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Achievement Orientation: Projective and Objective Measures of the Veroff Model and Their Relationships to Job Reward Values Orientation

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ACHIEVEMENT ORIENTATION: PROJECTIVE AND OBJECTIVE MEASURES OF THE VEROFF MODEL AND THEIR RELATIONSHIPS TO JOB REWARD VALUES ORIENTATION

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Achievement Orientation: Projective and Objective Measures of the Veroff Model and Their Relationships to Job Reward Values Orientation

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The area of achievement motivation research has been fought with theoretical and methodological controversy. The unitary construct of achievement motivation has been challenged by alternative models suggesting several dimensions of achievement orientation. Assessment methods have also been controversial with some researchers preferring objective measures while others prefer projective measures. A third problem in this research area involves the choice of appropriate behavioral or performance correlates of motivation in order to provide a measure of construct validity.

The purpose of the present study was to further explore one model of achievement orientation, the Veroff (1977) model which posits six distinct orientations toward achievement. They are Autonomy, Power, Social Approval, Competition, Task Mastery, and Effectance. The relationships between the projective measure of achievement orientation (Depner & Veroff 1979), an objective measure developed for this study corresponding to the projective measure, and subjects' self-reported

orientation toward their future jobs was explored. It was hypothesized that Autonomy achievement is associated with the value of intrinsic job factors, Social Approval is associated with the value of work environment, and Power achievement is associated with the value of long term job rewards.

Results of canonical correlation analysis indicate that overall the projective measure of achievement orientation was not significantly related to the job reward values orientation measure. The predictions of specific relationships among the achievement and job reward orientations were not supported. However, the canonical correlation analysis did reveal a significant overall relationship between the objective measure of achievement orientation and job reward values orientation and two of the three predictions of specific relationships between the measures were supported by the data. Possible explanations of the failure of the results utilizing the projective measure to support the predictions are discussed and the implications of these results for future research are explored.

This thesis submitted by Catherine Fairchild Sikorsky in partial fulfillment of the requirements for the Degree of Master of Arts from the University of North Dakota is hereby approved by the Faculty Advisory Committee under whom the work has been done.

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ABSTRACT

The area of achievement motivation research has been fought with theoretical and methodological controversy. The unitary construct of achievement motivation has been challenged by alternative models suggesting several dimensions of achievement orientation. Assessment methods have also been controversial with some researchers preferring objective measures while others prefer projective measures. A third problem in this research area involves the choice of appropriate behavioral or performance correlates of motivation in order to provide a measure of construct validity.

The purpose of the present study was to further explore one model of achievement orientation, the Veroff (1977) model which posits six distinct orientations toward achievement. They are Autonomy, Power, Social Approval, Competition, Task Mastery, and Effectance. The relationships between the projective measure of achievement orientation (Depner & Veroff 1979), an objective measure developed for this study corresponding to the projective measure, and subjects' self-reported orientation toward their future jobs was explored. It was hypothesized that Autonomy achievement is associated with the value of intrinsic job factors, Social Approval is associated with the value of work environment, and Power achievement is associated with the value of long

term job rewards.

Results of canonical correlation analysis indicate that overall the projective measure of achievement orientation was not significantly related to the job reward values orientation measure. The predictions of specific relationships among the achievement and job reward orientations were not supported. However, the canonical correlation analysis did reveal a significant overall relationship between the objective measure of achievement orientation and job reward values orientation and two of the three predictions of specific relationships between the measures were supported by the data. Possible explanations of the failure of the results utilizing the projective measure to support the predictions are discussed and the implications of these results for future research are explored.

CHAPTER I

INTRODUCTION

Achievement motivation has been a prolific area of research in psychology for many years. The work of Atkinson and McClelland in the late 1940's and early 1950's provided the prevailing model and measure of achievement motivation for many years. Their model, the expectancy-value theory, was based on the expectancy of success or failure in a given situation, the value of success or failure in a given situation, and an internal personality characteristic, achievement motivation. The measure of this internal drive, achievement motivation, Ma, or n Ach, was the score based on the extent of concern with achievement on a series of TAT stories.

This model of achievement motivation has been questioned by researchers and theorists on the grounds that the measure and model are too culture-bound (e.g., De Charms 1968; Friedrich 1976): that is, the expectancy value theory is too grounded in traditional values and life goals and not sensitive to unique, individualized, autonomous kinds of achievement. Critics of the expectancy-value theory have been concerned with the difference between intrinsic and extrinsic motivation, both phenomenologically and in terms of the differential effect on performance (e.g., Deci

1975; Folger, Rosenfield & Hayes 1978). They have attempted to specify the conditions which facilitate the motivation to achieve in a given situation, as well as those which facilitate task performance and task liking (e.g., Kruglanski 1978).

Other researchers have been particularly concerned with the method of assessment of achievement motivation. Several researchers have utilized the TAT method along with other projective and objective methods of assessment in order to determine whether or not different measures of achievement motivation are related (e.g., Mitchell 1961; Weinstein 1969). They found that the projective measures were not highly related to other measures and that there did not appear to be a unitary construct of achievement motivation, but rather several dimensions.

Veroff (1977) proposed a multidimensional model that appears to take into account some of the other dimensions found in the literature as well as the intrinsic-extrinsic dichotomy. His model is based on two dimensions resulting in six distinct kinds of motivation. The first dimension differentiates process from impact achievement orientations and the second dimension distinguishes the standard of excellence to be applied to performance (task-defined, defined by others, defined by self). Individuals differ in their preferences for achievement in each of the six resultant categories. Depner (1975) tested the model find-

ing some support for the multi-dimensional nature of achievement, but failing to support the model with the performance measures she used.

This study attempts to assess the viability of the Veroff model of achievement orientation by correcting for two kinds of problems: problems with the performance measures of achievement orientation and problems with the projective measure.

The self-report measure used in this study was chosen because it was assumed to involve an important area of concern to the subjects of this study, their future jobs or careers, and because it appeared to address some of the distinctions of the Veroff model. Though several investigators have developed instruments to assess job reward value orientation, the Manhardt (1972) measure was chosen because of its reliability across two replication studies and because of its origin in statistical findings rather than theoretical constructs. In this way, the results of the Veroff model can be compared to an empirically-derived measure. The three factors of the Manhardt measure are named Long term Career Objectives, Work Environment and Interpersonal Relationships, and Intrinsic factors. The importance assigned by students to these three factors in considering their future job selection and satisfaction is the self-report measure to be compared with the achievement orientation scores.

The second kind of problem addressed in this study concerns the projective measure. Veroff (1977) and Depner (1975) used a form of the TAT measure of n Ach. In addition to this measure, an objective measure was devised for this study in order to address problems with scoring and reliability of TATs found in the past as well as to begin to develop an objective measure which is easier than the TAT to administer and score.

In summary, this study addresses the area of achievement motivation by further testing a multi-dimensional model proposed by Veroff (1977). This model delineates six kinds of achievement, proposing that the scores on the six types of achievement are better indicators of one's achievement orientation than any single measure. The Manhardt (1972) measure of Job Reward Values Orientation is utilized as a behavioral measure of achievement orientation. Finally, an attempt is initiated to devise an objective measure of achievement orientation to replace the somewhat unwieldy projective measure.

CHAPTER II

REVIEW OF THE LITERATURE

Achievement Orientation

The Atkinson Model

The expectancy-value theory, developed in the late 1940's by Atkinson and McClelland, has generated much of the research in the area of achievement motivation. A comprehensive review of even the major research findings stemming from this model is clearly beyond the scope of this paper. Nonetheless, a brief summary of the model, some research findings, and shortcomings of the model provides a necessary background to the discussion of alternative conceptualizations of achievement motivation.

Atkinson and McClelland define achievement motivation as the tendency to strive for success in competition with a standard of excellence. According to their manual for scoring achievement imagery, competition with a standard of excellence may be expressed in the desire to win in competition with others, the desire to prove one's capability to others, affective involvement with success or failure, concern with quality of one's acts, the desire to do something unique, and any career aspiration involving long-term effort (Atkinson 1958). Resultant motivation, or the motivation to succeed in a given situation is the tendency to approach success minus the tendency to avoid failure. The approach and avoidance tendencies are each the product

of three factors. The first is seen as a relatively stable personality trait while the second two are subjective perceptions of the particular achievement situation. The personality trait associated with the tendency to succeed is the motive to succeed (Ma or n Ach) and it is this factor which will be discussed in this paper. The personality trait associated with the tendency to avoid failure is the motive to avoid failure (Ma) and is thought of as an anxiety variable. The situational variables associated with both tendencies are the probability of success and the incentive value of success.

Atkinson, McClelland, and their colleagues began their work on achievement motivation as a part of their ongoing research on the effects of drive arousal on imaginative behavior. They manipulated the assumed drive to succeed by the instructions to the subject about the significance of their task performance. Drive arousal instructions emphasized the relationship between task performance and intelligence and leadership ability, while neutral instructions down-play the importance of task performance. Extensive research led to the standardization of scoring procedures for the TAT stories and a manual of scoring procedures to train independent investigators. In this way, it was hoped that satisfactory score-rescore as well as interscorer reliability coefficients could be obtained with their "objectification" of the fantasy-based

measures.

In addition to investigating the effects of arousal on the achievement motivation scores, Atkinson, McClelland, et al. further investigated differences between subjects who scored high on the TAT measures and those who scored low. High scorers were found to prefer intermediate risks, to have more realistic aspirations, to be more persistent problem-solvers, and to be more upwardly mobile in socio-economic status than low scorers (Atkinson & Raynor 1978). Atkinson and Raynor (1978) have comprehensively reviewed the history, current findings, and revisions of this model of achievement motivation.

Problems with the model of achievement striving and with the measure of the achievement motive have been noted. A major difficulty was that females did not respond to the arousal instructions with increased achievement imagery (Lesser, Krawitz & Packard 1963; Veroff, Wilcox & Atkinson 1953); rather, their level of achievement imagery remained at a constant higher level and it did not seem to be related to achieved behavior in the same way as it is for men. Intervening variables were sought to explain the discrepancy between women's motivation scores and their achievement behaviors. In 1968 Matina Horner hypothesized an independent "fear of success" and consequent "motive to avoid success" to account for the discrepancy. She said that success in male dominated fields is associated with

competition and aggression or, at best, assertiveness which is at odds with the female stereotype and may result in social sanctions. "Unfortunately, in American society even today femininity and competitive achievement continue to be viewed as two desirable, but mutually exclusive ends just as they were in 1949 when Margaret Mead pointed out that 'each step forward as a successful American, regardless of sex, means a step backward as a woman.'" (Horner 1972, p. 158). Horner hypothesized that the threat of social sanctions as a result of success creates a motive to avoid success in conflict with the motive to achieve.

Using a variety of verbal and pictorial TAT cues and scoring criteria to measure the motive to avoid success, Horner's theory has been remarkably heuristic. In the past 10 years investigations have addressed such issues as the development of fear of success (e.g., Brown, Jennings, & Vanik 1974; Condry & Dyer 1977; Kimball & Leahy 1976); the effect of maternal employment on the incidence of fear of success (e.g., Gibbons & Kopelman 1977); the effect of sex role attitudes on the incidence of fear of success (e.g., Alper 1973, 1974; Cherry & Deaux 1978; Janda et al. 1978; Peplau 1976); the relationship of fear of success and androgeny (e.g., Gayton et al. 1978); and fear of success to causal attributions of success (e.g., Condry & Dyer 1976; Feather & Simon 1973; Levine et al. 1976).

Further, fear of success has been studied in relation to achievement behaviors such as academic performance (e.g., Curtis, Zanna, & Campbell 1975; Griffore 1977); career aspirations (e.g., Hoffman 1977); and success on sex role-defined experimental tasks (e.g., Karabenick & Marshall 1974, 1976; Makosky 1976; Marshall & Karabenick 1977; Morgan & Mausner 1973; Murphy-Berman 1975).

Despite the compelling nature of the fear of success theory and the energy of many investigators, Zuckerman and Wheeler (1975) and Tresmer (1976), in exhaustively reviewing the literature, found that the bulk of the evidence is inconsistent and unreplicable and that Horner's measure is both unreliable and lacking in predictive validity. Methodological problems arise because different TAT cues do not elicit comparable amounts of fear of success imagery and because investigators have not agreed on standardized scoring rendering the results almost impossible to compare across studies. Of the myriad of conceptual and methodological ambiguities of the motive to avoid success, one of the primary conceptual problems is that fear of success imagery is no more prevalent among females than males (Tresmer 1976).

The research on the motive to avoid success taken as a whole suggests that it fails to account for sex differences in the relationship between achievement and behavior. Nonetheless, the research does suggest

methodological and theoretical problems for achievement motivation research generally.

The difficulty in comparing results using different scoring criteria suggests that rigid adherence to a standardized scoring procedure is essential to the extrapolation of meaningful interpretation of the data. Even the most reasonable alterations in scoring rationale render the data uninterpretable in the context of past research. The original scoring manual for an n Ach (McClelland, Atkinson, Clark, & Lowell 1958) provides the logical choice because of its long history of use, reliability statistics, and its generalizability across TAT stimuli.

More importantly, the fear of success research using different TAT stimuli suggests that the unitary construct of achievement motivation is inadequate in accounting for the level of motivation of both males and females across a variety of situations. That is, individuals differ in their motivation to achieve depending on the characteristics of the achievement task and situation, as well as in their overall motivation to achieve. Achievement Orientation refers to this task-situation preference to achieve.

The Atkinson-McClelland construct of achievement motivation has been questioned as a model of overall motivation because of its heavy emphasis on competition and its relative neglect of achievement evaluated against individualized standards of excellence (Tangri

1975). DeCharms says, "The type of subject used and the validation sample (college men from New England schools) may have had a determining effect on the fact that the resultant measure is most clearly related to entrepreneurial behavior (DeCharms 1968, p. 210).

Finally, Lynette Friedrich eloquently and succinctly calls attention to the need to explore individual differences in achievement orientation, as well as achievement motivation. Friedrich says, ". . . unless achievement motivation is conceived of as a magical quantity existing in a timeless void, the achievement strivings of both women and men in areas in which they are personally involved must be considered. What is personally involving for the two sexes has changed in the past and is changing . . . If the proverbial baby is not to be thrown out with the bath, the delineation of the different modes and areas in which achievement strivings can be expressed is of critical importance. More diverse and refined value-orientation assessments, cues, and scoring procedures are needed if the measurement of achievement motivation is to be of value in the prediction of behavior" (Friedrich 1976, p. 60).

Constructs of Intrinsic and Extrinsic Motivation

Some motivation theorists have questioned the Atkinson-McClelland model of achievement motivation and the behaviorist orientation in general because of its lack of consideration of such subjective factors as choice,

challenge, and the perception of freedom. For example, White (1959) argues that much of human behavior is initiated not in order to satisfy a specific need or to achieve a particular goal, but rather to satisfy the organism's intrinsic interest in creating and understanding through seeing the effects of his own action on the environment. He says, "I shall argue that it is necessary to make competence a motivational concept; there is a competence motivation as well as competence in its more familiar sense of achieved capacity . . . It is directed, selective and persistent, and it is continued not because it serves primary drives, which indeed it cannot serve until it is almost perfected, but because it satisfies an intrinsic need to deal with the environment" (White 1959, p. 318).

DeCharms (1968) proposes a theory of motivation based on the distinction between behavior initiated as an "end in itself" and behavior initiated as a means to some other end. He names the origin state that state of mind which is characterized by complete involvement of the self under conditions minimizing the perception of anxiety or threat to the ego and maximizing perceived freedom. The origin state of mind corresponds to White's competence motivation wherein the effects on the environment are seen to be personally caused; hence the term "personal causation" to describe "origin" motivation. Conversely, the pawn state is characterized by instrumental behavior, wherein the

desired and is mediated by an external other and it is associated with anxiety and self-consciousness. The origin and pawn states are subjective perceptions of self-motivation and are, thus, difficult to control in an experimental setting.

Nonetheless, DeCharms cites the Harlow monkey studies as support for the importance of intrinsically motivated, or origin state, behavior in the learning (achieving) process. Monkeys who have not been rewarded for manipulating a puzzle were less successful at puzzle manipulation after rewards were introduced than they were before receiving rewards. DeCharms says: "Concentration on the goal may hamper task performance (as when the monkeys attacked the hasp directly rather than proceed through the sequence of devices in the order that they had learned previous to the introduction of the raisin). One of the effects of an extrinsic reward upon task behavior, then, is to focus attention on the reward and this effect may produce a deterioration of task performance" (De Charms 1968, p. 331). Further, subsequent to the withdrawal of rewards, the monkeys were less likely to manipulate the puzzle for its own sake than they were prior to the introduction of extrinsic rewards. Thus, subjective freedom and perceived instrumentality have important effects both on the quality of task performance and on the quantity of task-oriented behavior engaged in during "free-time."

Using human subjects, De Charms cites studies in which the lack of anticipated reward facilitated performance and liking for an experimental task (Weik 1964); perceived freedom (volunteer versus coerced subjects) enhanced the Zeigarnik effect for unfinished tasks (Green 1963); and ego-involving instructions emphasizing intelligence and future success in relation to task performance, debilitated recall of unfinished tasks (Green 1963).

Finally, De Charms (1965) attempted a more subtle manipulation of the origin-pawn variable. Subjects were asked to complete two tinkertoy models; one explicitly defined by the experimenter (Pawn model) and the other left to the subject to create alone (Origin model). Subjects' ratings showed that they felt freer working on the Origin model, they enjoyed it more, and they said that they would choose to work more on the Origin model rather than the Pawn model even though they reported feeling <u>less</u> successful on the Origin model. In this study, reduced probability of success did not reduce liking and motivation in a freely chosen task, suggesting that intrinsic, subjective factors may be more important in performance and liking than expectation of success.

Deci (1975) investigated performance and attitudinal differences between intrinsic and extrinsic motivation and found that under a variety of conditions intrinsically motivated behavior could be altered by the introduction of an extrinsic reward. Extrinsic rewards resulted in

performance decrements and reduced liking for the activities. Deci distinguishes between the effects of rewards characterized by their controlling effects and those characterized by their informative effect. He hypothesized that controlling rewards decrease performance and liking and informative rewards increase performance and liking. Deci tested this hypothesis by giving subjects positive verbal feedback on their puzzle-solving performance and measuring the amount of free-time spent working on the puzzles later. For males, the verbal rewards acted positively, resulting in more free-time spent on the puzzles. Thus, for them, Deci says the reward was seen as information about performance. For females, however, the results were reversed; that is, after being given positive verbal feedback about their performance they spend less free-time on the puzzles than when they had not been given any feedback. Hence qualities of a particular reward may be differentially salient to males and females: males tend to respond to verbal reinforcement as information about their performance and females tend to perceive it as controlling their behavior. In De Charms' terms, verbal approval may be a valued reward to females and may create a pawn state of awareness, whereas for males, the reinforcement may have less instrumental value and, thus, may interfere less with the origin state.

Folger, Rosenfield, and Hayes (1978) investigated the relative importance of choice and reward on the level of motivation and productivity of undergraduate women. Sub-

jects were paid with somewhat less than adequate research credits or much more than adequate research credits for their participation. The level of choice was determined by whether or not the experimenter emphasized the subject's rights to continue or discontinue the experiment. They found that perceived freedom led to higher motivation with low pay than with high pay whereas lack of perceived freedom led to higher motivation with high pay than with low pay. They conclude "investigators should also distinguish between two types of rewards: rewards as compensation for an activity to which a person already feels constrained versus rewards as incentives offered to induce a person to engage in the activity" (Folger et al. 1978, p. 564).

Kruglanski (1978) distinguishes between exogenous and endogenous attributions of motivation roughly corresponding to De Charms' origin-pawn and Deci's intrinsic-extrinsic motivation. However, his model further clarifies the role of rewards in increasing or decreasing performance and motivation. When the reward is circumstance contingent, that is, intrinsic to the performance of the activity, performance will be enhanced. Conversely, when the reward is circumstance independent, or extrinsic to the particular activity, performance decrements will occur such that the individual will act according to the minimax principle, minimizing effort and maximizing gains. The same reward

may be intrinsic to some activities and extrinsic to others. For example, money is intrinsic to gambling and extrinsic to building a puzzle. In addition, Kruglanski makes the point that the importance of rewards may vary such that as the intrinsic motivation increases, the relative importance of the reward declines. Thus, the reward itself does not reduce the intrinsic motivation, rather the importance placed on the reward and intrinsic motivational attributions together create a shifting balance which then determines level of performance and liking for the activity.

In summary, White (1959), De Charms (1968), Deci (1975), Kruglanski (1978), and others have emphasized the importance of subjective and contextual factors in the determination of the level of motivation and the ensuing level of performance. Some of these factors include perceived freedom of choice, level of reward, type and appropriateness of reward, and subjective value of the reward.

The evidence obtained from the studies of intrinsic and extrinsic motivation suggests that the construct of achievement motivation may be more complex than is implied by the Atkinson-McClelland model. Several investigators have utilized a variety of methods for assessing achievement motivation in different areas in order to assess whether or not achievement motivation can best be described

as a unitary construct.

Achievement Motivation or Achievement Orientation

Mitchell (1961) used seven measures of achievement motivation in addition to the Atkinson-McClelland measure. He included a sentence completion test, an adjective checklist, a true-false inventory, and a multiple choice questionnaire which were all compiled by the author, as well as the Taylor Manifest Anxiety Scale and two measures of aspiration level. The achievement scores were compared across tests and with the undergraduate women's GPA in order to determine whether there were identifiable factors and which ones predicted grade point average in school. He found the adjective checklist to be the best predictor of GPA and he found a confusing set of positive and negative correlations among the achievement measures. He says, "The whole pattern of interrelationships was one that suggested not only the multidimensionality of the putative achievement motivation construct, but also the probability that various measures of that construct might reflect quite different aspects of it and would therefore be little correlated or selectively correlated with other measures and with the criterion (GPA)" (Mitchell 1961, p. 182). Mitchell also factor analyzed all of the items of the measures. He found six factors which he called: Academic Motivation and Efficiency, Self-satisfaction, Wish-fulfillment Motivation, Non-academic Achievement Motivation, External Pressure to Achieve, and Imputed Generalized Motivation Without Attendant Effort.

Weinstein (1969) used eight measures of achievement motivation in a study investigating the interrelationships among projective and self-report measures of n Ach and several risk-taking tasks in males. In addition to the Atkinson-McClelland TAT measure, Weinstein used two other projective measures, the French Test of Insight and Doodles, and sub-scales from the Edwards Personal Preference Schedule, the California Personality Inventory, and several others. The measures of n Ach were not significantly correlated overall and the average correlation between measures was only .04 and not significant. Weinstein concludes, "Present results not only confirm Mitchell's (1961) finding but may also be interpreted as a basis for their generalization across sexes.

Veroff (1969) utilized the Atkinson-McClelland definition of achievement motivation (competition with a standard of excellence) to postulate three stages of the development of achievement motivation differing in the type of standard of excellence used. The first type of achievement motivation, autonomous achievement, uses an internal, self-derived standard of excellence and emerges in the child with language acquisition. The second stage, social motivation, uses social comparison as the standard of excellence. Social motivation begins when the child enters school and compares his or her performance with peers. Finally, autonomy and social motivation are integrated so

that each may be used according to the particular situation. The development of achievement motivation proceeds more or less successfully depending on how well the problems of the two stages are resolved. Veroff outlines six types of achievement orientation resulting from the successful or unsuccessful resolution of achievement problems of the three stages. They are: integrated achievement, competitive orientation, high in fear of failure, high in fear of success, and low achievement motivation. Veroff cites evidence to support his model of the development and typology of achievement motivation from many studies using nursery school and elementary school samples.

Veroff, McClelland, and Ruhland (1975) looked at a variety of projective, objective, and behavioral measures of achievement orientation in black and white men and women of the Detroit metropolitan area. From 17 measures, six factors of achievement orientation emerged: Assertive Competence, Task Competence, Fear of Failure, Social Comparison, Future Achievement Orientation, and Hope of Success. They found that the factor structure is not significantly different for men and women, although women were lower than men in Assertive Competence and Fear of Failure and higher in Hope of Success than men. Further, Veroff et al. found Assertive Competence to be strongly correlated with family social status, educational level, income, and test behavior. The Task Competence factor also relates to these variables, though in slightly different

ways for men and women.

Jackson, Ahmed, and Heapy (1976) postulated six dimensions of achievement orientation: Status with Experts, Acquisitiveness, Achievement via Independence, Status with Peers, Competitiveness, and Concern for Excellence. They developed five methods to measure the six achievement orientations including adjective self-ratings, personal description, adjective checklists, and a true-false personality inventory. Factor analyses of all of the items yielded strong support for the six hypothesized factors, especially the Aquisitiveness factor. They conclude: "In the case of an individual, it is not sufficient to say that an individual is at the X percentile in achievement motivation; but alternatively, his profile of the six dimensions identified in the present study, possibly together with others, might be used more precisely to identify the combination of characteristics determining the unique direction of his motivation to achieve" (Jackson, Ahmed, & Heapy 1976, p. 17).

As part of a large investigation of the dimensions of masculinity and femininity in junior and senior high school students, Spence and Helmrich (1978) developed the Work and Family Orientation questionnaire (WOFO) to predict achievement behaviors and aspirations of both men and women. Several versions of the scale were developed, each yielding distinct factors of motivation. The first version

formed six factors: Work orientation, Mastery, Competitiveness, Effort, Job Concerns, and Spouse Career Aspirations. The second version, designed for use with adults, was comprised of four factors: Work Orientation, Mastery, Competitiveness, and Personal Unconcern. Support for the validity of this instrument as a measure of achievement motivation was obtained by a comparison of several samples of students and professionals. High school students scored significantly lower than college students except when only high aspiring high school students were included. Scientists score higher than college students on all scales except for competitiveness. Studies of women athletes and productivity of male scientists produced complex interactions among the achievement scales.

In summary, there is evidence from a number of studies in strong support of a multidimensional construct of achievement motivation. These investigations have found factors concerned with academic achievement, non-academic achievement, autonomy and social achievement, competitive achievement, fear of success and failure, assertive competence, task competence, status with peers and experts, acquisitiveness and others. As Jackson et al. (1976) suggests, the generalized achievement motivation construct may be a gross distortion of the particular achievement interests and strivings of the individual. These individualized interests may be better described in terms of

the individual's achievement orientation.

However, the studies reviewed above demonstrate that there can be as many factors of achievement motivation as there are methods and instruments for assessing it. Veroff (1977) presents a cogent argument for a taxonomy of achievement orientation based on the Atkinson-McClelland definition of achievement motivation and their TAT method of measurement. Consideration of this model and relevant research findings will follow.

Varieties of Achievement Orientation

Dissatisfaction with a unitary model of achievement motivation, as in the expectancy-value theory, led Veroff (1975, 1977) to consider individual differences in achievement orientation. Veroff hypothesizes that individual preferences determine one's orientation to achieve or level of motivation in a particular situation. That is, individuals are not necessarily equally motivated to perform across a variety of situations; rather, due to personality factors and/or social learning, individuals differ in the types of activities which elicit their sustained interest and effort.

Veroff (1977) presents a theoretical taxonomy of achievement orientation which represents an attempt to derive conceptual dimensions comprising an accomplishment. Six varieties of achievement motivation are delineated in this model along two dimensions. The first dimension of achievement orientation is the process-impact distinction.

Here, the types of achievement which emphasize the process of achieving are distinguished from those which emphasize the impact of the accomplishment. For those oriented toward the process of achieving, satisfaction is gained through "doing" the task. In other words, the goal or endpoint of the striving may be less important to the achiever than the activity itself. On the other hand, people who are oriented toward the impact of their accomplishments derive satisfaction from the accomplishment itself and perhaps from other rewards accrued as a result of that accomplishment, "being" is a means to some end. This dimension may be analogous to the extrinsic-intrinsic or exogenous-endogenous distinction. In extrinsic, exogenous, and impact-oriented achievement, satisfaction, the goal, or the reward are gained as a result of and external to the act of achieving; whereas in intrinsic, endogenous, process-oriented achievement, the satisfaction, goal, and reward are part and parcel of the achievement activity itself.

Individuals may also differ in their preference of standards against which to evaluate their accomplishments. Veroff distinguishes between three sources of evaluation: self, others, and task-standard.

The two dimensions, process-impact and standard of evaluation together define six achievement orientations (see Table 1). For example, the orientation which emphasizes

TABLE 1

VEROFF TAXONOMY OF ACHIEVEMENT ORIENTATION

Dimension II Standard of Evaluation	Dimension I	
	Process	Impact
Self	Autonomy (dress pattern-female; car motor-male)	Power (Advertising promotion)
Others	Social Approval (English paper)	Competition (Olympic tryouts)
Task	Effectance (French lessons)	Mastery (cancer cure)

*TAT cues used by Veroff & Depner are indicated.

process-oriented, self-evaluated achievement is named Autonomy achievement in Veroff's model and the impact-oriented, self-evaluated activity is called Power achievement. Individuals are expected to differ in their motivation to achieve in the six categories of achievement.

Depner (1975) and Depner and Veroff (1979) developed six verbal TAT cues in order to explore the usefulness of the taxonomy in tapping sex differences and individual differences in achievement orientation. Moreover, they explored the relationship of these orientations to several objective measures and two behavioral measures designed to be publicly or privately evaluated.

The projective measures were scored by the Atkinson (1958) system. In addition, specific themes for four of the stories were scored, using a present/absent system, in order to further clarify the extent to which the specific characteristics of a particular orientation were being met. For example, the autonomy item was scored for specific indications of (1) the desire to work alone and (2) without help as well as to reveal conflict or ambivalence about achievement and the competition item was scored for ambivalence. In this way, the authors maintained reliability and generalizability with previous findings while introducing new or supporting measures.

Depner (1975) explored the relationship between the individual orientation scores to the total achievement score finding that competition was significantly related to the total score for both men and women; and social approval and power were related to the total score for women. Autonomy, effectance, and task mastery were not related to total score. It is interesting to note that the mastery orientation received the highest mean achievement scores for both men and women. Depner concludes, "Examination of the relationship between each domain and the total score supports Veroff's (1969) contention that what is regarded as general achievement motivation reflects only competitive, socially-appraised kinds of achievement" (Depner 1975, p. 18). Nonetheless, she also

notes that "in general, specific kinds of achievement motivation bear positive relationships to one another and to the total scores. That is, they seem to share a common component while making more precise distinctions" (Depner 1975, p. 20).

They found that males and females are strikingly similar in the extent to which they express achievement concerns in a variety of situations. Achievement scores differed significantly for males and females only on the autonomy orientation wherein males expressed less concern with achievement than in any other situation. Moreover, the percentage of males and females expressing autonomous themes were significantly different; whereas only 27% of males indicated the need to work alone, 71% of the females expressed this need. Further, although there was no difference in n Ach scores for the social approval cue, fewer males indicated that social approval alone was important (18.5%) than females (55.3%). Ambivalence about same-sex competition was noted in only 13.6% of the males' protocols compared to 44.7% of the females' protocols.

Behavioral measures were the scores on two experimental tasks which subjects performed anonymously. The first, arithmetic problems, was presented as a male sex-typed task while the second, scrambled words was presented as a female sex-typed task. Subjects' scores were obtained on

a "practice trial" and an evaluated trial in order to examine differences in intrinsic, private, and self-motivated behavior and extrinsic, public, and other-evaluated behavior. For males, performance on the evaluated tasks was related to the total n Ach score. Specifically, power orientation correlated with performance on the arithmetic task and competition and effectance were related to the word task for males. Contrary to predictions, the autonomous achievement orientation was negatively related to achievement for women on the arithmetic task. It is unclear whether this negative relationship was due to the sex-typing of the task, lack of interest, or lack of challenge in the experimental task.

Though the results of the behavioral measures are interesting, they reflect performance in a highly specific achievement situation and may differ substantially from performance on similar tasks in situations in which the significance of performance is greater (as for example in a college entrance examination). Thus, it is unclear how these and other laboratory behavioral measures should be interpreted with regard to achievement.

In summary, what the Veroff taxonomy lacks in a legacy of empirical foundations, it makes up for in its simplicity and sensitivity to the subtle variations in individual perceptions of accomplishment and success. Although total score (or a unitary construct) appears to be more or less

descriptive of the achievement motives of males, the achievement motivations of women appear to be more complex and differentiated. Moreover, as cited above, it has been suggested that while sex differences of men and women are declining, this is not simply the result of women taking on more competitive, assertive, or power-oriented concerns, but rather that both men and women are examining their goals in less traditional ways. Hence the taxonomy is especially powerful because while being attuned to the particular concerns and conflicts of men and women it is capable of differentiating and classifying expressions of unique and personal achievement concerns and preferences. These achievement orientations may be reflected in the types of occupations chosen by individuals and in the relative value of rewards or benefits earned in the process of working or as a result of the work accomplished. Therefore, the following discussion focuses on research concerning reward orientations.

Job Reward Orientation

Much research in the 1960's and 1970's has focused on how intrinsic and extrinsic factors interact in people's conceptions of job satisfaction and dissatisfaction. By definition, work for pay is an extrinsically motivated activity. Nonetheless, to the degree that individuals

have freedom of choice in the type of work they do, one would expect intrinsic factors to be important. Herzberg, Mausner, and Snyderman (1959) found that some job characteristics are important determinants of job satisfaction (motivators) while other job characteristics determine the degree of job dissatisfaction (hygienes). Motivators tend to be those factors leading to the gratification of self-actualization needs while hygienes are factors leading to the gratification of organismic needs (e.g., pay, benefits, security).

Burke (1966) asked undergraduate industrial psychology students to rank five motivators and five hygienes as to their importance to themselves and to a member of the opposite sex in their job satisfaction. They found that both males and females ranked motivators higher than hygienes more often than hygienes over motivators (63.5%, 62.4%). Further, females were fairly accurate in perceiving the similarity between rankings of males and themselves and they were able to predict the rankings of a member of the opposite sex. Males, on the other hand, were poor predictors of females' rankings, tending to assume that females would more often rate hygienic factors above motivators.

In another study Burke (1966) asked males and females to predict same-sex rankings for the ten job characteristics in addition to ranking the importance of the

characteristics for themselves and a member of the opposite sex.

Again they found that both males and females significantly more often placed the importance of motivators over that of hygienes in their rankings. Further, there was a high degree of correspondence between the rankings of males and females ($r = .83$). Although females tended to perceive males as having similar values to themselves ($r = .71$), males perceived females' rankings as different from their own ($r = -.31$). Similarly, females were better able to predict the rankings of males ($r = .89$) than males were able to predict the rankings of females ($r = -.07$). Females were less accurate and males were more accurate in predicting the rankings of their own sex ($r = .49$, $r = .65$, respectively). Thus, although males and females vary in their accuracy in predicting job reward values for others of the same and opposite sex, the findings of the Burke studies indicate the actual similarity between males and females in their job reward values.

Centers and Bugental (1966) investigated the importance of six intrinsic and extrinsic job reward characteristics to men and women of varying occupational levels. They hypothesized that three intrinsic factors (self expression, feeling of satisfaction, interesting work) would be more important to males and females of high occupational levels than low ones whereas three extrinsic factors (pay, co-workers,

security) would be more important to those of lower occupational levels. Subjects were employed persons categorized by SES criteria. They were asked to indicate only the first, second, and third most important job characteristics of the six items. As predicted, white collar workers significantly more often indicated intrinsic factors as important ($p < .01$) and blue collar workers more often chose extrinsic factors ($p < .01$). Males and females were not significantly different in their choices overall although men more often than women indicated the importance of self-expression in their choices ($p < .05$) and women more often than men indicated the importance of having pleasant co-workers ($p < .01$). Although these differences were statistically significant, their sample was large ($N = 692$) and actual percentage differences were small.

Saleh and Lalljee (1969) attempted to replicate the Burke (1966) study using male and female college students, teachers, and company workers. They hypothesized that males and females would not differ in the importance of intrinsic and extrinsic job characteristics with age and occupational level controlled. Their study is difficult to interpret for two reasons. First, different methods for assessing the importance of intrinsic and extrinsic job characteristics were used: a forced choice format with six intrinsic and ten extrinsic factors and a twelve

item ranking of six intrinsic and six extrinsic job characteristics. The authors neither explain the rationale for their method choice nor account for the difference in methods statistically. Further, Saleh and Lalljee had difficulty in setting up the occupational level controls. Subjects from another company were chosen to "fill in" for some occupational levels and the percentages of males and females on some occupational levels were highly discrepant.

Nonetheless, Saleh and Lalljee found that in the college and teacher samples and in the company sample, with age and occupational level controlled, males and females did not differ in their mean intrinsic scores. However, higher level company workers were significantly more intrinsically oriented than lower level company workers. Unfortunately, their method choice did not allow the analysis of individual items.

Schuler (1975) concurs with Saleh and Lalljee that occupational status and age are variables, however his method focuses on specific job reward values rather than overall intrinsic and extrinsic orientations. Schuler used an eight-item questionnaire including four "intrinsic" and four "extrinsic" items. Although the specific rating method was never specified, it is assumed some sort of ranking procedure was employed. Subjects varied in gender, age, education, and organization level. He found that with age, education, and occupational level controlled males

and females differed in the importance placed on some of the specific items. More than did females, males valued pay, the opportunity to influence important decisions, and the opportunity to direct the work of others. More than did males, females valued the opportunity to work with pleasant employees.

In contrast to the Saleh and Lalljee (1969) and Centers and Bugental (1966) findings, Schuler found no significant effects due to age, education, or occupational level on the importance of intrinsic versus extrinsic factors.

Brief, Rose, and Aldag (1977) attempted to resolve some of the conflicting evidence by using a broader sample of employed subjects. Though they found no sex differences in the rankings of five job reward values, their study does little to clear up the controversy because they did not use some of the items which consistently result in sex differences, that is, opportunity to direct or supervise others and pleasant co-workers.

Finally Jurgensen (1978) reports data from an extensive longitudinal study including almost 57,000 subjects begun in 1945. All applicants for jobs in a midwestern gas company were required to complete a questionnaire in which ten job characteristics were to be ranked as to their importance to the applicant. He found that the rankings of men and women for the entire sample were significantly different. Whereas men ranked security, advancement, and

type of work as most important, women considered type of work as much more important than any other item. Though Jurgensen reports little change in the rankings from 1945 to 1975, he notes that "some trends are apparent. The most important of these are an increase in importance of advancement and security. In addition there is an increase in importance of working conditions for women . . . It is interesting to note that the decreasing emphasis on seniority and increasing emphasis on type of work by men tends to bring their job wants closer to those that have been possessed by women" (Jurgensen 1975, pp. 270, 271).

Jurgensen also investigated the effects of age, marital status, education, and occupational level, finding that differences due to those variables were often greater for men than women. A possible interpretation of the results is that with an increasing level of responsibility, owing to being older, married, and male, there is an increase in the importance of long-term job characteristics, i.e., advancement, benefits, and security. While older, married women do not show these value shifts there are shifts similar to those of older, married men in divorced or widowed women suggesting that the "bread winner" role results in greater importance attached to long-term job attributes. Nonetheless, there were no significant effects for the number of dependents.

Dyer and Parker (1975) investigated the hypothesis

that many of the discrepancies in the literature involving the importance of intrinsic and extrinsic job attributes is a result of conceptual and definitional confusion over the terms themselves. They cite examples of items referred to as intrinsic in some studies and extrinsic in others. In order to test their hypothesis, they asked members of the APA to define the terms, intrinsic and extrinsic, and to classify 21 items. They found little agreement on definitions even among psychologists informed in this area. Moreover, there was a remarkable lack of consistency in the classifications of many items. Dyer and Parker conclude that "until the conceptual issues surrounding the terms intrinsic and extrinsic have been clarified, it seems that little of real value will be gained from research that simply serves to perpetuate this obviously confusing and possibly unwarranted dichotomy" (Dyer & Parker 1975, p. 458).

Research based on the purely conceptual dichotomy is clearly not in order; nonetheless, because items are difficult to classify does not mean that the terms cannot be useful descriptive labels of general clusters of items. Thus, studies which have preserved the integrity of individual items in their analysis have produced interesting results which can then serve as the basis for speculation as to their intrinsic and extrinsic aspects.

Another approach to the classification problem was

taken by Manhardt (1972). He used factor analytic techniques to arrive at three clusters of items from a pool of 25 job attributes. He used a sample of college graduates, newly employed at an insurance company, asking them to rate each of the 25 job attributes as to their importance for overall job satisfactions. The items loading more than .40 on only one factor were used to comprise each factor.

Factor I, Manhardt named Long Term Career Objectives. It is comprised of five items including advancement, supervising others, working on important problems, income and responsibility for risk-taking. (Note that some of the items have commonly been classified as intrinsic while others have been classified as extrinsic by other researchers).

Factor II is named Work Environment and Interpersonal Relationships and includes six items. Four refer to the environment, i.e., conditions, routine, leisure, and rules, and two refer to the quality of interpersonal relationships, i.e., associates and supervisors.

Finally, Factor III is composed of eight job characteristics which mainly refer to Intrinsic factors or to the job content. The Intrinsic factor includes items referring to independence, creativity, and sense of accomplishment.

Manhardt found that sex differences were significant on Factors I and II such that males placed greater

importance on Factor I or Long Term Career Goals, while females placed more value on Factor II or Work Environment and Interpersonal Relationships. The differences cannot be explained in terms of differences in occupational status because all subjects were in entry-level positions with approximately the same potential for advancement. The differences may, however, reflect differences in occupational goals, perceived future occupational options, as well as some unstated, though viable, occupational limitations for women. Manhardt suggests that their careers may not have been the sole goal for women in his sample as they may have been to the men. There are no overall sex differences in the importance of intrinsic job factors.

Bartol (1976) examined the effects of sex and professional training on job value orientations of undergraduate students. It was hypothesized that professional training is more important than gender in predicting the importance of job values. Male and female college students majoring in business and female psychology students completed the Manhardt (1972) Job Orientation Questionnaire. Scores for each S on the three factors were determined by summing the values marked for the items comprising each factor in the Manhardt study. The mean factor scores for the business majors were comparable to male and female scores in the Manhardt study. That is, whereas males

valued the Long Term Career Goals as most important, female business majors valued Work Environment and Interpersonal Relationships as most important. However, female psychology majors rated Work Environment and Interpersonal Relationships lower than did the male business majors.

Analysis of the significance of the differences in mean scores indicates that the differences between the female business and psychology majors is greater than that between males and females on all three dimensions ($P < .01$ for female business-female psychology majors for each of the three dimensions). Female psychology majors valued intrinsic job factors as significantly more important than did the female business majors and they rated both the long term and work environment factor as less important than did the female business majors. In contrast to the differences in importance ratings among females of different pre-professional background; male and female business majors are remarkably similar in their job orientations. The only significant difference, that in the importance of Work Environment and Interpersonal Relationships, though significant, is considerably smaller than the differences found between the female groups.

Bartol concludes, "The results of this study support suggestions that males and females in the same profession

may have more similar job interests than members of the same sex in different professions. The data also illustrate the possible dangers of combining subjects from diverse professional training areas when attempting to isolate differences on job orientation due to the sex variable" (Bartol, p. 370). Unfortunately, Bartol neglected to include a sample of male psychology majors in her study and, therefore, it is unknown whether professional training is a significant variable for males as well as females.

Bartol and Manhardt (1979) expanded the 1972 study, including new appointees (1970-1974) to the insurance company in addition to the original sample. It is unclear why fewer subjects were included in the combined sample than in the original sample alone. The hypotheses and analyses of the original study were expanded in several important ways.

First, separate factor analyses were conducted on the male and female data in order to eliminate the possibility that the sex differences themselves produced the three factor structure found in the combined sample. Since the factor structure remained in the separate analysis, this possibility was rejected.

Secondly, the effects of training background were investigated. As was found in the Bartol study, business majors valued long-term aspects more than science-math majors and social science-humanities majors, social

science-humanities majors valued intrinsic job aspects higher than did the other majors.

Thirdly, the effect of date of employment on job orientation was investigated in order to determine the stability of job orientation and/or trends in the job orientations of males and females over time. It was found that intrinsic job aspects are gaining in importance to both males and females. Further, sex differences found on Factors I and II are diminishing such that long-term career aspects are more highly valued and environment-interpersonal aspects are less important to the more recently employed women. Males' scores on Factors I and II are not significantly different over the course of the study.

It is interesting to note that in the overall sample, intrinsic aspects received higher mean ratings per item than did Factor I or Factor II. The mean per item score on the intrinsic factor is 4.04 suggesting that differences on this factor may be difficult to achieve due to the relatively high ratings given these items by most subjects. Thus, a ceiling effect may minimize individual and group differences on this factor.

Summary and Statement of the Problem

The study of achievement motivation has been a prolific area of research in psychology. In particular there has been extensive investigation utilizing the

Atkinson-McClelland model and a great deal of controversy has arisen around its use. A major conceptual criticism is that achievement motivation should be a multidimensional construct rather than a unitary construct and that a measure of achievement orientation rather than the generalized motive measure is needed to account for the complexity and variety of achievement strivings of women and, increasingly, of men.

Research investigations focusing on achievement orientation and job value orientations have converged on the conceptual distinction between intrinsic and extrinsic motivational factors. Although it is widely recognized that intrinsic factors are critically important, their inherently subjective nature has made research difficult and results are often disappointing. In particular, laboratory tasks which can be objectively evaluated, by definition preclude performance measures of behavior which is motivated by truly intrinsic factors. Similarly, researchers have had difficulty in constructing job orientation questionnaires based on the conceptual dichotomy because researchers and subjects alike have highly idiosyncratic definitions of the terms and there is little agreement on the classification of individual items. Thus, investigators have reached an impasse on how to operationalize what is an intuitively obvious and critical aspect of human motivation. The Veroff (1977) taxonomy represents one model for distinguishing such achievement

orientations, particularly those of a public, socially-evaluated type from those which are private and self-evaluated. This study explores Veroff's six varieties of achievement orientation and their interrelationships to further test the utility of this multi-dimensional model in comparison with the unitary construct in describing the interests and preferences of men and women.

In order to investigate the relationship between achievement orientation and behavior, it was decided to look at the attitudes and values with which individuals evaluate their jobs and careers. For most college students, their prospective careers represent an important goal; therefore, it is hypothesized that achievement orientation preferences are related to the differential value of job rewards overall.

It is specifically hypothesized that:

(1) Autonomous achievement orientation is associated with the importance of intrinsic job characteristics.

(2) Social approval achievement orientation is associated with the importance of work environment and pleasant interpersonal relationships on the job.

(3) Power achievement orientation is associated with the importance of long-range career characteristics of the job.

Sex differences in achievement orientation and job value orientations will be explored, although no specific hypotheses are made.

Finally the feasibility of an objective measure of achievement orientation to eliminate some of the difficulties encountered in the use of the projective measure will be explored.

CHAPTER III

METHOD SECTION

Subjects

Subjects were 140 undergraduate students enrolled in psychology classes at the University of North Dakota. There were 76 females and 64 males ranging in age from 18-51 years ($\bar{X}$ age - 20.07). Although the majority of the subjects were freshmen (56%), 23% were sophomores, 15% were juniors and 4% were seniors. Nine subjects were married.

Materials

All test materials were compiled into a single booklet for each subject coded for sex of subject. The first page was a short fact sheet wherein subjects indicated their age, sex, marital status, and class status. Subjects also indicated whether or not they had a major and a planned occupation after graduation.

The projective measure, designed by Depner (1975) elicits the six types of achievement orientation discussed by Veroff (1977). The measure consists of six verbal TAT leads. The leads were matched for sex of subject and randomly presented in each booklet. The type of imagery represented in each situation is given in

parentheses after each story.

1. Barb (Bob) has been struggling with her new dress pattern (his car motor) for an hour. A neighbor has offered help but Barb (Bob) refused. (process-self-Autonomous)

2. Jean (Joe), an advertising executive, has been assigned the task of selling educational T.V. to the masses. Her (his) boss is looking over her (his) plans. (impact-self-Power)

3. Wanda and Heidi (Wayne and Harold) have each prepared for the qualifying race to represent their country in the Olympic swim meet. Only one can go. Today is the day of the race. (impact-other-Competitive)

4. Diane (Dan) has turned in an essay to her (his) English professor, whom she (he) really admires. She (he) has worked hard on it but is unsure about what she (he) has done. (process-other-Social Approval)

5. The search for a cure for cancer has inspired Helen (Harry). With a PhD in biophysics she (he) begins work at the labs at the National Institute of Health, well financed by government funds. (impact-task-Mastery)

6. Tam (Ted) is going to France and is trying to revitalize the little French she (he) learned in high school, but that was ten years ago. She (he) has scheduled once-a-week lessons with a tutor. This is her (his) third lesson.* (process-task-Effectance)

*This item was changed by the author.

The Job Orientation Questionnaire by Manhardt (1972) followed the Achievement orientation stories. The questionnaire consists of a list of 25 job characteristics which are to be rated on a scale ranging from 1 to 5 as to their importance to the subject in his or her future job selection (see Appendix A).

Finally, subjects were given the Objective Achievement Orientation questionnaire developed for this study wherein the subjects were asked to rank order six statements corresponding to the six types of achievement orientation as to their relative importance to the subject in selecting a job (see Appendix A).

Procedure

The experimenter handed out the booklets to each subject in order to insure that males and females received the appropriate booklets. The experimenter introduced herself to the group and thanked the subjects for their participation. She briefly explained the nature of the experiment and asked subjects to sign a consent form indicating their knowledge of their freedom to discontinue at any point. Subjects were asked to complete the first page of the booklet and to wait before turning to the other pages.

The experimenter read the following instructions adapted from McClelland, Atkinson, Clark, and Lowell (1958, p. 837) and subjects were allowed four minutes to write each story.

> Your booklet contains a series of six paragraphs describing more or less common situations. Try to imagine a story about each situation. You know, what led up to this, what the people are thinking and feeling, and what they will do.
>
> In other words, write as complete a story as

reminding them of the task instructions. The task was resumed immediately thereafter.

Instructions for completing the two questionnaires were presented in each booklet. Subjects were asked to read the instructions to themselves and complete the questionnaires at their own pace. After completing the booklet, the subjects were thanked for their participation and dismissed. Interested subjects were encouraged to remain after completing the questionnaires for a discussion of the hypotheses of the study and the measures used.

Data Scoring

Scoring achievement stories. The scorer completed the scoring instructions presented in the Manual for the Achievement Motive presented by McClelland, Atkinson, Clark & Lowell (1958, pp. 179-203, 693-735). The scorer achieved a mean rank order correlation of .91 and a mean percentage agreement on the presence of achievement imagery of .92 with the expert scorer over three sets of 30 stories.

Stories were coded to preserve subject identity and recorded such that all of the stories of each TAT lead were scored together in order to maximize homogeneity of scoring practices within each orientation. Score-rescore reliability was computed for time intervals of at least

you can---a story with a plot and characters. You will have four minutes to write each story. Write your first impressions and work rapidly. I will keep time and tell you when you have one more minute and when it is time to go on to the next one. Please do not go on to the next story until I tell you.

There are no right and wrong stories, so you may feel free to write whatever story is suggested to you by the situations you are given. Spelling, punctuation and grammar are not important. What is important is to write out as fully and as quickly as possible the story that comes to mind as you imagine what is going on in each situation.

You can use the back of the page if there is not enough room on the front. You will notice that on each page the following three questions are written out to remind you of what kinds of things to include in each story:

(1) What led up to this situation? That is, what has happened in the past?
(2) What is being thought? What is wanted? By whom?
(3) What will happen? What will be done?

Questions? OK. Turn to the first page of your booklet and begin.

Atkinson (1958) suggests that in contrast to clinical uses of the TAT, utilizing greater than four cues reduces the reliability of achievement scores. Thus, in addition to randomizing the order of presentation of the six cues, subjects were given several minutes rest between the 3rd and 4th stories in order to minimize fatigue. In order to maintain task orientation and prevent communication between subjects about the stories, the experimenter commanded the attention of the subjects by informally

one week for 30 stories of the six story leads. The mean score-rescore rank order correlation over the six orientations was .86 and the mean score-rescore percentage agreement on the presence of achievement imagery was .90.

Manhardt factor scores. Three factor scores were determined for each subject by the simple addition of the importance ratings given by the subject to the items comprising each of the factors in Manhardt (1972). Thus, the factor labeled Long Term was composed of the importance ratings of five items, Work environment was comprised of six items, and the Intrinsic factor was comprised of eight items.

Statistical Analysis

In order to assess the degree of relationship between the two measures of achievement orientation and between each of these measures and the job reward values orientation measure, canonical correlation analyses were performed. Canonical correlation is like multiple regression analysis except that the canonical correlation represents the correlation between two linear composites formed from two sets of variables. The canonical correlation squared, then represents an estimate of the shared variance of the two composites. Several successive correlations can be performed with new composites to test the significance

of successive sources of variance (Kerlinger & Pedhauzur 1973). This type of analysis is used when there is reason to believe that a common construct underlies the variances of two sets of measures and, therefore, it appeared to be particularly suited to test the major hypothesis of the study. The canonical correlations performed on these data assessed in turn the overall relationships between the objective and projective measure of achievement/orientation, the projective measure of achievement orientation and the job reward values orientation questionnaire, and the objective measure of achievement orientation and the job reward values orientation questionnaire.

The relationship between specific achievement orientations and job reward values orientations as hypothesized were assessed by Pearson product moment correlation analysis. This analysis was performed for both the objective and projective measures of achievement orientation.

Further, the data obtained with the projective measure of achievement orientation was compared with that of Depner (1975) using her strategy of analysis. Each individual orientation score was correlated with the sum of the scores of the remaining five orientation scores. High correlations were assumed to represent a congruence or construct similarity between the individual orientations and the total score while low correlations were

assumed to indicate a distinctive type of achievement orientation. Thus, evidence for the multi-dimensional construct was obtained by the low correlations.

Finally, the results of the job reward values orientation questionnaire was compared with the results of Manhardt (1972, 1979) and Bartol (1976) who found persistent sex differences on the Long term factor and the Work environment and Interpersonal relationships. The effect of age, class and occupational decision (future occupation decided or not decided) were also assessed.

CHAPTER IV

RESULTS

Tests of the Hypotheses

The data lend no support to the first hypothesis that scores on the projective measures of achievement orientation are related to the three job reward factors. None of the canonical correlations between the projective achievement measure and the job reward measure are significantly greater than chance (see Table 2).

TABLE 2

JOB REWARD AND PROJECTIVE ACHIEVEMENT ORIENTATION: CANONICAL CORRELATIONS

Canonical Variable	Canonical Correlation	Chi-Square	df	p
1	.308	25.83	18	.10
2	.240	12.54	10	.25
3	.185	4.64	14	.32

The hypotheses specifying the relationships between specific achievement orientations and the importance of specific job values orientations (that is, H 1: Autonomy achievement is related to Intrinsic job factors, H 2: Social Approval achievement is related to Work Environment job factors, and H 3: Power achievement is related to Long term job factors) are not supported by the data.

Table 3 shows that the Pearson product moment correlations between Autonomy achievement and the importance of the Intrinsic factor, as well as that between Social Approval achievement and Work Environment are not significantly greater than chance ($r = -.02$; $r = .125$, respectively). The correlation between Power achievement and the importance of the Long term factor is slightly larger ($r = .160$, $p < .059$).

TABLE 3

JOB REWARD AND PROJECTIVE ACHIEVEMENT ORIENTATIONS: PEARSON PRODUCT MOMENT CORRELATION COEFFICIENTS

Autonomy X Intrinsic	$r = -.02$	$p = .81$
Social Approval X Work Environment	$r = .13$	$p = .14$
Power X Long term	$r = .16$	$p = .059$

Finally, the canonical correlations between the projective and objective measures of achievement-orientation are not significant indicating that the two sets of variables are not strongly related (see Table 4).

TABLE 4

OBJECTIVE AND PROJECTIVE ORIENTATION:
CANONICAL CORRELATIONS

Canonical Variable	Canonical Correlation	Chi-Square	df	p
1	.29	27.20	36	.85
2	.24	15.54	25	.92
3	.19	7.87	16	.95
4	.15	2.98	9	.96
5	.03	.122	4	.99
6	.01	.001	1	.94

Job Reward Values Orientation

In this sample, males and females do not differ significantly in the ratings given to the Long term factor ($t = .82$; $p = .41$). However, the small difference between the mean ratings of males and females on the Work Environment factor is significantly greater than chance (females $\overline{X} = 22.78$, males $\overline{X} = 21.47$; $t = -2.51$, $p < .01$) as is the somewhat greater difference on the Intrinsic factor (females $\overline{X} = 34.03$, males $\overline{X} = 32.47$, $t = -2.65$; $p = .009$) (see Table 5).

TABLE 5

SEX DIFFERENCES IN JOB REWARD VALUE ORIENTATIONS

	Males N = 64 Mean	Females N = 76 Mean	t	df	p
Long term	17.83	17.33	.82	138	n.s.
Work Environment	21.47	22.78	-2.5	138	$p < .02$
Intrinsic	32.47	34.03	-2.65	138	$p < .01$

Achievement Orientation-Projective Measure

The analyses of Depner (1975) and Depner and Veroff (1979) were used in this study to determine the relationship of each of the achievement orientations to the total achievement score. Low, nonsignificant correlations indicate an orientation distinct from generalized achievement motivation, the total score. As shown in Table 6, the correlations ranged from .05 to .26 between the achievement scores and the total scores. Three of the six correlations are significant, those of Autonomy, Competition, and Effectance and these three orientations are significantly correlated with each other (see Appendix B). There appears to be no evidence to support a distinction between process and impact orientations or socially-appraised and internally-appraised orientations in this sample. A chi-square for the significance of the correlation matrix of the six achievement orientations was

significant (X^2 = 26.36, df = 15, p < .05).

TABLE 6

PROJECTIVE ACHIEVEMENT ORIENTATION SUBSCORES WITH THE SUM OF REMAINING ORIENTATION SCORES: PEARSON PRODUCT MOMENT CORRELATION COEFFICIENT*+

	Autonomy	Power	Competition	Social Approval	Mastery	Effectance
Sum of other 5 orientation scores	.26 p = .002	.13 n.s.	.20 p = .02	.09 n.s.	.05 n.s.	.23 p = .006

* To obtain each correlation, the scores for each orientation were correlated with the score obtained by summing the other five orientation scores.

+ See Appendix B for complete correlation table.

As in the Depner (1975) sample, there are significant sex differences in achievement scores, R = .46, p < .0001), largely accounted for by the Autonomy scores of males. Males scored lower on the Autonomy orientation than females (males $\bar{X}$ = .65, females $\bar{X}$ = 2.566; t = -5.58, p < .0001).

Achievement Orientation-Objective Measure

Although there is no support for the hypothesis that the objective rankings of achievement orientation preferences are a measure of achievement orientation as assessed in the projective measure (see Table 7), the overall

relationship between the objective measure of achievement orientation and the Job Reward Values Orientation was explored in the same way as the relationship using the projective measure. This analysis revealed two significant correlations between the measures (Canonical Variable 1 R = .45, p = .0001, canonical variable 2 R = .419, p = .002) (see Table 7). The correlations between the variables of the variable sets and the canonical variables (Table 8) show that the first correlation appears to be largely composed of the importance of the Intrinsic factor on one side and the importance of Effectance and lack of importance of Competition on the other. The second significant correlation appears to be primarily composed of the Long term factor on one side and the greater importance of Autonomy, Power, and Social Approval and the lesser importance of Effectance and Mastery on the other side.

TABLE 7

JOB REWARD VALUES AND THE OBJECTIVE MEASURE OF ACHIEVEMENT ORIENTATION: CANONICAL CORRELATIONS

Canonical Variable	Canonical Correlation	Chi-square	df	p
1	.46	58.61	18	.0001
2	.42	27.22	10	.002
3	.11	1.55	1	.81

Pearson product moment correlations testing the specific hypotheses revealed significant correlations between the importance of Autonomy and the Intrinsic factor ($r = -.21$, $p < .01$) and Power and the Long term factor ($r = -.19$, $p < .02$). The correlation between Social Approval and the Work Environment factors is not significantly greater than chance (see Table 9).

TABLE 8

VARIABLES OF VARIABLE SETS I AND II WITH THE RESPECTIVE CANONICAL VARIABLES: CORRELATION COEFFICIENTS*

		1	2	3
Variable Set I *	Autonomy	-.33	-.46	.45
	Power	-.06	-.43	-.79
	Social Approval	.12	-.45	.09
	Competition	.84	.31	-.05
	Effectance	-.72	.46	-.03
	Mastery	-.04	.47	-.05
Variable Set II	Long term	-.11	.89	.45
	Work Environment	.21	-.29	.93
	Intrinsic	.94	.35	.02

* For Variable Set I, higher values mean lesser importance rating.

TABLE 9

JOB REWARD AND OBJECTIVE ACHIEVEMENT ORIENTATION: PEARSON PRODUCT MOMENT CORRELATION COEFFICIENTS

Autonomy X Intrinsic	r = -.21	p = .01
Social Approval X Work Environment	r = .07	p = .38
Power X Long term	r = -.19	p = .02

CHAPTER V

DISCUSSION

The general purposes of this study were three-fold. First, the Veroff model of achievement orientation was investigated in order to determine whether or not the Depner (1975) findings in support of the multi-dimensional model could be repeated. Secondly, support for the construct validity of the Veroff model was sought by comparing the specific achievement orientations with specific job reward values orientations. Finally, a simple objective measure corresponding to the projective achievement orientation measure was devised and compared with the job reward values orientations in the same manner as the projective measure.

The findings of this study utilizing the projective achievement orientations measure were disappointingly unsupportive of the predictions. Though evidence was found in support of separate dimensions of achievement orientation, the results were not consistent with the findings of Depner (1975). In this sample, Competition, Mastery and Effectance were significantly related to each other and to the total score. No other orientations were significantly related. In contrast, Depner (1975) reported that "Competition was related to the total score for both sexes ($p < .01$ for women, $p < .05$ for men). Social

Approval and Power orientations are related to the total score among women ($p < .05$, $p < .01$, respectively). This relationship is strong but not significant among men. Intrinsically appraised dimensions, such as Autonomy and Effectance are not related to the total score. It appears that these dimensions are better measures specifically" (Depner 1975, p. 19). Also the significant chi-square of the correlation matrix indicated that the achievement scores of the six orientations are related to each other.

This study also failed to find evidence of the predicted relationships between achievement orientation as measured by the TAT and job reward values orientations. A number of possible explanations of the failure of this study to support these predictions, as well as to replicate the Depner (1975) findings, will be explored.

A cursory examination of the mean scores on each of the achievement orientation stories found in Depner (1975) and here (see Appendix C) shows that the mean scores of this sample were considerably lower than those of the Depner sample. This difference may have occurred for one of two reasons, scoring error or sampling differences. First, systematic differences in scoring the achievement stories of the two samples or systematic errors on the part of the scorer here or the scorers in Depner (1975) may have resulted in higher mean scores in Depner (1975).

The scores in the two studies may have differed systematically, however since all scorers were trained in the Atkinson-McClelland method utilizing the same scoring criteria, and all achieved adequate reliability this hypothesis is unlikely. Also, the patterns of rankings of the scores of males and females of both samples are similar. In both samples, males score significantly lower than females on the Autonomy orientation, and in both samples this orientation has the lowest on Effectance and all other scores closely fallow. This suggests that the samples are similar in their patterns of scores.

Secondly, if the overall differences in mean scores are not due to discrepancies in scoring practices, the samples must differ in the extent of their achievement motivation as measured by the projective test. A myriad of differences in the characteristics of the student populations may be named as the cause; however several important differences will be discussed here. First, the five intervening years between this and the Depner study most certainly have brought changes in the outlook of college students towards achievement and the future. An obvious issue affecting students' point of view toward achievement is that of women's rights. The "fear of success" literature has demonstrated how quickly this

social movement has brought changes in the outlook of both men and women, in most cases, broadening their view of their achievement opportunities. A greater and more pressing influence on the achievement motivation of college students may have to do with changes in the political-economic climate between the early 70's and early 80's in the United States. Students may sense a greater restrictiveness in the spectrum of available opportunities, a shift away from the idealism of the late 60's and early 70's, and they may be taking a new look at more practical, concrete goals. The subjects of the 80's may demonstrate less concern with achievement than with "bread and butter" issues.

The Depner (1975) sample was taken from undergraduate students at the University of Michigan. Perhaps University of North Dakota students are less motivated to achieve than are students from the University of Michigan. Though it may be expected that students will differ in their achievement orientation, it seems unlikely that they would differ to this extent in overall motivation.

The differences between the overall scores of this sample and the Depner (1975) sample may be due to scoring errors or to differences in the University populations. However, the unreliability of the correlations of individual orientations and the total score as well as the low correlations between the achievement orientation measure

and the job reward value orientations, pose serious problems for the Veroff model or the Veroff measure as generally applicable. If the model applies to subjects in the lower ranges of achievement motivation as well as in the upper ranges, then revisions of the model and/or projective measure of achievement orientation must be considered.

The adequacy of the projective measure of achievement orientation may be questioned on several grounds. First, the reliability and construct validity of the TAT measure have been found to be insufficient in several studies. Mitchell (1961) found that the TAT measure was unrelated to a measure of performance and that it loaded most on an error factor. Weinstein (1969) investigated the test-retest reliability of three projective measures of achievement motivation, the French Test of Insight, Doodles, and the TAT. As reported above, the average correlation among these measures was .04 and the correlation between odd and even numbered TAT stories was .27. They conclude that the "lack of relationship (between projective measures) coupled with the low reliability values necessarily limits the ability of these measures to predict behavior" (Weinstein 1969, p. 168). Mitchell (1961) suggests that some projective measures may actually measure wish-fulfillment fantasies rather than motivation resulting in effortful action towards an achievement goal.

Another problem with the projective measure concerns the way in which the particular orientations are differentiated. Instead of using the pictorial TAT, Veroff and Depner designed verbal TATs, a technique which became widely utilized in the literature of sex differences in achievement motivation. The story leads were created to represent achievement concerns of each of the six orientations. The problem with this technique is that there is no way of knowing the ways, other than achievement orientation, in which the stories differ. The achievement situations range from repairing an automobile or fixing a dress pattern to finding a cure for cancer. Clearly, some situations may be more attractive generally than others; some situations may elicit "wish fulfillment fantasies" while others may elicit motivation towards realistic goals.

The questionable meaning of differences in the projective measure is best illustrated by the Autonomy Orientation. Depner (1975) found this orientation to result in some of the most interesting findings. It did not appear to be highly related to the total score, indicating that the scores on this orientation represent something other than generalized motivation, and males scored significantly lower in this orientation than females. The latter finding was supported in this study. However, these differences are only important if we can be reason-

ably sure that subjects are responding with their preferences with regard to autonomy and not sewing or car repairs which were the actual story settings. The results of the objective measure may shed some light on this issue. If the results of the projective measure are true reflections of achievement orientation, then one would expect on the objective measure, males to rank autonomy as less important than the other achievement orientations and as less important than do females. The actual results of the objective measure proved to be contrary to both of these predictions. Males rank autonomy as slightly more important than do females (males rank $\overline{X}$ = 2.71, females rank $\overline{X}$ = 3.01) and not considerably less important than other orientations. Therefore, alternative explanations for the findings of the Autonomy orientation and the projective achievement orientation measure generally cannot be ruled out.

In summary, the results using the projective measure of achievement orientation proved to be disappointing in the study reported here. They did not support the earlier findings of Depner and Veroff and they failed to support predictions of a relationship between achievement orientation and job reward values orientation. Further, there was no significant relationship between the projective achievement measure and the objective measure designed for this study. In the attempt to determine whether these

results were primarily due to inadequacies of the model or of the measure, results using the objective measure were considered.

The objective measure of achievement orientation was meant to be a very simple and quick measure of the relative importance of each of the six achievement orientations. Statements were written to be direct and obvious definitions of the six achievement orientations and an attempt was made to insure that subtle biases were not introduced in favor of or against particular orientations. In contrast to the projective technique, the objective measure elicited directly subjects' conscious inclinations. It was hoped that this measure would be a direct test of Veroff's model of achievement orientation.

Overall, the objective measure proved to be significantly related to the job values measure, indicating that subjects' ranking of their preferences in achievement situations is related to their preference in job rewards. The canonical correlation showed that the two measures are related in two ways. First, the importance of Effectance orientation and lack of importance of Competitive Achievement is related to the Intrinsic job factor; that is, non-competitive people who are concerned with learning for its own sake will find job satisfaction in the intrinsic aspects of a job. Secondly, the importance of Autonomy, Power, Social Approval and lack of importance of Effect-

ance and Mastery are related to the Long term factor. People who are interested in Long term job characteristics like opportunity for advancement, responsibility, and high income, are oriented towards achievement situations that emphasize independence, control over others, and responsibility to others and that downplay learning for its own sake and learning to have an impact on the world.

This suggests two general orientations toward achievement in a job or career. The first involves a primary concern with the type of work. In this orientation, job satisfaction comes from enjoying the particular tasks, learning new skills, and having variety in the types of tasks performed. The second orientation involves a primary concern with getting ahead in whatever organization one is involved in. Here, the particular tasks, either in terms of their enjoyableness, or importance, is of least concern; rather the level of responsibility, status, and power within any organization is the key to job satisfaction.

Two of the three specific hypotheses were supported by the data. That is, Autonomy achievement is significantly related to the Intrinsic job factor and the Power achievement orientation is significantly related to the Long term job factor. Contrary to predictions the Social Approval orientation was not significantly related to the

Work Environment job factor.

The results utilizing the Manhardt measure of job reward values orientation was generally supportive of the results of past studies: that is, the items of the Intrinsic factor received the highest mean ranking in this as in other studies using this measure. Females rated this and the Work Environment higher than did males. There was no difference in the scores of males and females in the Long term factor.

In all, the findings lend some support to the Veroff model of achievement orientation as assessed by the objective measure. There do appear to be several distinct orientations to achievement motivation and these achievement orientations are related to the importance of job characteristics. However, this study did not address the appropriateness of Veroff's categorization. These results do suggest that further investigation of the Veroff model could be profitable. A possible investigation of this type would subject the scores of several items corresponding to each of the categories to factor analysis with the aim of validating the process-impact distinction and the standard of excellence distinction.

APPENDICES

APPENDIX A

Objective Measure of Achievement Orientation

Objective Measure of Achievement Orientation

Please rate the following characteristics as to their relative importance to you in selecting a job. That is, mark 1 next to the job characteristic which is most important to you, 2 next to the one which is next most important to you and so on until you mark 6 next to the one which is least important to you. There are no right and wrong choices. All of the items are important, but people differ in the order in which they rank them. Please put them in the order in which you value them not the way you believe that others think.

_____ Opportunity to work on your own - allows independence.

_____ Opportunity to direct the work of others.

_____ Opportunity to take high responsibility in your work.

_____ Opportunity to show your worth in comparison with others.

_____ Opportunity to learn new skills.

_____ Opportunity to have an impact on the world by the work you do.

APPENDIX B

Projective Achievement Orientation Correlation Coefficients

Table 10

Projective Achievement Orientation Correlation Coefficients

	Total Score	Autonomy	Power	Competition	Social Approval	Mastery	Effectance
Autonomy	.26 p=.002	1.0					
Power	.13 n.s.	.066 n.s.	1.0				
Competition	.20 p=.02	.17 p=.05	.129 n.s.	1.0			
Social Approval	.09 n.s.	.123 n.s.	.09 n.s.	.02 n.s.	1.0		
Mastery	.05 n.s.	.036 n.s.	-.009 n.s.	-.029 n.s.	.027 n.s.	1.0	
Effectance	.23 p=.006	.258 p=.003	.089 n.s.	.204 p=.02	-.05 n.s.	.105 n.s.	1.0

APPENDIX C

Comparison of Means of Depner (1975) and Sikorsky

Table 11

Comparison of Means of Depner (1975) and Sikorsky

Variable	Sex	Depner Mean and Standard Deviation		Sikorsky Mean and Standard Deviation	
Autonomy	Male	2.55	1.47	.63	1.78
	Female	4.66	2.21	2.57	2.33
Power	Male	3.95	2.15	2.61	2.04
	Female	4.57	2.18	2.81	2.09
Social Approval	Male	4.86	1.61	2.23	2.17
	Female	4.95	1.87	2.54	2.32
Competition	Male	5.59	1.99	2.5	1.77
	Female	4.97	1.73	2.22	1.88
Mastery	Male	6.14	1.73	2.59	2.0
	Female	6.05	1.54	2.41	1.91
Effectance	Male	3.41	2.20	1.17	1.90
	Female	3.26	1.80	1.42	1.88

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