
- (D) Try to answer as many questions as possible, but do not answer any question which you find embarrassing.

1. What is your age? _____ years, _____ months.

2. What class are you in?

- _____ Freshman
- _____ Sophomore
- _____ Junior
- _____ Senior

3. Have you attended any other college or university besides the University of Massachusetts?

- _____ No
- _____ Yes

4. What is your home town? _____ Town or city _____ State

5. (a) From what high school did you graduate? _____.

(b) How many students were in your graduating class? _____ students.

(c) What was your academic standing in your entire high school graduating class? (Check one).

- _____ Highest tenth
- _____ Next to highest tenth
- _____ Third to highest tenth
- _____ Fourth to highest tenth
- _____ Bottom half
- _____ Don't know

(d) When did you graduate? _____ Month _____ Year

6. In high school did you take the college ^{preparatory} curriculum?

- _____ Yes
- _____ No: Which curriculum did you take? _____.

7. What is your present marital or social dating status? (Check one).

- _____ Married
- _____ Engaged
- _____ "Pinned"
- _____ "Going steady"
- _____ Dating but not "going steady"
- _____ Other: Specify _____.

8. What is your principal source of financial support while at the University of Massachusetts?

- Parents
- Summer job
- Summer job plus part-time work during school year
- Part-time work during school year
- Loans
- Scholarship
- Other: Specify _____.

9. What is your father's occupation? _____.

10. (a) Is your mother presently engaged in any work in addition to being a housewife?

- No
- Yes: What? _____.

(b) Prior to the present, but while married, has your mother engaged in work in addition to being a housewife?

- No
- Yes: What? _____.

(c) Before her marriage, did your mother engage in work outside home?

- No
- Yes: What? _____.

11. (a) How many brothers and sisters do you have, including half, step, and adopted? _____ brothers, _____ sisters.

(b) How many have attended or are attending college? _____.

(c) Of those who are out of school, list occupations.

12. With respect to your emotional relations with your parents would you say that you feel:

- Much closer to mother than father
- Somewhat closer to mother than father
- About the same toward both
- Somewhat closer to father than mother
- Much closer to father than mother

13. Have you chosen a major yet?

 No
 Yes:

What one? _____.

14. Do you plan to prepare for a specific vocation or occupation while at the University of Massachusetts?

 No
 Yes:

What vocation? (Please answer in detail) _____

15. Listed below are several common reasons for coming to college. Place a number 1 beside that one which best expresses your most important reason for going to college. Place a number 2 beside the next most important, and a number 3 beside your third most important reason.

Number in order of importance to you.

I AM GOING TO COLLEGE IN ORDER TO:

 Obtain vocational training; develop skills and techniques directly applicable to my career.

 Develop my ability to get along with different kinds of people.

 Obtain a basic general education and appreciation of ideas.

 Develop my knowledge and interest in community and world problems.

 Meet some prospect for a husband.

 Help develop my moral capacities, ethical standards and values.

 Prepare myself for a happy marriage and family life.

 Carry out the demands or wishes of my parents.

 Keep up socially with my high school friends who have gone on to college.

 Because I had nothing else to do.

 Because I didn't want to work.

-4-

16. After college, which of the following would you most prefer to do for the rest of your life? Indicate TWO, by using:

- 1 for your first choice
2 for your second choice.

_____ Career only.

_____ Marriage only.

_____ Career briefly and then marriage, but career continued: If you check this item, does "briefly" mean to you:

- _____ 1 or 2 years?
 _____ 3 or 4 years?
 _____ 5 to 10 years?
 _____ Longer?

_____ Career briefly and then marriage, but career discontinued: If you check this item, does "briefly" mean to you:

- _____ 1 or 2 years?
 _____ 3 or 4 years?
 _____ 5 to 10 years?
 _____ Longer?

_____ Career and marriage. Career stopped when children arrive, but resumed when children are in school.

_____ Career and marriage. Career stopped when children arrive, and never resumed after that.

_____ Other: Specify _____.

17. Are you planning or considering going to graduate school?

_____ Yes: In what field? _____.
 _____ No: Would you like to if you could have your own way?

_____ Yes
 _____ no

18. If it were up to you, at what age would you like to get married?

_____ Don't want to marry.
 At _____ years of age.

19. Looking at things realistically, how old do you think you will be when you do get married?

_____ Don't expect to marry.
 At _____ years of age.

-5-

20. Do you prefer a husband who:

- is more educated than you
 has about the same amount of education as you
 is less educated than you
 makes no difference

21. Which of the following statements concerning women working do you come closest to agreeing with?

- In general, I don't approve of women having careers.
 I approve of a woman having a career if she wants one, providing she is not married.
 I approve of a married woman having a career if she wants one, providing she has no children.
 I approve of a married woman having a career if she wants one, providing her children are older than _____ years.
 I approve of a married woman having a career if she wants one, regardless of the age of her children.

22. What three things or activities in your life do you expect to give you the most satisfaction?

Please write 1 in the space beside the most important; a 2 in the space beside the next most important; and a 3 in the space preceding the third most important.

Rank three:

- Your career or occupation.
 Family relationships.
 Leisure-time recreational activities.
 Religious beliefs or activities.
 Participation as a citizen in the affairs of your community.
 Participation in activities directed toward national or international betterment.

23. How often, on the average, did you date while at the University of Massachusetts this year? (Count only pre-arranged meetings with boys on campus during the evenings.)

- Not at all
 Less than once a month
 About once a month
 About twice a month
 About once a week
 About twice a week
 About 3 or 4 times a week
 About 5 or 6 times a week

-6-

24. Do you have a "steady" boy friend or fiance who is not a student at the University of Massachusetts?

No
 Yes:

How often do you manage to see each other? _____

25. Which of the following statements best expresses your feeling about the kinds of dates you have had this year at the University of Massachusetts?

I don't date on campus.
 Most of the dates I have are enjoyable.
 Some, not many, are enjoyable.
 Very few, or none, are enjoyable.

26. Have you had as many dates on campus this year as you would have liked?

Yes
 No, but it doesn't matter much to me.
 No, and I would like to date more often.

27. How important a part of your college life do you think dating is?

Very important
 Moderately important
 Not important

28. In general, how well would you say that you get along with other girls on campus?

Very well
 Moderately well
 Have some difficulty
 Don't get along well at all

29. Do you feel that you are more popular or less popular in college than than you were in high school?

More popular now
 About the same
 Less popular than in high school

30. Is your social life at college more satisfying or less satisfying than you expected before September?

More satisfying than I expected
 About what I expected
 Less satisfying than I expected

31. In general, how satisfied with your social life in college as a whole do you feel?

- Extremely satisfied
 More satisfied than unsatisfied
 Neither satisfied nor unsatisfied
 More unsatisfied than satisfied
 Extremely unsatisfied

32. During high school how active were you in social affairs (dates, dances, parties, etc.) both in and out of school?

- (a) Compared to other students in general. Check in column (a) below.
 (b) Compared to your own circle of friends or acquaintances. Use column (b) below.

(a)
Compared to others
in general, I was:

(b)
Compared to my own
circle, I was:

- | | | |
|-------|-------------------|-------|
| _____ | Very active | _____ |
| _____ | Moderately active | _____ |
| _____ | Slightly active | _____ |
| _____ | Not active at all | _____ |

33. Are you now a member (or pledge) of a sorority at the U. of Mass.?

Yes: Which one? _____
 No:

If you answered "no",

(a) Do you now desire to join a sorority?

Yes
 No

(b) Did you desire to join a sorority before entering college?

Yes
 No

(c) Have you at any time during the past five months wanted to join a sorority?

No
 Yes: If you answered "Yes", was this before or after rushing?

Before
 After

34. Do you approve or disapprove of the sorority system as it exists at the University of Massachusetts now?

Approve
 Disapprove

APPENDIX D

THE METHOD USED TO GUARANTEE CONFIDENTIALITY OF
SUBJECTS' RESPONSES TO THE TAT
AND QUESTIONNAIRE

METHOD USED TO GUARANTEE CONFIDENTIALITY

Code numbers were printed on the cover page of the test booklet, on the back of each page of the test booklet, on two pages of the questionnaire, and on the envelope. A particular code number was designated for each subject, and this same number appeared on the test booklet, questionnaire, and envelope for each subject. On the fifth page of the test booklet, the subjects were asked to write their names, detach the name-sheet, and pass it in, keeping the rest of materials until the end of the administration of all materials. After the name-sheets were collected, the name of each subject with her corresponding code number was entered on a single piece of paper by the thesis advisor, Dr. Field, and the individual name-sheets were destroyed. The "master" code sheet was carefully kept in the private files of Dr. Field, and only he had access to this information. Even the author was unable to connect names with code numbers. (This was not necessary for the purposes of the thesis study.)

It was felt by the author and his advisor that this method of insuring confidentiality was sufficient to allow the desired responses of the subjects to come forth in the research project, and also sufficient to make the subjects feel confident that their responses would not be public in any way.

APPENDIX E

SUPPLEMENTAL STATISTICS AND TABLES

Table I

n Achievement Scores and Composite Index Classifications
for the 97 Subjects

(Key: C = Career, M = Marriage, S = Satisfied, U = Un-
satisfied, L = Local)

<u>Subj.</u>	<u>Class.</u>		<u>Score</u>	<u>Subj.</u>	<u>Class.</u>		<u>Score</u>
1	C	S	12	31	C	L	11
2	M	L	7	32		U	2
3		L	1	33	M	L	15
4	C	S	8	34	M	S	5
5		S	3	35	M	U	5
6		L	8	36		L	15
7	M	U	7	37		S	15
8	C	U	9	38		S	2
9	C	U	4	39		S	15
10	M	L	1	40		S	12
11	C	S	9	41		U	6
12	C	S	23	42	C	U	6
13	M	U	4	43		U	14
14	M	S	17	44		U	10
15	C	U	12	45	C	L	12
				46	M	L	6
17		S	20	47	M	L	10
18	C	U	13	48	C	U	13
19	C	L	3	49	M	S	1
20	M	L	3	50	M	L	2
21		S	5	51			3
22	M	S	7	52	M	L	14
23		S	11	53	C	S	5
25	C	L	15	54		S	9
				55		L	6
26	C	S	11	56		U	0
27		U	7	57	M	U	12
28	C	S	8	58	C	L	12
29	C	U	8	59		L	11
30		L	15	60	C	S	4

Table I (Cont'd)

<u>Subj.</u>	<u>Class.</u>	<u>Score</u>	<u>Subj.</u>	<u>Class.</u>	<u>Score</u>
61	S	12	81	U	5
62	U	8	82	C U	9
63		16	83	C L	8
64	U	6	84	C S	10
65	M S	2	85	C S	15
66	M L	5	86	S	6
67	M S	8	87	M U	8
68	S	7	88	U	5
69	C S	3	89	U	2
70	L	4	90	C U	10
71	M U	7	91	U	9
72	S	1	92	U	9
73	U	5	93	M U	9
74	C	7	94	M U	14
75		13	95	S	3
76	S	7	96	L	2
77	U	10	97	S	14
78	M U	13	98	U	3
79	M U	11	99	M L	7
80	M L	1			

Table II

Mean n Achievement Scores for the 97 Subjects,
Divided into Group I (Ss 1-50) and Group II
(Ss 51-99).

	<u>Group I</u>	<u>Group II</u>
N	48	49
Mean	8.92	7.57
SD	4.98	4.02
Diff.	1.35	
σ diff.	0.93	
CR	1.45	
P	<.14	

Table II

Frequencies of AI, TI, and UI scored for responses
to each of the four pictures, all subjects.

	<u>AI</u>	<u>TI</u>	<u>UI</u>
Picture 1 (boy-surgeon)	31	37	29
Picture 2 (boy-girl-beach)	5	15	77
Picture 3 (farm scene)	58	31	8
Picture 4 (two men's heads)	43	19	35

Table IV

n Achievement Scores for Subjects Classified
According to Their Responses to Question 13
("Have you chosen a major yet? If so, specify").

<u>Response</u>	<u>N</u>	<u>Mean</u>
NO.....	26	8.19
YES:.....	71	8.27
Home Econ. (unspecified)..	25	9.12
Home Econ. Teaching.....	11	8.45
Child Development.....	9	8.67
Foods and Nutrition.....	4	13.00
Dietetics.....	3	3.33
Extension.....	5	5.00
Merchandising.....	4	9.50
Arts and Textiles.....	2	10.50
Miscellaneous.....	8	5.75

Table V

n Achievement Scores of Subjects Classified According to Their Responses (First Choice) to Question 16 ("After college, which of the following would you most prefer to do for the rest of your life?").

<u>Response</u>	<u>N</u>	<u>Mean</u>
Career only.....	2	10.50
Marriage only.....	13	7.08
Career for <u>1 or 2</u> years and then marriage, but career continued.....	17	8.18
Career for <u>3 or 4</u> years and then marriage, but career continued.....	15	6.47
Career for <u>1 or 2</u> years and then marriage, but career <u>discontinued</u>	31	7.55
Career for <u>3 or 4</u> years and then marriage, but career <u>discontinued</u>	9	10.90
Career and marriage. Career stopped when children arrive but resumed when children are in school.....	6	10.50
Career and marriage. Career stopped when children arrive and never resumed after that.....	5	11.00

Table VI

Mean n Achievement Scores for "career" and
 "Marriage" Girls in the Two Separate Class-
 rooms Used in Administration of the Test
 Materials

	GROUP I		GROUP II		COMBINED	
	<u>Career</u>	<u>Marriage</u>	<u>Career</u>	<u>Marriage</u>	<u>Career</u>	<u>Marriage</u>
N	17	14	10	13	27	27
Mean	10.53	6.42	8.30	8.33	9.70	7.44
S.D.	4.17	4.62	3.52	3.26	4.09	4.49
Diff.	4.11		...		2.26	
σ diff.	1.64				1.38	
t	2.51				1.63	
P	<.01				<.055	

ACKNOWLEDGEMENTS

The author would like to express his sincere appreciation and gratitude for aid in the planning and execution of this research on the part of the following:

The 97 home economics students used as subjects, for their honest cooperation in responding to the data administered in this study.

Dr. Helen S. Mitchell, Dean of the School of Home Economics at the University of Massachusetts, for making these subjects available and aiding in the administration of the research materials.

Miss Helen Curtis, Dean of Women, for making available valuable information used in the section of this study concerned with sorority membership.

The members of the thesis committee, Professor Edwin L. Driver and Professor Leland Varley, for giving generously of their time and efforts throughout the preparation of this research.

Dr. Albert E. Goss of the Psychology Department, who provided helpful advice statistical and other matters relevant to this investigation.

The chairman of the thesis committee, Dr. William F. Field, Director of Guidance at the University of Massachusetts, who pointed the direction for this research in the beginning and wisely guided the author through the months of preparation to the conclusion. His helpful advice and friendly cooperation will long be remembered by the author.

APPROVED

W. F. Field

H. L. Yasley

E. H. Driver

Date _____



