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AN EMPIRICAL INVESTIGATION
OF AN EXPANDED FORMULATION OF
THE MOTIVE TO AVOID SUCCESS IN FEMALES

by

MARILYN A. PUDER

A dissertation submitted to the Graduate
Faculty in Psychology in partial fulfillment
of the requirement for the degree of Doctor
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This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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Chapter I

INTRODUCTION

This peculiar abnegation of self is the resource of a woman for escaping the responsibilities of her own development. Like a nun, she puts over her living face a veil as a sign that the woman no longer exists for herself. She is the servant of God, of some man, of her children, or maybe of some good cause. As a servant, she is no longer responsible for herself which would make her terrified and lonely. To be responsible for the good progress of one's life is terrifying.

D.H. Lawrence (The White Peacock)

It appears that at present we are in the midst of a wave of the feminist movement that is concerned with far greater and more basic changes in the "status quo" of women than ever before, especially in the direction of career orientation. Women and some men are today apparently trying to find viable, productive, and satisfying alternatives to the stifling sexual stereotypes of the past. Many woman want to re-examine themselves as human beings, asking "Who am I?", "Can I be more?", and searching for broader horizons and clearer directions for their own lives and their children's lives.

This growing dissatisfaction with traditional female sex-role stereotypes seems to have been fortified by the Women's Liberation Movement and its various organized pressure groups, which in its direct and indirect efforts and challenges has stimulated overt changes in our contemporary American society. The women's issue at present has been widely popularized by the media and it appears that as a result of both the challenges from the pressure groups and the popularity of the issue, there has been recent legislation aimed at guaranteeing women a larger share of places at the top and an apparent removal of "external barriers". There have been impressive gains in the women's movement demonstrating that feminism is not a fad but a strong and enduring social force. For example, the membership of the National Organization for Women, the largest feminist group, has grown from 12,000 in 1972 to a present 55,000. In addition, there has been a significant increase in the numbers of women entering into politics, the business world, and the professions, like law and medicine. For example, at Stanford's Graduate School of Business, 60 of the 310 students in the 1975 entering class were women, up from 21 out of 294 in 1972. The number of women in the nation's law schools has climbed from 3.6% of the total enrollment in 1960 to 9.3% in 1971 to a high in 1974 of 20%. In 1974 nearly 25% of the nation's incoming medical school students were women, up from 13% in 1972 (Time, May 26, 1975).

Yet despite this obvious progress, the world has not changed that radically, contrary to the beliefs of many. Even though women constitute over 50% of the population of the United States, they do not at present hold a proportionate number of positions of high power and prestige. Most working women are still holding low-skilled jobs. Although in the professional and technical jobs, 38% are held by women in the United States, they are disproportionately represented in the traditionally oriented female sex-role appropriate occupations, in which discrimination against women has never been an issue. For example, 97% of all dieticians, 85% of all elementary school teachers, 70% of all health technicians are women. In contrast, 2% of engineers, 5-7% of the attorneys, and 9% of the physicians in this country are women (U.S. Department of Commerce, 1974). In fact, only 11 out of 731 tenured faculty members of Harvard are women (Schwartz, 1974). Research indicates that women in doctoral programs of various disciplines have a significantly higher drop-out rate than do men (Austin, 1969; Epstein, 1973).

Although it may be socially desirable now to express more liberated attitudes, as yet the jump between attitudes and associated behavior has not been a completely smooth one. Perhaps not enough time has passed nor enough obstacles overcome to permit a jump between changed attitudes and truly dramatic changes in associated behavior.

Within the field of psychology, 1975 marked the inaugural of the American Psychological Association's Division on the psychology of women, defining itself as dedicated to research on women, with a membership of more than 800 (Mednick & Weissman, 1975). The research on many of the aspects of the female experience is accelerating at a rapid rate and the problem areas and questions raised touch on almost every theoretical, methodological, and practical domain of psychology. The common thread throughout most of the research appears to be a questioning of age-old assumptions about sex-roles, sex identity, achievement motivation, career development, and the theory and practice of psychotherapy.

While the differential achievement of men and women has long been of interest of some researchers, recently this interest has been heightened in response to the renewed scholarly and popular attention to women's ability to achieve in general. The inability of women to attain work status comparable to that of men has in much of the literature on women been frequently attributed to the more sociological and economic determinants, such as discrimination by employers, lack of enough day-care centers, male chauvinism, profits made by capitalistic businessmen in keeping women at low level jobs or at home, and the arrival of the worst economic downturn since the 1930s (Bergmann, 1974; Epstein, 1973).

Recent research has indicated that in addition to these more sociological determinants, there are psychological determinants; that is, internal variables among women that may serve to sabotage any real overt behavioral changes in sex-role (Goldberg, 1968; Horner, 1968).

In one line of inquiry devoted to the examination of the blockages of the achievement motive in women, Horner (1968) proposed an ingenious explanation for women's failure to achieve high level goals; that is, "a stable enduring personality characteristic" conceived as the motive to avoid success (MAS). Horner states that the arousal of this motive may very well account for a major part of the withdrawal of so many trained American women from the mainstream of thought and achievement (1970, p. 70). According to her theory, MAS is aroused and inhibits performance in achievement situations in which there is anxiety over competitiveness and its aggressive "masculine" overtones. She asserts that bright women are caught in a "double-bind" in which success in achievement means failure in femininity and therefore social rejection by men. According to her "aggression hypothesis" of MAS, the primary behavior manifestation is expressed as an inhibition in the performance of women specifically in achievement situations in which there is direct competition against men.

In another line of inquiry is the suggestion by Goldberg (1968) that women themselves do not really unite to fight discrimination, but

"covertly" cooperate in their own oppression. Goldberg found that women tended themselves to differentially evaluate the work of other women, to the point of devaluing the intellectual and professional competence of other women more than the identical work done by men. He attributed this differential evaluation to antifeminism in women, comparable in dynamics to self-prejudices of other out groups.

Since their initial formulation, numerous studies have attempted to replicate and/or extend Horner's and Goldberg's original findings respectively and generally the evidence in the two lines of inquiry point out that the two respective hypotheses are too limited to adequately describe the data.

In an attempt to broaden the two above hypotheses and based upon extensive integration of empirical and theoretical evidence, Porjesz (1974) introduced an expanded theory of MAS, which has as its focus, an expanded concept of MAS in two directions. She expands it horizontally to show that MAS is a non-situational fear of independence and responsibility not only behaviorally manifested in face-to-face competitive situations with men but also in a wider range of achievement-related situations. Vertically, she expands the understanding of MAS dynamically and developmentally with specific focus on the mother-daughter relationship during the critical periods of the daughter's development of autonomy.

Rather than view MAS as a fear of aggression which gets manifested in specific competitive settings, she views it as being a more generalized, non-situational fear of independence and responsibility, with the underlying anxiety associated with loss of love and security. Rather than contradict Horner, she attempts to expand her formulation to explain achievement-related attitudes and behaviors among females in a broad spectrum of situations, not limited to those with competitive overtones, or those in which men are necessarily present. For example, this tendency for women to devalue the achievement efforts of other women found by Goldberg, is interpreted by her as a manifestation of the motive to avoid success. Rather than conceive of this tendency to devalue as merely a function of attitudes and beliefs as hypothesized by Goldberg, she posits that it reflects an underlying MAS conflict expressed behaviorally.

The present thesis makes no attempt to deal with all the complex issues and problem areas in the research on the psychology of women. Rather, the major purpose is to test the broadened expansion of MAS, as derived from Porjesz's expanded theory, and to bring her formulations that were explored and described in a clinical setting back into an empirical setting. The confirmation of the hypotheses that MAS is related to the tendency among some women to devalue the achievement competence of other women would provide empirical support for an expanded and broader concept of MAS. It is expected that high MAS

women would show this tendency more than low MAS women.

The secondary purpose is to test the developmental expansion of MAS, as derived from Porjesz's theory, which predicts that low MAS women would be more likely to have mothers who worked outside the home than high MAS women.

Chapter II

HORNER'S INITIAL CONTRIBUTION TO THE THEORY OF THE MOTIVE TO AVOID SUCCESS

Historical Background to Horner's Theory

Achievement motivation research was given its initial impetus by Murray (1938) and later through the work of McClelland, Atkinson, et al. (1953), in which the characteristics of achievement motivation were explored toward the broader goal of constructing a theory of human motivation.

The theory of achievement motivation is based upon the Expectancy-Value Theory of Motivation (Atkinson & Feather, 1966). They defined motives as stable predispositions to action that we learn early in life. An adult's motives interact with the incentives of a particular goal, to give the goal a value. The expectancies of reaching that goal in turn interact with the value, resulting in a tendency to act to get the goal.

Researchers in this area isolated two motives, the motive to approach success (Ms) and the motive to avoid failure (M-f) and these were found to determine achievement motivation level and reliably

predict subsequent achievement performance in males, but not for females. For females the results were inconsistent and the predominantly male psychologists concluded that women must have a motive to approach failure (Mf).

Horner, dissatisfied with this existing theoretical understanding of the achievement motivation of women, introduced a new motive based upon the work of Freud (1930, 1936, 1950, 1965) and Mead (1949) and the observation of significantly higher test anxiety for women, to explain the contradictory findings of women in achievement situations. She hypothesized that the operation of achievement motivation in women is confounded by the presence of an inhibitory motive; the motive to avoid success (MAS), or sometimes called the fear of success.

The theoretical construct of MAS as conceived by Horner (1968) is inextricably tied to the expectancy-value theory of motivation. Within this theory, motivation and goal directed tendencies may be either approach or avoidance in nature depending on whether the expected consequences of engaging in an activity in a particular situation are positive or negative. Any avoidance motivation (anxiety) that is generated by the expectation of negative consequences in any one situation will inhibit the expression or manifestations of any positive motivation toward the goal that is simultaneously aroused in that

situation. Hence once aroused, MAS inhibits positive achievement motivation.

Horner's Theoretical Postulations

She postulated specifically that MAS, a psychological barrier inhibiting successful achievement, results from the expectancy held by bright women that success in competitive achievement situations will be followed by negative consequences, particularly loss of femininity and social rejection by men. Dynamically she conceives of MAS as reflecting an underlying conflict between the wish to achieve and a fear of competitiveness and its aggressive (and by implication masculine) overtones. She views the motive as being aroused as an unconscious defense against situational anxiety associated with underlying aggressive impulses. Horner views aggression as the major component of the "masculine sex-role stereotype" and she conceives of the "aggressive" overtones within the competitive achievement situations as the significant ingredients that trigger this achievement conflict. Although she does not define "aggression," the reader is inferring that it relates to the male associated trait of assertiveness.

Whereas for most men success in competitive achievement activity is consistent with masculinity and self-esteem, women often pay a price when they succeed, especially in pursuits that are commonly held to be the province of the male and where some degree of

aggression may be the prerequisites for success. For women, competitiveness often has these overtones of aggression and masculinity and success by women in competition with males may be taken as evidence of lack of femininity and it may lead to disapproval, an unfortunate outcome since much of the evidence suggests that women depend upon the approval and esteem of others significantly more than men (Bardwick, 1971).

Horner carefully informs the reader that the construct is not conceived as a sex-linked trait by biological necessity, the sex differences predicted are considered a function of sociocultural conditioning. In terms of causal antecedents of the motive, she attributes its appearance to the clash between societal sex-role stereotypes which consider successful achievement motivation masculine, and the female's high level of achievement motivation and intellectual capacity. She therefore attributes MAS primarily to societal causes and considers it "an internalized feminine sex-role stereotype" (1972) and has limited her focus to the examination of the influence of external social factors affecting its occurrence.

Horner makes clear that only women with high ability and achievement motivation can be affected by this motive. In order to expect negative consequences in a situation because of success, the essential element for arousing MAS, one must first realistically expect success as a function of high levels of ability. Clearly, if

you neither want nor can attain success, the expectancy of negative consequences because of success would scarcely be a salient concern.

Horner also makes clear that MAS should not be conceived as synonymous with the will to fail. In the expectancy-value theory, a will to fail would be a positive motive toward failure guided by the expectancy that positive consequences would result from failure. This is not the same either theoretically or functionally as MAS. The presence of MAS, when aroused, inhibits the performance of subjects otherwise positively motivated for success because they expect negative consequences to follow the expected success.

In summary then, MAS is conceptualized as an underlying fear of aggression and it is believed by Horner to inhibit the performance of women specifically in achievement situations in which there is direct competition against men.

Traditional Psychoanalytic Influences on Horner's Theory of MAS

Horner conceives of MAS as reflecting a conflict over aggression, to her, the major component of the masculine stereotype. It appears that Horner's basic dynamic hypothesis can be viewed as an outgrowth of the traditional psychoanalytic formation of feminine and masculine social characters based on the nature of their sexual structure (Freud, 1950, 1965).

Both the Freudian notion of women's sexuality and formation of feminine social character are based on the presumptive passivity (non-aggressiveness) of women in the sex act. The social role is an elaboration of the cluster of traits which define the essential feminism (Laws, 1970): submissiveness, dependency, docility, masochism, narcissism, and non-aggressiveness. Freud conceptualized the dominant motive as "penis envy," all masculine strivings represents a woman's attempt to compensate for lack of the active and aggressive organ. In his formulation, the proper resolution of this complex is for the woman to bear a male child as a means to satisfy her life-long wish for an infantile penis.

It would be beyond the scope of this paper to present a detailed review and investigation of this traditional psychoanalytic theory of women. What is important for the present study are the implications of this theory in relation to Horner's theory of MAS. Her aggression hypothesis appears to be an outgrowth of the Freudian emphasis on instinctual conflicts and its relation to social roles.

Over time there have been shifts within the psychoanalytic movement toward an emphasis on the personal ego in object relations; where the important issue surrounds autonomy, which is viewed as the natural growth process of the ego and includes basic drives toward curiosity, mastery, individuation and self-actualization, and where aggressive instincts are present but play a relative minor role (Blos,

1967; Erickson, 1960, 1959; Horney, 1937; Maslow, 1962; Mahler, 1967, 1968; White, 1959; Winnicott, 1965).

Whereas Horner's theory of MAS lies within the context of the traditional psychoanalytic theory and has as its major focus the conflict over aggression, Porjesz's expanded theory of MAS has as its theoretical framework, ego psychology, and views MAS as the conflict over autonomy. which will be amplified in the section discussing Porjesz's theory of MAS.

Horner's Measurement of the Motive to Avoid Success (MAS)

Historical Background

The use of story writing for assessing motivation began with the adaptation of procedures used in Henry Murray's Thematic Apperception Test (1938) in a study arousing properties of hunger by Atkinson and McClelland (1948). A description of this adapted technique is found in Atkinson's book (1964, p. 223).

A series of pictures which suggested food seeking or eating in varying degrees were selected from some of Murray's original set of TAT pictures and from ordinary magazines. Following a general instruction that the task was to construct interesting and imaginative stories, each picture was shown for 20 seconds and then withdrawn. The subjects were then given four minutes to write a story about the picture. The general questions that are normally given verbally in the clinical use of thematic apperception were printed at equal intervals on otherwise blank story forms to guide subjects through the plot of the story. The guiding questions

were:

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

As soon as the four minutes allotted for writing a story was up, another picture was shown . . . It produced . . . a sample of imaginative behavior, induced by certain picture cues under controlled motivation conditions.

Horner's Original Measurement

The procedure Horner used to determine the level of MAS is a modification of those described by Atkinson. Rather than using a picture cue, she devised a verbal one, "After first term finals, Anne (John) finds herself (himself) at the top of her (his) medical school class." Subjects are requested to write stories with instructions similar to the standard visual TAT, including description of the present circumstances, what led up to it, and a possible future outcome, with females responding to the Anne cue and males to the John cue.

A simple present-absent scoring system was developed in which MAS is scored as present by two independent judges if at least one of the following criteria is met in the subject's responses, and these criteria were derived in part from Scott's (1958) application of Miller's (1944) approach-avoidance paradigm to thematic reactions to threatening stimuli:

- (1) negative affect, consequences or anticipation of negative consequences because of success.
- (2) the direct expression of conflict about success.
- (3) instrumental activity away from present or future success, such as leaving the field for more traditional work, such as nursing, teaching or social work.
- (4) denial of effort and responsibility for attaining success or denial of the cue itself.
- (5) bizarre, inappropriate, unrealistic, or non-adaptive responses to the situation described in the cue.

These criteria were supplemented by more detailed descriptions of the three major groups of responses which were developed from her one sample of female college students. These descriptions and especially the examples used to illustrate them have become for many subsequent researchers additional (or the only) categories for scoring Horner's MAS. The categories are as follows:

- (1) Fear of social rejection: fear of losing one's friendship, the loss of one's datable or marriageable quality, actual isolation or loneliness as a result of the success and the desire to keep the success a secret and pretend that intelligence is not a part of her. This includes wondering or worrying about other people's reactions.
- (2) Doubts about one's normality as a woman, and guilt or despair about the success.
- (3) Denial of the cue or denying effort or responsibility for attaining the successful outcome; and bizarre stories. Two examples of denial were given by Horner (1968, p. 106) as follows:
 "Anne is really happy she's on top, though Tom is higher than she -- though that's the way it should be -- Anne doesn't mind Tom's winning . . . "

"It was luck that Anne came out on top of her med school class because she didn't want to go to med school anyway . . . " (Tresemer, 1974b)

Horner's New Measurement

Very recently in response to a wide variety of criticism concerning the limitations of the original measurement Horner and her coworkers (1973) have developed a new measurement of MAS which they propose to be a more sensitive measuring device of MAS, which will be elaborated upon in a later section dealing with the evaluation of the empirical research on MAS.

Chapter III

PORJESZ'S THEORY OF THE MOTIVE TO AVOID SUCCESS (MAS)

Introduction

Porjesz has investigated the underlying psychodynamics as well as the development of this motive with a new focus and depth that has enabled her to expand Horner's theory in two major directions. Vertically she has provided a more comprehensive understanding of the nature of the underlying conflict, associated anxiety, and environmental factors that create its presence beginning early in life, with specific focus on the mother-daughter relationship during the critical periods of early childhood and adolescence. Horizontally, she has expanded the understanding of MAS to include broader behavioral manifestations of the conflict in situation which do not have competition with men as the salient variable.

Fear of Autonomy

Porjesz proposed that MAS grows not merely from a fear of aggression, as Horner proposed, but rather from the fear of the

broader, "more meaningful" masculine associated characteristics, namely independence, autonomy, and individuality. She views autonomy as a broader component of the masculine sex-role stereotype, as the major difficulty for many females. She is not disputing Horner's aggression hypothesis, but rather expanding it; that is, aggression being seen as only one manifestation of autonomy.

Porjesz views MAS dynamically as a defense system that originally served to protect women from the underlying conflict between the wish to achieve (wish to feel independent and competent) and a fear that successful achievement would result in loss of love, security (dependency), and/or total abandonment; but with the development of the personality, it becomes a stable enduring personality characteristic. The underlying anxiety that Porjesz sees associated with MAS is conceived as more generalized and non-situational in nature; anxiety comes from the fear of autonomy and therefore situations that might trigger off the conflict become broader and more multidetermined than Horner originally proposed them to be.

In terms of causal antecedents of MAS, it is to be remembered that Horner attributes it to the clash between societal sex-role stereotypes and she limited her focus to the examination of external social variables that affect its occurrence.

In contrast, Porjesz's conceptualization is connected with a developmental formulation and has as its primary focus the

unconscious internal conflicts around autonomy fostered by the experiences of separation-individuation within the mother-daughter relationship. Her theory does not exclude the influence or importance of traditional sex-role stereotypes upon the occurrence of MAS; she does see the conflict as an autonomous ("masculine") versus affiliative ("feminine") conflict transmitted from the mother to the daughter in a variety of ways and at a variety of levels. She, rather, does not work solely from a cultural etiology; she sees it arising from internal psychological experiences in early childhood and only at a later point of development being reinforced and exacerbated by existing traditional stereotypes.

Porjesz's fear of autonomy theory is given some indirect support by Anderson (1974) who elaborates upon the sociological concept that the woman who transcends the sex-role stereotype is a social deviant (Epstein, 1973). In her attempt to explain this sociological concept psychologically, Anderson (1974), although not either utilizing or acknowledging the existence of Horner's nor Porjesz's construct of MAS, nevertheless seems to be distinguishing among women those who develop MAS from those with no conflict over success according to and in agreement with Porjesz's broader formulations. She writes (pp. 201-202):

. . . What has made it possible for these women to keep going in face of repeated painful rebuffs

and frequent negative feedback from their environment, it is their capacity to function in an emotionally autonomous way . . . the ability to function autonomously is in turn directly proportional to the extent to which the female has successfully relinquished dependent ties on parenting figures. So long as a woman is still not sure enough of herself to give up a dependent relationship and still needs positive affirmation from the environment, her ability to move ahead when facing conflict and reacted to as a deviant often is seriously curtailed. If the goals she has set up for herself brings her into conflict with the environment, she often gives up the goals in order to live her life in such a way as to get more approval and a more positive and supporting response from the environment. Such a course of action, however, often leads to stunting of her own personality development and can result in a premature closure of her personality structure.

Developmental Theory

Developmentally, Porjesz proposes that women with MAS were provided with inadequate maternal support and encouragement toward environmental exploration and independent activity and the separation of self from the mother remained incomplete. These early life experiences with the mother are conceived as the psychological determinants in determining how well a woman will be able to handle and survive psychologically the negative and conflicting experiences she will have later in her life. The development of MAS is seen to parallel the development (or lack of) of sense of mastery, competence and autonomy. Her developmental framework comes from the theoretical positions of several ego psychologists who view autonomy

as a natural growth process which includes the basic drives toward curiosity, mastery, individuation and self-actualization and a process in which aggressive impulses although present, play a relatively minor role; and who view the struggle for identity and autonomy occurring in two critical periods in early childhood and adolescence, when separation of self from the mother is a salient issue (Blos, 1967; Erickson, 1950, 1959; Horney, 1937; Mahler, 1967, 1968; Maslow, 1962; White, 1959; Winnicott, 1965).

In order to arrive at her expanded developmental formulation, Porjesz consolidated and integrated a number of research findings that studied the relationships between MAS and career orientation, as well as studies relating past and present status of maternal employment and career orientation and achievement behavior.

Mother's employment has been theorized as providing a "competency model." According to Keniston and Keniston (1964) and Vogel, et al. (1970), this model refers to the identification with the maternal model's behavior in relation to work. If the mother has positive feelings about her competence in work, the daughter, according to the model, would be more likely to accept competency in achievement. Porjesz proposes that the mother's employment provides not only a competency model, but in its inherent nature serves the critical function in the developmental process of allowing for a separation between mother and daughter. The separation paves the

way for the female's ability to "wander and explore" (Maccoby, 1966) and for ultimate psychological distance and independence and development of inner psychological resources leading to autonomous achievement motivation.

She believes that in some cases when a mother does not work, and the mother attempts, especially if she was ambitious, to gratify her own unfulfilled and frustrated achievement needs vicariously through the achievement efforts of her daughter, for the MAS female, achievement becomes associated with mutual gratification of dependency needs within the mother-daughter relationship.

She proposes that MAS develops latently throughout early life, but first overtly expresses itself in a young women's experience in college. For the non-MAS female, college, which stresses individuality, independence, and responsibility, grows naturally from her home environment. For the MAS woman these demands clash with the expectations of home life. Until this time, the close association between her need to achieve and her need for affiliation were consonant with the symbiotic nature of the mother-daughter relationship; the MAS woman was doing well academically in order to seek love and approval from her mother. In college when the object of affiliative needs shifts toward a boyfriend and marriage these two motives suddenly conflict, affiliative versus achievement results in overt expression of MAS.

According to Porjesz, for the MAS woman finding a suitable husband now becomes the primary goal for the achievement of her mother's approval. But the MAS woman still has the need to succeed academically, and therefore finds herself in an anxiety-producing double-bind. Horner sees this bind as reflecting a specific fear of aggression within the competitive achievement situation. Porjesz suggests that anxiety underlying MAS is a more basic separation anxiety, first manifested in relation to the primary object (mother) but later generalizes to all significant interpersonal relationships. This defensive system to protect herself from the basic underlying fear of abandonment and being all alone results in MAS.

Binger (1966) in an article concerned with emotional disturbances among undergraduate women, describes a particular syndrome of depression as the single most frequent encountered emotional disturbance likened to an "identity crisis," with underlying feelings of inadequacy. This is manifested in a wide range of symptoms including varying degrees of anxiety, maladjusted eating habits ranging from overeating to anorexia, acne, menstrual irregularity, loss of zest, feelings of apathy and fatigue. Although Binger does not specify the underlying dynamics of this syndrome, his examples of its occurrence are all seemingly related to the conflict Porjesz speculates between love and security (affiliative needs) and academic achievement.

. . . The depression seems to be a kind of declaration of dependence, of helplessness and a muted cry for help as well . . . (1966, p. 197)

Knight (1974) described a similar syndrome in some women who are in their second year of medical school. Several of them experience what he refers to as the "sophomore syndrome," a depression manifested in loss of interest in school, and this tends to occur the closer some of these women get to reaching their goal of becoming a professional. Although Knight, like Binger, does not utilize the MAS construct, his description of the syndrome parallels Porjesz's broadened conceptualization of MAS, existing in some bright females caught in a conflict between affiliation and achievement.

. . . The approaching requirement for greater independence and self-assertion brings to the surface unresolved dependency needs and fears of separation from those who have sustained her in a more supportive environment. While she wants opportunities to function independently, she is not yet psychologically prepared for them (1974, p. 5)

Horizontal Theory

Proposing that MAS is a more generalized personality disposition not limited to specific competitive settings, Porjesz believes that MAS may be expressed subtly in a multiplicity of behaviors throughout a woman's interpersonal and academic experiences, besides actual competitive performance.

Horner viewed the anxiety associated with MAS in women as situational in nature being aroused specifically in achievement settings involving direct competition with men. The underlying rationale for this conceptualization is that the anxiety is specifically associated with aggressive masculine overtones that exist within situations involving direct competition with men. This conceptualization is limited, according to Porjesz, because it restricts our understanding to rather artificial achievement situations not representative of the actual career world in which competition is present but of a much more subtle nature. The average woman is bombarded with samples of achievement efforts (books, magazines, etc.) in which she evaluates in reference to some standard of excellence. These everyday evaluations are subtly competitive in nature. The woman's feelings about successful achievement might indeed relate to how she evaluates them. Moreover, with new opportunities for women in the career world much of the present competition involves women against other women.

There has been a line of theoretical and empirical inquiry devoted to the examination of prejudice existing among women against the achievement efforts of other women (Baruch, 1972; Dorros & Follet, 1969; Goldberg, 1968, 1972; Mischel, 1974; Pheterson, 1969; Pheterson, et al., 1971).

Goldberg's (1968) theoretical understanding of this tendency existing among some women to devalue the intellectual and professional

competence of another woman's achievement efforts is tied to Allport's (1958) theory of prejudice; in which prejudice is defined as negative stereotyping without sufficient warrant and/or contrary to objective evidence. Antifeminism is viewed as any other prejudice; that is, the minority group of women incorporate the negative prejudicial attitudes of the dominant majority. The incorporation of the negative traits of traditional female sex-role stereotypes become a part of the female's self-concept and Goldberg views the devaluation as serving the defensive function of "identification with the aggressor." Mischel (1974) conceives of the devaluation of this sort as not only reflecting "identification with the aggressor," but also as reflecting accurate and reliable judgments and beliefs about the prevailing sex-role stereotypes that assume that women are not or should not be as intellectually or professionally as competent as men.

However, what becomes apparent is that the prejudice hypothesis (social stereotype etiology of devaluation) is just as incapable of handling the confusion and ambiguity of the research in the area as is Horner's aggression hypothesis of MAS, and not a comprehensive explanation of the phenomenon. This confusing state of affairs in the research dealing with Goldberg's and Horner's hypotheses will be amplified in a later section in which the evaluation of the research in these two respective areas are discussed.

Porjesz extends Goldberg's theory, in that while accepting the defense of identification with the aggressor as a relevant mechanism, she believes it is linked with MAS, another defense responsible for the apparent bias demonstrated against the achievement efforts of other women.

She suggests that when a woman is in the position of evaluating the achievement production of another woman, she tends to identify with the woman and any underlying fear of success would simultaneously be projected onto her. Therefore she postulates that the anxiety associated with MAS is aroused in the presence of an achievement effort by another woman via the processes of identification and projection and is reduced by the subsequent devaluation of the woman's intellectual and professional competence.

That the presence of MAS may be an important variable associated with the devaluation by some women against the achievement efforts of other women is given support in Baruch's finding (1972) that devaluers tend to have non-working mothers and non-devaluers tended to have working mothers. It has been previously postulated that the maternal work variable may be a crucial variable in differentiating among high achievement females, those with a high from those with a low degree of MAS.

According to Porjesz, this tendency to devalue is not merely a function of stereotyped attitudes and beliefs, but also in part a function

of a woman's MAS conflict expressed behaviorally.

This postulation serves the purpose of broadening Horner's original concept to include situations in which direct competition against men does not exist.

Chapter IV

EMPIRICAL STUDIES ON THE MOTIVE TO AVOID SUCCESS (MAS)

Horner's basic postulation is that MAS will inhibit the performance of women specifically in achievement situations in which there is direct competition against men. The literature shows that there may be other variables associated with MAS, other than the variable of face-to-face competition against men.

Sex and Race Differences in the Incidence of MAS

It is one of Horner's major assumptions that MAS should occur significantly more frequently among women than among men. In her original empirical study with Michigan undergraduates (1968), she administered the verbal TAT to 90 male and 88 female freshman and sophomore college students. Same sex cues were used, in that, the sex of the person depicted in the cue is of the same sex as the subject. Using same sex cues was based on the assumption that the sex of the person depicted in the cue affects the validity of the motive scores

obtained from stories written to that cue (Atkinson & Reitman, 1956; Lesser, Krawitz, & Packard, 1963).

The results for the male subjects indicated that 90% expressed a strong positive attitude toward the successful achievement of the male in the verbal cue, including confidence in his future and a feeling that achieving success would enable the fulfillment of other goals, such as general happiness in personal relationships. Only 9% of the males had responses that reflected MAS and their stories focused mainly on the man's rather unexciting personality.

The results for the female subjects indicated that as many as 65% of the women expressed strong negative feelings and attitudes toward the successful achievement of the female in the cue, including negative consequences in her future, such as social rejection by men and loss of femininity.

The high incidence of MAS in white women as found by Horner, has not only been maintained, but in fact has increased in some of the studies performed since the original 1964 research. Surprisingly, despite the growing interest in female liberation, recent data indicate that negative attitudes expressed toward successful women by white female students have increased from the 65% found in the 1964 study to a high of 88.2% of the data collected in 1970 by Horner.

Many studies have supported the high incidence of MAS among women (Alper, 1974; Gearty & Milner, 1975; Hoffman, 1974; Makosky,

1972; Patty, 1974; Schwenn, 1970).

Most, if not all of the above studies to date have examined the incidence of MAS of unmarried female students either at a college or high or junior high school level, primarily because it is an integral part of Horner's theory that MAS is involved in competitive achievement situations. According to Horner's theory, women who have already achieved the criteria of female success (e.g., establishment of marriage and a family) and who are uninvolved in achievement activity would be less apt to show fear of success imagery than female college students because they no longer have any reason to fear the consequences of success (loss of femininity).

Unger and Krooth (1974) investigated the incidence of MAS among non-working married women, and found that 84% of their sample of white, college-educated, middle- and upper-class non-working housewives manifested fear of success matching the same percentages of upper division college women who gave negative associations to the Horner MAS test (Horner, 1970). Although aware of the possibility of over-generalizing from one sample, they suggest that MAS phenomenon might be more independent of specific situational cues, such as student status than has been formerly noted and they suggest that MAS might reflect a more global phenomenon among women.

There has been support for Horner's assumption that a high incidence of MAS in white college students should occur significantly more in females than in males (Alper, 1974; Dalsimer, 1973; Jackaway, 1975; Monahan, Kuhn, Shaver, 1974).

Some recent studies, however, have not supported this assumption, yielding distributions of MAS for the two sexes which vary widely, as well as findings which show an increase in the percentages for males such that there is little significant sex differences in the incidence of MAS (Brown, Jennings, & Vanik, 1974; Burghardt, 1973; Curtis, et al., 1973; Feather & Raphaelson, 1974; Goodmonson, 1974; Hoffman, 1974; Levine & Crumrine, 1973; Morgan & Mausner, 1973; Moore, 1974; Peplau, 1974; Robison, 1974; Tresemer, 1974a).

A qualitative analysis of the content of some of these stories given by men and women reflects that, although the percentages may not be significantly different, there are reported significant sex differences in the content of the imagery assumed to indicate MAS, which reflects that the conflict might have different functional significance for the two sexes. The general finding is that social rejection and affiliative loss is the MAS theme most frequently produced by women in response to the female cue; whereas for men, devaluation of the goal and disinterest in academic success is the most frequent theme in response to male cues (Goodmonson, 1973; Hoffman, 1974; Horner, 1974; Robison, 1974; Tresemer, 1974a). What generally emerged to the medical

school cue was the ideological theme that doing well in medical school means joining the "capitalistic rat race" and forfeiting personal fulfillment. In short, the men who scored for MAS in response to the John cue were not generally concerned or conflicted over their identity or their masculinity, but rather tended to express a preference for non-materialistic happiness.

In spite of the fact that there are inconsistencies in the percentages of men and women showing MAS imagery, where some studies show that men and women have a similar incidence of MAS and other studies show that there are significant sex differences, it is quite clear that when male and female MAS responses are compared they are qualitatively different.

In several studies where Horner's verbal TAT cue was administered to black and white subjects and their percentages were compared, it was shown that race was likely to affect the incidence of MAS.

Some studies have found that black college women show significantly less MAS imagery than white college women (Fleming & Horner, 1973; Weston & Mednick, 1972; Horner & Walsh, 1974).

Moore (1974), as part of a large survey conducted in the Detroit area in the summer of 1973, examined the incidence of MAS told by a cross-section of the public representing the non-college population, which up to that point received only sporadic and nonsystematic atten-

tion. The setting of the successful achievement was switched from medical school to simply "college" to bring the story situation more within the realm of reality for the non-academic survey respondents.

She found that irrespective of the subjects' sex or the sex of the cue, blacks as a whole were less likely to tell fear of success stories than whites. She found that within the black sample, there was a tendency for MAS to be more common among the better educated; with 47% of those respondents educated beyond high school telling stories with more MAS imagery as compared to 25% of those with less education. She found that this increase in MAS with additional education beyond high school was more significant among the black females.

A qualitative analysis of the imagery stories the black college women and white college women wrote about the achieving male or female figure were distinctive (Horner & Walsh, 1974). The differences revealed that by achieving success, white women are violating a socially prescribed norm, while black women are not. Horner interprets the result within her theory that anxiety associated with the aggressive nature in intellectually competitive settings is not relevant to black women who are often placed in more dominant, aggressive positions with the family structure, as compared to the black men who were up until recently traditionally seen as being more passive than the black women, at least in terms of being the head of the household.

Porjesz (1974) believes that this interpretation of the race results is too limited. She believes that it is not necessarily the aggressive characteristic that is crucial here in differentiating the two cultures with respect to MAS. According to her, black women, rather than solely being seen in this aggressive light, have been often forced into by circumstances a more independent position socially, and it might be this factor of independence that could be the critical variable for determining the presence or absence of MAS imagery.

The research points out that not only are there differences in incidence between black females and white females, but there might be a different functional significance for the two populations.

The Motive to Avoid Success and Education and Intelligence in Females

Horner's contention that the MAS conflict becomes more salient during college years because that is a time when a female perceives and experiences the double-bind between femininity and achievement success and career planning, has been supported in many studies which reflect a general trend toward an increase in the incidence of MAS imagery with grade school level (Cross & Detterbeck, 1972; Dalsimer, 1973; Folger, et al., 1970; Horner, 1970; Moore, 1974; Page, 1973).

Moore (1974), who extended the investigation of the incidence of MAS beyond the lab setting to survey interviews with respondents

representing the general population, found that the percentages of respondents who manifested MAS imagery were generally lower among the non-college population. The group of respondents that manifested the highest incidence of MAS were the most similar to college students, young and well-educated, a finding which held overall for blacks and whites, although the incidence among blacks, as noted previously, was generally lower.

Page (1973), in a study of New York City college undergraduate females, found that juniors and seniors had a higher level of MAS than did freshmen and sophomores; thus supporting the view that the closer one gets to a goal (graduation, according to Horner) the more the conflict. Dalsimer (1973), in a study of white junior and high school students, found a significant increase for females in the incidence over the period from eighth to the twelfth grades; the level of MAS, however, remained constant for the males.

Another one of Horner's postulations is that MAS is strongly aroused in women who are highly able to achieve success. Support for this hypothesis has come from Cross and Detterbeck (1972), who found a positive correlation between intellectual ability, especially verbal ability (college board scores -- verbal) and the level of MAS.

Hoffman (1974) found in her study that MAS was more characteristic of honor students, suggesting that for these students who perform at a high level and for whom being on top may be a real

possibility, the conflict becomes more salient.

There is no doubt that the MAS conflict becomes more salient for women who are able to expect success, as a function of their high levels of ability.

The Motive to Avoid Success and Sex-Role Orientation in Females

The literature clearly shows that MAS is involved with other variables, other than face-to-face competitive situations with males. The results from the studies presented below point out a relationship between MAS and sex-role orientation.

In a small study of 16 college women, Schwenn (1970) found that upon entrance to college, most of the women were highly involved and dedicated to a future innovative career, but as graduation approached, many had altered their career aspirations toward a more traditional feminine occupation. The presence of MAS imagery was significantly correlated with this change toward a traditional occupational choice.

Horner (1972) reports a somewhat similar finding regarding career orientation for the subjects tested in her original study (1968). In spite of high G.P.A.s, 89% of the women scoring high in MAS were majoring in the traditionally feminine humanities and aspiring toward traditional feminine careers. Fifty-six percent of the women scoring low in the motive were majoring in the less traditional natural sciences and aspiring to graduate careers and careers in the rigorous

scientific areas such as math, physics, chemistry, despite the fact that their grades were not always equal with their aspirations. She reports, also, that more than 90% of those female undergraduates high in MAS changed their career aspirations from innovative to traditional careers as they approached graduation, whereas less than 25% of those low in MAS did. Curtis, et al. (1973) investigated the level of MAS in a study of 30 male and 24 female students in their first year of law school. They found that, although the percentage of MAS among the female students was significantly less than those percentages from samples of undergraduate female college students, the females who scored high in MAS were more likely to chose jobs in the more traditional female-oriented sphere of law than those females scoring low in MAS.

In another study with college women, a high positive correlation was found between MAS level and the tendency toward a traditional feminine sex-role orientation. Specifically, those women who scored high in MAS imagery on Horner's verbal cue, valued a traditional homemaking orientation as wife and mother for themselves significantly more than a career orientation. This tendency toward a feminine sex-role orientation was significantly more pronounced in women high in MAS compared with women who did not express MAS imagery in their fantasy productions (Makosky, 1972).

In a recent study of female and male undergraduates, Robison (1974) hypothesized a relation between MAS and future orientation. Since MAS is conceived by Horner as a disposition to be uncomfortable when successful in competitive achievement situations and to avoid such situations whenever possible, Robison believed that a person high in MAS should be more likely than his/her counterpart low in MAS to set future goals requiring, for their satisfaction, the minimum amount of successful competitive achievement.

She asked subjects to rank order a list containing both family-centered and educational-occupational future goals and hypothesized that subjects high in MAS should be more likely than subjects low in MAS to rank the family goals more important than the career-oriented goals. When MAS was assessed by same sex cues, she found that her hypothesis was supported and that subjects high in the motive were likely to have family-centered goals significantly more than subjects low in the motive, and this result was found for both males and females. However, she found that the relationship between MAS and future orientation was much stronger for her female subjects. Oglesby (1974) also confirmed this result and found the relationship to hold for women.

In an attempt to pursue Peplau's (1973) finding that MAS was related to traditional sex-role attitudes and that MAS affected competitive behavior only among women with traditional sex-role orientations, Moore (1974) assessed the joint effect of MAS and traditional

sex-role attitudes, as part of a large survey with 576 subjects.

She specifically hypothesized that women who fear success would have more children than women who do not fear success, because according to her, pregnancy would be a relatively easy and available escape route from a threatening career arena. Her results showed that MAS was significantly and positively related to larger family size among white women, a relationship which held when income and religion were controlled. In addition, she found that white women who both showed fear of success and who held traditional attitudes had significantly more children than did either women low in MAS or women high in MAS but who did not have a traditional sex-role orientation.

Related to the above findings, are the results of a study done by Clarkson, et al. (1970), where the relationship between sex-role orientation and the number of children a mother had was examined. They found that mothers who had high competency self-concepts were found to have significantly fewer children than mothers who perceived themselves to be low on the competency items; the self-concepts of mothers with fewer children differed only in respect to the competency cluster of traits, those that are negatively valued aspects of the feminine stereotype, but positive masculine associated aspects of the male stereotype.

Alper (1974) has recently begun an extensive examination of the relationship between sex-role orientation and MAS imagery among females. In one such study, the incidence of MAS was examined as a function of the sex-role orientation of the TAT cue and the subjects. Half of the subjects (nursing students and liberal arts undergraduates) in each group were given Horner's original "Anne-medical school" cue and the other half were given a reworded "Anne-nursing school" cue. The results indicated that the nursing students showed a significantly higher percentage of MAS imagery (80%) to the "med school" cue as compared with the "nursing school" cue (14%), suggesting the lack of arousal of MAS imagery in relation to the traditional female appropriate field. Surprisingly, however, no such discriminating pattern emerged for the liberal arts students who showed equal amounts of MAS imagery to both cues.

In another study, Alper (1974) reworded the stimulus cue, omitting the medical school reference ("After first term finals, Anne finds herself at the top of her class."). The results indicated that for her sample of undergraduate females, the omission of the "masculine-associated" aspects of the stimulus cue, significantly reduced the percentage of arousal of MAS imagery.

The results from another of her studies (1974) indicated a significant relationship between sex-role orientation and the degree and nature of MAS imagery. The women who favored a feminine

sex-role orientation, tended to have a significantly higher percentage of MAS imagery, and their "success" stories tended to reveal achievement as instrumental to the gratification of dependency ("women as man's helper") and affiliative needs, focusing on attaining husbands; and the tasks on which the women were working were generally female-oriented.

The results of some of these studies cited thus far indicate a concomitant intensification in MAS and the tendency toward either a traditional homemaking orientation or a traditional feminine career orientation in women as graduation approaches. Also some of the results confirm the relationship between MAS and sex-role orientation, with the motive being associated with the feminine sex-role stereotype and orientation and absence [or low degree] of the motive being associated with the masculine sex-role stereotype and orientation.

The Effect of the Motive to Avoid Success on the Achievement Performance of Females

Although Horner's major prediction is that MAS should be manifested primarily in face-to-face achievement competitive situations with males, there is much evidence that MAS is far more pervasive than in just face-to-face competitive situations.

There is evidence for a general decline in intellectual ability and achievement performance in late adolescence and early adulthood

females (Campbell & McKain, 1974; Hopkins, 1971; Maccoby, 1966; Macfarlane & Sontag, 1954). Some of these studies, which used intelligence tests as the dependent variable, showed that the females' decline is significantly greater than their male counterparts. While this decline could be interpreted as a function of the competitive setting of school, the administration of the intelligence test was in an individual setting in which the experience was private and non-competitive.

Cross and Detterbeck (1972) found that the MAS conflict tended to depress intellectual performance and neutralize ability differences between high and low MAS subjects. Although the females high in MAS tended to have significantly higher verbal ability, there were no differences in actual performance (GPA).

The effect of MAS level on achievement performance was the second part of Horner's original study (1968). She hypothesized that women high in MAS would show a significant decrease in performance level in achievement situations involving direct competition with males. All the subjects in the study worked on the solution of a series of achievement problems alone (non-competitive) and against a member of the opposite sex (competitive condition).

The results demonstrated a significant and dramatic decline in performance of the MAS females under the competitive condition as compared with the non-competitive condition. On the other hand,

women low in MAS behaved more like men in that they solved significantly more problems in the competitive condition than when working alone. Horner concluded on the basis of her results that women who show MAS imagery inhibit their achievement performance when in competition with men because of the conflict they have over aggression and achievement tendencies and the fear of being seen as unfeminine. This hypothesis has been supported by several studies (McGuinness, 1974; Peplau, 1973). However, there are a number of other studies that do not support this hypothesis (Makosky, 1972; Morgan & Mausner, 1973; Robbins, 1973; Sorrentino & Short, 1973).

Makosky (1972) conducted an expanded version of Horner's study (1968) in order to further examine the effect of MAS level on achievement performance of women in competitive as compared with non-competitive achievement settings. Subjects were given Horner's verbal cue and were then given a series of anagram problems in one of three experimental conditions: one-third worked alone, one-third competed against a member of the opposite sex, and one-third competed against a member of the same sex. In addition, the instructions were varied so that one-half of the subjects in each of the above conditions received "male instructions" and one-half received "female instructions."

The results of the study showed that all women, regardless of the presence or absence of MAS, performed poorly when working alone.

Women high in MAS performed most effectively when working in competition with another woman on a "feminine task." In addition, there was a significant decline in performance of these women when competing against a male, and this was especially true on a "masculine task." Females low in MAS were found to perform significantly better when working in competition against a male especially on a masculine task than they did when working alone or in competition with a female, especially on a "feminine task."

Some of the above results support Horner's prediction that women high in the motive perform significantly poorer in achievement settings in which there is competition against males. However, the result that high MAS women were found to perform significantly better when competing against other women than when working alone does not confirm Horner's general hypothesis concerning the arousal of MAS; that competition per se, because of its aggressive overtones, is a determining factor triggering off the anxiety associated with MAS.

In a study of male and female high school students, designed to determine the degree to which girls would hold back from outperforming boys in a dyadic setting even in tasks at which the girls were superior in ability to boys, Morgan and Mausner (1973) found clearly demonstrable behavioral manifestations of MAS in bright females in a cooperative setting between the sexes. They also found that there was no significant relationship between the actual MAS behavior and the

fantasized fear of success imagery measured by Horner's testing device.

Sorrentino and Short (1973) in a study with freshman females compared the performance of women high and low on MAS in a male-oriented and female-oriented situation.

Their results were the opposite of those obtained by Matosky (1972). They found that women, on a whole, performed better in the male-oriented condition than in the female-oriented condition, and this difference between conditions being significantly greater for those women scoring high rather than low in MAS. The authors interpret their results as failing to support the hypotheses derived from Horner's theory. According to her theoretical model, male-oriented performance situations should arouse MAS more than female-oriented performance situations because success at male-oriented activities may imply "behavior unbecoming to a lady," and may arouse the anticipation of negative social consequences. Success at female-oriented activities on the other hand, is less likely to arouse the expectation of negative social consequences, since the negative incentive value of success should be greater for performance tasks which are generally considered masculine than for those which are generally considered feminine.

Sorrentino and Short speculate that the MAS score might not be a valid measure of the psychological conflict and might instead be

tapping social attitudes toward male and female accomplishments, with the effect that a high MAS score might reflect a female who was more sensitive to the demand characteristics of the cue in the test; that is, the sex-role cue, than a low MAS subject, and in addition might reflect the attitude that masculine accomplishments are seen better than female accomplishments. Therefore, according to them, the high MAS female who devalues the female success when Anne is on top in medical school because women should not be as good as men, would feel better about herself and have more extrinsic incentives of self-esteem at a male-oriented task.

The important characteristic of this study was that there was no implication of competition of any kind, with each other or with males. The authors point out that her motive score might well be limited only to situations where females are actually in competition with men. But when competition with a standard of excellence, rather than competition with males takes place, Horner's theory and measurement device, they suggest, is limited in its generalizability and they add that her theory and motive score should be reevaluated in light of their inability to predict behavioral manifestations in situations where competition against males is not a salient factor.

Robbins (1973) designed a study with female undergraduates in order to elaborate on the nature of MAS and its relationship to achievement performance using different competitive situations.

Subjects were given Horner's MAS test and were randomly assigned to three experimental conditions. The first one was designed to convince the subjects that they were competing against each other to help the experimenter, the second was a non-competitive setting, and the third was a standard competitive condition. The expectation based on Horner's model was that the first two conditions would facilitate the performance of MAS subjects, since the competition was less emphasized than in the last condition.

The results showed that all groups of subjects in all the conditions demonstrated similar levels of performance; in fact, there was no relationship of MAS to performance in any of the conditions. Robbins in addition employed, in the second part of her study, different sex-role appropriate instructions, in order to test the prediction that female role appropriate verbal format would have specific salutary effects on the performance of MAS subjects. This prediction was not confirmed, instead all subjects performed better on female format than on the male format. Robbins interprets her results as reflecting the unpredictable relationship between MAS and behavior, and she questions Horner's hypotheses as well as her testing device. She gives no other explanation for her contradictory results.

There has been much research with findings that suggest that there are significant sex differences in expectations for and evaluations of academic success. Many studies which have been done on various

age groups have shown that females are generally lower in their initial expectations of success than are males, even when actual performance between the sexes were equal or when women were ultimately superior (Battle, 1966; Crandall, 1969; Deaux & Farris, 1973; Montanelli, et al., 1969; Stein, 1971, Strickland, 1971; Vaughter, et al., 1974).

There is also a related body of research which suggests that males and females differ in their evaluations of their own performance in a manner which parallels observer ratings. Deaux and Emswiller (1974) asked subjects to evaluate performance of either a male or female doing well on a task which was either masculine or feminine in orientation. The subjects of both sexes viewed males' performance on a masculine task to be attributed to ability and effort, while the equivalent performance of females on the same task was seen as due to luck. Weiner, et al. (1971) conceives of these factors as "locus of control" variables, in that, ability and effort are conceived as internal attributes, while luck is conceived as an external attribute. Other research studies have found that males tend to explain their own successful performance by invoking the internal attributes, while many females attribute their successful performance to external attributes (Deaux & Farris, 1973; Feather, 1969).

Patty (1974) designed a study in order to investigate the relationship between these locus of control variables, the presence or absence of MAS, and performance on a digit span task with a sample of female

undergraduates. In the first part of her experiment, 57 subjects were assessed for MAS by Horner's test and then were randomly assigned to either a "Difficult" or "Easy" instruction condition. Although the task was the same for the two groups of subjects, in the "Difficult" instruction condition, subjects were informed that although the task looks easy, it is really very difficult; while subjects in the "Easy" instruction condition were told just the opposite, that while the task may appear difficult, it is really very easy. In the second part of the study, 54 subjects were also assessed for MAS and then randomly assigned to "Internal" or "External Control" instructions. The former instructions informed the subjects that success on the task is a matter of effort and ability rather than luck, while the latter instructions informed the subjects that success on the task was a matter of chance and luck.

The results showed that MAS absent women performed better following the "Difficult" and "Internal Control" instructions and MAS women performed better following the "Easy" and "External Control" instructions. She interpreted her results by suggesting that MAS absent women excel in situations which are difficult, important, and/or reflect their own individual ability. Whereas MAS present women perform best on tasks where the negative consequences of success are minimal, that is on easy tasks, tasks that say little about their individual ability. Given that men and masculine tasks are

traditionally seen as demanding stiffer and more difficult competition and competence than women and feminine tasks, Patty suggests that women with low MAS view competition against men and on masculine tasks as more challenging and exciting and she therefore attempts to explain Matosky's study (1972), which found that low MAS women did better in competition with men on masculine tasks. Although Patty does not explicitly criticize Horner's hypotheses about MAS and achievement behavior, it seems clear that her results point out that MAS is related to performance settings that do not necessarily have competition against men as the salient variable. Other studies have shown similar relationships between high MAS women and the low expectation cycle (Jackaway, 1975) and high MAS women and the external locus of control (Midgley & Abrams, 1974).

It seems clear that even when tasks do not involve face-to-face competition with males, many of the studies show that high MAS females do less well on tasks they believe men would do well at.

Motive to Avoid Success and other Correlates

The popularity of Horner's concept of MAS has led some researchers to investigate other correlates that might be related to MAS.

In general, some research tends to point to a significant relationship between MAS and the tendency to devalue and/or conceal one's own performance and accomplishments, in that high MAS females indicate a

lesser degree of willingness to report high grades and a greater degree to conceal and lower their actual grade than low MAS subjects (Horner, 1972; Schwenn, 1970).

Some studies tend to point to a significant relationship between MAS and dependency in women (Lipman-Blumen, 1972; Porjesz, 1974; Schwenn, 1970).

In another line of inquiry, some researchers have attempted to examine whether college women with high MAS are generally more maladjusted than women with either no such conflict or women whose conflict over achievement is at a low level. The general findings suggest that there is a positive correlational relationship between emotional difficulties and a high level of MAS, although the psychodynamic causes and consequences of the observed relationship can only be for now a matter of speculation until further empirical research is completed (Cross & Detterbeck, 1972; Horner, 1972; Horner & Walsh, 1974, Monahan, et al., 1974).

It is clear again that MAS seems to be associated with many other variables, other than in competitive situations with men.

Motive to Avoid Success and the Sex of the Stimulus Cue

In addition to the studies that have shown the operation of MAS in different situations, there are some studies that attempt to show

the methodological limits of Horner's original measurement.

Horner's original procedure required subjects to respond to the verbal cue, where the actor in the cue (Anne or John) was the same sex as the subject. The rationale was to encourage the subject to identify with the actor and hence reveal his or her motives.

Some researchers, especially those with a cognitive and social psychological orientation, have found this same sex cue procedure limited, in that, it makes it impossible to determine whether the MAS response is a function of the sex of the subject or the sex of the actor in the cue situation. In an attempt to expand Horner's original procedure, these researchers required both female and male subjects to respond to the Anne or John cue in four different combinations (male Ss — male cue, male Ss — female cue, female Ss — female cue, female Ss — male cue) (Feather & Raphelson, 1974; Monahan, et al., 1974). They hypothesized that if MAS responses occurred only for female subjects, an intrapsychic explanation is warranted; something about being female causes them to have negative attitudes toward achievement. On the other hand, if MAS responses occur only with the female cue but for both sexes, a "cultural" explanation is suggested; stereotypes surrounding women's achievements are negative ones, learned and accepted by both sexes. The findings in the two studies were consistent. For both sexes, the proportion of negative responses to the Anne cue was higher than the proportion of negative responses to

the John cue and males to an even greater extent than females responded negatively to the female cue. They interpreted these findings as evidence that man have a deep-seated prejudice against women's achievement and while men's view of male success might be changing, they find female's achievement drives threatening to their internal cultural values and norms. They also believe that the MAS scores may be accounted for in terms of both sexes' belief in conventional sex-role stereotypes and that the projective procedure might well be tapping societal conceptions about male and female sex-roles in regard to what are considered to be appropriate sex-role occupations for the two sexes. The problem, as they see it, remains one of inferring a possible attitude to a dynamic inference about motives. This confusion about the interpretation of the MAS score will be elaborated upon in a section dealing with the evaluation of the MAS research.

Robison (1974), in a study of male and female undergraduates, analyzed the frequency of the occurrence of various content categories by sex of subject and sex of cue. She found that the content of the MAS imagery was generally determined by the sex of the cue, rather than the sex of the subject. The female cue elicited significantly more stories in which social rejection and affiliative loss occurred or was expected. Overconfidence and subsequent failure was frequently found in stories written about men than in stories written about women. The

data she interprets as supporting the cultural view; that both men and women know the prevailing attitudes in society concerning the negative consequences of success and that they are different for men and women, and hence both men and women tell stories about women in which social rejection or fear of social rejection figured prominently as the fear of success theme. Whereas, both sexes told stories about men in which devaluation of the achievement was the most common fear of success theme.

Katz (1972) experimented with the story-writing cue in her study of undergraduate men and women, in order to evaluate whether MAS was a projective fear, a "psychological barrier," or a function of social stereotypes, that is a "response to deviancy." She had her subjects complete a story based on one of the two following cues: "All of Anne's classmates in medical school are men. After first term finals, Anne finds herself at the top of her class," and "Half of Anne's classmates in medical school are women. After first term finals, Anne finds herself at the top of her class."

Results of her study showed that MAS imagery decreased in the second case, suggesting that the female subjects were more concerned about Anne's being a successful "deviant" in a male-oriented field than about her success per se. For male students, the results were similar, when Anne was one of 50% of the women students, the stories reflected acceptance, but when she was the only woman, they expressed how

femininity was incompatible with success.

Robison in another part of her previously described study (1974), investigated whether the same sex cue procedure used by Horner would yield scores that are better predictors of MAS related behavior than opposite sex cues. She found that when MAS is assessed by the same sex cue, subjects high in the motive are significantly related to the future orientation variable (previously discussed on page 41) in the predicted manner. When MAS was assessed by the opposite sex cues it was not related to future orientation in the same manner; in fact, the relationship was weaker and the direction was reversed.

Robison seems to be aware of the confusion regarding the meaning of the MAS score, and yet on the basis of her results, she believes that the same sex cue procedure yields scores which are better predictors of MAS related behavior.

Chapter V

EVALUATION OF THE EMPIRICAL RESEARCH ON HORNER'S MAS

Since the popularization of Horner's concept and her measurement device, numerous studies have been done where a measure of MAS has been obtained from Horner's thematic materials. Often the findings (e.g., percentages of men and women showing MAS imagery) have been compared with Horner's original findings and these attempts to replicate and/or extend her findings have frequently yielded data inconsistent with her original hypotheses. As a result of inconsistent and at times contradictory findings several researchers have either criticized Horner's measurement device and/or some of her theoretical assumptions underlying it (Alper, 1974; Berman, 1973; Curtis, et al., 1973; Feather & Raphaelson, 1974; Levine & Crumrine, 1973; Major & Sherman, 1975, Monahan, et al., 1974; Robbins, 1973; Robison, 1974; Tresemer, 1974a, 1974b).

Reliability of Horner's Original Measurement

Tresemmer (1974a, 1974b) has sharply criticized Horner's conceptualization primarily on the basis of inaccurate and unreliable scoring procedures. In an attempt to decipher the cause of confusion in many of the studies that tended to either support a high degree of MAS imagery in females and at the same time reported wide fluctuations in the incidence of males and females with no consistent or predictable pattern or showed no consistent or predictable relationship between MAS imagery and achievement behavior, Tresemmer reviewed the scoring criteria utilized by the different researchers. His results showed that part of the fluctuations were due to subjectivity involved in scoring MAS, as well as great divergences in kinds of scoring conventions used from one study to the next.

He attributes many of these inconsistencies to the fact that there has been no existing scoring manual for Horner's measurement, no exhaustive set of explicit criteria with examples and sample stories for testing and increasing coder reliability.

Some researchers, according to Tresemmer, have limited to scoring MAS to Horner's specific criteria, some have scored any negativity in a story as MAS, and some have included themes which are theoretically outside the concept. Rarely do these researchers state explicitly how their own criteria are the same or different from Horner's. He points out that common coding mistakes have been to

label all negative comments in a story as part of MAS, these may be unrelated elements such as references to illness, murders that do not arise as a consequence of success, which obviously ignores the theoretical basis of MAS -- the anxiety that success will have negative consequences. Properly, only consequences should be counted as MAS imagery. Nor can negative antecedents of success be considered part of the MAS category if negative aspects of the story occur before success. Presumably researchers were measuring the same variable, but it is clear from Tresemer's review that in fact they were using variations of the same instrument. It is no wonder then that research results tend to be inconsistent and contradictory at times.

Tresemer, while criticizing the reliability of the measurement, also believes that Horner's concept of MAS is unproven and doubts whether it is a motive at all. Alper (1974), who shares some of Tresemer's criticisms, believes that the "now you see it now you don't" phenomenon (fluctuations in its appearance from one study to the next) in the MAS literature appears to be a function of methodological differences and unreliable scoring procedures of one study to another, rather than from a basic instability of the motive.

Validity of Horner's Original Measurement

It is to be remembered that the "med school" cue as devised by Horner is supposed to represent a condition of success that subjects can react to. However, there has been much criticism in the literature on the specificity of the cue as a "none too subtle" measure of a motive (Morgan & Mausner, 1973).

Historically, the traditional use of the TAT was to put subjects into a situation thought for theoretical reasons to arouse a particular latent stable predisposition to action; they then write stories at that time. The latent theme of the stories are understood as projections of latent need states and are scored as indicators of the need. To facilitate this projection outward Atkinson and McClelland (1948) emphasized that the most effective stimuli should be vague and contain characters with whom the person can identify.

However, Horner's "med school" cue is not vague. As Tresemer points out (1974b, p. 206):

. . . the relative specificity of this cue can perhaps be likened more to studies in social psychological research on reactions to word stimuli [top in medical school] than to the traditional clinical uses of the TAT when attempt is made to use ambiguous stimuli . . .

Several researchers have pointed out that because of the specificity of the success situation in the cue, the meaning of the MAS score is unclear; is it tapping a special intrapsychic phenomenon,

motive if you will, in women or a general less dynamic more cultural concept of belief (Feather & Raphelson, 1974; Monahan, et al., 1974)? They feel that because of the specific content of the cue, this projective procedure might well be tapping societal conceptions and stereotypes about male and female sex-roles in regard to what is considered to be appropriate sex-role occupations for the two sexes. The problem, as they see it, is one of inferring a possible attitude to a dynamic inference about motives. Many times attitude tests tap the social desirability of current ideology (e.g., is it okay for a woman to succeed in a male field?) while not being valid indices to the subjects' actual underlying feelings.

The research generated by this problem in the interpretation of the motive score has already been described in a previous section. The results suggested that MAS may be accounted for in terms of both sexes' belief in conventional sex-role stereotypes. If so, is it safe to proceed from data concerning beliefs to psychodynamic inferences that females suffer from fear of success motivation!

All of this is not to imply that the MAS score is not a reflection of a motive in women, since in the above studies and in others there are significant differences in the content of the imagery for males and females, which make it clear that something deeper than belief may be being tapped. And beliefs in social stereotypes do not exclude the learning of motives; as a matter of fact, sex-roles are probably

learned along with basic motives as products of the socialization process. The major problem, rather, is that Horner's measuring device is so bound up with a specific situation that has a special meaning in our culture, that one remains unclear and uncertain about the meaning of the MAS score. The fact that Horner regarded MAS as an unconscious defense and utilized a "supposed" clinical tool for its measurement indicates her awareness of its psychodynamic complexity, so that one is surprised and confused about her limited societal scope.

One of the other problems that has been pointed out in the literature is that Horner's hypotheses concerning the relationship between MAS imagery and achievement related behavior have achieved little empirical support. Some studies have been able to replicate her findings, but many others have not been able to confirm her predictions. Several studies, in fact, have shown that the measure has little predictive validity in other achievement behavior situations where competition with males is not a salient factor (Matosky, 1972; Morgan & Mausner, 1973; Sorrentino & Short, 1973). The specificity of the sex-role occupation is additionally complicated by the specific type of competitive setting Anne is placed in within the cue. She is top in a class in a field for men, and therefore the fact that she is competing directly with men is quite blatant.

The New Measurement -- Its Reliability and Validity

In response to many of the above criticisms of Horner's original system, a new comprehensive and extensive scoring system has recently been developed with a detailed scoring manual with sample stories and explicit criteria making sure coders rate stories alike (Horner, Tresemer, Berens, & Watson, 1973). The great virtue of the new system is that the specific cue is replaced by less specific more ambiguous cues of all sorts, which have the property that the nature of the goal that has been attained must be established by the individual her/himself. The traditional ambiguity of projective tests has been reinstated and there is less of an imposition of cultural assumptions of success and goals and therefore the developers feel that the new system is able to tap the subjects' motivational dispositions, rather than solely beliefs and attitudes about personal success.

Three or four cues are used, of which two are task cues. The following is a list of task cues for which a researcher may choose two for her/his study:

Anne (John) is looking into a microscope . . .

Anne (John) is looking through a telescope . . .

Anne (John) has just completed the project on
which she (he) has been working on for
several months . . .

After much work, Anne (John) has finally gotten
what she (he) wanted . . .

Two (or one) "neutral cues" are also to be used; they are as follows:

Anne (John) is sitting in a chair with a smile on
her (his) face . . .

Anne (John) seems particularly pleased . . .

Anne (John) is walking along the beach late in the
day . . .

The task cues represent situations involving long-term effort toward a personally chosen goal, the attainment of which is measured against one's own standard of excellence (these are the hallmarks of achievement as construed by Atkinson and McClelland, 1948). In contrast to the specification of the goal in Horner's original verbal cue, the task cues are more ambiguous as to the goal that had been attained. It is for the subject to choose a single or number of long-term goals to which they could relate with which they could integrate the success stated in the cue.

Theoretically the "neutral" cues, according to Horner's original system, should not be scored for MAS, since they bear even less resemblance to the original "med school" cue than the task cue. But when Horner analyzed the "smile cue", which was used as a neutral and unscored cue in her original Michigan sample (Horner, 1972), she realized that being pleased and smiling indicated a situation of an attained goal. In the new scoring system, these cues are scored and therefore the system is not limited to a single cue.

There are six scoring categories -- some of which correspond closely to the original present-absent scoring system. For each category a numerical weight is given (either +2, +1, or -2) and the subject obtains a numerical score. Therefore there is no longer an all or none framework, but rather depending on the particular sample's distribution, a subject's score lies on a continuum of quantitative degree.

The new instrument seems to avoid the pitfalls and confusions of the original instrument, and it becomes less limited in its scope and able to function as a more sensitive projective tool. The reliability of this new instrument has been increased by the construction of a scoring manual with comprehensive and detailed explicit criteria, as well as, numerous explanations of scoring of sample stories making sure that coders rate stories alike. In addition, the authors point out that a scoring reliability of .85 must be achieved between two independent judges before the measurement is used in empirical work.

The system was validated on an all-female college sample and the six categories of the new scoring system were chosen out of 52 categories used to score the stories in the study because they explained in combination 45% of the variance of performance decrements from (a) a neutral pretest (where stories were written), to (b) a competitive posttest one month later where females in male-female pairs were informed that they had done better than their male competitor on a

frustratingly difficult mathematics achievement task and then tested on an anagram achievement task.

At the present time, the new test has been validated in only the study cited above (Horner, et al., 1973) using as a criterion, the decrement of women's achievement performance from a neutral non-competitive situation as compared with their performance in a situation in which there was direct competition against men. Certainly, replications of this validity test are needed. In addition, the construct validity of the test must be examined. At best, this new test can be said to be a valid predictor of women's tendency to inhibit performance in direct competition against men and therefore a measure of their fear of aggression.

In addition, the test was developed and validated using only undergraduate college females. The results may not be generalizable to that wide range of women actually working toward specific careers (e.g., graduate school students) nor those many women functioning in the career world.

Therefore, although the test is much broader in terms of the categories and cues used to evaluate the score, it has, at least at the present time, limited generalizability.

Validity of the Concept

There has been an upsurge of empirical research concerned with an examination of MAS motivated in part by the common sense appeal of Horner's work and the popularity and relevance of the women's movement. Many studies, as have been shown, have revealed serious limitations in her work, and generally much of the findings are confusing, inconsistent and contradictory. As was pointed out previously, much of the fault existed in an unreliable and confused measuring device, and in response a new broader device has been developed. Several researchers, however, continue to oppose the entire conceptualization of MAS (Levine & Crumrine, 1973; Tresemer, 1974a).

It seems that what is needed at this point, rather than a dismissal, is an exploration and broadening of Horner's original conceptualization in an attempt to understand its full meanings and implications. One of the major limits of Horner's original theory of MAS appears to be her limited conceptualization of MAS as situational anxiety evoked in competitive settings with men, reflecting a conflict over the fears of aggression.

Chapter VI

STUDIES ON THE DEVALUATION OF WOMEN'S ACHIEVEMENT COMPETENCE

Devaluation of the Female Sex-Role Stereotype

The sex-role stereotypes defined by our society also have an influence on the MAS conflict in females, in that they serve to intensify an already existing achievement conflict. Women are told they have equal opportunity, but the price they pay for achievement may be to be an "old maid."

There has been unequivocal evidence in the literature about the existence of sex-role stereotypes, widely held over populations heterogeneous in social and economic status. In these early studies, the researchers demonstrated that there was much negative stereotyping of women in our society. In fact, a basic ingredient of the sex-role stereotypes was the greater social and personal value designated to men and "masculinity," as compared to women and "femininity" (Dinitz, et al., 1954; Fernberger, 1948; Kitay, 1940; Komarovsky, 1946, 1950; Lynn, 1959; Seward, 1946; Sherriffs & Jarret, 1953; Sherriffs & McKee, 1957; Wallin, 1950). Both sexes were found

to perceive men as intellectual, rational, competent, and independent, although lacking in warmth. Women were perceived as demonstrating social skills and emotional support, yet seen as less competent, more dependent and passive; in essence regarded with ambivalence, on one hand revered and set on a pedestal for their beauty and sexuality, and on the other hand devalued on a great number of other traits.

With the apparent changes in the society since these earlier studies, the popularization of the women's movement, it might be assumed that the existence of sex-role stereotypes and the particular negative stereotyping of women would no longer be as ubiquitous. Recent research has produced evidence to refute this expectation and there is a persistence of traditional sex-role stereotypes in a wide variety of groups, across sex, age, educational and marital status, and socioeconomic background (Broverman, et al., 1972; Hall & Hall, 1972; Rosenkrantz, et al., 1968; Schultz, 1973). In addition, there are no notable shifts in the content of the sex-role stereotypes: the male valued traits reflect a "competency cluster," including characteristics such as independence, objectivity, logical thinking, adventuresomeness and independence. A relative absence of these attributes characterizes the feminine stereotype which forms a "warmth-expressiveness cluster," including traits such as tactfulness, neatness, interest in art and literature (Broverman, et al., 1972). Very recently, however, there seems to be some evidence for breakdowns of this

traditional sex-role stereotyped attitude, with college women showing more concern with work achievement and competence (O'Leary & Depner, 1975).

The impact of the devaluation of the feminine sex-role stereotype has found to be related to parents' preference for the sex of their child, in that parents are generally happier and have stronger preferences for the birth of a son than of a daughter (Dinitz, et al., 1954; Hammer, 1970; Peterson & Peterson, 1973; Pohlman, 1969; Sears, Maccoby, & Levine, 1957). The impact of this adherence to the traditional role expectations has been found in school settings (Saario, Jacklin, & Tittle, 1973; Serbin & O'Leary, 1975), as well as in children's literature (Britton, 1973; DeCrow, 1972; Fisher, 1969; Frisof, 1969; Kidd, 1970). There is overwhelming evidence to suggest that in reading texts from primary to high school level in the United States in the private and public sectors, there is conspicuous devaluation of the female, especially in relation to her limited career aspirations. In light of these findings, it is no wonder that Britton (1973) points out that with compulsory school attendance and the fact that 15 major textbook companies which control 90% of the market produce the same products, there is a danger that every young girl is reading about herself as a passive and dependent citizen for 12 years by law! Very recently in response to the outcries by many women's groups, McGraw-Hill, one of the largest publishing houses, has promised to eliminate sex bias in its

newest textbooks (Of Women and Men, 1975). Maybe the other publishing houses will follow in response.

As there have been changes in the publishing sphere because of the pressure of women's groups, there appears to be pressure on the popular media to reduce its traditional devaluation of the female's sex-role, especially in terms of her competency in careers. The women's movement has in recent years become a popular topic, if not a profit making product, which on one hand is extremely encouraging. Many of the traditional myths are being discouraged and the female's sex-role behavior, in terms of her career orientation are being broadened and popularized (e. g., TV shows such as "Police Woman"). On the other hand, these changes, as encouraging as they are, are not necessarily reflective of any real underlying alterations in the real attitudes and feelings of the contemporary society toward the female.

WNBC, a television network, devoted three hours of prime time to a documentary entitled "Of Women and Men," featuring Barbara Walters and Tom Snyder as the reporters and hosts (January 9, 1975, 8:00 - 11:00 p. m.). On one hand, the intent of the show was to explore not only women's rights, pointing out their new freedoms in their relations with men, the job market and their own feelings about their competence and independence, but also to explore the growth in society's androgynous blurring of behavior and expectations in an attempt to destroy sex-role stereotypes. On the other hand, certain

aspects of the presentation of the material, as well as the quality of the commercials used by the sponsor, L'Oreal, a cosmetics industry, created a paradox to this viewer. It seemed in keeping with traditional sex-role stereotypes, but contradictory to the show's androgynous intent, to have Barbara Walters report on textbooks in the American public schools and Tom Snyder to report on athletics. Reading is a passive activity and women have traditionally been given strength in the verbal and passive spheres, while athletics connote activity and strength. The content of the reports was in keeping with the intent of the show, yet it might have had more impact and consistency with the major theme if the roles of the reporters were reversed. In addition, the commercials used throughout the lengthy show depicted beautiful women, who were either sitting around doing nothing or being embraced by men, saying, "I'm worth a lot," the viewer inferring that they are worth a lot because they used L'Oreal hair color to make them beautiful. One would think that the sponsor might have been more responsive to the traditional attitudes underlying many contemporary American women. Women do have internal conflicts about what it means to be a woman, but obviously our society has ways it subtly encourages and reinforces the conflicts.

The ramifications and consequences of the tendency to ascribe greater value to males as compared to females has been related to clinicians (including counselors, psychiatrists, psychologists, and

social workers) ratings of mental health (Asher, 1975; Broverman, et al., 1970; Haan & Livson, 1972; Harris & Masling, 1970; Johnson, 1974; Kogan, et al., 1957; Thomas & Steward, 1971; Wiener, et al., 1959).

The results of the studies have shown that a double standard of mental health exists for men and women. The healthy adult is seen as the healthy man, whereas the healthy woman is perceived as significantly less healthy by adult standards. If she adopts behavior desirable for adults, she is failing to be feminine, but if she adopts feminine behaviors, she is deficient in general standards for adulthood.

There is also much evidence that seems to show another consequence of society's devaluations of the female, and that is the tendency to evaluate masculine accomplishments as more competent and valuable in comparison with those of female's, when in fact the accomplishments may be identical (Deaux & Emswiller, 1974; Feather & Simon, 1975; Fidell, 1970). Deaux and Emswiller point out that when women are seen as competent by both sexes, both sexes attribute the competence to luck rather than skill.

The research therefore demonstrates the persistence of traditional sex-role stereotypes despite apparent changes in our contemporary society. These sex-role stereotypes and resultant tendency to favor males over females distorts the clinical evaluations of professionals in the direction that significantly devalues females. In the next section, evidence suggesting that women themselves tend

to devalue the competence of the achievement efforts of other women will be discussed.

Studies on the Tendency of Women to Devalue the
Competence of Other Women

Prejudicial evaluation of women's work by men has been offered as an explanation for the apparent failure of women to achieve as much success as men (Klein, 1950; Scheinfeld, 1944). If men undervalue the accomplishments of women, women also may do so. There are several studies that attempt to demonstrate that under some conditions women tend to devalue the intellectual and professional competence of other women. In spite of the claims of sisterhood, one wonders how much women are covertly less supportive of their fellow women's efforts.

Taking Allport's (1958) definition of prejudice as the distortion of perception and experience, Goldberg (1968) hypothesized that when confronted with an identical piece of work, women would value the professional work of men more highly than that of women. He further hypothesized that when the content of the professional field was one traditionally reserved for women, the tendency of women to devalue women would be lessened or even reversed.

In order to establish what is a stereotypic female or male field, Goldberg asked 100 female college students at Connecticut College to rate a list of 50 occupations to the degree they associated the field

with men or with women. His normative data were based on a 6-point rating scale and results showed that the fields most strongly associated with men were law and city planning and primary education and dietetics most strongly associated with women and linguistics and art history were rated consistently neutral. He obtained six professional articles from the above fields which he abridged and combined into booklets. The crucial manipulation had to do with the author's name; the same article bore a male name in one set of booklets, and a female name in the other set. Each booklet therefore contained three articles by men and three by women. At the end of each article his female college students were instructed to answer a set of nine evaluative questions rating from either 1 to 5 the author's professional competence, professional status, value of the article, effectiveness of the author's writing style, persuasiveness and creativity. Unexpectedly, Goldberg found that the subjects had significantly lower ratings of all female authorship articles regardless of the content of the articles itself, pointing to a general and pervasive prejudice of women against the achievement efforts of other women.

Goldberg interprets his results in accordance with Allport's (1958) theory in which prejudice is defined as negative stereotyping without sufficient warrant and/or contrary to objective evidence. Allport views anti-feminism as any other prejudice; it is the belief that women are inferior to men, and more importantly to allow that belief to distort

one's perception of women. He adds that anti-feminism, like anti-semitism, consistently distorts the "evidence" of experience so that one sees not what is actually there, but what one "expects" to see. In addition, Goldberg accepts Allport's interpretation of the tendency for a minority group to incorporate negative, prejudicial attitudes and beliefs of the dominant majority in a defensive function which is called, "identification with the aggressor."

Goldberg, therefore, attributes women's tendency to devalue the achievement competence of other women according to the "prejudice hypothesis."

In an attempt to clarify the nature of situations which lead to discriminatory behavior against women, Unger, et al. (1972) constructed situations in which both male and female subjects were in the position of cooperating or not cooperating with a female. When the situation was such that the female's behavior fit the stereotype of the "dependent damsel," both male and female subjects were willing to cooperate. However, when the situation was such that the woman possessed some degree of social power, equal to that of men, they received decreased cooperation from both men and women, with the female subjects being less cooperative. That the women themselves opposed and treated their own sex with more discrimination when women were aspiring to equal power and status with men, the authors interpret as being in agreement with Goldberg's hypothesis concerning identification with

the aggressor.

Dorros and Follet (1969) replicated Goldberg's study with a sample of male students. The findings indicated that males share the same prejudice as females in their evaluation of the competence of women as compared to men. However, this tendency was found to be less strong in males than in Goldberg's original sample of females.

In another study by Alper and Korchin (cited in Goldberg, 1972), college students of both sexes were tested on their recall of socially pertinent information including items relating to the admission of females to Harvard University. The results demonstrated a significantly greater tendency among the women as compared to the men to recall pro-male and anti-female items. Although Goldberg interprets the results of the two above studies as supporting his prejudice hypothesis, he does not explain why the prejudice is stronger in women than in men.

Etaugh and Rose (1975) replicated Goldberg's study with a sample of male and female adolescents (in grades 7, 9, and 11). The findings indicated that the performance of female writers was devalued more than that of the identical performance of males, with the two sexes differing little in their evaluations. The authors interpret their results to show that sex bias in evaluating performances appears to be well-established by adolescence.

Pheterson (1969), however, found that sex bias was absent in a group of middle-aged uneducated women. He conducted this study utilizing Goldberg's technique, in which the sample was asked to evaluate articles which were all in female stereotyped fields. The women behaved consistently with the traditional sex-role stereotype and evaluated the female authorship articles as equal to, or more favorable than the same article with a male author. These results, however, contradict those of Goldberg's, as the women in this sample evaluated the female authored articles as equal to or more favorable than the same articles written by a male.

In another similar study designed to investigate the divergent results of Goldberg (1968) and Pheterson (1969), female college students at Connecticut College were asked to evaluate eight abstract paintings with the description of the artist and the painting varied on three dimensions (Pheterson, et al., 1971). First, the sex of the artist was altered so that the women were given identical versions of the background profile of the artist except that the sex of the artist (first name) was altered for one-half of the subjects. Second, the status of the painting was altered so that half of the subjects were told that the painting was an entry in a contest not yet judged and the other half thought it was a prize-winning painting. Third, the personal odds of the artist were varied so that half of the subjects were told that an artist had overcome a severe handicap (e.g., "an arm amputee since

1967") and the other half thought that the artist faced no unusual obstacles. The first hypothesis of the study was that women would evaluate male attempts to accomplish more highly than female attempts, that is, given a piece of work of uncertain status and is in competition the man's rather than the woman's attempt is more likely to be eventually successful. The second hypothesis was that women will evaluate female accomplishments as equal to or better than male accomplishments because women do not expect success and assume that women face more obstacles and will therefore have a contrast effect and overvalue the achievement. The third hypothesis was that women will evaluate the accomplishments of people with personal odds against them more favorably than the accomplishments of people without such odds, because Allport (1958) noted that our culture shows great admiration for the achievements of the handicapped or the underprivileged. The paintings were evaluated by the subjects along the dimensions of technical competence, creativity, overall quality and content, emotional impact, and predictions of the artist's future success.

The results indicated that when a painting was allegedly an "entry in a contest" there was a significant devaluation of the identical painting with a female opposed to a male painter. However, these significant devaluations of female painters occurred only on the dimension of technical competence and predictions about the artist's future success. On the other hand, no significant differences were found in evaluations

when the paintings allegedly were "past winners" in a contest. The third variable, personal handicaps of the artist, had no effect on the ratings. The authors interpret these findings in relation to the "prejudice hypothesis" and conclude that:

. . . work of women in competition is devalued by other women . . . when confronted with another woman who is trying to succeed they will assume that she is less motivated, less expert, or simply less favored by others than a man would . . . women do not devalue another woman when she has already attained success . . . (pp. 117-118)

They attempt to explain the divergent results of Goldberg (1968) and Pheterson (1969) by speculating that uneducated, middle-aged women perceive published articles as signs of obvious success, whereas college women perceive such work simply as a presentation of ideas, and that women are prejudiced against female ideas but not against female success. Therefore, they construe the results of the two studies as supporting a single interpretation. They propose that the subjects in the Pheterson study perceived the very publication as conferring success upon its authors. Thus, they see the results of both studies as illustrating the general principle of prejudice against women until they are proved successful. Although, they admit that the interpretation of their study and the divergent results of the former studies is by itself not sufficient, they are unable to offer a further explanation of the phenomenon they observed.

Another study was designed to reexamine the prejudice hypothesis using only a portion of Goldberg's original articles (Chobot, Goldberg, Abramson, & Abramson, 1974). Rather than using the six original articles, they used only four articles, two neutral articles (art history and linguistics) and two female-associated articles (education and dietetics) for a sample of college men and women. In contrast to Goldberg's finding, they found no significant difference between male-authored articles and female-authored articles. They offer the explanation that there was no devaluation of the female-authored articles because of the contributing factor of increased feminine emancipation. Although this indeed might have had an effect on the results, the fact that they did not include articles in masculine fields might be a salient factor. It has been shown that devaluation of female authors is at its greatest for articles in masculine fields (Goldberg, 1968; Mischel, 1974).

In an attempt to extend Goldberg's findings of professional prejudice against women to a sample of male and female judges and to a social structure different from contemporary American society, Mischel (1974) in a series of very complicated studies with American and Israeli subjects, used the evaluative format Goldberg had employed. In addition, she measured all subjects' occupational sex-role stereotypes in the manner similar to Goldberg's study and found that in all her samples, law and city planning were the most significant male

fields and primary education and dietetics were the significant female fields. In her attempt to investigate possible differential evaluations resulting from sex-role stereotypes, this result supported her use of the four articles.

In her first study, with male and female high-school students in their senior year and male and female college undergraduates, she hypothesized that in traditionally masculine fields (law and city planning) both males and females would show bias (tendency to devalue) against women. In general, subjects of both sexes and educational levels gave higher marks to male authors in masculine fields and to female authors in female fields, bias therefore occurring in the direction of the sex appropriateness of the field; in that judges tended to prefer authors whose sex was the same as that normative for (or strongly associated with) the professional field in which the article was written. A fine grained analysis revealed that the tendency to devalue women's competence appeared to vary with the grade level of the judges and the particular article and these preference patterns were shown more clearly in the judgments of college students, pointing out that differential evaluations were highly specific to certain fields and changed as education level changed.

The findings from her first study do not confirm Goldberg's findings, in that her data indicate far more specificity rather than broadly generalizable sex bias. While her results indicate that the

sex of the professional has substantial biasing effect on the evaluation of his or her achievement, the direction of the effects are variable and complex. She also casts some doubt on Goldberg's prejudice hypothesis. In her first study, the college students had clear occupational sex-role stereotypes about the four fields, and yet they showed no sex bias in the evaluation of articles in law and primary education. Rather than consider this sex bias a behavioral manifestation of internalized sex-role stereotypes, Mischel believes that it may reflect "reality judgments with the raters operating in the most realistic fashion possible to maximize predictive accuracy given the situation" (1974, p. 162).

The possibility that stereotypes can exist without consequent sex bias was employed in her second study. Here she found that in her Israeli sample, containing both a Kibbutz and a Jerusalem sample of males and females similar in age to her American sample, the subjects did not show any evaluative bias found in her American sample. Although the Israeli subjects shared the same stereotypes as the American subjects regarding the sexual associations of the diverse fields, their stereotypic beliefs did not necessarily affect their behavior, in their tendency to devalue the competence of women.

Mischel casts doubt on the validity of the prejudice hypothesis, which refers to the process of identification with the beliefs and attitudes, and she suggests that the incorporation of these beliefs does not

need to produce the biased behavior. Rather, she speculates it is the subject's experience with the availability of competent models in his or her society which breaks down bias in practice and in behavior. In Israel the availability and experience with competent women in a greater variety of fields (in the army and as head of the government) may reduce the biases in behavior, even though sex-role stereotypes may be remarkably similar to those found in the United States, continue to exist at the level of attitudes. She concludes by speculating that the phenomenon of devaluation may not reflect prejudice but rather reality judgments about the differential probability of success for males and females with particular fields.

In a related study, Baruch (1972) gave Goldberg's Articles Test to a sample of Swarthmore College females with the purpose of attempting to tease out the relationship between devaluation of feminine achievement competence by females and maternal sex-role attitudes and employment. She tested two hypotheses offered by researchers to explain the specific nature of the maternal influence upon college women's attitudes toward professional achievement for women in general. The first hypothesis is the "prejudice hypothesis" offered by Goldberg (1968) based on the prejudice theory of Allport (1958). The second hypothesis is based upon the theories of Keniston and Keniston (1964) and Vogel, et al. (1970) that women develop negative feelings toward the achievement efforts of women in general via the process of

"identification with the maternal model's behavior in relation to work."

This "competence hypothesis" refers to the process of identification with the maternal behavior, whereas the prejudice hypothesis refers to the process of identification with beliefs and attitudes.

The hypotheses were tested utilizing Goldberg's (1968) technique and in addition each subject's attitude toward a career orientation was assessed, as well as her perception of her mother's sex-role ideology and employment history. According to the "prejudice hypothesis," it would be predicted that those women who devalue the achievement competence of women as compared to men would also have a negative attitude toward career women and the dual role pattern. It would also be predicted that mothers of devaluers would have negative and conflicted attitudes towards a dual role pattern for women. According to the "competence hypothesis," it would be predicted that women who devalue the achievement competence of other women would have a non-working mother.

The results supported the "competence hypothesis"; the only variable that significantly differentiated those women who tended to devalue the achievement competence of other women from those who did not, was the maternal work status with devaluation being significantly associated with a non-working mother. There was no relationship between the tendency to devalue and the subject's sex-role attitudes or her mother's sex-role ideology. Simply having a mother

who was employed was enough to affect the daughter's judgment about the competence of other women.

Both Mischel (1974) and Baruch (1972) share the view based on the results of their two studies that this tendency to devalue the achievement competency of women by women is more complex than simply a result of the internalization of stereotyped beliefs and attitudes of the dominant majority. They both emphasize actual behavior of competent female models, rather than attitudes as the critical factor.

In a related study, Vogel, et al. (1970) found that daughters of employed mothers perceived women less negatively on the competence cluster (male valued items) whereas daughters of non-working mothers perceived women as lacking competence. Thus while the two groups did not differ in their perceptions of women with respect to characteristics usually valued in women (warmth-expressiveness) the daughters of employed mothers did perceive women as more intelligent and professionally competent than the other group.

Evaluation of the Prejudice Hypothesis

In an attempt to replicate and/or extend Goldberg's (1968) findings, several studies have yielded data inconsistent with his original hypothesis and have cast doubt on the generality of his interpretations (Baruch, 1972; Mischel, 1974; Pheterson, 1969).

Several of the findings point to limitations of Goldberg's "prejudice hypothesis" as an explanation for some women's tendency to devalue the achievement competence of other women; in that the relationship between this tendency and the identification with and internalization of attitudes and beliefs (the process inherent in the prejudice hypothesis) is unclear and inconsistent. It appears that this tendency is more complex than simply the matter of whether a woman has internalized a more or less traditional view of femininity.

Some researchers (Baruch, 1972; Mischel, 1974) have suggested that this tendency to devalue is not simply the function of the identification with attitudes and beliefs, but rather may be connected to the identification with the behavior of competent female models. Therefore, actual behavior, according to them, is the crucial factor rather than just attitudes and beliefs. It appears that what is needed at this point is an exploration into other variables that might be associated with this tendency.

Chapter VII

THE MOTIVE TO AVOID SUCCESS IN FEMALES AND THEIR DEVALUATION OF FEMININE ACHIEVEMENT COMPETENCE

What becomes apparent from the foregoing research is that the "prejudice hypothesis" is not a sufficient explanation of the often inconsistent and contradictory findings.

Although it has been postulated that this tendency to devalue feminine achievement competency is related to the process of identification with female behavior, rather than beliefs, none of the previous research has investigated the subject's actual behavior, and in specific, the subject's actual achievement behavior. One wonders whether the fact that these subject variables were not taken into account may have contributed to the cloudiness and inconsistency of the previous research.

The research that was presented in previous sections concerning the motive to avoid success might well be relevant at this point. It is to be remembered that the motive was conceived as reflecting a female's conflicts over her achievement strivings which may be

expressed behaviorally in a variety of ways. A female's tendency to devalue her own performance, or her altering her career choice from a male to a female-dominated field are some examples of the MAS conflict expressed behaviorally. If a female high in MAS does experience conflict about the consequences of her success, there is a possibility that this underlying conflict might contribute to the way she perceives other women's success.

Porjesz (1974) has critically evaluated some of the research on devaluation and offers an alternative interpretation based upon an expanded theory of MAS, which attempts to explain why some women who are conflicted about their own success will tend to devalue the success and competency of other women.

Porjesz views Goldberg's Articles Test as a clinical projective tool. She postulates that in the process of evaluating articles written by other women, those females high in MAS identify with the female authors and project this fear unto them. She explains:

. . . thus, the anxiety associated with MAS in women is aroused in the presence of an achievement effort of another female via the process of identification and projection and is reduced by the subsequent devaluation of the author's intellectual and professional competence. (1974, p. 127)

The female's reaction, according to this MAS interpretation, is not just a measure of internalized beliefs and attitudes about existing cultural stereotypes (Goldberg, 1968), nor a measure of a realistic

judgment about the probability of success in contemporary society (Mischel, 1974), nor just a reflection of identification with a maternal model (Baruch, 1972), but in addition it is a measure of the projection of their own conflicts. In addition to the defense mechanism of "identification with the aggressor," postulated by Goldberg, which assumes that most women will devalue the achievement competence of women when their contribution is in a "masculine field," the present author views a high level of MAS as another defense responsible for the apparent bias some women demonstrate against the achievement of other women.

Summary and Conclusions

From the foregoing empirical and theoretical studies, the following major conclusions can be drawn:

1. The concept of "the motive to avoid success," as originally theorized by Horner appears to be limited. It has shown to be correlated with many behavioral variables, not just those limited to achievement situations in which there is competition against males.

2. Horner's original projective measuring test for "the motive to avoid success" has been shown to be limited. The test has recently been broadened and many difficulties in the measurement overcome, but these changes have not been met with any changes or broadening of the original conceptualization.

3. Porjesz has offered an expanded conceptualization of "the motive to avoid success" as reflecting a generalized non-situational conflict over autonomy. Her formulations expand the understanding of the motive in females to include a wider range of achievement related settings, in which the conflict may be expressed.

Porjesz further expands the understanding of "the motive to avoid success" developmentally, with specific focus on the mother's employment outside the home, as a crucial variable which serves the function of paving the way for the daughter's development of autonomous achievement motivation.

4. Traditional sex-role stereotypes still exist in contemporary society and can be divided into two major clusters of traits: the "competency cluster," describing the masculine stereotype, and the "warmth-expressiveness" cluster, describing the feminine stereotype. Our society ascribes significantly greater social and personal value to the "masculine stereotype" and therefore to men, than to the "feminine stereotype" and to women. The research reflects a strong tendency among our society to devalue females in relation to all characteristics associated with the "masculine stereotype."

5. Another area of research that focuses on women's difficulty in areas of achievement is the area of women's tendency to devalue other women. Several hypotheses have been offered as explanations for this phenomenon, including the "prejudice hypothesis"

(Goldberg, 1968), the "competence hypothesis" (Baruch, 1972), and the "reality judgment hypothesis" (Mischel, 1974). The research has demonstrated that although each hypothesis contributes to explaining the phenomenon, none serves in itself as a sufficient and comprehensive interpretation.

6. Porjesz offers, by way of her expanded theory of the motive to avoid success, a broader interpretation of women's tendency to devalue other women, viewing it as one important manifestation of the motive to avoid success. She considers this her horizontal expansion of Horner's theory, suggesting the operation of "the motive to avoid success" in achievement-related situations, other than those which have competition against men as the major variable.

Chapter VIII

HYPOTHESES AND DESIGN

The present study was conducted in order to empirically examine Porjesz's (1974) expanded theory of "the motive to avoid success" in women. The study focused primarily on the horizontal expansion of Horner's theory (1968), and therefore examined the relationship between "the motive to avoid success" (MAS) and women's tendency to devalue the achievement competence of other women. The secondary objective focused on the developmental expansion, and therefore examined the relationship between MAS and the maternal work status variable.

The hypotheses derived from the horizontal expansion may be subdivided into two areas; that is, the hypotheses 1, 2, and 3, involving the evaluation of competence, and hypothesis 4, involving the evaluation of creativity-expressiveness. The specific hypotheses derived from the horizontal expansion of MAS from these two areas are stated below:

Rationale for Hypotheses 1 - 3

When a woman is in the position of evaluating an article, she will identify with the female author. When the article is in a field that elicits MAS, namely in a male-oriented field, the woman with a high level of MAS will project the conflict onto the female author. In order to reduce the anxiety associated with the conflict, the woman will subsequently devalue the female author's professional competence. A woman who has a low level of MAS will also identify with the female author, but because there is little or no anxiety aroused, MAS will not be projected onto the female author. Therefore, in contrast with the woman with a high level of MAS, for the woman with a low level of MAS there will be little or no subsequent devaluation of the female author's professional competence.

If the field of an article does not elicit MAS, namely when the field is one reserved for women where the achievement fulfills the gratification of affiliative needs, there will be no projection of MAS and therefore little or no subsequent devaluation.

Hypothesis 1. It is expected that high MAS subjects will have a tendency to devalue the achievement competence of female authors significantly more than male authors when the professional field of the article is associated with men.

Hypothesis 2. It is expected that low MAS subjects will have a tendency to devalue the achievement competence of female authors

when the professional field is one associated with men, significantly less than the high MAS subjects.

Hypothesis 3. It is expected that high MAS subjects will have a tendency to devalue the achievement competence of female authors significantly less when the field of the article is one associated with women as compared to articles in which the field is associated with men.

Although these three hypotheses are stated separately, they are actually interrelated. The general prediction is that the high MAS subjects are expected to devalue the female authors in male fields more than any of the other ratings given to either the male authors in male fields or the female authors in female fields. In addition, the high MAS subjects are expected to devalue the female authors in male fields more than the low MAS subjects' ratings of female authors in male fields.

Rationale for Null Hypothesis 4

Rather than postulate a general prejudice, it is expected that a selective pattern of devaluation will emerge consistent with MAS. Since creativity and expressiveness are traits consistent with the traditional feminine stereotype and do not elicit MAS, it is expected

that even in the male fields, the women high in MAS, when rating the female authors on these evaluative dimensions, will not project MAS and therefore no subsequent devaluation will occur.

Null Hypothesis. It is expected that high MAS subjects will not significantly differ from low MAS subjects in their tendency to devalue the creativity and expressiveness of female authors when the professional field is one associated with men.

Rationale for Hypothesis 4

The derived hypothesis from the expanded theory of MAS predicts no difference between high and low MAS subjects in their evaluation of the creativity and expressiveness of female authors in male fields. However, there might be other points of view which predict some other relationship. It is a subsidiary interest of this study to explore other possible relationships. For example, according to the "differential acceptance hypothesis" (French & Lesser, 1964) women who value intellectual attainment and intellectual career orientation, rather than a traditional homemaker role, feel that they must reject the woman's role. The women in this study probably all value intellectual attainment, since they are college students; however, it is possible that the low MAS women are more male-oriented in their sex-role orientation than are the high MAS women. Therefore, it is possible that when a

low MAS woman is in the position of evaluating a female author, she may devalue those feminine associated characteristics.

Hypothesis 4 It may be possible that low MAS subjects have a tendency to devalue the creativity and expressiveness of female authors when the professional field is one associated with men significantly more than high MAS subjects.

The specific hypothesis derived from the developmental expansion of MAS is stated below:

Rationale for Hypothesis 5

Mother's employment outside the home serves the critical function in the developmental process of allowing for a separation. This separation paves the way for the ultimate psychological distance and independence and development of inner psychological resources leading to autonomous achievement motivation. Mother's employment might, in addition, serve as a model for the development of positive attitudes toward female competence. Therefore, mother's employment might serve as a critical variable differentiating among those high achievement women, those who develop a high or low level of MAS.

Hypothesis 5. It is expected that significantly more high MAS subjects will have non-working mothers than low MAS subjects.

Design of the Study

Hypotheses 1 - 3 were tested in a 2 x 2 x 2 analysis of variance. High and low MAS was treated as a between-subject variable. The other two variables, field of the article and sex of the author of the article, were treated as within-subject variables. The predictions of the study depended on the significance of the second order interaction (MAS x field x sex of author). The predictions were not dependent on the significance of main effects or first order interactions.

Table 1

EXPERIMENTAL CONDITIONS IN THE 2 x 2 x 2
FACTORIAL DESIGN FOR HYPOTHESES 1 - 3

	male field		female field	
	male author	female author	male author	female author
high MAS	1	2	3	4
low MAS	5	6	7	8

Hypothesis 1 - cell 1 versus cell 2, where the mean in cell 2 is expected to be higher than in cell 1 (the higher the score, the more devaluation).

Hypothesis 2 - cell 2 versus cell 6, where the mean in cell 6 is expected to be lower than in cell 2.

Hypothesis 3 - cell 2 versus cell 4, where mean in cell 2 is expected to be higher than in cell 4.

Hypothesis 4 was also tested in a $2 \times 2 \times 2$ analysis of variance. High and low MAS was treated as a between-subject variable. Field of article and sex of author were treated as within-subject variables. The predictions depended on the significance of the second order interaction (MAS x field x sex of author). The predictions were not dependent on the significance of main effects or first order interactions.

Table 2
EXPERIMENTAL CONDITIONS IN THE $2 \times 2 \times 2$ FACTORIAL
DESIGN FOR HYPOTHESIS 4

	male field		female field	
	male author	female author	male author	female author
high MAS	1	2	3	4
low MAS	5	6	7	8

Null Hypothesis - cell 2 versus cell 6, where there are no expected differences in the means.

Hypothesis 4 - cell 2 versus cell 6, where the mean in cell 6 may be higher than in cell 2.

Hypothesis 5 was tested by chi-square tests.

Chapter IX
METHODOLOGY

Overview

The variables in this study were the following:

Subject Variable

The MAS score, as measured by the newly revised MAS projective test -- all female subjects were given this test, and those white female subjects whose scores fell one standard deviation and above from the mean of the sample were classified as high MAS subjects; those subjects whose scores fell minus one standard deviation and below the mean were classified as the low MAS subjects.

The Article Variables

The sex-role association of the professional field of the article in the modified Goldberg's Articles Test (GAT) -- city planning and law were considered masculine, while dietetics and education were considered feminine.

The sex of the author of the article in the GAT -- for any one subject, there were four articles, two written by men and two written by women.

Article Evaluation Variables

The evaluative questions at the end of each article of the GAT were divided into those which were male-oriented in the content of their sex-role stereotype, tapping the competence of the author, and the other set of questions tapping the female sex-role stereotype like creativity and expressiveness. The ratings of these items were the dependent variables in this study.

Questionnaire Variable

The maternal work status variable gleaned from the questionnaire was divided into those subjects whose mothers worked during the following four periods: their early childhood (1 - 5); their middle childhood (5 - 12); their adolescence (13 - 18); and their mothers' present work status; from those subjects whose mothers did not work during these periods.

Subjects

For this study, white female senior college students who were achieving at a relatively high level were the subjects of choice. The criteria for high level achievement was the subject's inclusion in the

Dean's Honor List at City College of the City University of New York. One hundred and six City College students were tested, data from nine black female senior dean's list students were not used, only data from the ninety-seven white female dean's list subjects will be reported here and considered the experimental sample. The age range of the sample was 18 to 45, mean age was 21. Fifty-five percent of the subjects in the sample were Jewish; twenty percent were Catholic, seven percent Protestant, one percent Greek Orthodox, and seventeen percent of the subjects reported no religion. Eighty-six subjects were single, nine were married and two were divorced, and the mean reported overall grade point index was 3.48. Sixty-seven percent of the sample reported definite plans for graduate school the following year.

Specific Research Procedures

This investigator received a copy of the City College 1974 - 1975 Dean's Honor List. From this list, names and telephone numbers of females, whose class code classified them as entering into their senior year in the Fall 1975 term, were obtained. The investigator personally contacted each subject by telephone to introduce the study, secure the subject's cooperation, and to set up appointments. Each subject was told the following:

My name is Marilyn Puder and I am a doctoral student at City College. I am working on my dissertation which is a study surveying the thinking and feelings of bright college students at City College. You were specifically selected. I got your name and phone number from the dean's list in the Honor's Office at City College. I am calling to enlist your help in my study. The focus of my study will be to get your attitudes about several professional articles in different fields and social situations college students might find themselves in. The survey has been constructed to ensure that it takes no longer than an hour of your time. No names are required, there is no personal interviewing and therefore you are provided complete confidentiality. I will be at the City College Psychological Center on _____ between the hours of 10:00 a.m. through 4:00 p.m. Your participation is greatly appreciated, and if you are interested we can schedule an appointment at the start of one of the hours between 10:00 and 4:00.

It was explained to the subjects that because of the nature of the research, further details could not be revealed to her at that time, or for that matter immediately after her participation in the study, but that the investigator would obtain her address at the time of their appointment and would be glad to furnish her with such information and further results of the study after the study had been completed.

All appointments were held at the Psychological Center of the City College at least once a week between the hours of 10:00 and 4:00 from October 16, 1975 through December 11, 1975. The subjects were scheduled to arrive on the hour so that group administration would be possible. Since a few subjects did not always keep their appointments at the assigned time, some subjects were run individually, while most

were run in groups, ranging in number from 2 through 8.

Once the subjects had taken seats and arranged themselves with a pen or pencil, the investigator, prior to the actual administration of the three tasks, thanked the subjects for coming, and explained the general instructions for the study, the content of which was the same as what was said to each subject over the phone. The subjects were, in addition, informed that no names were to put on any of the booklets and that a code number consisting of the first three digits and the last four digits of their social security numbers were to be written on the top of each of the booklets.

The Goldberg's Articles Test (GAT) then was distributed and the subjects were told to read the instructions, written on the cover-sheet of the booklet, to themselves:

In this booklet, you will find excerpts of four articles, written by four different authors in four different professional fields. At the end of each article, you will find several questions which are to be answered before you proceed to the next article. Please write the first evaluation that you think of, don't spend too much time thinking about the questions. You are not assumed to be sophisticated or knowledgeable in all the fields. We are interested in the ability of students to make critical evaluations in the professional literature.

The GAT test was administered first and immediately collected when subjects were finished so that responses would not be affected by the other measures, which might reveal to some subjects the true purposes of the study. Once the subjects finished the GAT test, the

Motive to Avoid Success (MAS) test and questionnaire were distributed. The instructions for the MAS test were written on the coversheet and the subjects were told to read them to themselves:

On these pages, there is a description of an event, your task is to make up as dramatic a story as you can. Tell what led up to the event, describe what is happening at the moment, what the person involved are feeling and thinking and give the outcome. You have four minutes for each story.

The subjects were timed individually from start to finish of the MAS test. They were given 20 seconds to read each cue and four minutes to write each story. When the MAS test was finished, the subjects were asked to proceed to the questionnaire. The subjects were told that when they finish the questionnaire to return both booklets to the investigator. At this time the subjects were thanked again and informed that if they had any questions about the study to leave their names and addresses on a pad of paper the investigator provided. The investigator promised to furnish them with more information once the study was completed.

Measurement Devices

Goldberg's Articles Test (GAT)

The test as well as the procedure used was adapted from Mischel's (1974) modification of Goldberg's original test and procedure (1968).

Goldberg originally used six articles, two from female fields and two from male fields and two from neutral fields. As empirically determined by both Goldberg and Mischel, the two fields most strongly associated with masculine achievement were law and city planning, and education and dietetics were fields found most strongly associated with female achievement.

In order to offset any possible fatigue and boredom effects, this study adapted Mischel's procedure where she shortened the task from six to four articles, omitting the neutral articles.

For any one article, half of the booklets had a male author's first name appearing on the first page of each article. The other half had a matched female authored name, the first name was the only thing that was different. Each booklet had two male and two female authored articles, one from each field.

Not only was the task shortened from six to four articles, but also the tasks were designed so effects, such as those arising from fatigue and boredom, would not differentially influence the results. The order of the authors was counterbalanced so as to make sure that the attribution of authorship was independent of the field of the article. In any one group of subjects, four different sets of booklets were to be distributed such that the counterbalancing of authors was as follows:

Table 3
COUNTERBALANCING OF AUTHORS ON THE GAT TEST

		Set			
		1	2	3	4
Article	1	male	male	female	female
	2	male	female	male	female
	3	female	female	male	male
	4	female	male	female	male

In addition, the order of the articles for each booklet was randomized.

At the end of each article the subjects in Goldberg's original procedure answered a set of nine evaluative questions and the author's name, in the form of Miss _____ or Mr. _____ was included in each question. Each question contained five response choices ranging from 1, the most favorable rating, to 5, the least favorable rating. Therefore for each article the subjects' score ranged from 9 to 45.

An abbreviated set of questions modified from Mischel's procedure was used in the present study. First, the number of questions was reduced from nine to six, to offset possible boredom, and the three questions dropped were those not relevant to the present hypotheses. Second, the style of presenting the author's name was modified. Mischel has pointed out that Goldberg's style of referring to authors as Mr. or Miss adds extra evaluative dimensions that could be difficult

to assess; that is, the use of titles such as Miss gives additional information about the author which might influence the assessment of competence. The use of Ms. was rejected by Mischel on the grounds that the title is too closely associated with the women's rights movement and so it might unduly sensitize the judges to the dimension of interest. Mischel resolved the problem by using the ascribed author's first and last names which she included in each question. This investigator agreed with Mischel's criticisms of the original procedure but intended to modify her procedure even further.

It would appear that constant use of first and last names becomes repetitious and may give the subjects some cues to suspect the actual significance of the author's name. Since it was hoped that the real purpose of this test remained latent and that the test functioned more like a projective tool, the stimuli used should be more vague. Therefore, rather than use first and last names constantly in each question, in the present study, the identity of the author alternated between use of first and last name to a reference to "him" or "her" and to the title of "author" itself.

Third, there was a modification in the content of some of the questions to allow for a more relevant test of the hypotheses of this study. The original four questions which tapped the subject's evaluation of the author's competence were retained. In addition, two of the original questions were modified in order to tap the subject's

evaluation of the author's creativity and expressiveness. The six questions at the end of each article were the same for each article, except for the author's identity. An example of Goldberg's original questions, as well as a sample of the revised GAT used in this study can be found in Appendix A.

For each article a subject received a score ranging from 4 to 20 (from most to least favorable rating) for the questions dealing with the author's achievement competence. In addition, the subject received a score ranging from 2 to 10 (most to least favorable) for the questions dealing with the author's creativity and expressiveness.

The Motive to Avoid Success Projective Test (MAS test)

Each subject received a booklet containing the MAS test with standard instructions on the coversheet. There were three verbal cues within each booklet, each written on a separate page with space for the subjects to write a story. The three cues chosen for this study from the cues available in the manual (Horner, et al., 1973) are stated below:

1. After much work, Anne has finally gotten what she wanted . . .
2. Joan is looking into her microscope . . .
3. Carol is walking along the beach late in the day . . .

Although the scoring manual does not make it explicit that the names of the female subjects in each of the three cues should be different, this investigator changed the names for each cue (rather than

have Anne as the only female in each of the three cues) in order to control for possible carry-over from one story to the next.

There were six scoring categories and for each category a numerical weight was given. The total score may be determined by either categorical or continuous scoring and the developers of this test make it clear in their scoring manual that there is no strong evidence on the basis of which method to recommend, but they suggest that whichever one is chosen should be made explicit. Scores for this study were determined by continuous scoring, that is, scores for each category were summed across stories and the range of scores for the three stories theoretically can be from -6 to +24, although in the sample in the present study the range was from -6 to +14.

The care with which the scoring categories are described in the manual, though perhaps appearing tedious, seems essential for making explicit what criteria are used in the scoring of the thematic content. A full description of the six scoring categories can be found in the manual which is included in Appendix D.

This investigator rated the MAS tests of the ninety-seven subjects according to the criteria set out in the scoring manual. To determine reliability of the investigator's ratings, another rater was recruited (a clinical psychologist familiar with the theoretical background of the MAS test) to blindly rate the MAS tests of the ninety-seven subjects. This rater was trained by the investigator on a series

of scoring examples (hypothetical scores and their correct scores) described in the scoring manual (Appendix D).

The investigator and the judge's ratings were correlated and the resulting Pearson r coefficient was .96, a correlation which is significant at the $p = .001$ level of confidence. Each subject's MAS score was then calculated as an average rating of the two raters. The ninety-seven subjects' scores were differentiated into high and low MAS subjects; all scores one standard deviation from the mean and above were considered the high MAS group, and all scores minus one standard deviation from the mean and below were considered the low MAS group. From a total sample of ninety-seven subjects, by chance, twenty subjects scored in the low MAS group, and twenty subjects scored in the high MAS group. Table 4 shows the means, standard deviations and the Pearson r for the investigator and other judge's ratings of MAS scores for the whole sample. Table 5 shows the mean scores for the high and low MAS groups.

Table 4

MEANS, STANDARD DEVIATIONS AND PEARSON PRODUCT
MOMENT CORRELATION COEFFICIENT FOR THE
INVESTIGATOR'S AND INDEPENDENT JUDGE'S RATINGS
OF MAS SCORES FOR THE N = 97 SAMPLE

Rater	Mean	Standard Deviation	r
Investigator	2.95	5.02	.96*
Independent Judge	2.59	5.10	

* $p < .001$

Table 5
MEAN SCORES FOR THE HIGH AND LOW MAS GROUPS

Group	Mean	Standard Deviation	N
High MAS	10.50	2.41	20
Low MAS	- 2.92	3.84	20

Questionnaire

This investigator devised a set of questions for all subjects to answer. Information was obtained about the subject's age, race, religion, marital status, academic achievement, college major and career plans, graduate school plans. This information was used not only to identify subjects, but also to describe the sample. The relevant item in the questionnaire which was used in the analysis of the results was the information concerning their mother's present and past work status. Questions about their mother's employment history were included. A copy of the questionnaire can be found in Appendix C.

Chapter X

RESULTS

The results of this study are presented in terms of the various analyses which were made in order to test Porjesz's (1974) horizontal expansion of Horner's MAS theory (1968), specifically formulated in Hypotheses 1 - 4; and to test the developmental expansion of Horner's theory, specifically formulated in Hypothesis 5. Following the description of the results of these major hypotheses is a description of the post hoc analysis of several demographic variables, some of which differentiate between the two MAS groups, and some of which do not.

Horizontal Expansion

The mean competence ratings of articles in each condition are shown in Table 6.

These data were submitted to a 2 x 2 x 2 analysis of variance for mixed design. The analysis of variance tested the effect of MAS level (high and low), sex-role association of the professional field of the article (male and female), and the sex of the author (male

and female) on the competence ratings of the article.

Table 6
MEAN RATINGS OF ARTICLES IN THE EXPERIMENTAL
CONDITIONS FOR HYPOTHESES 1 - 3

	male field		female field	
	male author	female author	male author	female author
High MAS	8.55	8.45	8.26	7.97
Low MAS	8.60	6.95	8.30	7.35

Note: higher numbers indicate more devaluation.

The results of the analysis of variance for the competence ratings are shown in Table 7. The analysis yielded no significant main effects or first-order interactions; however, it did indicate a significant interaction for MAS level x sex role association of field x sex of author ($F[1, 76]=8.14, p < .01$).

Table 7
 AN ANALYSIS OF VARIANCE OF COMPETENCE RATINGS
 AS A FUNCTION OF MAS LEVEL, SEX OF FIELD,
 AND SEX OF AUTHOR

Source	SS	DF	MS	F	p
Between subjects	334.49	39			
MAS level (A)	1.40	1	1.40		
Subj. w. groups (error [a])	333.09	38	8.77		
Within subjects	705.75	120			
Sex of field (B)	.75	1			
A x B	11.57	1	11.57		
B x subj. w. groups (error [b])	304.95	19	16.05		
Sex of author (C)	15.00	1	15.00	1.63	NS
A x C	.30	1			
C x subj. w. groups (error [c])	174.93	19	9.21		
B x C	2.77	1	2.77	1.19	NS
A x B x C	18.88	1	18.88	8.14	<.01
BC x subj. w. groups (error [bc])	176.60	76	2.32		

The analysis of variance indicates the existence of some systematic effect attributable to the unique combination of the three treatment factors, but it does not provide enough information to draw a conclusion as to the significance of the three experimental hypotheses. At the outset of the study, three hypotheses were constructed as planned nonorthogonal comparisons between certain cell means, which were to be tested by multiple t tests. When doing three t tests at the .05 level

of confidence, the likelihood of deciding that a given comparison is significant, when in fact it is not, is: $1 - .95^3 = .14$; however, at the .01 level of confidence, the likelihood of this type of error is: $1 - .99^3 = .03$. Therefore, in order to reduce the likelihood of this error, the .01 level of confidence was chosen for these three comparisons.

Table 8 presents the results of the t tests for hypotheses 1 - 3. As can be observed from the table, hypothesis 1 was not confirmed ($p > .01$), demonstrating that the high MAS subjects did not devalue the achievement competence of female authors significantly more than male authors when the professional field of the article was one associated with men. (Hypothesis 1 was not confirmed at the .05 level of confidence.)

Table 8
t TESTS FOR HYPOTHESES 1 - 3

	cell means	D	T	p
Hypothesis 1	8.55 - 8.45	.10	.165	$> .01^*$
Hypothesis 2	8.45 - 6.95	1.50	5.06	$< .01^{**}$
Hypothesis 3	8.45 - 7.97	.48	.599	$> .01^*$

Note: This is a significance level for one-tailed tests.

*Correlated t tests with 19 d. f.

**Independent t test with 38 d. f.

Hypothesis 2 was confirmed, $t[38] = 5.06$, $p < .01$, demonstrating that the low MAS subjects significantly differed from the high MAS subjects in their evaluation of the competence of female authors in male fields, with the low MAS subjects giving more favorable ratings. Although this hypothesis was confirmed, when it is examined in the context of the other findings and related to the general prediction made concerning the devaluation phenomenon expected for the high MAS subjects, the meaning of the results for Hypothesis 2 become more complex. The interpretation of this result will be amplified in a later section in which the evaluation of and implications of the results are discussed.

Hypothesis 3 was not confirmed ($p > .01$), demonstrating that the high MAS subjects did not devalue the achievement competence of female authors significantly less when the field of the article was one associated with women as compared to the articles in which the field was associated with men. (Hypothesis 3 was not confirmed at the .05 level of confidence.) Although the differences in the cell means were not significant, the differences were in the predicted direction.

The mean creativity-expressiveness ratings of articles in each condition are shown in Table 9. These data were submitted to a $2 \times 2 \times 2$ analysis of variance for mixed design. The analysis of variance tested the effect of MAS level (high and low), sex-role association of the professional field of the article (male and female),

and the sex of the author (male and female) on the creativity-expressiveness ratings of the article.

Table 9
MEAN RATINGS OF ARTICLES IN THE EXPERIMENTAL
CONDITIONS FOR HYPOTHESIS 4

	male field		female field	
	male author	female author	male author	female author
High MAS	4.65	4.35	4.10	4.15
Low MAS	4.65	4.25	4.40	3.85

Note: higher numbers indicate more devaluation.

The results for the analysis of variance for the creativity-expressiveness ratings are shown in Table 10. As can be observed, the analysis yielded no significant main effects, first-order interactions, or second-order interactions. Hypothesis 4, which predicted that low MAS subjects would have a tendency to devalue the creativity-expressiveness of female authors, when the professional field was one associated with men, significantly more than high MAS subjects, depended on the

significance of the second-order interaction (MAS x field x sex of author). Inspection of the cell means reveal little or no difference and therefore Hypothesis 4 was not confirmed.

Table 10
AN ANALYSIS OF VARIANCE OF THE
CREATIVITY-EXPRESSIVENESS RATINGS AS A FUNCTION
OF MAS LEVEL, SEX OF FIELD, AND SEX OF AUTHOR

Source	SS	DF	MS	F	p
Between subjects	70.10	39			
MAS level (A)	.03	1			
Subj. w. groups (error [a])	79.07	38	2.08		
Within subjects	200.50	120			
Sex of field (B)	4.90	1	4.90	1.71	NS
A x B	.02	1			
B x subj. w. groups (error [b])	54.58	19	2.87		
Sex of author (C)	3.60	1	3.60		
A x C	1.22	1	1.22		
C x subj. w. groups (error [c])	69.68	19	3.67		
B x C	.10	1			
A x B x C	.63	1			
BC x subj. w. groups (error [bc])	65.77	76			

The null hypothesis, predicting that high MAS subjects would not significantly differ from low MAS subjects in their tendency to devalue the creativity-expressiveness of female authors when the professional field is one associated with men, cannot be

rejected at the .05 level of confidence.

Developmental Expansion

Hypothesis 5, which predicted that high MAS subjects would have a more significant tendency to have non-working mothers than low MAS subjects, was tested by one-tailed chi-square tests for four periods.

A chi-square was done in order to test whether there were any significant differences between the two MAS groups on the maternal work status variable for the age period of 1 - 5. In the high MAS group, 2 out of 20 mothers worked, while in the low MAS group, 4 out of 20 mothers worked. The chi-square revealed no significant association ($\chi^2[1] = .79, p > .05$). For the maternal work status variable for the age period 13 - 18, 15 out of 20 mothers worked in the high MAS group, while in the low MAS group 13 out of 20 mothers worked. The chi-square revealed no significant differences ($\chi^2[1] = .48, p > .05$). There were no differences between the two MAS groups on the present maternal work status variable. In both groups, 15 out of 20 mothers were presently working.

Table 11 shows the data arranged in a contingency table for the age period 5 - 12. The obtained $\chi^2 = 3.60[1]$ is significant at the .05 level of confidence and therefore Hypothesis 5 is partially confirmed for the age period 5 - 12, demonstrating that high MAS subjects are

significantly more likely to have non-working mothers during the ages from 5 - 12 than low MAS subjects.

Table 11
CONTINGENCY TABLE FOR THE CHI SQUARE TEST FOR MAS
LEVEL AND MATERNAL WORK STATUS (5 - 12)

		MAS Level	
		Low	High
Mothers working during Ss' ages 5 - 12	Yes	13	7
	No	7	13

Post Hoc Analyses

Although there were no specific hypotheses at the outset of the study concerning the relationship between MAS level and several demographic variables, for the sake of exploration some analyses of these variables have been done in order to investigate whether they discriminate between the high and low MAS groups.

Discriminating Demographic Variables

Sex-role orientation. The literature, discussed previously in the section devoted to the empirical studies on MAS, indicated a rela-

tionship between MAS and sex-role orientation, with a high degree of the motive being associated with the feminine sex-role stereotypes, and with a low degree of the motive being associated with the masculine sex-role stereotypes.

This investigator was interested in exploring whether in the sample of the present study, there would exist differences between the high and low MAS subjects in their sex-role orientation. The variables that were chosen as a measure of sex-role orientation were the subjects' reported college major and career aspirations. The investigator and an independent judge (a doctoral student in clinical psychology) rated the college majors combined with the subjects' respective career aspirations for both MAS groups in terms of three categories, female-role associated, male-role associated, and neutral. The reason college major and career aspirations were combined was because occasionally a situation would occur in which some subjects were majoring in the same field, but had relatively different career goals. For example, two subjects could major in psychology, while one had plans to go into social work, another had plans to enter into a research career. The former subject was rated along a more female-role orientation, while the latter subject was rated more in the neutral orientation.

Tables 12 and 13 present the majors and career goals of both the high and low MAS groups. There was 100% agreement between

the two raters on the sex-role orientations of the majors and career goals, and their agreed rating is also shown on the tables.

For the high MAS group, 10% were classified as male-oriented, 65% were classified as female-oriented and 25% were classified as neutral. For the low MAS group, 40% were classified as male-oriented, 35% as female-oriented and 25% as neutral.

A chi-square was done in order to test whether high MAS subjects had a significantly higher tendency toward female-dominated sex-role orientation than low MAS subjects. The obtained chi-square, $[1] = 5.40$, was significant at the .05 level of confidence for a two-tailed test; confirming the prediction that there were significant differences between high and low MAS groups in terms of their sex-role orientation, as inferred from their college major and career aspirations.

Table 12
COLLEGE MAJORS AND CAREER GOALS OF THE HIGH MAS GROUP

Major	Career	Male	Female	Neutral
Speech Pathology	speech pathologist			*
English	teacher (H. S.)		*	
Psychology	child psychologist		*	
Sociology	social worker		*	
Math	teacher (H. S.)			*
Biology	research biologist	*		
Nursing	nurse		*	
Psychology	working with children		*	
History of Art	teacher of arts n' crafts		*	

Table 12, continued

Major	Career	Male	Female	Neutral
English	teacher		*	
Art Education	teacher		*	
Sociology	social worker		*	
Psychology	(social psychologist (res.))			*
Psychology	social worker		*	
Computer Science	computer specialist	*		
Speech Pathology	speech pathologist			*
Speech Pathology	speech pathologist			*
Psychology	social worker		*	
Education	teacher of the gifted		*	
Education	elementary school teacher		*	

Table 13

COLLEGE MAJORS AND CAREER GOALS OF THE LOW MAS GROUP

Major	Career	Male	Female	Neutral
Psychology	social worker		*	
English	teacher		*	
Biology	veterinarian	*		
Phys. Anthro.	research	*		
Chemistry	research chemist	*		
Bilingual Ed.	teacher		*	
Nursing	nurse		*	
Math	actuarial work	*		
Psychology	work with children		*	
Anthro-Archeo.	archeologist	*		
Anthropology	research	*		
Computer Science	computer specialist	*		
Speech Pathology	speech pathologist			*
Education	teacher		*	
Special Education	teach CRMD		*	
Psychology	clinical psychologist			*

Table 13, continued

Major	Career	Male	Female	Neutral
Political Science	lawyer	*		
Psychology	social psychologist			*
Psychology	counseling psychologist			*
Psychology	social psychologist			*

Non-Discriminating Demographic Variables

Graduate School Plans. The investigator was interested in whether there would be any significant differences between the high and low MAS groups in terms of their graduate school plans. Table 14 shows the data arranged in a contingency table.

Table 14
CONTINGENCY TABLE FOR THE CHI-SQUARE TEST
FOR MAS LEVEL AND GRADUATE SCHOOL PLANS

	MAS Level	
	Low	High
Yes	18	15
No	2	5

The obtained chi-square with the Yates correction for the data was 3.5 [1], and this value was not significant at the $p = .05$ level of confidence.

Of those in the high MAS group who plan to attend graduate school, 80% plan to obtain their master's degree (53%/M.A.; 27%/M.S.W.) and 20% plan to obtain their doctoral degree. Of those in the low MAS group who plan to attend graduate school, 50% plan to obtain their master's degree (22%/M.A.; 6%/M.S.W.; 6%/M.B.A.; 17%/M.S.), and 50% plan to obtain their doctoral degree. The differences between the MAS groups in terms of the types of graduate degrees seems to be related to the variable of sex-role orientation that has been previously discussed. That is, 90% of the subjects aspiring toward their doctoral degree have been classified as either male-oriented or neutral in their sex-role orientation.

Religion. There were no significant religious differences between the two MAS groups ($\chi^2 [4] = 8.14, p > .05$).

Age, Academic Achievement and Marital Status. The age of subjects did not appear to discriminate between the two MAS groups (mean of high MAS = 21.3; mean of low MAS = 21.4).

The reported grade-point average (GPA) for the two groups also did not appear to discriminate them (mean of high MAS = 3.52; mean of low MAS = 3.53).

There appeared to be no significant difference between the two MAS groups on the marital status variable, with 95% single and 5% married in the high MAS group, and 85% single and 15% married in the low MAS group ($\chi^2 [1] = 1.11; n. s.$).

Birth Order. There were no significant differences between the two MAS groups for the birth order variable ($\chi^2 [2] = 1.00, n. s.$). Within the high MAS group, 35% reported being first-born children (out of this percentage, 10% were only children), 55% reported being second-born, and 10% reported being third-born. In the low MAS group, 50% reported being first-born (out of this percentage, 25% were only children), 40% reported being second-born, and 10% reported being third-born.

Mother's Educational Level. There was no significant difference between the high and low MAS groups for mother's educational level ($\chi^2 [3] = 1.12, n. s.$). For the high MAS group, 15% of their mothers finished grammar school without attending high school; 60% graduated from high school without continuing on to college; 15% attended college (10% receiving college degrees), and 10% received graduate degrees. For the low MAS group, 15% of their mothers finished grammar school without attending high school, 45% graduated high school without continuing on to college, 20% attended college (15% receiving college degrees), and 20% received graduate degrees. Although there were no significant differences between the two groups, it appears that there

was a trend pointing to more low MAS subjects having mothers who had higher educational experience than high MAS subjects.

Father's Educational Level. Father's educational, like mother's educational level, did not significantly differentiate between the two MAS groups ($\chi^2 [3] = .57, n. s.$). For the high MAS group, 5% of the subjects' fathers finished grammar school without going on to high school, 55% graduated from high school without going on to college, 20% received college degrees, and 10% received graduate degrees. For the low MAS group, 10% of their fathers finished grammar school without continuing on to high school, 45% graduated from high school without going on to college, 35% attended college (25% receiving college degrees), and 10% received graduate degrees. Although differences between the two groups were not significant, a slight trend appears for more low MAS subjects than high MAS subjects having fathers who had more higher educational experience.

Place of Birth. There appeared to be no significant difference between the two MAS groups for the place of birth variable ($\chi^2 [1] = .17, n. s.$). For the low MAS group, 85% of the subjects were born in New York City, 5% born in Cuba, and 10% born in Washington, D. C. In the high MAS group, 80% of the subjects were born in New York City, 5% born in California, Poland, Massachusetts, Michigan, respectively.

High School Average. There were no significant differences between the two MAS groups in terms of their high school averages

($\chi^2 [1] = .96$, n. s.). In the low MAS group, 55% of the subjects had a high average of A, 40% had an average of B, and 5% had an average of C. In the high MAS group, 40% of the subjects had a high average of A, 55% had an average of B, and 5% had an average of C. Although the differences were not significant, more subjects in the low MAS group had high school averages of A than subjects in the high MAS group.

Chapter XI

DISCUSSION

The purpose of this dissertation was to test Porjesz's horizontal and developmental expansion of the motive to avoid success. A discussion of the findings, the implications of these findings, and tentative directions for future research are presented.

The general pattern for the first three hypotheses dealing with the evaluation of competence were not confirmed, even though Hypothesis 2 indicated a significant difference between the high and low MAS subjects in their evaluation of the competence of female authors in male fields, with the low MAS women giving more favorable ratings. Although this result was predicted, when it is examined in the context of the other findings, it becomes clear that the interpretation becomes more complex and demands reexamination of the rationale underlying the hypothesis.

It was shown in the preceding chapter that the low MAS subjects' ratings for the female author/male field were not only more positive (less devaluation) than for the high MAS subjects' ratings for the female author/male field, but by visual inspection of the cell means, they were

the most positive ratings given to any of the author/field combinations. The general prediction was that the mean in cell two (see Table 6, page 116) would be the highest (most devaluation), but instead of that result, it was found that the mean in cell six was the lowest (least devaluation). The rationale underlying Hypothesis 2 was that the low MAS subjects would identify with female authors, but because there was little or no anxiety aroused in reference to feminine achievement in traditional male fields, the MAS conflict would not be projected onto the female author and therefore there would be little or no subsequent devaluation of the female author's competence. Implicit in this rationale was the expectation that there would be no differences in their ratings of female authors versus male authors in male fields, since neither would arouse the MAS conflict. However, there was a difference, with more positive ratings given to the female authors.

These low MAS women appear, perhaps, to represent "female chauvinists," if you like, who not only may espouse sexual equality, but who seem to tip the scales a bit in favor of women, exhibiting a form of pro-feminine bias and idealization of female competence in traditional masculine pursuits. The high MAS subjects in the present study do not show the predicted devaluation of female competence in male fields, but in contrast to the low MAS subjects, they do not seem as in favor of tipping the scale in favor of women.

Instead of arriving at the devaluation phenomenon for high MAS subjects as predicted, the results point to an interesting idealization phenomenon among low MAS subjects.

Before attempting to describe some of the possible explanations for this result, it seems appropriate at this point to discuss the results of Hypothesis 4. The null hypothesis was based on the rationale that devaluation would occur in terms of a selective pattern consistent with MAS. When the ratings concerned solely the creativity-expressiveness of the authors, traits that were considered consistent with the traditional feminine stereotype and therefore would not elicit MAS, it was expected that high MAS subjects would not significantly differ from low MAS subjects in their tendency to devalue these ratings for the female authors in male fields. The two MAS groups, in fact, did not differ in their ratings. Since there was no devaluation phenomenon for the high MAS subjects, but a rather interesting idealization phenomenon for the low MAS subjects for the competence ratings for the female authors in male fields, it can be seen that the low MAS did not remain consistent in their idealization trend when the ratings concerned the traits consistent with the female sex-role stereotype. Therefore, rather than a selective pattern of devaluation occurring for the high MAS subjects, a selective pattern of idealization was found for the low MAS subjects.

In addition, Hypothesis 4 was not confirmed, demonstrating that the "differential acceptance hypothesis," which predicted that the low MAS women might significantly devalue these female traits in contrast to the high MAS women, was not validated. Although the low MAS women did not continue to idealize these traits as contrasted with the more masculine traits, they did not seem to devalue these female traits.

Certainly questions can be asked in relation to these results, raising skepticism in regard to the validity of the original hypotheses. Yet, it would seem premature, on the basis of these results alone, to reject the horizontal expansion of the MAS theory. In addition, it became clear as the study progressed that there were several variables which might have confounded the results. It is the purpose at this point to note and examine some of these variables.

When the original studies were done by Horner and Goldberg, as well as when this present study was originally formulated, women's liberation movement was certainly underway. It is conjectured, however, that in the years since, the women's rights movement has come an even longer way, with even greater awareness and self-consciousness on the part of women to the redefined attitudes concerning women and work. This is given indirect support by O'Leary and Depner (1975) who found evidence for breakdowns of the traditional sex-role stereotyped attitudes, with college women showing more concern with work achievement and competence. Therefore, there is perhaps a greater

tendency among women in general to be aware of and alert to the sex of a professional and in so doing they mobilize a different attitude when evaluating the productions of these professionals. There is rarely a magazine that does not have, nowadays, at least one article that relates to women in some major way. There seems to be a flood of constant reminders to women about their position in relation to work.

This kind of external thrust could clearly have some general effect on the way women, at this point, evaluate an author's productions. The question still remains whether or not these evaluations are experienced internally in an integrated manner by women, or a reflection of a conformity reaction to the expectations of these external pressures.

When this study was formulated, this phenomenon was not as seemingly ubiquitous as it appears to be at the present time.

It is speculated here that in addition to the general ubiquitousness of the redefined sex-role stereotypes, the sex and personality of the investigator, as well as the specific procedures used in this study, might have had an effect on the results.

All the subjects were personally contacted by the female investigator on the phone who introduced herself as a doctoral student interested in surveying the attitudes of bright college students. Perhaps the initial contact with subjects on the phone inadvertantly served as a screening process, so that those subjects with the highest level of MAS (i.e.,

most threatened by female competence) may have rejected participation in the study without further contact. It is interesting to point out here that out of about 150 or so subjects contacted, 30 or so rejected the study on the first call. In addition, there were subjects, who although originally setting up appointments, failed to show at the expected time and failed to call and cancel their appointments. There were other subjects who did call to cancel their first appointment, but when an alternate appointment was scheduled, they failed to arrive. These can be considered as another expression, perhaps less acute, of the anxiety associated with MAS. Unfortunately, however, these speculations cannot be readily tested experimentally.

Although interaction between the investigator and the subjects was planned to be kept at a minimum, frequently it was necessary for the investigator to show some warmth and encouragement in order to increase the motivation of some subjects to participate. Therefore, the investigator not only presented herself as an achieving woman going for a doctoral degree, but she indirectly presented herself as a warm and accepting person. It is speculated that the presence of a competent and warm female model during the testing situation might have reduced any anxiety stemming from the affiliative-achievement conflict that might be present in some of the women. That is, some women might have identified with the competent investigator and if the underlying MAS conflict was present, it might have been lessened

by the investigator's social support. This identification perhaps was displaced onto the female authors in male fields (the investigator was perhaps seen as transcending the traditional sex-role stereotypes, since she was studying for her doctorate) and since there was little anxiety, there might have been little reason for the subjects to devalue the author's competence.

Aside from the sex and personality of the investigator reducing any possible achievement-affiliative conflict, the sex of the investigator, as well as the group administration of the testing, might have served as a specific external stimuli alerting the women to the general ubiquitousness of the redefined sexual roles in relation to women and work, discussed previously. Although the subjects were not told the purpose of the experiment, the fact that they found themselves with a female investigator in solely the presence of other women may have signaled some conscious (or perhaps unconscious) awareness of the purpose of the experiment. This experience must have been especially poignant in that the general setting for these subjects' classes at their college are coeducational.

If these variables were operating, then it is possible that the GAT test perhaps was not operating as a projective test tapping underlying and internalized feelings and conflicts, but instead was tapping attitudes reflecting the social desirability of the current sexual equality ideology in relation to women and work.

All these possibilities justify further examination, and further research is suggested to explore the differential responses of women while in the presence solely of other women in comparison with more everyday situations in which men are present. In addition, the variable of the sex of the investigator should be explicitly considered when designing experiments in this area, since its influence cannot be ruled out.

Another factor possibly influencing the results has to do with the nature of the educational setting itself as compared with the settings in both Horner's and Goldberg's studies. Both of their studies were conducted in private universities where many of the students lived in residence. In the present study, the subjects were all students at a public college where all students are commuters, and rather than living on campus, many of these students still live with their families. Although the specific effect of the different educational settings has not been tested, it might be speculated that for many of the students in the present study the college experience might feel like an extension from high school, whereas in the other studies, the shift to college away from home may have an abrupt and profound impact on the women's lives. Whether this abrupt shift forces direct confrontations with achievement-related issues and therefore associated anxiety, more so than for women whose college experience may not provide this abrupt shift, remains speculation.

It must be stated here that the high MAS scores among the present subjects did not reach the high extremes as did the low MAS subjects, based on the range of scores measured by the test. The speculation that the level of MAS might differ in relation to the educational setting, specifically in regard to whether the setting acts as an abrupt shift from high school, awaits further empirical research.

As mentioned, the high MAS scores among the present subjects did not reach the high extremes. Although the empirical range of the MAS continuum provided by the scoring manual was from -6 to +24, the scores for the present sample ranged from -6 to +14. Although the extremes of the low MAS subjects in the present study are the same as those in the manual, the higher MAS scores were more moderate than those provided by the scoring manual. Since the two groups were selected on the basis of their scores falling either one standard deviation and above from the mean of the sample or minus one standard deviation and below from the mean, it is evident that the high MAS scores show a more moderate absolute score than was predicted empirically from the manual. The more limited range and lower scores of MAS, although possibly a result of subject and experimental factors already enumerated, might also point to some limitations of the scoring system for the MAS test.

In the course of reading and rating the MAS stories, it became apparent that, especially for the stories told to the two task-related

cues, the six scoring categories could not comprehensively differentiate the quality of the achievement, power, or task-oriented goal. The task-related cues used in this study ("After much work, Anne has finally gotten what she wanted . . . ", "Joan is looking into her microscope . . . ") represent situations involving long-term effort toward personally chosen goals. The categories used in the scoring do differentiate those subjects whose chosen goals are primarily affiliation rather than achievement (the interpersonal engagement category); they do differentiate those subjects who anticipate negative consequences because of the success of their goal (the non-contingent and contingent negative consequences category); they do differentiate the ways in which subjects approach their goal (the relief category and the absence of instrumental activity category); and they do differentiate the level of autonomy involved in the approach toward the goal (the absence of others category).

None of the categories, however, differentiate those subjects who describe a goal or task in a rather realistic and concrete fashion from those who describe the goal or task in a dramatic way, making the task or goal a rather unreal event. The dramatization of a task or goal tends to give the sense of the presence of a high level of MAS, in that one way to avoid the threatening consequences of achieving success is to perhaps set up unreal goals. Perhaps another expression of MAS was not tapped by the absence of this differentiation of

the quality of the goal in the stories made up to the task-related cues.

The following two stories were told to the cue, "After much work, Anne has finally gotten what she wanted . . . ", and although the quality of the achievement goal in the stories is different, their scores, based on the existing categories, were identical:

She had been in the darkroom for hours trying to get the detail of an image clearer. It had required a lot of dodging, and other technical skills, until she finally had the evidence she needed that someone else, indeed was hiding in the bushes aiming a high powered rifle. The evidence, which she worked hard on, was to blow the case wide open ----- CONSPIRACY!!!!!!

It took her a long time but with the rigid study and concentration on the long term goal, she got into medical school. Indeed, it was not easy. In fact, it was very demanding in terms of study and self-discipline. She sacrificed much of her social life, but after four years of hard work in college and individual study, Anne took her medical boards and was accepted to the school of her choice. Her family, friends and teachers all felt proud of Anne. Her struggle proved that with motivation and pertinacity, it is possible to accomplish what one goes after.

It is apparent that in both stories the two subjects are describing their struggles to succeed at their achievement goals. However, in the first story, the overall tone of the goal appears quite dramatic; whereas in the second story, the goal is described in a rather realistic and concrete way.

An important factor relating to this phenomenon involves the standard instructions used for the MAS test, in which the subjects are told that their task is to make up as dramatic a story as they can. The problem is that the instructions tell the subject to dramatize, but there is no specific criterion that differentiates among those subjects who follow the instructions from those who do not. It is speculated that the instructions could have served as a confounding variable in the test for MAS, and it is suggested that the instructions be reworded in a more objective way in order to motivate a story, without explicitly asking for dramatization. Despite the instructions, however, a measure of the reality of the achievement goal itself is crucial and is something sorely missing.

Although most of the six scoring categories, described in the scoring manual, were rather easy to assess, the scoring for the interpersonal engagement category occasionally created some difficulties. According to the manual, this category is scored when two or more specific persons are clearly involved or occupied with each other and it must comprise a major goal in the story, i.e., it must be explicit affiliation with another. When the interpersonal activity of the goal was a less developed theme than either achievement, power, or task-oriented instrumental activity, the story was not supposed to be scored for interpersonal engagement. Therefore only if a relationship is the focal point and the key theme developed, is the interpersonal

engagement category scored.

In the process of reading and rating the stories, it was at times obvious that these criteria were limited. Specifically, in some stories where the task or achievement goal was primary, one got the feeling and sense that, although secondary, an interpersonal interaction was rather meaningful and salient. According to the criteria, however, it should not be scored since it is not the primary theme of the story. For example, in response to the the cue, "Joan is looking into a microscope . . . ", the following story ideally should not be scored for interpersonal engagement, but on close inspection it seems that something meaningful might be being expressed, which is not being tapped by the scoring category:

. . . and all she can think of is "oh no, not another unidentifiable mineral." But this is what the task is and this is what she has to do. But the same thought was echoed among all her classmates. At this moment, the professor blissfully walked by the door to the lab and threw in a passing, "Hope it is going well, keep at it." This seems to be the normal state of affairs in most beginning, believe it or not, alot of advanced microscopy courses, in which the task is to identify sometimes unidentifiable minerals, even though the professor thinks that they are identifiable!

The fact that the professor's comments were quoted and his style of walking was underlined by the subject points to the conspicuousness of the subject's involvement with the professor. This verbal interaction is not enough to warrant a score in this category, since it

is the task that occupies the major theme of the story. Yet one wonders why the subject needs to make the interaction so conspicuous in the face of a primary task-oriented story; is it possibly pointing to an achievement-affiliation issue that involves the conflict over success? If it were, it is certainly not being tapped by this scoring system.

It is suggested that the ambiguity in regards to the interpersonal engagement category be refined, and the category be expanded to include conspicuous interactions, even if they do not comprise the major theme of the story.

In spite of some of the limitations, this new scoring system for MAS has some strengths that were revealed. It does provide cues, which when contrasted with the former MAS test, are less specific and culturally-determined enabling subjects to establish, by themselves, their own personally selected goals that have been attained. In addition, the scoring manual, which was very comprehensive and provided detailed explicit criteria, as well as numerous explanations of scoring sample stories, did help the investigator train another judge. The high reliability that was achieved between the investigator's and independent judge's ratings of the MAS stories point to the generally consistent and clear scoring manual.

Finally, the new MAS test was shown to be a valid predictor of an associated behavioral variable, i.e., sex-role orientation. The

literature has pointed out a relationship between MAS and sex-role orientation, with a high degree of the motive being associated with feminine sex-role orientation and a low degree of the motive being associated with masculine sex-role orientation. Specifically in this study there were significant differences between high and low MAS groups in terms of their sex-role orientation, as inferred from their college major and career goals; with the high MAS women having a significantly higher tendency toward female-dominated sex-role orientations than the low MAS women.

In summary, the horizontal theory was not directly confirmed, in terms of the devaluation phenomenon expected by the high MAS women, but it cannot be refuted given the number of possible confounding personal and experimental variables.

There are a number of possible explanations for the idealization phenomenon which will be discussed, but it is to be remembered that none of the following are conclusions at this time, and can only remain conjectures awaiting further systematic research.

The idealization phenomenon may be viewed as a form of ego-defensiveness. Basic to psychoanalytic theory is the concept of "defense mechanisms," whose objective is the reduction of anxiety emanating from inner conflicts (A. Freud, 1936). Several theorists view idealization as part of the mechanism of overcompensation of the reaction-formation type, in which idealization serves as a defense

against the anxiety associated with the underlying feelings of inadequacy (Fenichel, 1945; Kernberg, 1975). This rather general psychoanalytic interpretation relates idealization to the individual's dynamics. It is perhaps worthwhile to add to this conception of idealization as a compensatory mechanism, a social psychological interpretation which relates the idealization to the mechanisms of group defensiveness. Allport (1958) describes the enhanced strivings of particular minority groups as a compensation that these victims of prejudice use. In terms of their idealization, he describes the concept of "strengthening of in-group ties." He believes that the idealization might be a form of prejudice in favor of one's own kind as a natural reflex and defense against out-group prejudice.

In light of these psychoanalytic and social psychological explanations of idealization as a compensatory defense, it is perhaps possible to speculate about the findings. One wonders whether the low MAS subjects overemphasized the competence of the female authors in male fields as a result of a compensatory mechanism. These low MAS women, who were found to be significantly more male-oriented in their sex-role orientation, might represent those women who transcend the sex-role stereotypes. It has been suggested elsewhere (Anderson, 1974; Epstein, 1973) that women who aspire to careers on what has been masculine turf may be considered social deviants forming a special kind of minority group, and who often experience subtle forms

of negative feedback from their environment. In addition to external pressure, it is speculated that these women might perhaps have a similar conflict as the one proposed for high MAS women, that is, an achievement-affiliation conflict, but in their case the need to approach the achievement in an autonomous way may be stronger than the need for affiliation. In order to keep going in the face of external and internal pressure, these women might reduce the conflicts by overvaluing themselves in such a way that they bring to their ego an increase in self-esteem. This increase in self-esteem might, perhaps, provide them the needed coping mechanisms and inner security necessary for them to approach autonomous achievement.

It is therefore speculated that anxiety may have been aroused in the presence of an achievement effort of another female who is transcending the sex-role stereotypes via the processes of identification and projection and the subsequent reduction of anxiety might well have been accompanied by the idealization of the author's competence.

Another explanation of this idealization phenomenon has at its basis the developmental theory proposed by Porjesz. Therefore it makes sense at this point to integrate some of the findings of the developmental hypothesis as they might be related to and explain the results of the horizontal expansion of MAS, namely the idealization phenomenon.

Hypothesis 5 was partially confirmed, demonstrating that high MAS women had significantly fewer mothers who worked during their ages from 5 to 12 than low MAS women. There were no differences between the two MAS groups on the maternal work status variable for ages 1 to 5, 13 to 18, and present work status. Therefore, based on these results, there seems to be something special about the years 5 to 12, and its relationship to level of MAS and maternal work status.

Many writers have found it useful to distinguish between various periods of growth in which a child's personality develops and in which specific adaptive changes and tasks occur. The ages 5 to 12 take in the middle years of childhood beginning with a child's entrance into school; and in the psychoanalytic terminology, this period is referred to as the "latency period." Given the finding that the only significant age period related to level of MAS and maternal work status was this latency period, it is important to examine the ways in which different theorists view the important generalized personality development during this age period. Although the discussion is primarily on the latency period, this is not to imply that these experiences are separate from the rest of the personality development during the other growth phases.

The latency period is seen by the Freudian psychoanalytic conception as a time when the child has gained control of or is less preoccupied than formerly with his/her body pleasure needs. Oral, anal, and sexual interests are said to be less evident or more disguised, i.e., to be relatively "latent" remaining so until the resurgence of sexuality in adolescence. Therefore, the latency period is seen as a hiatus in sexual activity between the infantile stage of the preschool years and the adult stage beginning at puberty. In addition, Freud also saw the early latency period as a time when, on the basis of former early pregenital experiences, the superego is formed. This intrapsychic agency contained in the developing ego represents those aspects of identification with parental images which the child takes as his/her guideposts to moral and social values; and the identification with parental models are incorporated into the ego leading to the organization of the self (Freud, 1930).

Another related issue relevant during this period is separation-individuation, a task that involves the resolution of the symbiosis between the child and its mother. According to Mahler, this resolution is achieved by the internalization of the representation of the mother (1968). It is during this period that the child becomes aware of his being a separate person from his/her mother and develops a sense of self. These progressive steps toward separation leading to the maturation of ego functioning which facilitate the child's sense of

autonomy is achieved when the reliable and remembered maternal object becomes strongly internalized. This internalization enables the child to rely on autonomous intrapsychic means of mastering any inner anxiety, replacing the constant external reliance on the ever-present mother (Parsons, 1971).

There are other theorists who extend the range of the ego adaptive tasks, in which the child learns how to deal effectively with his/her environment through exploration, manipulation and social relatedness. Erickson (1950, 1959) points out that it is during this time when the child is struggling around the issue of "industry versus inferiority," where a sense of adequacy or inadequacy is developed based on the child's exploration and manipulation of his environment. White (1959, 1972), in a similar vein, suggests the important development of a child's "sense of competence" and "feelings of efficacy" in relation to his environment.

Sullivan's (1953) developmental schema is based on an interpersonal theory in which a child is seen as a product of his interactions with significant others. In his schema, the latency period is referred to as the "juvenile era," a time when the child begins developing interest in his/her compeers; that is, the child learns to affiliate, cooperate and compete with his/her peers, usually along lines of age and sex. Sullivan believes that this social experience is a necessary part of the child's development of an "orientation in living."

Similar to the interpersonal task that Sullivan describes, Stone and Church (1966) point out that the latency period should also be referred to as the "gang age," because during this period one of the most striking characteristics is that children of this age period form special separate cohesive sub-cultures of their peers. They point out that this peer-group solidarity appears to be a necessary and valuable stage for the development of the child's autonomous identity.

It must be remembered that what is being examined here is the clinical syndrome of MAS which specifically relates to achievement and competence. Since the latency period seemed to be the critical age-range in this study, in terms of the developmental expansion of MAS, it seemed essential to investigate the generalized developmental tasks that some theorists believed occurred during this period. Some of the important generalized tasks that occur during this age period, suggested by some theorists, are internalization of parental models, resolution of the symbiosis with the mother, development of industry and a sense of adequacy and competence, and social relatedness with one's peers, all leading in one form or another to the development of an autonomous self-identity.

Porjesz (1974) in her developmental expansion of MAS focused on the early phases of separation-individuation and on adolescence, whereas the present finding suggests that rather than early childhood or adolescence, middle childhood is a critical period. This should not

be surprising since the achievement functions take precedence at this age period, dramatically symbolized by the fact that it is at the age of five when most children begin school. Obviously personality development is a continuous process, and the very early separation-individuation experiences with the mother leave a lasting effect on the quality of the girl's experience during latency. But it is really during latency when achievement and work-related issues are foremost in the child's experience.

At this point it is important to return to the finding that low MAS women in the present study idealized those female authors in male fields. The explanation previously offered for this idealization phenomenon was as a form of ego-defensiveness.

In light of the developmental expansion, another explanation may be offered. This related to projective identification. Kernberg (1975) defines projective identification as a mechanism differing from the kind of projection in which the impulse projected onto an external object is something alien and distant from the ego. In this case what is being projected onto an external object does not appear as something alien and distant from the ego, but rather the self identifies with the object onto whom the ego-ideal has been projected.

To explain the relevance of this mechanism in terms of the idealization phenomenon found in this study, first the issue of what is the model needs discussion. It is suggested that the low MAS

women have more ideal models in relation to achievement, since more of their mothers actually worked during their childhood. As it was previously pointed out, it is during the latency period that these models are identified with and become internalized and integrated into the ego ideal. In addition to serving as a competence model, there is the added effect of the mother's separation (because she worked) which changes the nature and strength of the internalization. The strength of the internalization, according to Parens (1971) is paradoxically stronger in the absence of the mother, because with the absence of the external support of the ever-present mother, there is a stronger reliance upon the internalized introject. Separation anxiety might still be an issue, but the anxiety gets mastered via the reliance upon rather autonomous intrapsychic measures. Therefore, since low MAS women had more separations from their mothers, it is possible that the internalizations are stronger, and when these internalizations were projected outward on external objects which resemble the internalized object and ego-ideal, these projections become manifested in more idealization.

In addition to projective identification and the resulting phenomenon of idealization of competence on an individual basis, this phenomenon can also be seen on a group basis. This internalized identification might form the basis for selection of types of identifications with reference groups that women associate with and wish to

be part of. This idealization by the low MAS women of the competence of female authors in male fields might reveal the identification with those women whose traits are similar to their ego-ideals.

This identification with a kind of women's group reaffirms and is consonant with the facts concerning maternal work during the subjects' ages 5 to 12. As was previously mentioned this is a time when peer group ties, particularly with one's own sex, are so prevalent and central a task. The mother is away at work and the child is starting school, and therefore her own work might, in part, consist of looking beyond her mother for further identifications.

The horizontal expansion was based on the theory proposed by Porjesz that MAS is a more generalized personality disposition not limited to face-to-face competitive settings with men; and that the underlying anxiety associated with MAS can be aroused, not only in these face-to-face competitive situations with men, but also in a wider range of achievement-related situations. The horizontal expansion specifically stated in this study that the anxiety associated with MAS can be aroused in the presence of an achievement effort by another woman via the processes of identification and projection and can be reduced by the subsequent devaluation of the woman's achievement competence.

Although the horizontal expansion was not directly confirmed, in terms of the devaluation expected by the high MAS women, the

systematic patterns of idealization by the low MAS women tends to suggest broader manifestations of MAS. Although the horizontal expansion relating devaluation to the high MAS women cannot be accepted, it cannot be refuted given the number of possible confounding personal and experimental variables which have been discussed.

Although the present study does not test all the aspects of Porjesz's developmental expansion, the hypothesis relating to the maternal work status was confirmed. Moreover, by isolating the period from 5 to 12 years, the results tend to point to the fact that it is a later experience of separation-individuation from the mother, combined with the new experiences associated with the latency period that are significant (or perhaps critical) in the development or lack of development of MAS. It may not be surprising that these experiences enhance the ability for a healthy rebelliousness in adolescence that Porjesz considers especially salient for the development of autonomous achievement motivation.

In conclusion, it is important to stress the exploratory character of this first empirical investigation into the expanded formulation of MAS. More definite formulations of many of the issues raised here must await further research. MAS is a complex clinical entity, so that testing with empirical methods is somewhat limited. Any real evaluation must include rigorous systematized clinical investigation.

Chapter XII

SUMMARY

The present study was designed to test the broadened expansion of MAS, as derived from Porjesz's horizontal and developmental theory of "the motive to avoid success" (MAS). The horizontal expansion postulated that the underlying anxiety associated with MAS is of a more generalized nature manifested in a wider range of achievement-associated settings, other than solely in face-to-face competitive settings with men. The derived hypotheses from this horizontal expansion specific for the present study, predicted a relationship between the level of MAS and the tendency of high MAS women to devalue the achievement competence of other women, particularly when their achievement was in a male field.

In addition, the developmental expansion which postulated a relationship between level of MAS and maternal work status, was also empirically tested, with the specific expectation that significantly more high MAS women would have non-working mothers than low MAS women. Implicit in this expectation was the idea that

it was the separation from the mother (because she worked) in addition to the daughter's identification with the mother's competence that was associated with a low level of MAS.

The Goldberg's Articles Test, the new MAS projective test, and a questionnaire devised by the investigator were administered to 97 white dean's honor list senior college women. Those subjects whose scores on the MAS test fell minus one standard deviation and below the mean for the sample were classified as the low MAS women, and those subjects whose score fell one standard deviation and above from the mean were classified as the high MAS women. The tendency to devalue the achievement competence of professional women, as measured by the Goldberg's Articles Test, and the maternal work status variable, as gleaned from the questionnaire, were assessed in the present study of 20 high MAS and 20 low MAS subjects.

The expectation that there would be a systematic pattern of devaluation by the high MAS women for the professional competence of female authors writing in male fields was not confirmed. Although the horizontal expansion relating devaluation to the high MAS subjects could not be accepted, it could not be refuted given the number of confounding personal and experimental variables that may have been involved in the study.

The results indicated a systematic pattern of idealization by the low MAS women for the professional competence of female authors

writing in male fields. Although the high MAS subjects did not show the predicted devaluation of female competence in male fields, they did not seem, in contrast with low MAS subjects, as in favor of tipping the scale in favor of females in male fields.

Two different explanations were offered for this idealization phenomenon. It was discussed in relation to ego-defensiveness, relating idealization to a compensatory mechanism. In addition, it was discussed in relation to the developmental expansion, that is, how it relates to internalization of a competent maternal model into the ego-ideal and this projection of the ego-ideal.

The hypothesis derived from the developmental expansion was partially confirmed, demonstrating that the low MAS subjects had significantly more mothers who worked during their middle childhood than high MAS subjects. The results were discussed in relation to the criticalness of the latency period in the development or lack of development of MAS.

The new MAS test was shown to be a valid predictor of sex-role orientation. Specifically, the high MAS subjects had a significantly higher tendency toward a female dominated sex-role orientation, as inferred from college major and career goal, than the low MAS subjects.

There were no significant differences found between the two groups for the following variables: in the subject's graduate school plans, age, marital status, academic achievement in college and high

school, religion, mother's work status at present and during the subject's early childhood and adolescence, mother's educational level, father's educational level, place of birth, and birth order.

Although there was no significant difference in the numbers of subjects, between the two MAS groups, planning to go to graduate school, it was clear that more of the low MAS subjects were aspiring toward their doctorates than high MAS subjects, who generally were aspiring toward master's degrees.

It was suggested that many issues raised by this study must await further research and that any real evaluation of the complex MAS conflict must include rigorous systematized clinical investigation.

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APPENDIX A

Goldberg's Articles Test and a Sample
of Goldberg's Original Questions

INSTRUCTIONS

In this booklet you will find excerpts of four articles, written by four different authors in four different fields. At the end of each article you will find several questions which are to be answered before you proceed to the next article. Please write the first evaluation that you think of, don't spend too much time thinking about the questions. You are not assumed to be sophisticated or knowledgeable in all the fields. We are interested in the ability of students to make critical evaluations of professional literature. Thank you for your cooperation.

Code number

(first three numbers and last four
numbers of your social security
number)

Sex: _____

Readiness for Learning

Pauline L. Conger

What is most important for teaching basic concepts is that the child be helped to pass progressively from concrete thinking to the utilization of more conceptually adequate modes of thought. But it is futile to attempt this by presenting formal explanations based on a logic that is distant from the child's manner of thinking and sterile in its implications for him. Much teaching in mathematics is of this sort. The child learns not to understand mathematical order but rather to apply certain devices or recipes without understanding their significance and connectedness. They are not translated into his way of thinking. Given this inappropriate start, he is easily led to believe that the important thing is for him to be "accurate" -- though accuracy has less to do with mathematics than with computation. Perhaps the most striking example of this type of thing is to be found in the manner in which the high school student meets Euclidian geometry for the first time, as a set of axioms and theorems, without having had some experience with simple geometric configurations and the intuitive means whereby one deals with them. If the child were earlier given the concepts and strategies in the form of intuitive geometry at a level that he could easily follow, he might be far better able to grasp deeply the meaning of the theorems and axioms to which he is exposed later.

But the intellectual development of the child is no clockwork sequence of events; it also responds to influences from the environment, notably the school environment. Thus instruction in scientific ideas, even at the elementary level, need not follow slavishly the natural course of cognitive development in the child. It can also lead intellectual development by providing challenging but usable opportunities for the child to forge ahead in his development. Experience has shown that it is worth the effort to provide the growing child with problems that tempt him into the next stages of development. In teaching from kindergarten to graduate school, I have been amazed at the intellectual similarity of human beings at all ages, although children are perhaps more spontaneous, creative, and energetic than adults. As far as I am concerned young children learn almost anything faster than adults do if it can be given to them in terms they understand. Giving the material to them in terms they understand, interestingly enough, turns out to involve knowing the mathematics oneself, and the better one knows it, the better it

can be taught. It is appropriate that we warn ourselves to be careful of assigning an absolute level of difficulty to any particular topic. When I tell mathematicians that fourth-grade students can go a long way into "set theory" a few of them reply: "of course." Most of them are startled. The latter ones are completely wrong in assuming that "set theory" is intrinsically difficult. Of course it may be that nothing is intrinsically difficult. We just have to wait until the proper point of view and corresponding language for presenting it are revealed. Given particular subject matter or a particular concept, it is easy to ask trivial questions or to lead the child to ask trivial questions. The trick is to find the medium questions that can be answered and that take you somewhere. This is the big job of teachers and textbooks. One leads the child by the well-wrought "medium questions" to move more rapidly through the stages of intellectual development, to a deeper understanding of the mathematical, physical, and historical principles. We must know far more about the ways in which this can be done.

Answer the following questions by circling the one response to each question which most clearly reflects your opinion. Work as quickly as you can and answer all questions.

1. How valuable for the professional field would you consider Pauline L. Conger's article to be?
 1. extremely valuable
 2. moderately valuable
 3. some value
 4. little value
 5. no value

2. Based on this article, what would you judge her professional competence to be?
 1. extremely competent
 2. above average competence
 3. average competence
 4. below average competence
 5. incompetent

3. Based on the article, how creative do you feel Pauline L. Conger to be?
 1. extremely creative
 2. above average creativity
 3. average creativity
 4. below average creativity
 5. not creative

4. Based on your reading of this article, what would you guess Pauline L. Conger's status in her field to be?
 1. a leader in the field
 2. important person in the field
 3. average status
 4. less than average status
 5. little or no status in the profession

5. Quite aside from content, how expressive would you judge her writing style to be?
 1. extremely expressive
 2. moderately expressive
 3. some expressiveness
 4. little expressiveness
 5. no expressiveness

6. If you were to assign a grade to her article, what would it be?
 1. A
 2. B
 3. C
 4. D
 5. F

A Post Mortem of the Eichmann Case

Louis M. Michaels

The majority of legal commentators of the Eichmann case have upheld the right of the State of Israel, in conformity with international law, to try the kidnapped Adolph Eichmann in an Israeli court under an admittedly extra-territorial and retroactive Israeli law. Most writers go no further in the review of the case, considering the legal matter closed upon the determination of legality. But the unfortunate truth appears to be that the legality of the Eichmann case is not derived from the particular compliance of this case with some high and taxing standards of the law, but from the general permissiveness of the applicable international law, under which, apparently, "ever independent state has jurisdiction to punish war criminals in its custody regardless of the nationality of the victim, the time it entered the war, or the place where the offense was committed."

Indeed, even some of the commentators who found the Charter of the Nurenberg Tribunal objectionable on the ground that it penalized political offenses (such as "crime against peace") hitherto not recognized in international law, have not made the same objection to the trial of Eichmann, who was tried and convicted for "crimes against humanity" (of which the "crime against Jews" is a mere particularization) and "war crime" -- both of which have had a longer history and recognition in international law.

The fact that the trial of Eichmann did not constitute a violation of international law, fails to answer completely the question whether Israel's conduct required to meet the growing needs of a world society striving for a greater degree of order and security through more effective standards of world law. As has been providently pointed out, "the important thing is that the trial and judgment shall not only be but appear to be just and fair, and shall contribute to the growth of law among the nations."

The trial of Eichmann complied with only a part of this admonition. It is undeniable that the actual conduct of Eichmann's public trial complied with a high standard of judicial process and also effectively conveyed this impression to the world community. But while in the long run the case will in most likelihood help fortify the

body of international criminal law -- through its reiteration of the Nuremberg principles and the reassertion of individual responsibility -- it has unfortunately left the impression that this result was partially procured through force. Indeed, the illegal force employed in bringing the accused to trial made it unclear in the mind of the world whether it was "force" or whether it was "justice" which had won in the last analysis. The keen observation has been made in this connection that "the cause of law is always poorly served by lawless law enforcement." Clearly, the precedent-setting value of the case, which gives recognition to universally-enforced international criminal penalties, suffers from the fact that Eichmann's apprehension and punishment were not accomplished through judicial process only. In the final analysis, it has been suggested, the trial of Eichmann failed to answer the fear of those who can see the misuse of the name of international law, in future times, by a victorious force which may or may not necessarily be on the side of justice. But what is feared most, indeed, is the impact of lawless law enforcement on our own morality and judicial institutions rather than that it may provide, in the future, an "excuse" or "precedent" for the "wrong" victor who requires little or any such precedent.

Because of the criticism of the Nuremberg trial as one conducted under the auspices of the victorious powers, it was the hope of many that future international tribunals would be more broadly constituted, in order to alleviate the fear of politically motivated or oriented justice and to lend future judgments wider international scope. Unfortunately, Israel's decision, based on understandable domestic needs, to try Eichmann in its own courts, has not complied with this hope. The absence of an existing international criminal tribunal made it difficult for Israel to do otherwise. Yet it is feared that this unilateral enforcement may considerably weaken the case's role as an effective deterrent against future international criminal behavior.

In bringing the Eichmann case before a domestic rather than an international tribunal, Israel nevertheless acted in accordance with historical practices and may have very well contributed to the joint-national-international responsibility for the creation and enforcement of international criminal law. The inability or unwillingness of the international community in the past to adopt an international criminal code and to establish an international criminal tribunal must not, indeed, deter individual nations from adopting and reasonably expanding their own internal legal principles, derived from what is already generally acknowledged among nations. Israel's reliance upon the principle of Nuremberg and the Genocide Convention as authority for its own law may serve as a prime example of a healthy cross influence

between national and international law. As the observer for the International Commission of Jurists pointed out:

"The Eichmann trial is an illustration of international penal justice. This justice, which is still in the first phases of its development, or what is often called a 'primitive state', is administered mainly by states. A state fulfills this task by applying international law either directly or through its body of laws. "

Critics of Nuremberg have argued, and the same argument could be repeated in the Eichmann case, that:

"Before one may expect the creation of an international criminal law as enunciated at Nuremberg it will first be necessary to accept, and to practice without crippling reservations, the principle of compulsory jurisdiction of an international court or agency over states in all their disputes even though these disputes may be claimed to be political in character. "

Pleas for an international criminal code and an international criminal tribunal will continue to be made. Whether the code or the tribunal should come first is already subject to disagreement. In response to the claim that without an international criminal code, "real progress in international law can achieve nothing unless there be an international court to apply it." Furthermore, the precedent of the World Court may indicate that international accord could more easily be obtained for the establishment of an international criminal tribunal than for the enactment of a comprehensive international criminal code.

The defects in the Eichmann case, it is hoped, may possibly serve to stress again the need for a permanent international criminal tribunal. The Eichmann case, indeed, furnished an opportunity for the establishment of an ad hoc tribunal in the Nuremberg tradition, but the opportunity was not seized. It is obvious that the only constant means for preventing future misuse of international law will be through the constitution of such an international tribunal, to act within the confines of the best international judicial traditions, and to supervise the healthy development of an international "criminal" rather than "political" international law. This obviously has not come to pass as yet. In the interim, it is quite likely that the historical facts may tend to justify the position of Justice Jackson that we cannot await a perfect international tribunal or legislature, and that international law must develop, as did the common law, through custom, agreement, and judicial precedent, such as the Nuremberg and Eichmann trials themselves -- despite their defects -- were intended to provide.

Answer the following questions by circling the one response to each question which most clearly reflects your opinion. Work as quickly as you can and answer all questions.

1. How valuable for the professional field would you consider Louis M. Michaels' article to be?
 1. extremely valuable 2. moderately valuable
 3. some value 4. little value 5. no value

2. Based on this article what would you judge his professional competence to be?
 1. extremely competent 2. above average competence
 3. average competence 4. below average competence
 5. incompetent

3. Based on the article, how creative do you feel Louis M. Michaels to be?
 1. extremely creative 2. above average creativity
 3. average creativity 4. below average creativity
 5. not creative

4. Based on your reading of this article, what would you guess Louis M. Michaels' status in his field to be?
 1. a leader in the field 2. important person in the field
 3. average status 4. less than average status
 5. little or no status in the profession

5. Quite aside from content, how expressive would you judge his writing style to be?
 1. extremely expressive 2. moderately expressive
 3. some expressiveness 4. little expressiveness
 5. no expressiveness

6. If you were to assign a grade to his article, what would it be?
 1. A 2. B 3. C 4. D 5. F

Sense and Nonsense about Nutrition

Susan W. Hamilton

Question: A radio broadcaster says that lack of Vitamin E in the diet of a father before conception may cause abnormalities in his children. Should he take extra vitamin E as a precautionary measure?

Answer: He should not. There is no scientific evidence to support this notion.

I have a thousand such questions in my files. And new ones keep coming in response to a syndicated column I have been writing for the past four years. To my surprise I have found there is little difference between the queries from people of modest schooling and those from college graduates. Indeed, I am beginning to think that the better educated a man is, the greater his skill in summoning up pseudoscience to support the latest food fad.

To be sure, he never uses this term. He takes his delusions seriously, as did our forebears who -- from earliest recorded history -- have attributed magical powers, both good and bad, to food. Sea salt was perhaps the first nutritional myth to gain a commercial foothold in this country. In his delightful book on quackery, Dr. James H. Young reports that a Massachusetts Bay colonist was fined five pounds in 1630 for vending sea water to cure scurvy. Today, although the Food and Drug Administration has brought numerous actions against the purveyors, sea-salt tablets are still widely sold, mainly to elderly people who believe they will restore vigor and cure assorted ailments.

Of course, they can do no such thing. Nor is there any evidence that beets build blood (not even Harvard beets). Fish and celery are not brain foods; and yogurt -- alas -- will not keep one young.

In a few instances, the seemingly uncanny powers of certain foods have been scientifically explained. We now know, for example, that limes or lemons cured scurvy because of their vitamin C content. Rice polishings prevented beriberi by reason of the vitamin B₁, or thiamine they provided. An ancient treatment for goiter was dried or burned sponge, which is rich in iodine. Sometimes a half-truth or a distorted scientific fact will give rise to a food myth. For example, carrots, as is often said, can "good for the eyes." But only if you have not been getting sufficient vitamin A for some time. The human

body converts carotene, the yellow pigment of carrots, into this vitamin which is needed to form an essential pigment (rhodopsin) of the retina. However, there is also plenty of carotene in green vegetables, where its yellow color is masked by chlorophyll. So green vegetables can be equally good for the eyes.

Will plenty of rare steak make you strong? Certainly it is rich in good quality protein. But so are fish, eggs, milk -- and overcooked steak. You can get equally strong on a diet of the right cereals and legumes plus a small amount of animal protein to supply certain amino acids which the body cannot get from any other source.

To say all this -- as I have been doing for many years in writing and in person -- will not, I know, have an immediate effect on your consumption of carrots or steak. Eating habits are deeply rooted in our nature and culture and it takes a long time to alter our tastes or whittle away our prejudices. Most people, in fact, have an extraordinary way of adapting scientific information to their own whims and preconceptions.

A striking example of such perversity was reported a few years ago by Dr. Edward Wellin, an anthropologist of Harvard's Department of Nutrition, after an expedition to Peru. There he studied the maternal and infant feeding practices of the 230 residents of Espinos. He described these villagers, culturally typical of the area, as "neither Indian, Spanish, nor modern Latin American but a mixture of all three." He found them "industrious, dignified, and poor." They had little formal education. But public-health officials, nurses, doctors, and teachers had been carrying on a continuing educational program among them for some years. However, Espinos mothers clung obdurately to their own nutritional myths. They had been told by the health experts, for example, that colostrum -- the secretion of the mother's breasts right after birth -- is a desirable food for the baby because it is high in vitamins and minerals and provides antibodies to help ward off infection. But the women of Espinos believe that colostrum blocks the milk flow, that it may foul the child's stomach and even kill it. So the mother carefully squeezes the colostrum from her breasts and buries it in the ground.

She is also aware that her diet during pregnancy and lactation influences her health and her child's. Accordingly, she reduces her intake of meat, eggs, fresh fruit, and vegetables while pregnant, and as always, drinks very little milk. Her fare consists of the usual corn, beans, squash, rice, tea, and stews, despite the contrary urging of experts.

Health workers have sung the praises of orange juice and the villagers now accept it as desirable for adults, particularly the sick, and for children of school age. But no mother will give it to a baby, being convinced that an infant who is still on milk should get nothing else.

As to vitamins in general -- public health workers and relatives living in cities have persuaded the villagers that vitamins exist and that they impart substance and vigor to certain foods. However, they interpret and apply this information in their own fashion. They regard vitamins as too "strong" for infants and too "fattening" for pregnant women. Thus they endow all foods known to be very nourishing or fattening with a high vitamin content. One woman explained that although she loved beef and fish-head soup she passed up both during pregnancy "because they had too many vitamins."

Ludicrous as these notions may seem, not a few Americans have equally weird ideas about vitamin pills -- particularly the belief that if you gulp enough of them, you will be adequately nourished. In fact, vitamins are simply catalysts which enable other nutrients to function more effectively. Furthermore -- contrary to popular myth -- there is no reason to increase your consumption of vitamins as you grow older. They serve primarily to help metabolize food and thus to produce energy and build, maintain, and repair body tissue. Since total food intake diminishes (or should diminish) with the years, the elderly in general have less need for vitamins than younger folk. At any age, whether a given individual needs extra vitamins is a decision for his doctor to make.

In matters of nutrition, however, all too many Americans prefer to take their counsel from TV commercials, an oracular voice on the radio or a newspaper report on the latest diet fad. A women's magazine editor recently told me that his readers feel neglected unless he publishes a new diet every other month. "You need some gimmick," he said with a long sigh.

At best, most of these gimmicks are worthless. One of the most ridiculous was the Hay diet of the 1930's, which prompted a lot of people to cut and eat hay fresh from the fields. Actually the diet was the invention of W. H. Hay, M.D., whose gimmick was a prohibition against eating protein and carbohydrates at the same meal. Since many individual foods contain both these components, the injunction is senseless. But though the Hay diet is forgotten, the notion persists that meat and potatoes -- or some other combinations of foods -- is bad for you.

Answer the following questions by circling the one response to each question which most clearly reflects your opinion. Work as quickly as you can and answer all questions.

1. How valuable for the professional field would you consider Susan W. Hamilton's article to be?
 1. extremely valuable
 2. moderately valuable
 3. some value
 4. little value
 5. no value

2. Based on this article, what would you judge her professional competence to be?
 1. extremely competent
 2. above average competence
 3. average competence
 4. below average competence
 5. incompetent

3. Based on this article, how creative do you feel Susan W. Hamilton to be?
 1. extremely creative
 2. above average creativity
 3. average creativity
 4. below average creativity
 5. not creative

4. Based on your reading of this article, what would you guess Susan W. Hamilton's status in her field to be?
 1. a leader in the field
 2. important person in the field
 3. average status
 4. less than average status
 5. little or no status in the profession

5. Quite aside from content, how expressive would you judge her writing style to be?
 1. extremely expressive
 2. moderately expressive
 3. some expressiveness
 4. little expressiveness
 5. no expressiveness

6. If you were to assign a grade to her article, what would it be?
 1. A
 2. B
 3. C
 4. D
 5. F

City Planning and Urban Realities

Henry F. Redlich

American intellectuals have begun to rediscover the city. Not since the days of the muckrakers has there been so much interest in local politics and in the "physical" features of the city -- the problems of slums and urban renewal, middle-income housing, the lack of open space, the plight of the downtown business district, and the ever-increasing traffic congestion. The new concern with questions usually relegated to architects and planners has been stimulated especially by two recent changes in city life. The rapid influx of Black and Puerto Rican immigrants has created slums in some neighborhoods where intellectuals live, forcing them to choose between fighting for neighborhood improvement or joining the rest of the middle class in flight. At the same time the post-war building boom -- in office buildings as well as residential projects -- is altering and destroying some favorite intellectual haunts like New York's Greenwich Village and Chicago's Near North Side.

This change has provided new material for one of the basic themes of the ongoing critique of American society -- the destruction of tradition by mass-produced modernity.

The vital neighborhood should be diverse in its use of land and in the people who inhabit it. Every district should be a mixture of residences, business, and industry; of old buildings and new; of young people and old; of rich and poor. People want diversity, and in neighborhoods where it exists, they strike roots and participate in community life, thus generating vitality. When diversity is lacking, when neighborhoods are scourged by the great blight of dullness, residents who are free to leave do so, and are replaced by the poverty-stricken, who have no other choice, and the areas soon turn into slums.

The most important component of vitality is an abundant street-life. Neighborhoods that are designed to encourage people to use the streets, or to watch what goes on in them, make desirable quarters for residence, work, and play. Moreover, where there is street life, there is little crime, for the people on the street and in the buildings which overlook it watch and protect each other, thus discouraging criminal acts more efficiently than police patrols.

The abundance of street life is brought about by planning principles which are geometrically opposed to those practiced by orthodox city planners. First, a district must have several functions, so that its buildings and streets are used at all times of the day, and do not (like Wall Street) stand empty in off-hours. The area should be built up densely with structures close to the street and low enough in number of stories to encourage both street life and street watching. Blocks should be short, for corners invite stores, and these bring people out into the streets for shopping and socializing. Sidewalks should be wide enough for pavement socials and children's play; intensive and high-speed automobile traffic should be directed elsewhere, for the automobile frightens away pedestrians. Small parks and playgrounds are desirable, but large open spaces -- especially those intended only for decoration and not for use -- not only deaden a district by separating people from each other but also invite criminals. Buildings should be both old and new, expensive and cheap, for low rents invite diversity in the form of new industries, shops and artists' studios.

Neighborhoods which are designed on the basis of these principles are areas like New York's Greenwich Village and San Francisco's Telegraph Hill (where residences of all types, prices and ages mix with small business, industry and cultural facilities) and low-income ethnic quarters like Boston's North End and Chicago's Back-of-the-Yards district.

The new forms of city building discourage street life, and create only dullness. Highrise apartment buildings, whether in public housing or private luxury flats, are standardized, architecturally undistinguished, and institutional in appearance if not operation. They house homogeneous populations, segregating people by income, race, and often age, and isolating them in purely residential quarters. Elevators, and the separation of the building from the street by a moat of useless open space, frustrate maternal supervision of children, thus keeping children off the street. Often there are no real streets at all, because prime access is by car. Nor is there any reason for people to use the street, for instead of large numbers of small stores fronting on a street, there are shopping centers containing a small number of large stores -- usually chains -- each of which has a monopoly in its line. The small merchant, who watches the street and provides a center for neighborhood communication and social life, is absent here. In such projects, the residents have no place to meet each other, and there is no spontaneous neighborhood life. As a result, people have no feeling for their neighbors, and no identification with their area. In luxury buildings, doormen watch the empty streets and discourage the criminal visitor, but in public housing, there is no doorman, and the interior streets and elevators invite rape, theft, and vandalism. Areas like this are blighted by dullness from the start, and are destined to become slums before their time.

The major responsibility for the new forms of city building may be placed on the city planner and on two theories of city forms: Ebenezer Howard low-density Garden City, and Le Corbusier's high-rise apartment complex, The Radiant City. The planner is an artist who wants to restructure life by principles applicable only to art. By putting these principles into action, he is methodically destroying the features that produce vitality. His planning theories have also influenced the policy makers, and especially realtors, bankers, and other sources of mortgage funds. As a result, they refuse to lend money to older but still vital areas which are trying to rehabilitate themselves, thus encouraging further deterioration of the structures until they are ripe for slum clearance, redevelopment with projects -- and inevitable dullness.

Answer the following questions by circling the one response to each question which most clearly reflects your opinion. Work as quickly as you can and answer all questions.

1. How valuable for the professional field would you consider Henry F. Redlich's article to be?
 1. extremely valuable
 2. moderately valuable
 3. some value
 4. little value
 5. no value

2. Based on this article, what would you judge his professional competence to be?
 1. extremely competent
 2. above average competence
 3. average competence
 4. below average competence
 5. incompetent

3. Based on the article, how creative do you feel Henry F. Redlich to be?
 1. extremely creative
 2. above average creativity
 3. average creativity
 4. below average creativity
 5. not creative

4. Based on your reading of this article, what would you guess Henry F. Redlich's status in his field to be?
 1. a leader in the field
 2. important person in the field
 3. average status
 4. less than average status
 5. little or no status in the profession

5. Quite aside from content, how expressive would you judge his writing style to be?
 1. extremely expressive
 2. moderately expressive
 3. some expressiveness
 4. little expressiveness
 5. no expressiveness

6. If you were to assign a grade to his article, what would it be?
 1. A
 2. B
 3. C
 4. D
 5. F

SAMPLE OF GOLDBERG'S ORIGINAL QUESTIONS

Answer the following questions by circling the one response to each question which most clearly reflects your opinion. Work quickly and answer all questions.

1. How valuable for the general reader would you consider Mr. McKay's article to be?
 1. extremely valuable
 2. moderately valuable
 3. some value
 4. little value
 5. no value

2. How valuable for the professional person in the field would you consider Mr. McKay's article to be?
 1. extremely valuable
 2. moderately valuable
 3. some value
 4. little value
 5. no value

3. Quite aside from content, how effective would you judge Mr. McKay's writing style to be?
 1. extremely effective
 2. moderately effective
 3. partially effective
 4. moderately ineffectual
 5. extremely ineffectual

4. Based on this article, what would you judge Mr. McKay's professional competence to be?
 1. extremely competence
 2. above average competence
 3. average competence
 4. below average competence
 5. incompetent

5. To what extent did you agree with Mr. McKay's point of view?
 1. complete agreement
 2. great deal of agreement
 3. partial agreement
 4. little agreement
 5. complete disagreement

6. How profound would you judge Mr. McKay's article to be?
 1. extremely profound
 2. moderately profound
 3. somewhat profound
 4. little profundity
 5. not at all profound

7. Based on your reading of this article, what would you guess Mr. McKay's status in his field to be?
1. a leader in the field
 2. important person in the field
 3. average status
 4. less than average status
 5. little or no status in the profession
8. To what extent did Mr. McKay sway your opinions about the issues discussed in her article?
1. completely
 2. a great deal
 3. somewhat
 4. very little
 5. not at all
9. If you were to assign a grade to Mr. McKay's article, what would it be?
1. A
 2. B
 3. C
 4. D
 5. F

APPENDIX B

The Motive to Avoid Success

Projective Test

CODE NUMBER _ _ _ _ _
(First three
numbers and last four numbers
of your social security no.)

SEX _____

ON THESE PAGES, THERE IS A DESCRIPTION
OF AN EVENT. YOUR TASK IS TO MAKE UP
AS DRAMATIC A STORY AS YOU CAN. TELL
WHAT LED UP TO THE EVENT, DESCRIBE
WHAT MIGHT BE HAPPENING AT THE MOMENT,
WHAT THE PERSONS INVOLVED ARE FEELING
AND THINKING AND THEN GIVE THE OUTCOME.
THERE ARE THREE EVENTS ON THE FOLLOW -
ING PAGES, AND YOUR TASK IS TO WRITE ONE
STORY FOR EACH EVENT. YOU HAVE FOUR
MINUTES FOR EACH STORY.

AFTER MUCH WORK, ANNE HAS FINALLY GOTTEN WHAT
SHE WANTED

JOAN IS LOOKING INTO HER MICROSCOPE

CAROL IS WALKING ALONG THE BEACH LATE IN THE
DAY

APPENDIX C

Questionnaire

Code number _____

12. (cont'd) For what degree _____?

13. Parents: Married _____ Separated _____
 Divorced _____ Widowed _____

14. Father's age _____ (if deceased, how old were you when he
 died _____)

education _____

place of birth _____

type of employment _____

15. Mother's age _____ (if deceased, how old were you when she
 died _____)

(Did another woman other than your natural mother
 function as your guardian, for example, a grandmother
 or a step-mother? _____ If yes, please
 answer the following questions, but specify whether
 the answer refers to your natural mother and/or your
 mother-substitute.)

education _____

place of birth _____

Is your mother presently working? _____

If yes, what kind of occupation? _____

Part-time _____ Full-time _____ Voluntary _____ Paid _____

Approximate length of time she has been employed in
 this type of occupation _____

Did your mother work anytime during your childhood and/or
 adolescence? _____

If yes, did she work during the following ages of your
 childhood and adolescence?

Code number _____

15. (cont'd)

_____ 1-5 years old	If yes, what kind of work _____
	Part-time _____ Full-time _____
	Voluntary _____ Paid _____
_____ 5-12 years old	If yes, what kind of work _____
	Part-time _____ Full-time _____
	Voluntary _____ Paid _____
_____ 13-18 years old	If yes, what kind of work _____
	Part-time _____ Full-time _____
	Voluntary _____ Paid _____

16. If your mother has worked since having children, would you say she generally,

_____ worked because she had to, but enjoyed it.

_____ worked because she had to, and did not enjoy it.

_____ worked because she wanted to, and enjoyed it.

_____ worked because she wanted to, but did not enjoy it.

17. How many other children in your family?

<u>Sex</u>	<u>Age</u>	<u>Education</u>	<u>Occupation</u>
------------	------------	------------------	-------------------

Thank you for your cooperation !!

APPENDIX D

The Scoring Manual for the
Motive to Avoid Success Project Test

S C O R I N G M A N U A L

for

An Empirically Derived Scoring System for

Matina S. Horner
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An Empirically Derived Scoring System*
for Motive to Avoid Success

SCORING MANUAL

I. SCORING CATEGORIES

In the parentheses below each category are the names of the closest corresponding categories of Horner's original (1968) present-absent scoring system for "fear of success imagery." The prior system was used to tap subjects' expectations about the consequences of highly successful achievement and therefore only very explicit success specific cues were used. E.g. "Anne finds herself at the top of her medical school class." This system does not require such specific cues.

Scoring
Weights

- | | |
|--|----|
| A. CONTINGENT NEGATIVE CONSEQUENCES | +2 |
| B. NON-CONTINGENT NEGATIVE CONSEQUENCES | +2 |
| <p>For both A and B (negative consequences because of success, negative affect because of success, bizarre, inappropriate, unrealistic or non-adaptive responses to the "success" situation described by the cue).</p> | |
| C. INTERPERSONAL ENGAGEMENT | +2 |
| <p>(instrumental activity <u>away from</u> present or future success)</p> | |
| D. RELIEF | +1 |
| <p>(any direct expression of conflict about success)</p> | |
| E. ABSENCE OF INSTRUMENTAL ACTIVITY | +1 |
| <p>(instrumental activity away from present or future success)</p> | |

F. ABSENCE OF OTHERS

-2

(opposite of fear of social rejection)

NOTE: This is a counter indicative category

*The system presented here is based on data from female subjects only. Verbal cues were used.

SCORING CRITERIA FOR EACH CATEGORY

NEGATIVE CONSEQUENCES

To score for negative consequences whether of the contingent or non-contingent category, there must be movement somewhere in the story toward a situation which could be experienced or interpreted as worse than the original situation. The initial state can be positive or neutral (or even slightly negative) but the consequence of movement somewhere within the story or preferably the overall development of the story can be characterized variously as tension-producing or involving failure, loss, frustration, hopelessness, deprivation or disaster.

The movement and/or the negative consequences may involve:

1. Tension: increase in negative affect usually explicitly stated (anxiety, regret, lament . . .) or being afraid that something might be lost or blocked.

"She has been in the building speaking with Paul . . . Paul is my fiance . . . Why is she smiling so wryly? And why is she so dressed up and acting so confident? I feel tears on my cheek . . ."

"Sue is late for class. She's trying to find the amoeba on the microscope slide that her instructor has just pointed out. She is shaking and nervous. Suddenly she realizes this is a zoology exam. She had forgotten all about it. How could she? Her instructor is very strict. He wouldn't understand if she tried to explain. She feels panicky."

Note: In this last example, though the movement is minimal, it does progress from bad to worse. Note also that some marginal statements ("late for class," "forgotten . . . Suddenly realizes . . . How could she?" "strict . . . wouldn't understand") could also have been considered as scorable negative consequences. This story, however, also has a clear statement of tension.

2. Deprivation: inability to attain or keep a desired goal, having something one wants taken away, lost, or destroyed by any source at all; a recognition that such blocks as natural laws, personal failures, etc. will prevent one from moving toward or attaining a desired goal.

"Sue is looking into her microscope when someone bumps her. Why is it, she thought, every time I try to do an experiment something goes wrong, someone bumps me causing me to break a plate."

" . . . She feels sad though because everyone is already dead and she will be alone for the rest of her life."

"She is examining a culture in a biology class. Her partners are competing for a contest in school. Because they had done such remarkable work before, they were eligible to enter this contest. They are all anxious for the experiment to turn out right. They know theirs is best. They may win and go to a science fair in Europe. But alas! -- too much confidence, one partner forgot to keep record on his control group."

3. Disaster: acts of God or man that take away or ruin something, often appearing as a bizarre and/or sudden ending.

" . . . they left together in his car -- not noticing Linda's father parked across the lot in his station wagon. He pulled out and followed them. When the teacher noticed, he started to drive quickly to escape. He ran off the road and the two of them died -- together -- as the sun went down on the otherwise tranquil world."

"Sue is a medical technologist. She is looking to see how many white blood cells are on a slide. She has seen millions of them before, but this slide is special. It is a slide from her sister's blood. Her sister has too many cells and has leukemia . . ."

Notes and Scoring Conventions

1. Negative consequences are scored when they occur for any character in the story, not only the main character.
2. Movement toward increased tension, deprivation, or disaster often occurs quite suddenly and is encapsulated in a single sentence. Frequently it is the very last sentence which gives the story a downward turn, and regardless of what the rest of the story was like, this is enough for scoring negative consequences. For example, the very last sentence of an otherwise positive story: "She dropped the glass and the experiment was ruined." or "Unfortunately he was killed in a plane crash."

3. Descriptive statements of difficulties, blocks, hardships or disasters that merely function to set the stage for the rest of the story are not scored. These generally occur in the first sentence and are followed by improvements in the situation or some more definitive negative consequences.

"Linda is all alone and yes, she is lonely. Today was just a perfect day at the beach and now it has come to an end. The flaming, orange sun slowly sinks behind the ocean. Its bright and brilliant rays shine down upon the water. The sun is going to find peace and rest just like Linda's brother who was killed in Vietnam."

Note: The statement in the first sentence is setting the stage for the rest of the story and, while negative, is not scored as a negative consequence. Note also that it is the final statement of the story that is scored and not the progression of events being described.

4. Things that "get in the way" of instrumental activity such as interruptions, physical blocks and other obstacles in stories where there is no movement are not scored.

"Sue is looking into her microscope. She received it for Christmas a few weeks ago. She finally has time to look at the blood stain she took a few hours ago. She has been interrupted by many people. She sits down and views her slide and is adjusting the lens as her sister enters the room. All Sue wanted was a little time alone."

5. Situations where there is an explicit statement of someone's involvement with or persistence at an instrumental activity such that the deprivation or displacement of the first person comes about because someone else wants to do the activity are not scored as deprivation. This is especially clear when the activity's function is to satisfy a "need to know" or curiosity goal.

"Carol is looking through a telescope because she is a member of the astronomy class that is on a field trip to a local observatory. Carol is using the telescope because each member of the class is being given a chance to look through the telescope as they have never had the chance to use a telescope of such

high magnitude before . . . Carol is so excited that she doesn't want to stop looking through the telescope. And she will probably have to be told to let someone else have a turn."

"Carol is looking through the telescope. Her younger brother, Teddy, is waiting for a chance to look through it. But, Carol is fascinated by the boy in the window of the house next door. Teddy wants to look at the mountain that is near their house. After waiting 20 minutes, Teddy finally pushes Carol away and get his chance."

6. A number of stories contain numerous fluctuations up and down, and we have termed these "zigzag" stories. If there are several shifts between positive and negative movements so that neither clear negative consequences nor "relief" can be scored with confidence, the story is not scored for negative consequences. The following examples illustrate this oscillation phenomenon:

"Barbara is a freshman. She's tired, liked chem in beginning. Now she's sick of so much lab. Chem has nothing whatsoever to do with her career plans. She had to take chem to fulfill a requirements. Thought she'd do terribly, actually is succeeding quite well, but isn't really working at it. She feels guilty. So she's going back. She'll put in time and appease guilt feelings. She'd just as soon this semester was over with but she doesn't want to go home for summer! She'll put in time, will really accomplish nothing. She doesn't have to work to do well. Is terrifically lazy."

"Anne is happy. Sort of. She is in the lunchroom with lots of people, but doesn't feel them around her. She feels separate. She's happy like usual, but not really because nothing good has happened today. Al didn't speak to her at breakfast. Nobody wants to be with her, help her. She's happy because that's the only way she can go on living. If she's happy about the myriad of wonderful little things, then the big ones don't hurt so much. Al will smile at her at lunch. That won't make any difference. She feels like a pawn, a body to him. He's cold, hard. She wants to help him but can't."

Negative Consequences fall in one of two scoring categories:
Contingent and Non-contingent:

A. Contingent Negative Consequences (+2)

When the tension, deprivation or disaster comes about because of something about the character involved:

1. Personal characteristics which must be explicitly stated:

" . . . In an effort to become popular, Joan took to smoking and drinking extensively. There seemed to be no problem at first, however, as time wore on Joan became dependent upon smoking . . . "

"She has always been clumsy . . . the key test tube was broken."

2. Actions:

" . . . She killed herself . . . "

"Carol, what are you doing. Watch out for the telescope, it's tipping! Crash. The telescope laid shattered on the floor. Carol looked forlornly at the professor and began to cry."

" . . . She was looking at some cells of a plant, when all of a sudden she lost the focus . . . "

3. Failure to act (e.g., forgetting):

" . . . Now she doesn't study much anymore. The next semester Joan flunked out of med school."

"But . . . alas! -- too much confidence, one partner forgot to keep record on his control group."

" . . . She bent her head over to see how far away the slide was from the edge. In so doing she forgot that she had left the Bunsen burner on. Her hair was singed a little but she was not hurt otherwise . . . "

Note: To be contingent, the fault for one's suffering must be one's own.

B. Non-contingent Negative Consequences (+2)

Something that comes about through the impingement of external forces:

1. Accidents and acts of God (floods, earthquakes).
2. Objects or concrete events (time runs out, paper is missing):

" . . . She feels she has plenty of time. She will sketch the drawings carefully at first, and as time runs out, she will be tense and make more hurried drawings and copy details for her text book."

3. Other forces not explicitly tied to the personal characteristics or the fault of the character, on or to whom the negative consequences impinge or occur.

" . . . Why is it, she thought, everytime I try to do an experiment something goes wrong, someone bumps me causing me to break a plate."

"Sue is looking into her microscope as she watches the tiny organisms moving around. It wasn't long ago when she wouldn't have even known what these were. Now, though, she is a technician and looking at a patient's tissues. She liked Mrs. Smith and was hoping that she wouldn't find what she was now looking at. These tissues were definitely cancerous."

" . . . Hand in hand they both turn and walk down the beach. Each tries to hold on to this moment. For tomorrow Tom leaves for Vietnam. Linda heads for school. Neither wants the other to leave, each walk silently with nothing to say . . . "

Note: In the last example, the causes of the unwanted separation are out of their control: the negative consequence for Tom is Linda heads for school; the negative consequences for Linda is Tom leaves for Vietnam.

Notes on Specific Scoring Conventions

- a. If the responsibility for a consequence is mixed, by convention it is scored as non-contingent.
- b. "Probably" or "maybe" statements should be scored as if the events happened.
- ". . . Soon Carol's friend will become impatient and maybe even angry because they had to put some money in the telescope."
- "Probably it will rain and she won't be able to go."
- c. Do not interpret motives. Score the language actually used in the story. "She ruined the experiment" is an active statement and is scored as contingent. "The experiment was ruined" (without other statements connecting this outcome to an actor) is a passive statement and is scored as non-contingent.

"Joan comes walking into the Soc. Sci. Center looking very pleased. She has been up most of the night writing a paper for history. She had put a great deal of work into it and was confident of a good grade. She reached into her pocketbook for the paper only to find it missing. Retracing her steps, she found the neatly typed paper lying in a mud puddle. Very upset, she returned to the building and found her instructor."

Note: The story does not say "she lost the paper" and is therefore scored as non-contingent negative consequences.

- d. Both contingent and non-contingent negative consequences may be scored once each per story. However, the exact same sentence or set of words in any one story cannot be used for both categories.

C. Interpersonal Engagement (+2)

Interpersonal engagement is scored when two or more specific persons are clearly involved or occupied with each other in the story. There are two aspects to this engagement: a) it must comprise a major goal in the story -- i. e. , an interpersonal or affiliative goal must be as important as an achievement, task or power

goal, if mentioned; and b) there must be an active concern with this interpersonal goal or activity toward it.

1. Affiliative Goal Orientation

The goal of the story (or one major goal in the story) must explicitly be affiliation with another. It may be either negative or threat-oriented (e.g., dealing with an interpersonal problem) or positive and/or goal-oriented (e.g., wanting to become closer to another). Sometimes the existence of these goals is not clearly stated and must be partially inferred.

In the first example below, the major concern of the story is with the relationship between Carol and the teacher. The second example does not have a clear interpersonal goal and even though an interaction occurs, it is in the context of the far more important goal, namely the task at hand. Thus, the first story below is scored for interpersonal engagement, while the second is not. The last three examples involve positive relationships and illustrate how interpersonal goals may be inferred if the hint is strong enough.

"Carol is looking through the telescope. She is in zoology lab. She is late. They're frantic because she forgot . . . She wants to speak to the professor. He casts her a bad stay-where-you-are look. Is he as mean as he looks? She wonders. I've heard some awful things about him. Never tried speaking with him. Shall I tell him my problem? . . . "

"Sue is in biology class and she is looking at a slide of bacteria. Sue realizes she must be able to identify correctly every form, or she will flunk the exam. She needs a good mark if she is to continue in the course. Mr. Potter, her professor, has warned her about her need for a good grade, and he feels she can achieve much more than she already has."

"He decides to have a good time tonight and calls his girl friend and makes a date . . . "

". . . She is a biology major at UNH and really enjoys school. Her future ambition is to become a doctor. Mr. Mackie is her professor who is a

very kind and extremely intelligent man. He is so willing to spend extra time with any student who needs the help. Sue digs "bio" and I'm sure you can see why!"

"Judy just read a letter from her boy friend -- saying he was coming up to see her this weekend at school . . . Now they can go to the hockey game, the Mil-Arts Ball and out to dinner with her parents on Sunday . . . Now she'll have to pick up the apartment and tell her roommate it's her turn on the couch this weekend. David hadn't been up for three weeks."

If the interpersonal activity of goal attainment is a considerably less developed theme than is achievement, power or task-oriented instrumental activity ("doing" something), the story is not scored for interpersonal engagement. In the first example below, Judy seems much less interested in Jack than in the snow. At least the relationship between them is not the focal point nor the key theme developed in the story. Thus, it is not scored for interpersonal engagement. The second example, on the other hand, contains a number of other processes (making mistakes on the job, living on his own away from parents), but also includes as a major goal the interpersonal relationship between the brother and sister; this example is scored for interpersonal engagement.

"Judy is thinking about the beautiful day she spent yesterday. She remembers how her and Jack went to the mountains and sat and watched the snow come down and cover the trees and ground. She remembered how happy it made her feel when it snowed. She loved the snow. Then she remembered how they went sliding down a hill on a toboggan. This was a great thrill -- to enjoy the new snow."

"Judy received a letter from her brother in California and he is telling her about the first day on the job and how many mistakes he has made. She feels lonely that he has gone out there since he was her only sibling, but felt that he had to start to live on his own away from their parents. He has also invited her

to come out and spend some time with him when he gets settled and she is smiling with happiness."

2. Kinds of Activity Scored as Interpersonal Engagement

a. Verbal Mode: "Dialogue":

Sometimes the stories are written in dialogue form, which clearly makes the present interchange of the story conspicuously important. In the following example, even though there are other sorts of actions going on, the interpersonal engagement, especially with Bill, stands out as being of primary importance.

" 'Bill, how did you do on your physics test?'
 'Oh, about the same as usual, D+; I don't expect to do much better than that. How did you do? You look like you did fantastic.' 'I did. I can't believe it! My first B in physics! You know how bad I've been doing this term with two D's and an F and I pull a B on the last test of the term.' 'How'd you manage that?' 'I finally got up enough nerve to ask the professor for some help, and he got me a private tutor who knew exactly what I was doing wrong.' "

The verbal mode is evidenced in other ways than through dialogue -- common verbs showing interpersonal engagement are the following: tell, ask (a question, for a date), say, suggest (what to wear), announce, urge, invite, convey (thoughts), listen, discuss, talk to, call and phone.

b. Non-verbal Mode:

Stories also describe interactions which are non-verbal. Common verbs used are as follows: wait for, come by, pick up, flirt with, approach, meet, join, be with, visit, love, kiss, take (to movies), help, show (appreciation), present, receive (presents), share, settle and make (happy, mad, friends).

Notes and Specifications: It is often difficult to assess just how the common verbs listed above are being used, that is, whether anything specific is being done. Caution must be taken to avoid the cases where these or similar words are used to describe an interchange where there is no interpersonal involvement at all. For example, a teacher may

briefly tell a student about an assignment but without a clearer development of interpersonal involvement, the verbal interaction is not enough to warrant a score in this category (see also the example of teacher's warning above). A helpful rule is that the relationship have some effect on one or both parties, as in the experience of external press. E.g., one of the common father-daughter stories:

"Carol's father had always been interested in astronomy, and consequently he was constantly urging her to share in his interests. She, being 19 years old, felt as though she could use her time more wisely; pleasurable by doing other things of her own interest. However, Carol, being an only child, had not the heart to deny her father's request to gaze at the stars through his telescope. Therefore, she sacrificed a good time for him."

D. Relief (+1)

Relief is scored when a relative tension or deprivation state is suddenly (sometimes magically) alleviated, often in a manner incurring surprise. There must be movement in the story.

"It had been so long that Judy was sick that she became discouraged, pale, and thin. She bore the pain daily, but she occasionally broke down to tears when the pain intensified. Suddenly she walked into our room and sat down in a chair, smiling. 'It's gone,' she said, 'The pain is gone, and I'm healthy again.'"

"The tests were passed back to all in the chemistry class. Joan's paper finally reached her, she was afraid to turn it over, she thought to herself and wondered if she had studied enough. Joan finally got the courage and she turned her paper over. To her amazement, she had gotten an A- on the exam."

Although relief generally occurs at the end of a story, it need not necessarily do so. It may just as well occur earlier in the story as long as a prior state of tension has been established.

"Linda is sitting in her bedroom looking out at the sunset. It seems relaxing to her after such a busy and hectic day."

Some stories seem to end in a symbolic "whew!" or to have the quality of a great breakthrough or burden lifted, a longing satisfied.

"Joan is married to Jean and for many years they've been trying to have children. Well, today she just returned from the doctor's and found out that she was pregnant. She feels beautiful sensations as she and her husband have longed for a baby ever since they were married. In 9 months Jean and Joan will bring a baby boy into the world!"

"Carol is looking through a telescope and sees a strange-looking object. She realized that this is the U.F.O. that everyone has been trying to locate for the last 200 years. The problem is that the object is moving and she has to follow it with the telescope. But she wants to call the UFO Bureau and report her findings. She can't leave the telescope. She is in a state of confusion because she wants the money, the \$100,000 reward. All of a sudden out of the clear blue sky her husband comes in the room and Carol's husband calls and they live happily ever after."

There must be no clear statement that an individual's efforts led to the positive outcome. However, if step-wise positive striving (instrumental activity) to ameliorate tension is mentioned in the story but rewards are completely out of proportion with the effort or somehow magically increased, it is still scored for relief.

"Judy is really pleased with the results. Her instructor just handed her the paper she and her classmates had passed in two weeks before. Much time, work and effort has been put into it. She was secretly hoping for an A but didn't quite expect it. Well she did get one and was very happy about it . . . "

Note: The goal-oriented activity here is clear, but the fact that she did not really expect to get an A but got one anyway (increasing her positive affect) qualified this story for relief.

" . . . As she watched the sunset, she thought about all her problems and how maybe she could solve them all. She tried to think of happy things later on and became filled with joy at watching the sunset . . . "

Note: The above story is marginal. The extent of conscious voluntary attempts to solve her problems is unusually extensive; but the positive outcome

("became filled with joy") is both the effect of the workings of an external stimulus and out of proportion to the moves she makes to solve her problems.

E. Absence of Instrumental Activity

In scoring a story for this category, the judgment to be made is whether instrumental activity is present or not. The following are the definitions and criteria for assessing presence of instrumental activity.

Instrumental activity is any overt or mental activity by one or more characters in the story indicating that something is being done about attaining a goal. There are various goals which may be stated or easily inferred: the first example below shows an achievement goal, the second example a curiosity goal.

" . . . Four years of your life doing hard work, trying to get to this end with good grades to get into law school . . . "

" . . . Carol is a very excitable person and is extremely excited when she looks through the telescope because she is amazed at how close the stars and planets seem to appear. And she wonders how they came to be this way."

Great care must be taken not to make inferences of actions from described end-states. Also, statements of one's condition or situation are not instrumental activity. E.G., "while driving back from the beach" describes a setting and, unless clearly connected with a goal of some sort, does not indicate instrumental activity, nor do statements that describe outcomes or effects. Thus, the statement "Just the fact that she knows she finally put him down, set him in his place," is not scored. It merely describes a state of affairs, the effect of an action on another. Since it does not describe the action itself, it is not scored as instrumental activity.

Also, instrumental activity is not to be confused with the mere presence of verbs. For example, the statement, "She made a contribution to the world," would not be scored because only the effect of the person's actions has been described and not the goal toward which the person is striving. The verb "made" is insufficient since it is not stated what is being made, or what the making of it entails. On the other hand, "She was working on her project, which would be a contribution to the world," would be scored since the actual activity is explicit in the story. In addition, the statement,

"She was thinking about the solution to the problem, which would make a contribution to the world," would be scored as instrumental activity toward the goal of solving the problem ("thinking" rather than "doing").

Stories where several people are interesting, and/or the goal is not clear, and/or the verbs involve action which is not specific (like help, meet, call up, etc.) are usually not adequately focused toward a goal to meet the requirements of instrumental activity. E.g., "John is helping Susan" is not scored. These are often scored as interpersonal engagement (see that category). If "John is helping Susan" do something, it is scored. In the following example, however, the goal of one of these verbs is clearly toward a specific goal (a focused microscope) and therefore it is scored. Note also that "has to write" describes an assignment -- a setting and not an action.

"Sue is in biology class and has been asked to look at a paramecium slide under the microscope. She has a lab partner and each table has an instrument. She has to write what she observes down for her report which will be collected after class by her teacher who is helping the students focus their microscopes."

There are a small number of common verbs which are difficult to score in this category: thinking, wondering, wishing, imagining, watching, and so on. Special care must be taken with these apparently passive activities to evaluate whether a goal exists in the story and whether the verb shows something being done about attaining it. Also difficult is the case of "curiosity" or "need to know." In the first of the two examples below, the character is not "wondering" aimlessly but directedly (how the cells came into being, secrets of life); thus, instrumental activity is scored as present. In the second example, however, "wondering" involves something other than a search for knowledge or resolution of curiosity and therefore does not qualify as instrumental activity.

"Sue is looking into her microscope, wondering how those tiny cells and bits ever came into being, a conglomeration as they are now . . . Sue is glad that she took this lab biology course for without it she would have never known the underlying secrets of life . . . "

"Carol is looking through the telescope wondering where the man in the moon is. Her mommy always talks about him but poor little Carol never does get to see him. And when she's lonely like tonight and

needs a friend, she really wishes she could see him and have a nice chat. But again, Carol has never heard the man in the moon talk back. She can only hear of him from grownups. Carol can't wait until she grows up so that she may find and see the great big man on the moon."

Absence of Instrumental Activity

No statement of any instrumental act ("thinking" or "doing") toward attaining a goal within the story. Also scored when the only instrumental act is in the first phase in the story and is essentially a restatement of the cue material. Commonly a story that is a description of a state of "being" (vs. the "doing" of instrumental activity).

"In the matter of an instant the bare branches of the trees were transformed from their stark presence into a multitude of tiny veins endlessly reaching toward the vibrance of the hues which were above them. The rich warm colors of the sun provided a feeling of pulsating life for Linda as she lay beneath the trees gazing into the sunset. It would seem that climbing these massive branches should deliver her into the warmth of the sun yet she knew that even the uppermost reaches of the tallest tree could not serve to make her one with heaven."

The subjunctive tense used above ("would seem . . . should") does not qualify as the description of overt or mental activity. The following example has instrumental activity in the first sentence, which is merely a repetition of the cue; the rest of the story does not contain instrumental activity, so it is scored for absence. Also, the action in the story exists without reference to any goal -- "has just come back from a visit" is neither toward any goal nor away from a clear goal.

"Sue is looking through her microscope in the chemistry lab. She isn't really working though. School is becoming very difficult for her and she has just come back from a visit with the assistant principal and is quite upset. The teacher in this class is very hard and Sue is so far behind in her work she feels the situation is hopeless. Also, her boy friend has this class with her and he tends to be a brilliant student which makes matters even worse."

F. Absence of Mentions of Other Persons (-2)

(This is a counter-indicative category.)

Absence of others is scored if no character or group other than the person specified in the cue is mentioned in the story. Stories about animals count as though they were people (second example).

"Carol has had many problems lately, so since she likes the beach so much, she decided to go down and take a walk along it one late day. She thought about all her problems, and the rush of the water and the quietness of the day made her feel better even though she had no solutions."

"Ann is sitting on the antique chair smiling at Tonka Ming -- Tonka is her siamese kitten. He has been stalking a ladybug across the carpet and when the ladybug suddenly flew away, the little cat had sat back and howled disconsolately. Ann smiles at Tonka's predicament. She had wanted the bug to get away. Yet she was sorry for the frustrated big-game hunter. She will take him (Tonka) into the kitchen and feed him tuna fish and raw eggs -- his favorite dish."

If the label for a group is global or vague, or if it describes a situation, then it is not treated as a mention of other persons.

"Sue is in a biology lab and she is looking through her microscope to observe what an ant would look like close up. Her class has been studying insects and she decided that she wanted to know what an ant really looked like . . . "

". . . In the future she will receive a Nobel prize and take the money and donate to more extensive cancer research. She is truly humanitarian and now will have a chance to prove herself to the world."

Note: In the first example, "class" is a situation and not the description of a group; this is also true for such phrases as "power to the people." In the second example, no person is mentioning awarding the "Nobel prize," and the "world" is considered far too general to refer to specific others. Consequently, these two are scored for absence of others.

Others may not be mentioned by implication or noted as missing. Thus statements that the cue character is all alone or feeling lonely do mention other persons by their absence and are not scored in this category: e.g.,

" . . . and she's the only one there . . . "

" . . . and Carol was getting lonely . . . "

" . . . These moods often came over her, feelings of loneliness, the absence of a true friend . . . "

" . . . The partner who was to have worked with her is not here today so she is all alone . . . "

(N. B.: In the stories where the verbal or picture cue depicts more than one person, the use of this category is questionable, and should not be scored.)

Determining A Motive To Avoid Success Score

Three or four stories should be used in determining a subjects total score. There are two ways possible to obtain a final score and we have no strong evidence on the basis of which to recommend one over the other but the method used should be reported.

Categorical Scoring:

The subject may receive ONLY one score per category. If imagery occurs in at least one story for a particular category, the category is scored present. Scores are not summed across stories. The final score for the subject is computed by weighting each category with the appropriate weights given in the manual. Thus scores for subjects say range from =2 to +8.

Continuous Scoring:

The major difference here is that scores for each category are summed across stories. The final score is computed by weighting each category with the weights given. Thus scores may range from -2 to +8 for one story and -6 to +24 for 3 stories.

EXAMPLE:

Subject A

	2	2	2	1	1	-2
category	A	B	C	D	E	F
Story 1	x		x			
Story 2		x	x	x	x	x
Story 3	x		x		x	

The categorical score for this subject would be 6.

The continuous score would be 13.

IMPORTANT

Before attempting to use this system in empirical work, or reporting empirical work using this system, it is important that a scoring reliability of at least .85 be achieved.

Methods for determining scoring reliability for thematic scoring of this kind can be found in the appendix of J. W. Atkinson, Motives In Fantasy, Action, and Society.

We gratefully acknowledge the help of a number of our colleagues in various phases of this work -- Jackie Fleming Hamilton, Joseph Pleck, Larry Aber, and Susan Kaplan.

SCORED EXAMPLES

- A. "The year is 1976. This is supposed to be the last sunset Linda will see, well at least according to the Bible. Actually, she is glad (2) that this will be her last day, at least she won't have to worry (2) about washing her hair tomorrow, and (2) she won't have to take that Psychology experiment. Imagine her distress (1) when she sees tomorrow's sunrise.

Scoring:

1. Non-contingent negative consequences: The negative consequences are indicated by her distress. They are caused by the world not ending, an event external to Linda, and not under her control. (+2)
2. Relief: Relief is clearly expressed by the phrase, "at least she won't have to worry . . ." but it could also be inferred from "she won't have to take that Psychology experiment." Her positive affect ("she is glad") is the result of the somewhat magical (Biblical predictions) alleviation of her problems. (+1)
3. Absence of mention of other persons: No persons are mentioned other than Linda, who is named in the cue. (-2)
4. Absence of instrumental activity: Linda performs no activities toward any goal. "She is glad" and "washing her hair" are descriptive of states, not activities. "Sees tomorrow's sunrise" is an event without a goal. (+1)

Total score: +2

- B. "On a nice freshly cut green lawn is Linda and Jerry sitting looking out at the sunset. Linda said to Jerry (1): It's such a beautiful sunset and Jerry said (1): You certainly are. Linda then gave Jerry a funny look (1). Linda was the type of girl who loved nature and all of its belongings. Whereas Jerry was just the opposite. No matter how hard Linda tried to convey thoughts to Jerry (1) he just wouldn't listen. Finally Linda told him (1) that they will never be happy together because they disagree (1) about practically everything (2). So, then they broke up (2).

Scoring:

1. Interpersonal engagement: The whole story is about the involvement of Linda and Jerry. The activity of watching the sunset or trying to convey thoughts are the occasions for events within the relationship. Scoring for engagement is not affected by whether the relationship is successful or not. (+2)
2. Contingent negative consequences: The deprivation occurs in the last sentence, "So, then they broke up." It is contingent because it is a direct consequence of the actions of the people in the story: "No matter how hard . . . he just wouldn't listen. Finally Linda told him that they will never be happy together" (+2)

Categories not scored:

Absence of instrumental activity: There is activity in the story: Linda gave him a look, Linda told him, toward the goal of working on the relationship and eventually terminating it.

Absence of mention of others: Jerry is a person not mentioned in the cue.

Relief: There is none -- the story ends with deprivation after a consistently downward movement.

Total score: +4

- C. "Sue had never wanted to go to college, but her parents and all of her friends had gone -- so she had no choice. In her first semester, she was required, to her despair, (1) to take a full-credit course in botany. The lectures were boring, but the labs -- 1 per week -- were unbearable. She found herself dreading (1) each Tuesday morning, because she knew that her destination would be her Botany lab; however, she was able to fool them all by looking into her microscope and seeing -- not scientific phenomena -- but her own dreams of getting out of the class."

Scoring:

1. Non-contingent negative consequences: This whole story is full of negative consequences. Non-contingency is indicated by the phrase "she was required," and tension by the phrase "to her despair." The movement of the first two-thirds of the story is from bad to worse culminating in ". . . the labs were unbearable. She found herself dreading . . ." (+2)
2. Relief: Relief is shown by the upward movement at the end of the story -- "however, she was able to fool them all" -- and via the nature of the alleviation (dreams in a microscope). (+1)

Categories not scored:

Interpersonal engagement: Even though there are constraining interpersonal relationships ("had no choice"), no interpersonal goal is developed. The only active constraint ("required") is made by an unnamed adversary (probably the college curriculum) and does not constitute an interpersonal engagement.

Absence of mentions of others: Others are present: "parents," "friends," and, later in the story, "them."

Absence of instrumental activity: Her actions around the microscope are oriented to the goal of attaining dreams. When avoidance or escape is actively pursued (e.g., "working on a plan to escape") or clearly toward a specific better place, then instrumental activity is present. If something is only being avoided, this is not instrumental activity toward a goal.

Total score: +3