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PERSONALITY CORRELATES OF FEAR OF SUCCESS

by Winifred C. Ejeckam

Thesis submitted to the School of Graduate Studies of the University of Ottawa in partial fulfilment of the requirements for the degree of Doctor of Philosophy

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CURRICULUM STUDIORUM

Winifred C. Ejeckam was born December 8, 1947 in Ogbunike, Anambra State, Nigeria. She received the Bachelor of Science in Education/Geography from the University of Nigeria, Nsukka, Anambra State, in 1974. The title of her thesis was Relationship Between Pupils' Attitude to Their School and Their Performance in School. She received the Master of Arts degree in Educational Measurement and Experimentation from the University of Ottawa, 1977. The title of her thesis was The Relationship Between Psychological Differentiation and Questioning Behaviour in Student-Teachers.

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INTRODUCTION

Research on fear of success has been concentrated mainly on the validation of the construct as well as its measurement. Some researchers have done this by relating fear of success to performance in achievement-oriented conditions, others by relating it to variables which, conceptually, should be related to fear of success.

The variability and inconsistency in results in fear-of-success studies indicate the possibility of inadequate specification of variables. Various attempts have been made to standardize the situational variables through experimental controls and instructions. It is also possible that there are some as yet unidentified personality variables, related to the incidence and/or dynamics of fear of success.

Fear of success is said to arise from concerns about anticipated or actual negative consequences of success or demonstration of competence. These consequences are, in the main, interpersonal in nature. Some are loss of friendship; social interaction; and group membership or acceptance. Others are anxiety over publicity where otherwise privacy is preferred, and finally low social regard.

The extent to which an individual likes social interaction, group membership/acceptance is related to his need for stimulation and consequently, his concern about losing them.

Eysenck, in his theory of personality, postulates individual differences in the need for additional stimulation as a consequence of excitation/inhibition balance. Individuals who have high excitation/inhibition balance and consequent low need for arousal (Stimulation) are said to be introverted. Conversely, individuals who have low excitation/inhibition balance and consequent high need for additional arousal are said to be extraverted. Extraverts are outer-oriented because of their need for this stimulation which they obtain through social activities, group action and interpersonal relationships. Introverts, on the contrary, are inner-oriented and withdrawn in order to avoid over-arousal.

Eysenck also postulated that individuals differ in emotional reactivity (Neuroticism (N)). Individuals low in this variable are said to be stable, while those high in it are said to have a high predisposition to neurosis (neurotic). High N individuals differ among themselves because of their location on the introversion-extraversion continuum. Thus different combinations of Neuroticism and Extraversion produce different behaviours in a given situation.

The purpose of this study was thus to investigate how Extraversion and Neuroticism relate to fear of success.

The research report is organized into three chapters. In the first chapter is presented a review of the literature pertaining to fear of success, extraversion-introversion and

neuroticism and also a theoretical rationale for the study which culminates in the research hypothesis. Presented in the second chapter is the methodology of the study. This is followed by the presentation and discussion of the results in Chapter III. Suggestions for further research were also indicated in Chapter III. This is followed by a summary and statement of conclusions. The report ends with reference notes, a reference list and appendices.

CHAPTER I

REVIEW OF THE LITERATURE

The theoretical background for this study is presented in this chapter. Atkinson's theory of achievement motivation (1964), its extension by Horner (1968) and related research are examined first. Eysenck's theory of extraversion-introversion (E) and neuroticism (N) (1967) together with relevant studies are then discussed. These are followed by a summary and criticisms of Eysenck's theory. Finally, the interaction of E and N dimensions and the manner in which they relate to fear of success are discussed.

The Theory of Achievement Motivation

In this section the components of achievement oriented behaviour--the tendency to achieve success, tendency to avoid failure and the resultant achievement tendency--are summarized. This is followed by a brief discussion of recent modifications to the theory (Atkinson & Birch, 1970; Atkinson & Raynor, 1974, 1978). Presented last are Horner's propositions (1968), the rationale and premises for them and also a review of some related studies.

The Tendency to Achieve Success, The Tendency to Avoid Failure and the Resultant Achievement Tendency

The tendency to achieve success, the tendency to avoid failure and the resultant achievement tendency are aroused in any achievement-oriented situation where an individual is aware that his performance will be evaluated (Atkinson, 1964). A tendency is an inclination to act in a particular way which can be measured in terms of direction and magnitude in a given situation (Atkinson, in Atkinson & Raynor, 1978). The above tendencies and the personality and situational variables of which they are composed are described in greater detail below.

The tendency or the inclination to achieve success (T_s) in any task is a product of one's motive to achieve success (M_s), the subjective probability of success (P_s) and the incentive value of success in that task (I_s). Hence

$$T_s = M_s \times P_s \times I_s. \qquad (1)$$

(Atkinson, 1964, p. 242)

Motive to achieve success , also called n Achievement, is a "capacity for taking pride in accomplishment" (Atkinson, 1964, p. 241). It is a stable and latent personality trait which is acquired early in life (McClelland, Atkinson, Clark, & Lowell, 1976). Motive to achieve success influences behaviour only when it is aroused by situational cues. Examples of the latter are task difficulty, and an individual's

awareness that his performance will be evaluated (Atkinson, 1964; McClelland et al., 1976). The motive to achieve success is typically measured using a thematic apperception test (TAT). Specifically, a set of pictures, verbal leads or sentences (generally referred to as stimulus cues) is presented to the subject. The character(s) in the cue(s) may be either male, female or both male and female. In response to four guiding questions, the subject writes imaginative stories about the character(s) in the cue(s). The stories are content-analyzed and scored on the basis of the number of achievement imageries they contain (McClelland et al., 1976).

Subjective probability of success (P_s) is an individual's expectancy that performance of a given task will be followed by success (Atkinson, 1964; Atkinson & Raynor, 1978). It is influenced by both the difficulty of the task and the individual's ability or competence in that kind of activity (Atkinson & Raynor, 1974).

The incentive value of success (I_s) is the relative attractiveness of success in a given activity (Atkinson & Raynor, 1978). It is assumed to be a direct function of P_s and is given by the following equation:

$$I_s = 1 - P_s. \qquad (2)$$

Thus Equation 1 becomes

$$T_s = M_s \times P_s \times (1 - P_s). \qquad (3)$$

Equation 3 implies that for any value of M_s, the tendency to achieve (T_s) is greatest when $P_s = .50$ (Atkinson, 1964; Atkinson & Feather, 1966). However, the final strength of the tendency to engage in some achievement-oriented task depends not only on T_s but also, in part; on the tendency to avoid failure.

The tendency to avoid failure, or anxiety about failure, is a product of an individual's motive to avoid failure (M_f), his subjective probability of failure (P_f) in a given task and the incentive value of failure (I_f) in that task (Atkinson, 1964; Atkinson & Feather, 1966). Expressed in symbols,

$$T_f = M_f \times P_f \times I_f. \qquad (4)$$

Motive to avoid failure (M_f) is the disposition to react with shame and embarrassment when the outcome of performance is failure (Atkinson, 1964). Like M_s, the motive to avoid failure is a stable and latent personality trait. When aroused, the motive leads to anxiety and the desire to avoid a task. Thus M_f is inhibitory in nature. Also, M_f is independent of M_s (Atkinson & Feather, 1966).

Subjective probability of failure (P_f) is the expectancy that failure will follow the performance of a task. It is assumed to have a complementary relationship with the subjective probability of success (P_s). Thus P_f is weak when P_s is strong and vice versa. Symbolically, $P_f = 1 - P_s$. (5)

(Atkinson, 1964)

The incentive value of failure, that is, the

repulsiveness of failure, is related to P_s in the following manner: $$I_f = -P_s. \quad (6)$$

(Atkinson, 1964)

The incentive value of failure is, therefore, negative. Equation 4 thus becomes:

$$T_f = M_f \times (1 - P_s) \times -P_s$$

$$\therefore T_f = -(M_f(1 - P_s)P_s). \quad (7)$$

It is obvious from Equation 7 that for a given value of M_f, the tendency to avoid failure (T_f) is greatest for tasks of intermediate difficulty (Atkinson, 1964; Atkinson & Feather, 1966).

Tendency to achieve success is excitatory while tendency to avoid failure is inhibitory. Consequently, the algebraic sum of the two tendencies is called the resultant achievement tendency or motivation (T_a) (Atkinson, 1964; Atkinson & Feather, 1966). Hence $$T_a = T_s + T_f. \quad (8)$$

Substituting T_s and T_f in Equation 8;

$$T_a = (M_s \times P_s \times (1 - P_s) + -(M_f(1-P_s)P_s). \quad (9)$$

$$\therefore T_a = (M_s - M_f)(1 - P_s)P_s. \quad (10)$$

The resultant achievement tendency (T_a) is positive if $T_s > T_f$ and, as can be deduced from Equation 10, this obtains when $M_s > M_f$. Conversely, T_a is negative if $|T_f| > |T_s|$ which is true when $M_f > M_s$, except when positive extrinsic tendencies help to overcome the effect of T_f.

However, Atkinson and Birch (1970) have modified the theory and have proposed that extrinsic tendencies may not

be needed, in an individual in whom $|T_f| > |T_s|$, to initiate a task. They more recently posited that the effect of T_f is transitory (Atkinson & Birch, 1970, 1978). T_f is the equivalent of negaction tendency (N) in the new framework. Negaction tendency blocks and opposes the expression of action tendency ((T), equivalent to T_s). This inhibitory tendency (T_f or N) dissipates as a result of being expressed in the form of resistance. Thus over a period of time, with T_s constant, N or T_f can be lowered to a point where T_s becomes larger and leads to the performance of an initially avoided task. Atkinson and Birch (1970, 1978) have, similarly, indicated that in the success-oriented individual once a task is initiated (because $T_s > T_f$), T_s starts to dissipate as a result of being expressed in action. Thus the initiation of or the withdrawal from a task already started depends not only on the magnitude of M_s and M_f but also on the rate of dissipation of T_s and T_f.

The assumption regarding the relationship between the resultant achievement tendency, and performance in a task, has also been modified. The relationship which was formerly assumed to be an increasing monotonic function (Atkinson & Feather, 1966) is now posited to be an inverted U-function (Atkinson & Raynor, 1978).

Additionally, Atkinson and Raynor (1978) have stated that performance in a task is a function of a greater number

of variables than was formerly proposed. Some of these additional variables are the cognitive and motivational effects of success and failure on an individual's subsequent motivation (Weiner, 1965); his future orientation (Raynor, 1969); and his fear of success (Horner, 1968). The cognitive learning effect, as proposed by Weiner (1965), is a change in expectancy of success and is related to T_s and T_f in a subsequent activity. The motivational effect of success and failure on an individual is referred to as inertial tendency which is carried over to a present task from recent past occasions.

Future orientation is an individual's conception of the relationship between the particular activity and his future goals. Raynor (1969) proposed that an individual's characteristic achievement-motivation for some present activity will be increased if present performance is seen by the individual as instrumental to attaining a future goal.

Fear of success is the anxiety about negative consequences that may be associated with success or demonstration of competence in a task.

Atkinson's theory of achievement motivation which was founded on a simple assumption that achievement-oriented activities arouse only two tendencies--T_s and T_f--has been modified greatly as a result of subsequent research. In the following section are presented and discussed the components

of one of the new variables added to the theory of achievement motivation--the tendency to avoid success or fear of success, as it is also called.

The Tendency to Avoid Success

After reviewing studies of achievement motivation in which female subjects were used, Horner (1968) made the following observations:

1. Females appeared to repress achievement imagery when responding to stimulus cues which show a female performing an intellectual and/or leadership activity (Lesser, Krawitz, & Packard, 1966; Veroff, Wilcox, & Atkinson, 1953).

2. In response to male stimulus figures, female subjects wrote stories that were scored high on n Ach (French & Lesser, 1964; Veroff et al., 1953).

3. The incidence of achievement imagery was not greater in achievement-oriented conditions than in non-aroused conditions (Angelini, 1955, cited in Horner, 1968; Field, 1953, reported in Horner, 1968; McClelland et al., 1976; Veroff et al., 1953).

4. n Achievement did not predict performance for females as consistently as it did for males (French & Lesser, 1964; Lesser et al., 1966; Veroff et al., 1953).

Horner then proposed that there exists an additional inhibitory tendency which is aroused in females when the

latter are engaged in an intellectual or leadership task. Horner called it the tendency to avoid success (T_{-s}). In effect, she proposed that resultant achievement tendency is the algebraic sum of T_s, T_f and T_{-s}.

Hence $$T_{a*} = T_s + T_f + T_{-s}. \quad (11)$$

The tendency or inclination to avoid success (T_{-s}) is a multiplicative function of motive to avoid success (M_{-s}), subjective probability of success (P_s) and the negative incentive value of success (I_{-s}). Symbolically,

$$T_{-s} = M_{-s} \times P_s \times I_{-s}. \quad (12)$$

(Horner, 1968, p. 23)

Horner defined the motive to avoid success in the following way:

> . . . a disposition (a) to feel uncomfortable when successful in competitive (aggressive) achievement situations because such behaviour is inconsistent with one's femininity, an internal standard; (b) to expect or become concerned about social rejection following success in such situations.
>
> (Horner, 1968, p. 22)

Motive to avoid success is thus seen as a disposition to be anxious when succeeding where success is not thought to be consistent with one's self-image or in anticipation of such a success.

Horner posited that the motive to avoid success originates from the societal stereotypes of females. These characterizations depict competence, independence, competition and intellectual achievement as incompatible with femininity but

consistent with masculinity (Mead, 1947/67; Veroff et al., 1953). Further support for the existence of the stereotypes is provided by Broverman, Vogel, Broverman, Clarkson, and Rosenkrantz (1970) and Der-Karabetian and Smith (1977). When internalized, this image of a female forms the basis of some psychological constraints on female subjects' behaviours of which the subjects are unaware (Horner, 1972, p. 158). These constraints dampen and restrict, in females, the desire to express and manifest their competencies, abilities and interests.

To incorporate M_{-s} into Atkinson's theory of achievement motivation, Horner made certain assumptions regarding the incidence of M_{-s}. She also made assumptions with respect to the nature of and the relationship between the situational variables, P_s and I_{-s}, conducive to the arousal of M_{-s}.

The assumptions are as follows:

1. Motive to avoid success (M_{-s}) is a stable personality characteristic acquired early in life in conjunction with sex role standards.

2. M_{-s} is more common in women than in men.

3. M_{-s} is more common in high ability women than in lower ability women. This assumption derives from the expectation that only those who are capable of succeeding in a task need be concerned about the consequences of success in that task.

4. M_{-s} is greater in those women who are high in n Achievement than in those low in n Achievement.

5. M_{-s} is more strongly aroused in competitive than in noncompetitive achievement conditions. This assumption is based on the fact that in competitive conditions performance in a given task is not only evaluated against some previously established standard of excellence but also against some one else's performance. Performance in the noncompetitive conditions, on the other hand, is evaluated against an impersonal standard of excellence alone.

6. The incentive value of success is negative because anxiety, rather than pride accompanies success. Thus success becomes threatening.

7. I_{-s} is stronger when the rival is a man and the task is considered appropriate for males only.

(Horner, 1968, pp. 22-25)

Horner proposed two possible assumptions regarding the relationship between I_{-s} and P_s. The first is a linear relationship in which I_{-s} varies negatively inversely with P_s. Hence

$$I_{-s} = -(1 - P_s). \tag{13}$$

The second is an exponential relationship in which I_{-s} and P_s are related in the following way:

$$I_{-s} = -((1 - P_s)^x) \tag{14}$$

where x is a kind of saliency variable determined by the nature of the existing conditions or by the presence of

intervening factors (Horner, 1968, p. 25).

By substituting Equation 13 into Equation 12,

$$T_{-s} = -(M_{-s} \times P_s \times (1 - P_s)). \quad (15)$$

Thus substituting the values of T_s, T_f and T_{-s} from Equations 3, 7, and 15, respectively, into Equation 11,

$$T_{a*} = T_s + T_f + T_{-s}$$

$$= (M_s x P_s x (1-P_s)) + -(M_f x P_s x (1-P_s)) + -(M_{-s} x P_s x (1-P_s))$$

$$T_a{}^* = (M_s - M_f - M_{-s})(1 - P_s)P_s. \quad (16)$$

Alternatively, by substituting Equation 14 into Equation 12 the corresponding value of T_{a*} is

$$T_a{}^* = T_s + T_f + T_{-s}$$

$$= (M_s x P_s (1-P_s)) - (M_f (1-P_s) P_s) - (M_{-s} (1-P_s)^x P_s). \quad (17)$$

Irrespective of which of the two assumptions regarding P_s and I_{-s} is made, T_{-s} is negative and inhibitory because I_{-s} is negative. Thus T_{-s} dampens and reduces further the tendency to succeed.

The motive to avoid success is assessed by a TAT-like test which is scored by means of content-analysis of stories written about stimulus cues. The following criteria or categories were specified by Horner for this purpose.

1. negative consequences because of success
2. anticipation of negative consequences
3. negative affect because of success
4. instrumental activity away from present or future success

5. any direct expression of conflict about success.
6. denial of the situation described by the cue.
7. bizarre, inappropriate, unrealistic or non-adaptive responses to the situation described by the cue.

(Horner, 1968, p. 105)

These criteria are centred on success avoidance and thus can only be used with stimulus cues that specifically depict a success situation (specific cues).

Horner (1968) tested hypotheses derived from her assumptions and propositions. She investigated the effects of the motive to avoid success on performance under conditions in which this motive was aroused. She also examined the incidence of the motive to avoid success in males and females; in high and low need achievers; and in high and low ability subjects.

Horner's sample included 90 female- and 88 male-college students. The experiment was organized into two separate sessions. In the first session, which she called the "Initial Assessment", all subjects responded to verbal cues of a TAT nature and also performed three intellectual tasks. The subjects worked in large mixed-sex groups.

n Achievement was elicited by four verbal cues. Motive to avoid success was inferred from stories written about the following verbal cue:

> After the first-term finals John (Anne) finds himself (herself) at the top of his (her) medical

school class.

(Horner, 1968, p. 39)

Males responded to the John-cue and the females to the Anne-cue. Using the 7-category criteria, the stories written by both male and female subjects were content-analyzed. An individual was regarded as showing fear of success if one or more M_{-s} imageries were found in his/her story. Thus M_{-s} was regarded simply as either present or absent in a story, irrespective of the actual number of fear of success imageries in the story.

Horner (1968) obtained the following results from this first part of her study: 65.5% of female subjects and 9.1% of the males showed fear of success. Fear of success stories were characterized by three main themes: social rejection; concern with one's normality and femininity; and denial of success/effort and bizarre responses (Horner, 1968, pp. 105-106). Horner also found that n Ach, contrary to her expectation, was not related to fear of success. Ability was also found not to be significantly related to fear of success, although the relationship was in the expected direction ($p < .10$).

In the second testing session, each subject was randomly assigned to one of three experimental conditions. The first condition was a noncompetitive condition in which each subject worked alone (alone condition). The second was an

opposite-sex competitive condition in which each subject was paired with a competitor of the opposite sex whose name was indicated on each subject's test material. The third condition was also a competitive condition in which each subject competed against another subject of the same sex. Each subject performed three intellectual tasks.

Horner examined the effect of M_{-s} on performance. She did this by using the 30 female subjects who worked in the noncompetitive condition (Session II) as well as in the mixed-sex competitive condition (Session I). For each subject, Horner compared the subject's performance in the two conditions in order to ascertain the number of subjects who performed better in the competitive than in the noncompetitive condition and vice versa.

Seventeen of the 30 subjects showed fear of success and 13 did not. It was found that 13 of the 17 who showed fear of success scored higher in performance tasks in the noncompetitive condition than in the mixed-group competitive condition. The results also showed that 12 of the 13 females who did not have fear of success performed better in the mixed-sex competitive condition than in the noncompetitive condition (Horner, 1968, pp. 111-113).

Horner also compared three groups of female subjects in competitive same-sex, competitive opposite-sex and noncompetitive conditions, respectively, with each other on how

important they felt it was for them to do well. She discovered that high fear-of-success females in the noncompetitive condition attached greater importance to doing well than those in the two competitive conditions. However, for the females who were low in fear of success, there were no significant differences among the three groups.

Horner also found no significant difference in fear of success between subjects high in n Achievement and those low in it. Similarly, high ability female subjects (honours' students) did not have significantly greater fear-of-success scores than lower ability subjects (nonhonours' students). The result was, however, in the expected direction.

On the basis of the results, Horner concluded that (a) more females than males have fear of success, (b) fear of success interferes with performance under competitive conditions, (c) fear of success is not related to n Achievement as currently measured and (d) there is a trend for fear of success to be related to ability ($p < .10$).

The major weaknesses of Horner's study are those of design and instrumentation. First, in Horner's study subjects wrote stories about stimulus cues that portrayed a character(s) of their own sex. This procedure has been severely criticized by subsequent researchers (Bishop, 1974; Tresemer, 1974) who argue that it might be responsible, at least in part, for the reported (Horner, 1968) sex-difference

in the incidence of fear of success. Critics insist that the use of the same stimulus cues for all subjects will make for better comparability in results among subjects.

Secondly, Horner's instrument is generally regarded as unreliable because it was comprised of only one stimulus cue which was too highly structured (specific) to yield an effective projective measure of fear of success. Additionally, Horner (1968) did not provide a standard scoring system to ensure high inter-scorer and score-rescore reliabilities of fear of success measurement.

These limitations are also found in many of the subsequent studies. This makes it difficult to evaluate and interpret results from these studies, especially where they tend to be inconsistent with one another. A few of these studies are reviewed next.

Researchers have investigated Horner's hypotheses with regard to (a) the incidence of M_{-s} in male and female subjects (b) the inhibitory effect of M_{-s} on performance in competitive achievement-oriented conditions as compared to performance in noncompetitive (alone) conditions and (c) the relationship between M_{-s} and sex-role identifications.

Hoffman (1974) and Crealock (1978) studied the incidence of M_{-s} in males and females. Hoffman (1974) replicated a part of Horner's study. She tried to determine, in addition, if the source of the anxiety about success was (a) the nature

of the field of study (whether or not it is traditionally male-dominated) (b) the publicity given to the success or (c) the presence of competition.

Four verbal stimulus cues were used in this study. The first was Horner's medical-school cue in which the character came first in their medical-school class--male-dominated field. The second cue depicted success in child-psychology (less male-dominated than medicine). In the third cue, the character was informed privately by mail that he(she) came first in his(her) medical school class. Finally, in the fourth cue, the competitive aspect was minimized by portraying a character who was only one of the very few to qualify to be on the honour's list in their medical school class. The subjects were divided into four experimental groups. Each experimental group received only one verbal stimulus cue and the character in the cue was female for female subjects and male for male subjects. The stories were content-analyzed according to Horner's (1968) scoring procedures.

Hoffman found that the different cues aroused M_{-s} equally frequently in the subjects. She also found that 65% of the females showed fear of success whereas 77% of the male subjects did. The proportion of females who showed fear of success coincides with Horner's finding; but that of the males does not. However, Hoffman's findings are consistent with those of many researchers (Crealock, 1978;

Peplau, 1976; Sturm, 1975). Horner (1972) also reported that an increased proportion of men manifested fear of success as compared to her original finding (1968).

Crealock (1978) investigated the incidence of fear of success in male and female students who had already chosen a profession. She also investigated whether fear of success would be aroused in a greater number of subjects when the cue portrayed success in a nontraditional sex-role vocation than in a traditional one.

Thirty-seven female and 26 male subjects in a Faculty of Education were assigned to two groups with approximately an equal number of males and females in each. Subjects wrote imaginative stories about two stimulus cues. In the first group, the character in the first cue was a man who was successful in engineering--a traditionally male vocation. The character in the second cue was a girl who was successful in nursing--a traditionally female vocation. In the second group, the vocations were reversed. The female character succeeded in engineering and the male character in nursing. Fear of success was scored according to Horner's original fear-of-success categories (1968). A subject was regarded as showing M_{-s} if any of his/her stories contained an M_{-s} imagery.

Crealock found that the male and female stimulus cues aroused fear of success equally frequently in male as well as

in female subjects. She also discovered that more men (62%) showed fear of success than women (27%). There was no significant interaction between the experimental condition and sex of the subject. In addition, Crealock found that fear of success was neither related to academic grades nor to attitude towards self.

Karabenick and Marshall (1974) investigated the effects of fear of success on performance in intellectual tasks under three types of conditions: two competitive and one noncompetitive. They also sought to find whether fear of failure and type of feedback mediated this influence.

The opponents in the first competitive condition were males whereas those in the second were females. In the third condition there were no opponents: (alone condition). There were three feedback types: success (higher performance than the competitor); failure (lower performance); and a tie with the opponent. In the noncompetitive conditions the terminologies were slightly different. Success implied higher score than a pre-selected norm; failure, lower score and a tie denoted a score equal to the norm.

A fear of success by condition by feedback combination resulted in a 2 x 3 x 3 design, that is, 18 experimental groups. However, subjects were further classified by fear of failure for statistical analysis.

The research subjects were 279 female undergraduates.

Motive to avoid success was measured with four stimulus cues. The number of cues was increased for two reasons; first, for external validity, second, to increase the reliability and consequently, the validity of the measurement. Horner's earliest presence-absence scoring system (1968) was utilized to determine which subjects showed fear of success. A score of 1 was assigned to a subject for a story if at least one fear of success imagery was present in the story and 0 if absent. Thus subjects' scores for the entire story-set ranged from 0 to 4. Fear of failure was measured with the debilitating subscale of the Achievement Anxiety Test (AAT) (Alpert and Haber, 1960). The median-split technique was used to stratify the subjects into high and low fear-of-success groups. Subjects in each group were then randomly assigned to the experimental conditions.

There is no information on how the subjects were separated into high and low fear-of-failure groups.

The subjects' performance task was an alpha-numeric substitution test. The subjects were subsequently informed that they had either succeeded, failed, or tied with an opponent or a norm. After this feedback, a second performance test was administered to the subjects in order to observe the effects of the different types of feedback on performance.

Karabenick and Marshall (1974) found that neither the

main effects of fear of success, feedback types and conditions nor their interactions were significant. They discovered a significant interaction between fear of success, fear of failure and experimental conditions: only among the females who had low fear of failure (low-M_f females) were the expected relationships between M_{-s} and performance in competitive condition supported. Specifically, summing over feedback types, those low-M_f subjects who had low M_{-s} and who worked in competitive conditions showed greater mean performance improvement than those in the noncompetitive conditions. On the other hand, low-M_f subjects who had high M_{-s} and worked in noncompetitive conditions showed greater improvement after feedback than those in the competitive conditions. No such trends were observed among the subjects who had high fear of failure.

Fear of failure (M_f) appears, from this study, to mediate the relationship between fear of success and performance following different feedback types in competitive and noncompetitive conditions.

Sturm (1975) also investigated the effect of M_{-s} on performance in intellectual tasks in competitive and noncompetitive conditions.

Her research subjects were 130 male and 124 female college students. Tests of fear of success and intellectual ability were administered to the students in a noncompetitive

condition. Intellectual ability was measured with Form 1 of the Scrambled Word Test (SWT) (Lowell, 1952). On the basis of the SWT scores, female subjects in the top and bottom quartiles (34 in each quartile) were selected to partake in a second testing session. In the latter session, Forms 2 and 3 of the SWT were administered to the subjects under two competitive conditions, respectively. In the first competitive condition, each female subject was led to believe that her male opponent belonged to the top quartile of the sample in the SWT, form 1. In the second condition, each female subject was told that her male opponent belonged to the lower quartile of the sample in the SWT, Form 1. This information about the male subjects was false as the male subjects were randomly assigned to the two conditions irrespective of their performance in the first test. Each female subject, however, received the correct information regarding the quartile to which she belonged.

Sturm observed an interaction between fear of success and experimental conditions in their effect on performance in an ability test. She found that female subjects, high in M_{-s}, scored higher in the intellectual tasks in the noncompetitive condition than in the competitive conditions. Conversely, female subjects who were low in M_{-s} scored higher in the competitive condition than in noncompetitive condition. These results support Horner's theoretical formulations

(Horner, 1968) and are contrary to Karabenick and Marshall's findings. The data for males were not analyzed because the males were only used to create opposite-sex competitive conditions, the effects of which were observed on female performance.

Makosky (1976) studied the relationship, in females, among fear of success, task description, work condition, and performance in a task. She reasoned that one would be expected to perform best on tasks, and against opponents, compatible with one's sex-role orientation. Her research subjects were 120 college females selected, from a larger sample, on the basis of their M_{-s} scores. Sixty of them showed fear of success and 60 did not. Half of the sample solved anagrams described as a masculine (male-oriented) task and the other half solved the same anagrams described as a feminine sex-typed (female-oriented) task. The subjects competed either against a male, a female, or worked alone.

Makosky found significant interactions between fear of success and task description in their effect on performance in intellectual tasks. High fear-of-success subjects performed better on a female- than on a male-oriented task. Conversely, the low fear-of-success subjects performed better on male- than on female-oriented tasks.

Similarly, there was a significant interaction between fear of success and type of competitor. Females who showed

no fear of success scored higher while competing against males than while either competing against females or while working alone. Females who showed fear of success scored slightly lower competing against males than while competing against other females or while working alone.

Females who exhibited fear of success rated a home and family more important than females who had no fear of success. The former also rated a professional career less important and themselves less feminine than the latter. Makosky concluded that females achieve most on tasks and against competitors who are perceived as compatible with their personal sex-role orientations. This differs slightly from Horner's (1968) and Sturm's (1975) finding that those high in M_{-s} performed generally better in noncompetitive than in any competitive condition. Makosky's study indicates that the task-description may also be important. It implies too, that high fear-of-success females have feminine-role orientation while the low fear-of-success females have masculine-role orientation. A direct test of this hypothesis by Peplau (1976) and also by Depner and O'Leary (1976), reviewed below, did not bear out this relationship.

Peplau (1976) explored whether fear of success in women is related, first, to the individual's sex-role orientation and secondly, to her boyfriend's sex-role orientation. She worked with a group of 91 college-age dating couples. Fear

of success was elicited in male and female subjects, respectively, with same-sex cues, and scored according to Horner's (1968) scoring system.

Peplau found no relationship between females' fear of success and their sex-role attitude or orientation. Females' fear of success was also not related to the sex-role orientation of their boyfriends. Finally, females' fear of success was not related to their achievement. In a footnote Peplau stated that similar analyses were carried out for males. She reported that, as with the female subjects, no significant correlates of males' fear of success were obtained. There was also no relationship between females' fear of success and that of their boyfriends. In this study, 44% of the males and 30% of the female subjects showed fear of success.

Depner and O'Leary (1976) also investigated the relationship between fear of success and a female' sex-role orientation. They also explored the relationship between females' fear of success and what they perceive to be the sex-role orientation of their significant males (husband or boyfriend). Depner and O'Leary argued that the female who has a traditional sex-role orientation would exhibit fear of success in traditionally male situations. This follows from Horner's statement (1972, p. 67) that when faced with a conflict between maintaining a feminine image and expressing one's

competence, most feminine women adjust their behaviour towards the former.

Like Peplau (1976), Depner and O'Leary, working with a sample of 100 female honours students, discovered that fear of success was not related to sex-role orientation. It was also found that females who perceived the significant males in their lives as endorsing nontraditional sex-role behaviour were more likely to respond negatively to vicarious success. On the basis of their results, Depner and O'Leary suggested that while fear of success may be one of the sources of career-related inhibitions, it is not necessarily the principal determinant. They argued that achievement motivation is overemphasized to the detriment of other personality characteristics which are equally important when considering why some individuals assume nontraditional roles and others do not.

Generally, results obtained in research on fear of success are mixed and inconclusive. Taking all the evidence together, Tresemer (1976, 1977) drew these general conclusions:

There is no relationship between M_{-s} and sex, n Ach, anxiety, ability, and sex-role identification. The relationship between M_{-s} and performance is inconclusive (Tresemer, 1976, 1977).

Most of the studies reviewed in this section suffer

from defects similar to those in Horner's study. Only a single specific cue was used in many of them (Hoffman, 1974; Makosky, 1976; Peplau, 1976; Sturm, 1975). Same-sex cues were also employed in many of the studies. However, Crealock (1978) found that male- and female- stimulus cues arouse fear of success equally frequently in both male and female subjects.

Nevertheless, a realisation of the weakness in the measurement of fear of success led Horner and her colleagues to develop a new scoring system (Horner, Tresemer, Berens, & Watson, 1973, in Tresemer, 1977). The scoring system has since been revised by Horner and Fleming (Note 1). The new system comprises six empirically-derived categories or criteria. The categories and their respective weights are:

1. Contingent negative consequences (+1)*
2. Non-Contingent negative consequences (+1)
3. Interpersonal engagement (+1)
4. Relief (+1)
5. Absence of instrumental activity (+1)
6. Absence of others (-1)

An annotated copy of these scoring categories (criteria) is included in Appendix B whereas a description of how they were developed is presented in Chapter II.

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* These are the current weights. A differential weighting system was formerly used (Fleming et al., Note 2, p. 44; Fleming, Note 3).

The new scoring system is designed for use with only nonspecific or neutral cues and therefore it makes possible an indirect measurement of fear of success. The revised scoring system is regarded as more valid and reliable than the previous one (Fleming et al., Note 2).

Horner and Fleming (Note 1), Fleming (1977b), and Fleming et al. (Note 2) stress that while the central theme of the old (1968) scoring system is the avoidance of success per se, the underlying phenomenon in the new system is the problematic expression of instrumental activity. Specifically, any action or competence that is perceived to be role-inappropriate, including but not limited to success, should generate anxiety. The new scoring system should thus lead to the prediction of an avoidance of any such actions pervaded with the threat of negative consequences (Fleming, 1977b, p. 232). Therefore, as Fleming (1977b) and Fleming et al. (Note 2) indicated, the new scoring system essentially implies a reinterpretation of fear of success and a wider applicability. The same researchers have also noted that while the scoring system was developed using female subjects it can be used for males and females alike since the categories do not suggest associative processes unique to females (Fleming et al., Note 2, p. 37).

Researchers have reinvestigated the effect of fear of success on performance in competitive and noncompetitive

conditions. Karabenick (1977) studied the relationship between fear of success, performance on male or female sex-typed tasks, and the difference between a subject's performance scores in noncompetitive and competitive conditions. In addition Karabenick (1977) investigated the moderating effects of other personality traits--n Ach, n Affiliation, and fear of failure (M_f)--on the relationship between fear of success and performance in the conditions specified earlier.

The research subjects were 98 female and 33 male college students. The measuring instruments were administered in two testing sessions. In the first session, individual differences in fear of success, n Ach, and n Affiliation were assessed by use of TAT and questionnaire techniques. Subjects wrote stories about three nonspecific verbal stimulus cues. These stories were scored for fear of success by one scorer; for n Ach by a second scorer; and for n Affiliation by a third scorer.

Mehrabian's (1968; 1969) questionnaire for n Ach, affiliative tendency and sensitivity to rejection (avoidance affiliation) were also administered. Fear of failure was measured by using Mandler-Sarason Test Anxiety Questionnaire (1952, TAQ).

The six-category scoring system for fear of success (1973-version) was employed in this study. The sum of fear

of success scores across the three stories was an individual's fear of success score. This method of scoring is referred to as the continuous system (Horner et al., 1973, in Tresemer, 1977).

In the second testing session, subjects worked on four sets of performance tasks. Two sets were described as relating to masculine abilities and interests (masculine sex-typed). The other two sets were female sex-typed. However, the tasks were similar and were randomly designated as masculine or feminine sex-typed.

The performance sessions was organized in two sub-sessions--individual and competitive sessions. In the individual session, a subject was given either a masculine or female sex-typed list of anagrams which he/she worked on for 4 minutes. After that, he/she was given another list of anagrams sex-typed opposite to the first one. Whether a subject got a male or female sex-typed task first or second was randomly determined for each subject. At the end of the individual testing session, a confederate of the experimenter was brought in as a competitor. The experimenter informed the subject and the confederate that both had just individually performed the same task and were going to compete against each other. Their performance scores in the individual session were announced with the confederate's score always slightly below the subject's on both masculine and

feminine sex-typed tasks. Each subject and the confederate competing against him/her were informed that they were going to rate each other on a series of personality traits one of which was how masculine or feminine the opponent was. The subjects were allowed to look at the rating scale a few minutes before the competitive performance tasks. Two tasks were administered--i.e. female and male sex-typed.

The performance change scores were (a) the difference, for each subject, between his/her performance scores in masculine sex-typed tasks solved in individual and in competitive conditions and (b) the difference between the female sex-typed tasks in the two conditions.

The results showed different patterns for male and female subjects. For females, fear of success was significantly but negatively related to masculine-task performance change as expected ($r = -.25$, $p < .01$, $N = 98$). Specifically, high fear-of-success females had lower increments in masculine-task performance scores from the individual to competitive conditions than did females who were low in fear of success. Fear of success was, however, not significantly related to performance change from individual to competitive conditions in female sex-typed tasks. For men, fear of success was not significantly related to performance change from individual to competitive conditions in either male or female sex-typed tasks.

There was, among females, a significant interaction between fear of success and experimental conditions on performance change. Performance change in this case was the difference between the sum of a subject's scores on the feminine and masculine sex-typed tasks in the individual conditions and the sum of his/her scores in the competitive condition. The group means showed a smaller increase for high fear-of-success females than for low fear-of-success females. There was also a significant interaction between experimental conditions and n Affiliation. The group means indicated that n Affiliation was related to performance changes in the same manner as fear of success. Need for achievement did not interact with fear of success. The following results were obtained with the questionnaire measures; first, females high in n Affiliation had higher performance increments than those low in it. Second, there was a significant interaction among n Affiliation, conditions, and task description. Specifically, females high in n Affiliation had higher performance increments on masculine sex-typed tasks than females low in n Affiliation. The reverse was true in female sex-typed tasks.

For males, the main effect of n Ach was significant (High n Ach: $\bar{X}$ = 29.10; Low n Ach: $\bar{X}$ = 18.10; N = 33). There was also a significant 3-way interaction among n-Ach, experimental conditions and sex-typing. On masculine tasks

high n Achievers increased more in performance from individual to competitive conditions (7.7) than low n Achievers did (3.5). On the other hand, the reverse was true on the feminine task (0.0 versus 2.7, respectively). There was also a significant 4-way interaction involving n Ach, fear of success, experimental condition and sex-typing. For males low in n Ach, increase in performance scores on masculine tasks from individual to competitive conditions did not differ as a function of fear of success. However, for males high in n Ach, performance increments for those simultaneously high in fear of success were smaller on the masculine sex-typed task (5.8) than for men low in fear of success (9.8). On the feminine task, high fear-of-success-high n Ach males' scores increased slightly ($\bar{X}$ = 1.1) while low fear of success-high n Ach males' scores decreased ($\bar{X}$ = -1.3).

While among females fear of success appears to interfere with performance in masculine tasks, it does not affect performance among males except those who are simultaneously high in n Ach and fear of success.

Karabenick (1977) noted that though fear of success is significantly and negatively related to performance change for females, it accounts for only a low proportion of variance of performance change (6%). Fleming (1978), working with a sample of 55 black female undergraduates, has, however, reported a higher proportion--25%.

Additionally, Karabenick (1977) found that fear of success was positively related to n Affiliation ($r = .57$, $N = 98$) and negatively to n Ach ($r = -.40$, $N = 98$) in females. For males, fear of success was positively related to n Affiliation ($r = .35$, $N = 33$) but unrelated to n Ach ($r = -.08$, $N = 33$). After an examination of the M_{-S} imageries in the thematic stories, Karabenick concluded that most of what is scored for fear of success reflects concerns over the establishment, maintenance or restoration of friendship with other persons. However, a nonsignificant relationship between n Ach and fear of success ($r = -.08$) in men, despite a significant correlation between n Affiliation and n Ach ($r = -.38$, $N = 33$) and between n Affiliation and fear of success ($r = 0.35$), did not support such a conclusion. Also by partialling out n Affiliation from fear of success in women, Karabenick (1977) observed that there remained a considerably lower but still significant correlation between fear of success and n Ach. This indicates that fear of success, despite its relationship to n Affiliation, measures some additional trait which is unrelated to n Affiliation.

Griffore (Note 4) and O'Leary and Hamack (1975) investigated the relationship of fear of success as measured by empirically-derived scoring system and academic grades.

Griffore (Note 4) conducted a study to determine whether fear of success interacts with subjects' expectancies

of success to affect performance on examinations in college courses. He reasoned that fear of success would be expected to inhibit performance where the subject was aware that success was a possibility, that is, where the task was easy or where the probability of success was high. Griffore argued, too, that the inconclusive results regarding the combined effect of task difficulty and fear of success on performance may be due to the 'artificial' nature of the tasks employed by previous researchers. He suggested that examinations in college courses may be more appropriate and meaningful tasks to use. Griffore investigated, in addition, sex differences in fear of success and how fear of success is related to fear of failure.

The research subjects were 54 female and 14 male graduate students. Three verbal neutral stimulus cues were employed and the empirically derived scoring system (Horner et al., 1973, in Tresemer, 1977) was used to measure fear of success. Fear of failure was measured by the debilitating subscale of Achievement Anxiety Test (Alpert and Haber, 1960). The final examination scores in a graduate course in Education were obtained. The regular final examination was used, but each question was labelled with its item difficulty --high, medium, or low. Difficulty levels were determined from previous administrations of the items.

Griffore (Note 4) observed that high fear-of-success

subjects scored lower on tasks of intermediate difficulty than did low fear-of-success subjects, as expected, but not on low-difficulty items, contrary to Griffore's expectation. When fear of failure was introduced into the design as a covariate, an analysis of covariance showed no significant interaction between fear of success and item difficulty. When sex was included as an additional independent variable in the analysis of covariance, neither the main effect of sex, nor any interaction involving sex was significant. In addition, a t-test showed no significant difference in fear of success between males and females.

The relationship between fear of success and fear of failure was significant for females ($r = .26$, $N = 54$) and nonsignificant for males ($r = -.15$, $N = 14$). These relationships should be taken with caution because of the very small sample sizes involved, especially for males.

Griffore's argument for expecting high fear-of-success subjects to show lower performance on easy tasks than low-fear-of-success subjects is a misinterpretation of Horner's (1968) formulation. Horner (1968, p. 24) proposed that negative incentive value of success ($I_{-s} = -(I - P_s)$) is greatest for difficult tasks. The premise for this is that success at a difficult task would be more threatening than success at an easy task which almost everybody would be expected to perform successfully. Horner proposed, in addition, that the

tendency to avoid success ($T_{-s} = M_s \times P_s \times (1 - P_s)$) would, however, be greatest at tasks of intermediate difficulty. Thus, Griffore's results regarding the effect of task difficulty on performance tend to support, rather than contradict, Horner's formulations.

O'Leary and Hammack (1975) also investigated the relationship between fear of success and academic performance. They, in addition, explored how fear of success related to sex-role orientation.

The research subjects were 72 junior and senior female high school students. O'Leary and Hammack (1975) employed four specific cues to measure fear of success while using the new empirically-derived scoring system (Horner et al., 1973, in Tresemer, 1977). Cumulative grade point average was used as a measure of academic performance.

O'Leary and Hammack (1975) reported that fear of success was not related to cumulative grade point average. The researchers, however, used specific cues that were inappropriate for use with the new scoring system. Nevertheless, O'Leary and Hammack's (1975) nonsignificant results and Griffore's (note 4) are consistent with those obtained by Crealock (1978) with the original scoring system (1968-version). Fleming et al. (Note 2) have argued that this type of result is usual in the literature on the relationship of achievement-related motives and academic grades. The

argument is that other variables than achievement motivation influence academic grades too.

O'Leary and Hammack (1975) also reported that fear of success was significantly related to sex-role orientation. They found that traditional females showed greater fear of success than nontraditional females across the four stimulus cues.

Esposito (1977) working with 60 male and 75 female white college students found fear of success to be associated with sex-role stereotyping in occupational aspirations. Fear of success was measured by the new scoring system (1973-version). The high fear-of-success females tended to choose traditionally female occupations while the reverse was true for those low in fear of success. For males, however, fear of success correlated positively with aspiration. Esposito (1977) found, also, that these high fear-of-success females who chose traditionally female occupations indicated interest in a wide variety of occupations on Holland's measure of vocational interest (1970). He thus considered these findings, on females, a support for Horner's argument (Horner, 1972) that high fear-of-success females when confronted with a conflict between their feminine image and developing their competencies and interests, adjust their behaviour to internalized sex-role stereotypes.

Jenkin's (cited in Fleming et al., Note 2) reported

that high fear-of-success individuals were nontraditionals while those low in fear of success tended to be more traditional in orientation. This finding contradicts both Esposito's and O'Leary and Hammack's results.

With regard to the incidence of fear of success in males and females, Karabenick (1977), Jackaway and Teevan (1976), Griffore (Note 4), and Shinn (1973, in Fleming et al., Note 2) found no significant sex differences in fear of success measured in neutral (nonaroused) conditions. Esposito (1977), however, found a significant sex difference, with females scoring higher than males, on the average. Also Jackaway and Teevan (1976) and Shinn (1973, in Fleming et al., Note 2) reported higher fear-of-success scores, in arousal conditions, for females than for males. Considering that fear of success is typically elicited in neutral conditions (as are n Ach and M_f) conclusions regarding the incidence of fear of success in males and females are made on the basis of results from studies in which the new instrument was administered under neutral conditions. These studies show that the incidence of fear of success is not sex-related.

In summary, results obtained with the new scoring system indicate that the incidence of fear of success is not sex-related (Griffore, Note 4; Jackaway & Teevan, 1976; Karabenick, 1977). However, there appears to be a tendency for fear of success to affect behaviour, for example: performance in

competitive conditions (Karabenick, 1977) and occupational aspirations (Esposito, 1977), differently among males and females. This pattern of relationship has led Marshall and Karabenick (1977) to question the construct validity of fear of success instrument among males. However, no conclusive statement can yet be made regarding the influence of fear of success on behaviours that are conceptually expected to be related to fear of success.

It appears that an important step in this area of research is to learn more about the psychodynamics of fear of success.

In view of the fact that fear of success has been shown not to be unique to females it becomes necessary to find another explanation for fear of success. Neither Horner (1968; 1972, note 1) nor her colleagues (Fleming, 1977a,b; Fleming et al., Note 2) have done this. Fleming's statement (1977b) can, however, be regarded as a reinterpretation of fear of success. She stated that any show of action or competence including but not restricted to success, that is role-inappropriate should generate anxiety which is elicited as fear of success. This fits well into Tresemer's more comprehensive view of the origin of fear of success--which is based on the concept of boundary maintenance (Tresemer, 1977).

Tresemer (1977) reviewed the origins of fear of success postulated in the following disciplines: psychoanalysis,

anthropology, sociology, social and personality psychology. He observed that the different views of fear of success had one important feature in common: the presence of a certain limit of tolerability which must not be exceeded. An individual's success is therefore devoid of negative consequences as long as a certain point is not exceeded. This limit may be established either by a personal or by a social normative system. Beyond this limit there exists actual and/or expected negative consequences (Tresemer, 1977). Thus each individual tries to maintain personal or social boundaries. Tresemer's proposition is, hence, called the theory of boundary maintenance. On the basis of the concept of boundary maintenance--personal and social--Tresemer (1977) grouped the various sources of fear of success under three main headings.

The first group is based on a desire to avoid a performance which may be inconsistent with one's self-perception (self-concept, -image, -esteem) (Tresemer, 1977, pp. 79-80). This inconsistency can arise from different reasons, for example, higher performance than expected from one's ability. The effect of this type of inconsistency has been demonstrated by Aronson and Carlsmith (1962) and Mettee (1971). They found that subjects whose performance was better than their performance expectancies were uncomfortable and less satisfied with this performance than were subjects who performed

equally or even less well but whose performance was in harmony with their expectation. Aronson and Carlsmith (1962) also discovered that, when surreptitiously allowed to change their responses after a false performance feedback, subjects whose feedback was inconsistent with their expectancies made significantly greater changes than did those whose feedback was consistent with their expectancy (p. 182). Specifically, subjects whose feedback was inconsistent with their expectation changed more correct responses to wrong responses. Mettee (1971) obtained similar results in his study. He concluded, as did Aronson and Carlsmith (1962), that incongruent performance is avoided or denied in order to maintain a consistent conception of self. Mettee (1971) found, in addition, that one reason subjects rejected incongruent performance was that they consider it as falsely raising their hopes and thereby exposing them to pain and disappointment that would follow when the subjects revert to their characteristic poor performance.

Inconsistency in performance can also arise where one's actual or possible performance is better than a social standard (or norm) allowed by other people and which may have been internalized. This is the type of inconsistency Horner (1968) proposed. In her framework, society sets a lower standard of excellence for females than they are capable of attaining. Consequently, a higher performance would be

inconsistent with the socially expected or tolerated level. Thus the possibility of, and the activities that may lead to such a success generate anxiety and avoidant behaviours.

The second source of fear of success is the exacting demand that an individual continue to perform at a similar level in the future. This may involve social and personal sacrifices (Tresemer, 1977, p. 80). Persistent hard work is required to ensure continued success. The former has been found to be associated with such negative side-effects as physical ailments (heart attacks, ulcers, gout), chronic tension, anxiety symptoms, defensiveness, nervous breakdowns (French and Caplan, 1973). Another negative side-effect of persistent hard-work is an individual's inability to gratify his other needs and interests such as camping, spending time with friends, hobbies and relaxation (Tresemer, 1977, p. 80). The anticipation or the probability of occurrence of these negative side-effects makes success unpalatable and even resented. Besides these negative side-effects, measures an individual takes to remain successful often lead to excessive individualism. The latter results in isolation and consequent low regard from the community.

This second source of fear of success was not considered by Horner (1968). Nevertheless, it is implied by Tresemer (1977, p. 106) that the existing fear of success scoring system can detect fear of success imageries arising from this

source.

The third source of M_{-s} is the fear of social ostracism which is a consequence of transgressing social boundaries. It is observed (Tresemer, 1977) that persons who perform better than other members of their social group are sometimes envied and sometimes rejected by the group. These individuals are often under pressure to do like the others. These punishments for doing too well discourage exceptional performance in situations where results can be measured and are public (Tresemer, 1977). This source of M_{-s} is consistent with Horner's formulations. She proposed that M_{-s} arises partly from fear of social rejection and loss of friendships as a result of successful competition in achievement-oriented situations (Horner, 1968; 1972).

The third source of fear of success is differentiated from the first by the fact that in the first the individual develops an internal standard against which he compares his performance for consistency or lack of it. This internal standard may be set in relation to an individual's ability or, as in Horner's framework, in relation to an internalized social stereotype. In the third source, however, the individual shows anxiety about success or actions leading to it only because of the negative social consequences that may accompany success.

Tresemer's broadened view of the origins of fear of

success is taken in this study because it includes an explanation for fear of success, not only in females as Horner's (1968) but also in males.

An examination of the sources of fear of success, characteristic imageries of fear of success and the results of studies in this area leads one to conclude that some individuals may be more susceptible than others to fear of success. The sources and characteristic manifestations of this anxiety about success are associated with concerns about interpersonal and social relationsips which may be related to Eysenck's two dimensions of personality: Extraversion-Introversion and Neuroticism-Stability. The nature of and the characteristics associated with these personality dimensions are discussed in the next section.

Extraversion and Neuroticism Dimensions of Personality

In this section Eysenck's theory of personality, with reference to extraversion-introversion and neuroticism-stability is reviewed. First, Eysenck's postulates about the physiological bases of extraversion-introversion (E), individual differences in E, together with some related studies are examined. This is followed by a similar analysis of the neuroticism-stability (N) dimension. In the third subsection, a summary and criticism of Eysenck's theory are presented.

Extraversion-Introversion

Extraversion and introversion designate the characteristic behaviour of outward-orientedness and inward orientedness, respectively.

Eysenck (1957, 1967) proposed that extraversion-introversion (E) is a function of excitation/inhibition balance. He defined excitation as those processes within the central nervous system that facilitate mental processes such as learning, conditioning, memory, perception, discrimination, and thinking (Eysenck, 1963). He defined inhibition as a process within the central nervous system which interferes with the ongoing perceptual, cognitive and motor activities of the organism (Eysenck, 1963).

More recently, Eysenck (1967) and Eysenck and Eysenck (1969) posited that the physiological locus of excitation and inhibition, and hence extraversion-introversion, is the reticular formation of the brain stem. Eysenck proposed that the degree of extraversion is a direct function of the level of activity in the ascending reticular formation (Eysenck, 1967; Eysenck & Eysenck, 1969). According to Eysenck, the loci of the facilitatory and inhibitory cortical tendencies are in the activating and the synchronizing parts, respectively, of the reticular formation. Thus Eysenck summarized his propositions about the relationship

between extraversion-introversion and reticular formation as follows: In the introvert, the activating part of the reticular formation is more easily aroused (low threshold of arousal) than the inhibitory or synchronizing part (high threshold of arousal). In the extravert, the reverse is true (Eysenck & Eysenck, 1969). This implies that under identical conditions cortical excitation is higher in introverts whereas cortical inhibition is higher in extraverts (Eysenck, 1967; Eysenck & Eysenck, 1969).

Eysenck's propositions generated many hypotheses some of which have been tested and are discussed below. It was hypothesized that if extraverts have less cortical arousal they should have more alpha rhythms than introverts. Alpha rhythms are low-frequency, high-amplitude brain waves which are manifestations of mental fatigue and low mental alertness (Ochs, 1966). This hypothesis was tested and supported by Savage (1964, cited in Eysenck, 1967). In this study, the degree of extraversion was measured by the Maudsley Personality Inventory (MPI).

Eysenck hypothesized that introverts have a higher threshold of critical flicker fusion (CFF) than extraverts (Eysenck, 1967; Eysenck & Eysenck, 1969). CFF is the point at which, due to very high rate of flickering, a subject perceives a light as steady though it still flickers (Morgan, 1965). The CFF threshold is a function of the level of

cortical excitation, hence the hypothesis (Eysenck, 1967). Empirical evidence supports this hypothesis (Shagass & Schwartz, 1963 in Eysenck & Eysenck, 1969; Simonson & Brozek, 1952, in Eysenck, 1967).

Additional support for Eysenck's theory was provided from studies on sedation threshold. Sedation threshold is the amount of depressant drug required to produce a given reaction. This reaction may be identified in terms of (a) changes in the patterns of the electrical activity in the brain (electroencephalogram, EEG) which vary with levels of alertness (b) occurrence of sleep or (c) performance decrement on behavioural tests (Eysenck & Eysenck, 1969). It has been found that depressant drugs increase inhibition and thus have an extraverting effect on an organism (Eysenck, 1957; Eysenck & Eysenck, 1969; Franks & Laverty, 1955; Gray, 1972; Shagass & Naiman , 1956). Consequently, introverts are expected to require a larger quantity of the drug, than extraverts, to lower their high excitation to the level where sleep supervenes or where performance decrement is effected. This hypothesis was tested and supported by Shagass and Kerenyi (1958, reprinted in Eysenck, 1971) and Shagass and Naiman (1956).

Furthermore, Eysenck (1967) hypothesized that differences in excitation/inhibition balance should show in mental alertness/fatigue, stimulus hunger/aversion, and conditioning.

Specifically, Eysenck (1967) expected extraverts to show greater mental fatigue than introverts. Mental fatigue is a decrement, due to inhibition, in the potential of the brain for action-evocation. If the extraverts have greater inhibition than introverts, the former should be more prone to mental fatigue than the latter (Eysenck, 1967). Mental fatigue is manifested in performance in the form of involuntary rest pauses (IRPs) and low (or lack of) vigilance.

Involuntary rest pauses (IRPs) are small periods of complete cessation of performance (Eysenck, 1967) during which inhibition is dissipated. The faster the build-up of inhibition, the more frequent the IRPs. Thus from Eysenck's theory it would be hypothesized that extraverts should have more IRPs than introverts if the former have higher inhibition. This hypothesis has been tested and supported (Spielmann, 1963 cited in Eysenck, 1967; Eysenck, 1964). In both experiments the Maudsley Personality Inventory (MPI) (1962) was used to measure the degree of extraversion. Eysenck (1964) operationally defined IRPs as gaps, between taps in a tapping task which were more than three standard deviations longer than the mean for the given subject.

Similarly, Eysenck (1967) hypothesized that extraverts should be less vigilant than introverts. Vigilance is the state of readiness to detect and respond to certain specified small changes occurring at random intervals in the experiment

(Eysenck, 1967). The more alert the individual the more changes he is likely to detect. High cortical excitation thus facilitates vigilance, hence Eysenck's hypothesis.

Hogan (1966) and Carr (1970) investigated this hypothesis. Hogan worked with a sample of 90 female subjects. The highest- and the lowest-scoring 25 subjects on the extraversion scale of the MPI (MPI-E) were designated extraverts and introverts, respectively. The hypothesis was supported. Carr (1970), working with 40 extraverted and 40 introverted subjects, measured using the EPI, also found introverts more vigilant than extraverts. These results support Eysenck's hypothesis that extraverts are more susceptible to accumulation of inhibition.

Eysenck also hypothesized that differences in excitation/inhibition balance show in the degree of stimulus-hunger (or stimulus-seeking) and stimulus-avoidance. Specifically, he expected extraverts to be stimulus-seeking while introverts show stimulus-avoidance. This would be true if the premise that introverts have a higher excitation/inhibition balance is true. Stimulus hunger is the desire for additional stimulation. From studies in arousal and performance (in Berlyne, 1960) it is known that a certain level of cortical arousal or alertness is optimal for the performance of any given activity or task. The organism tries to adjust its existing level of arousal in relation to the optimal level

for a task. It reduces arousal if the existing level already exceeds the optimal level of arousal. The process of reducing the current level of arousal or rejecting further stimulation is referred to as stimulus-avoidance or aversion (Eysenck, 1967). The organism, conversely attempts to raise the arousal level if it is lower than the optimum. This process is called stimulus-seeking or stimulus-hunger. Thus Eysenck supposed that if extraverts have a low excitation/inhibition balance they should show greater stimulus-hunger than introverts. Introverts, who have a high excitation/inhibition balance, should show more stimulus-avoidance than extraverts (Eysenck, 1963, 1967). This implies that extraverts should be more tolerant of pain (a type of stimulation) and less tolerant of stimulus deprivation than introverts (Eysenck, 1967).

Lynn and Eysenck (1961) supported this hypothesis. They administered the Hardy-Wolff thermo-stimulator to 30 students as a measure of pain tolerance. The extraversion scale of the Maudsley Personality Inventory (MPI-E) was used to measure the degree of extraversion. The subjects were divided into three groups on the basis of their extraversion scores. A systematic decrease in pain scores from high extraversion (high E) (17.2 sec) through average E (9.3 sec) to low E (5.6 sec) was found. A significant correlation of .69 between pain tolerance and extraversion was reported. Poser (1960, cited in Eysenck, 1967) also obtained a

correlation of .53 between pain tolerance and extraversion. This lends further support to Eysenck's hypothesis on pain tolerance and, indirectly, stimulus-hunger and stimulus-avoidance among extraverts and introverts. However, results from the following study failed to support the pain-tolerance hypothesis.

Levine, Tursky, and Nicols (1966) investigated the pain-tolerance hypothesis with a sample of 29 students and 52 housewives. Pain was administered in the form of electrical stimulation. The results yielded a nonsignificant correlation between pain-tolerance and extraversion. However, Eysenck contended that it was likely that each pain-administration period in Levine et al's study was not long enough for either introverts or extraverts to reach their respective optimal arousal levels.

In addition to the foregoing hypothesis, Petrie, Collins and Solomon (1960) tested whether introversion is positively related to stimulus-deprivation tolerance. Research subjects were 42 patients undergoing different kinds of pain as a result of surgery, 19 patients undergoing experimental pain, and 17 undergoing sensory deprivation which was experimentally induced. The degree of extraversion was measured with the MPI(E). In the experimental group, pain was administered in the form of heat. Sensory deprivation was achieved by keeping the volunteer subjects in a tank-type respirator (Petrie

et al., 1960). They found that the most pain-tolerant individuals had higher extraversion scores than the least pain-tolerant ones. Conversely, the subjects most tolerant of sensory deprivation had lower E scores than the least tolerant.

Tranel (1962, reprinted in Eysenck, 1970) did not find a negative relationship between sensory-deprivation tolerance and extraversion as expected. He noticed that on the average, extraverts tolerated isolation (sensory deprivation) significantly better than introverts. The criterion measure was the length of time spent in an experimental room. However, Tranel observed that extraverts disobeyed the instructions. They moved about or fell asleep--two things they were prohibited from doing. Those who moved about obtained self-stimulation through it. On the other hand, introverts observed the instructions. Thus they minimized physical movements and kept awake. Consequently, more of them than extraverts left the room before the end of the experiment.

Using the Sensation Seeking Scale (Zuckerman, Kolin, Price, & Zoab, 1964) as a measure of stimulus hunger, Farley and Farley (1967) tested whether extraverts are more stimulus-seeking than introverts. Extraversion was measured with the Eysenck Personality Inventory (EPI, Eysenck & Eysenck, 1963). The sample consisted of 100 adult male subjects. Farley and Farley found a significant linear correlation of .47 ($p < .01$)

between sensation-seeking and extraversion. The hypothesis was thus supported.

Eysenck hypothesized that introverts would form conditioned responses faster and better than would extraverts. This hypothesis is based on Pavlov's concepts and findings (Pavlov, 1927, also reported in Eysenck, 1957; 1967). Pavlov had demonstrated that cortical excitation facilitates conditioning provided that the individual is performing at or below the optimal level of excitation. To ensure that this condition prevailed Eysenck designed his experiments in conditioning to maximize inhibition (Eysenck, 1967).

The hypothesis was tested and supported, under the above-specified conditions which favour introverts, by Franks (1957) and Eysenck (1966 in Eysenck, 1967). However, it was also found that when conditions are overarousing (unfavorable to introverts) extraverts condition better and faster than introverts (Eysenck, 1967; Eysenck and Levey, 1972). This has led Eysenck to modify the hypothesis by clearly specifying that introverts condition better in underarousing conditions only.

In summary, Eysenck proposed that the physiological basis of introversion-extraversion is the recticular formation of the brain stem. Excitation and inhibition are functions of the activation thresholds of the facilitating and inhibitory parts, respectively, of the reticular formation. Individual

differences in excitation/inhibition balance are reflected in certain physiological and behavioural functions amenable to testing. Eysenck's postulates and the hypotheses derived from them have, in the main, been supported.

The nature of and the physiological basis for neuroticism (N) are examined in the following section.

Neuroticism

Neuroticism or predisposition to neurosis implies a low tolerance for stress whether it be physical as in painful situations or psychological as in conflict or 'frustration' situations (Eysenck, 1967).

Eysenck (1957, 1967) posited that the visceral brain (limbic system) is the physiological substratum of neuroticism (N)--also called emotionality. The visceral brain comprises the hypocampus, amygdala, cingulum, septum, and hypothalamus (Eysenck, 1967). These structures are interconnected. Thompson (1967) and Morgan (1965), however, do not consider the hypothalamus to be a part of the visceral brain; though they state that the other structures of the visceral brain are linked to the hypothalamus.

Eysenck regards the hypothalamus, as do Morgan (1965) and Thompson (1967), as the most important single structure in neuroticism. It is the hypothalamus that controls the sympathetic and parasympathetic autonomic systems.

A low threshold of activation (high level of activation) of the limbic system is associated with high N. Conversely, a high threshold of activation of the system (low activation) implies low N (Eysenck, 1967, 1973, 1977).

An individual who is high in N reacts strongly and persistently to strong external stimuli (Eysenck, 1957, 1961). He is described as unstable which is to say that his behaviour and mood are very changeable and therefore unpredictable. The individual who is low in N is, on the other hand, stable. This means that his behaviour and moods are less changeable and more consistent and predictable over situations.

On the basis of Van der Merwe's finding (1948), Eysenck (1967) proposed that high N scorers differ among themselves on the factor of basic-emotional tension. This factor, which was found to discriminate between neurotic introverted (NI) and neurotic extraverted (NE) subjects, is a function of whether the sympathetic or parasympathetic system is dominant (Theron, 1948; Van der Merwe, 1948). Eysenck suggested, based on Van der Merwe's findings, that differences in emotional reactions between NI and NE subjects are a function of the easy activation of the sympathetic and parasympathetic systems, respectively. This implies a sympathetic dominance in NI subjects and a parasympathetic dominance in NE subjects (Eysenck, 1967; Van der Merwe, 1948).

Despite the above-mentioned propositions and suggestions, Eysenck (1957, 1967, 1977) has also continued to explain the differences between NI and NE subjects in terms of conditionability and socialization. According to him, NI-emotional behaviour is a consequence of oversocialization, mediated through effective conditioning. The NE-emotional behaviour is, on the other hand, a result of undersocialization which in turn is due to poor conditioning.

Eysenck's account of the physiological basis of N is less clear and more tentative than that of E dimension. However, more evidence has been accumulated since Theron's and Van der Merwe's studies which tend to support Eysenck's position on the importance of the autonomic nervous system in Neuroticism. First NI subjects and NE individuals show more cortical arousal and inhibition, respectively, than equally introverted and extraverted but stable individuals (Claridge & Herrington, 1963). This feature is possible only if the sympathetic system whose activity engenders cortical arousal is dominant in the NI. Similarly, increased inhibition in the NE individual is possible if the parasympathetic system, associated with cortical inhibition (Gellhorn, 1968; Izard, 1972) is dominant.

Secondly, introverted and extraverted neurotics tend to exhibit the characteristic emotions associated with the sympathetic and parasympathetic systems, respectively. The

sympathetic system is suggested to be responsible for unpleasurable emotions (Allport, 1924, in Eysenck, 1967; Gellhorn, 1968, Olds, 1962 reported in Martin, 1973). Conversely, the parasympathetic system is proposed to give rise to pleasurable emotions (Allport, 1924 in Eysenck, 1967; Gellhorn, 1968; Olds, 1962 in Martin, 1973).

Eysenck stated that "the dysthymics is himself the sufferer from his own neurotic disorders and it is he who appeals to the psychiatrist for help" (Eysenck, 1977, p. 151). A dysthymic is an introvert who is not only high in N but has already had an emotional breakdown (Eysenck, 1957). He is characterized by excessive anxiety- and fear-reactions (Eysenck, 1957). Through their connections with these conditioned fears or anxieties, previously neutral stimuli acquire fear-arousing qualities. This leads to a proliferation of fear-arousing stimuli which distinguishes the neurotic introvert from the neurotic extravert.

There is also evidence to show that neurotic extraverts experience pleasurable emotions:

> In the case of the criminal or the psychopath, [neurotic extravert], however, it is other people who suffer and it is they who complain about the behaviour of the criminal or the psychopath. He himself is often quite satisfied with his life and his behaviour, his only complaint being that in living out his wishes and desires, he comes into conflict with society and may be sent to prison, or punished in other ways. Were it not for that, he would be quite happy and contented!
>
> (Eysenck, 1977, p. 151)

Nevertheless, Morgan (1965) and Izard (1972) warned that caution is required with respect to the above relationships. They called attention to the fact that the associations between sympathetic and parasympathetic systems and unpleasurable and pleasurable emotions, respectively, are not well-defined. Morgan conceded that there is evidence linking the parasympathetic system, for example, with pleasant emotions. However he argued that there is also evidence that some emotions credited to this system are not pleasant.

Additionally, Eysenck (1967; also Morgan, 1965; Ochs, 1966) has noted that the sympathetic system is more diffuse than the parasympathetic system. Morgan (1965), quoted in Eysenck (1967), stated that certain parasympathetic reflexes may occur without the involvement of other parts of the system whereas the "sympathetic system tends to discharge as a whole." This functional difference between the two systems is due to their structural differences. The specificity of reaction in NE individuals was observed by Henderson and Gillespie and reported in Eysenck (1957). They stated that:

> . . . he [hysteric] reacts in a specific region, i.e. in a particular organ or groups of organs; the psychic representation of the function has a peculiar tendency to be dissociated from the rest of consciousness; and there is a peculiar passivity in his attitude to the dissociated function.
> (quoted in Eysenck, 1957, p. 204)

In retrospect, therefore, the evidence tends to support

Eysenck's proposition that neurotic extraverts have a dominance of the parasympathetic system while neurotic introverts have a dominance of the sympathetic system. The modes of functioning of the two systems will now be discussed in order to facilitate an understanding of how the systems influence neurotic behaviours differently.

Sympathetic discharge is traditionally associated with 'fight or flight' and other emotional upheavals such as rage and anger (Gellhorn, 1968). It is evidenced in the form of increased heart rate, dilation of the pupil, contraction of arteries and also in an inhibition of the contraction and secretion of the stomach (Thompson, 1967). These sympathetic discharges necessitate an accelerated expenditure of energy both internally and externally. The sympathetic reaction is, therefore, called ergotropic, a term which Gellhorn credited to W. Hess (Gellhorn, 1968) and which means oriented to work.

Parasympathetic discharge is, on the other hand, an adynamic and a conservative reaction which leads to decreased expenditure of energy. For this reason it has been described as trophotropic (Hess, in Gellhorn, 1968). Parasympathetic emotional reaction is manifested in relaxed skin tone, constriction of pupils, dilation of arteries, a slow heart rate, and also in increased contraction and secretion of the stomach (Thompson, 1967).

Ergotropic and trophotropic systems are reciprocally related in the normal individual (Gellhorn, 1968; Izard, 1972). When the activity of the posterior hypothalamus (or other sources of cortical excitation) is reduced, either by drugs or by direct stimulation of the anterior hypothalamus, sleep supervenes. The posterior hypothalamus is responsible for the functioning of the sympathetic system whereas the anterior hypothalamus is responsible for the functioning of the parasympathetic system. Thus a reduction in the activity of the posterior hypothalamus implies a reduction in the activity of the sympathetic system. Conversely, an activation of the anterior hypothalamus implies the activation of the parasympathetic system. Thus the two systems have been described as antagonistic in function (Eysenck, 1967; Gellhorn, 1968; Izard, 1972; Morgan, 1965).

Izard (1972) stated that in the neurotic individual, however, the sympathetic and parasympathetic systems discharge upwards to the cortex simultaneously (Izard, 1972, p. 32). Nevertheless, even under such situations two patterns of anxiety, for example, are distinguishable (Gellhorn, 1965 in Izard, 1972). These are:

> 1. the excitatory form characterized by restlessness, hyperactivity, sympathetic response and ergotropic dominance.
>
> 2. the inhibitory form is characterized by hypoactivity, parasympathetic responses, and trophotropic dominance.
>
> (Izard, 1972, p. 32)

Izard went on to say that in the excitatory form the dominance is shifted to the ergotropic side (Izard, 1972). Similarly, it can be inferred that in the inhibitory form, the trophotropic system becomes dominant. Therefore, with a breakdown in reciprocity comes the predominance of either the sympathetic (excitatory form) or parasympathetic (inhibitory form) system. This conclusion is also supported by Shagass and Jones (1958 reported in Claridge and Herrington, 1963) who proposed, based on the results of their study, that dysthymics feel anxiety in terms of increased sympathetic activity. They also posited that hysterics feel anxiety mediated through parasympathetic mechanisms.

In conclusion, Eysenck proposed that the sympathetic and parasympathetic systems, controlled by the hypothalamus, together with the rest of the limbic system constitute the physiological substrata of neuroticism. The relative ease of activation of these structures differentiates high N scorers and low N scorers. While low N individuals do not differ in kind along N dimension, the predominance of either the sympathetic or parasympathetic system distinguishes between high N (NI and NE) individuals.

Summary and Criticism of Eysenck's Theory

Eysenck proposed physiological bases for Extraversion-Introversion (E) and Neuroticism (N). Extraversion-introversion

is a function of the threshold of activation of the facilitatory and inhibitory parts of the ascending reticular activating system (ARAS) (Eysenck, 1967, p. 270). An individual is introverted if the facilitatory part has a low threshold of arousal while the inhibitory part has a high threshold. The reverse is true for the extraverted individual. N, on the other hand, is a function of the threshold of activation of the hypothalamus and the visceral brain (limbic system) (Eysenck, 1967, 1973, 1977). Among the high N individuals, predominance of the sympathetic system and good conditionability characterize the neurotic introvert (NI). Conversely, a predominance of the parasympathetic system and poor conditionability characterize the neurotic extravert (NE) (Eysenck, 1967, 1977).

Certain portions of Eysenck's theory have been criticized. Gray (1970, 1972) advanced two modifications to Eysenck's theory in relation to (a) the physiological basis of E and (b) individual differences between extraverts and introverts in conditionability. He proposed that the physiological basis of introversion is not limited to ARAS alone, as Eysenck postulated. Gray contended that the following structures are also involved: medial septal area, hippocampus, the orbital frontal cortex, and the interconnections among them. However, he conceded that these structures together with ARAS perform the same theoretical function that

Eysenck credited to ARAS alone.

Eysenck's response to such criticisms on the exact physiological basis of introversion-extraversion is evident from this excerpt:

> it is not crucial whether cortical arousal is mediated by the ARAS, some minute portion or portions within it, or by some other structure. What is important is that the cortex should differently respond with greater or lesser arousal to different types of stimuli, and that it should do so in differing degree in extraverted and introverted persons.
>
> (Eysenck, 1973, p. 413)

Gray also criticized Eysenck for ascribing differences in socialization and emotional reactions to individual differences in conditioning despite research findings which indicate otherwise. Eysenck and Levey (1972; Eysenck, 1967) found that introverts condition better than extraverts only under conditions that are underarousing. These conditions of weak unconditioned stimulus (UCS), short conditioned stimulus—UCS interval and partial reinforcement are favourable to introverts (Eysenck, 1967; Eysenck & Levey, 1972, p. 208). Strong UCS, continuous reinforcement and long CS-UCS interval, however, are overarousing and so favourable to extraverts. Extraverts condition better and faster under these conditions (Eysenck & Levey, 1972; Martin & Levey, 1972; Martin, 1973).

Gray (1972) and Trasler (1973) argued that there was no evidence to show that naturally-occurring situations are more

underarousing than overarousing as Eysenck implies. Gray proposed that differences between introverts and extraverts in socialization are, rather, due to their differences in susceptibility to punishment, fear or threat. Eysenck (1963), in fact, stated that socialized behaviour in the adult has as its basis anxiety and fear responses to anti-social acts of an overtly aggressive or sexual character. According to him, these responses are conditioned in childhood. Thus, the point in dispute is whether the difference, in socialization, between introverts and extraverts lies in the availability of fear responses to be conditioned (Gray) or in the conditioning process itself (Eysenck).

Gray's proposition is easily explained in terms of sympathetic and parasympathetic systems. Differences among the high N individuals in sensitivity to punishment can be explained by the dominance of the sympathetic and parasympathetic systems, respectively, in NI and NE individuals. An additional support for this explanation is the greater pain tolerance which extraverts exhibit more than introverts (Lynn & Eysenck, 1961; Petrie et al., 1960).

Trasler (1973) like Gray, contended that differences in socialization do not depend on differences in conditionability. He argued that differences in socialization depend on the ability to form anticipatory responses. The latter, in turn, is a function of sensitivity to punishment. Trasler

contended further, that such differences as may exist in responsiveness to conditioning are less general than was originally supposed (Trasler, 1973, p. 71). It has been shown that many factors influence individual differences in conditioning. These are: (a) the conditioning schedules employed (Eysenck, 1967; Eysenck & Levey, 1972; Martin, 1973); (b) the nature and intensity of the UCS (Gray, 1970) and (c) the type of response to be conditioned (Willet, 1960). These factors, naturally, influence individuals differently.

In conclusion, Gray's and Trasler's propositions are merely modifications of the bases of some characteristics of introverts and extraverts. Their propositions lead to the same general hypotheses in this study in relation to high N individuals as does Eysenck's. Using either Eysenck's, Gray's or Trasler's formulations, neurotic introverts are expected to be oversocialized while neurotic extraverts are undersocialized. Therefore, Eysenck's framework is for the most part, retained in this study. Gray's and Trasler's are used where they facilitate explanations of relationships between variables.

Relationship between I-E, N, and Fear of Success

In this section the personality characteristics, including fear of success, of neurotic introverts, neurotic

extraverts, stable extraverts and stable introverts are reviewed. The physiological bases for these are explained.

Neurotic Introvert (NI)

The NI has excessive anxiety reactions and is characterized by a proliferation of anxiety-arousing stimuli. He is fearful, rigid, moody, reserved, sober, unsociable, quiet, and pessimistic (Eysenck, 1957, 1967, 1977; Eysenck & Eysenck, 1969). He also has low self-esteem (Eysenck, 1967).

The NI's excessive fear and anxiety reactions can be explained by his low threshold of activation of the sympathetic system. This system, as was discussed in a previous section, is responsible for mainly unpleasurable emotional experience and responses. These responses are in due course conditioned. During the conditioning process anxiety reactions get associated with otherwise neutral and even irrelevant stimuli preceding or accompanying fear-producing occasions (Eysenck, 1957). Anxiety-arousing stimuli are thus proliferated. Rigidity and moodiness of the NI individual can be explained by high excitation and sympathetic dominance. Unpleasurable emotions and fears would account for his moodiness while fear and low changeability account for his rigidity.

The NI's reservedness, sobriety, unsociability, and quietness are a function of his low threshold of arousal of

the ascending reticular activating system (ARAS) and the sympathetic system. The former is responsible for his high arousal level and consequently his stimulus avoidance. The latter is responsible for his excessive fear reactions, anxiety and increased cortical excitation (Claridge & Herrington, 1963; Sigal et al., 1958). To reduce stimulation and anxiety, the NI avoids social interactions--a source of stimulation (Eysenck, 1967) and anxiety (Gray, 1970).

Given these characteristics, the NI would show fear of success because, first, success attracts attention to him. Second, competitive situations are interpersonal situations which the NI would normally avoid. Where the success or the situation is unavoidable, its anticipated negative consequences would arouse anxiety and fear. Additionally, the NI has been reported to have low self-esteem (Eysenck, 1967). Performance that is inconsistent with one's low self-esteem has been shown to be a source of anxiety (Aronson & Carlsmith, 1963; Mettee, 1971; Tresemer, 1977). Therefore, the NI will show fear of success in a competitive situation because a successful competition would appear inconsistent with his low self-esteem. Similarly, any action or show of competence on his part that is indicative of a high performance that would be inconsistent with his self-image will arouse anxiety too. Thus, any performance that threatens his 'personal boundaries' (Tresemer, 1977) will arouse anxiety. These

boundaries or internal standards against which the NI compares his performance for consistency are defined in relation to his low self-esteem and his stimulus-avoidance. In summary, the NI will show fear of success.

Neurotic Extravert (NE)

The NE is found to be aggressive, impulsive, changeable, excitable, active, and restless. He also exhibits anti-social and asocial behaviours such as delinquency and stealing (Eysenck, 1957, 1977). He lacks a sense of responsibility to the society, and is unethical (Eysenck, 1957). These characteristics can be explained by the NE's low arousal level and the dominance of the parasympathetic system in him.

The NE is undersocialized due to either poor conditioning habits (Eysenck) or insensitivity to punishment (Gray; Trasler). Thus he fails to acquire and observe societal mores, rules, and socially acceptable ways of gratifying his needs. His self-satisfying methods of acquiring his additional stimulation may, thus, be socially aggressive. The dominance, in him, of the parasympathetic system which engenders pleasurable emotions may help to explain his impulsiveness and excitability. Since the emotional experience is mainly pleasurable there would be a tendency towards immediate gratification of the emotion. This is emphasized by the NE's increased cortical inhibition (Claridge and Herrington,

1963) and his increased stimulus hunger. The fast accumulation of reactive inhibition in the extravert would appear to necessitate constant, change or a variety of stimuli. This, therefore, explains his changeability.

The NE's undersocialization and tendency for overt emotional expression underlie his asocial, anti-social, unethical, and, sometimes, irresponsible behaviour patterns.

The NE, with the above characteristics, would not show any fear of success in competitive achievement situations. First, his tendency to immediate gratification of needs, his impulsiveness and high stimulus hunger would prevent any consideration or anticipation of negative consequences associated with success. Second, because he is undersocialized he has not acquired and internalized social mores and norms. Therefore, he is unaware of the limits to which an individual's success in a social group is tolerated. Thus the NE is not aware of the social boundaries. Consequently, he does not anticipate any negative consequences as a result of his actions. Therefore, the neurotic extravert will not show fear of success.

Stable Extravert (SE)

The SE is easy-going, sociable, talkative, outgoing, lively and care-free. He likes social interaction, leadership and group activities (Eysenck, 1967; 1977). These

characteristics are a function of his physiological constitution. The SE, unlike his neurotic counterpart has a high threshold of activation of the limbic system. His high and low thresholds of activation of the facilitating and inhibiting parts of the reticular formation, respectively (Eysenck & Eysenck, 1969) give rise to low cortical excitation. He thus develops stimulus-seeking behaviour. Stimulation is obtained through activities and interactions with fellow human beings. Thus his stimulus-seeking tendency is the basis of his sociability.

The SE seeks additional stimulation but through socially acceptable ways: through group activities, leadership activities, and talking to others. This implies maintaining good relationships with those others. Antagonism between the SE and the needed-others would threaten or eliminate the former's source of stimulation. Extraverts have been shown to have a low tolerance for stimulus deprivation (Eysenck & Lynn, 1961). Thus the SE will be especially susceptible to fear of success which originates from social ostracism, isolation and loss of friendships. Horner (1968) and Tresemer (1977) agree on the fact that some consequences of success in interpersonal competition or achievement situations for females (Horner, 1968) and for males and females (Tresemer, 1977) are social ostracism, social isolation and loss of friendships. According to Tresemer (1977), social

ostracism results when an individual has transgressed a socially established limit of performance or achievement. Isolation arises partly from ostracism and partly from excessive individualism that is associated with hard work needed to ensure continued success (Tresemer, 1977).

Social ostracism, social isolation and loss of friendships imply a loss of sources of stimulation and are, in effect, a form of stimulus deprivation. Therefore the SE will show high fear of success.

Stable Introvert (SI)

The SI is passive, calm, controlled, thoughtful, peaceful and trustworthy. He is even-tempered, and socially-withdrawn (Eysenck, 1957; 1967; 1977).

His high cortical excitation level results in stimulus-avoidance. Thus he avoids social interactions except when necessary or unavoidable. The stable introvert's calmness, passivity, control, and thoughtfulness may be accounted for by his high arousal level which renders great physical activity unnecessary. In addition, his high cortical excitation level facilitates mental activities such as thinking. Mental activities provide additional cortical arousal. This explains further why the SI seeks to reduce physical and interpersonal activities that would otherwise increase his cortical arousal. Finally, the SI's even-temperedness is a

function of his low emotionality.

Introverts have been demonstrated to possess a high tolerance for stimulus deprivation (Eysenck & Lynn, 1961; Petrie et al., 1960). Thus it is expected that isolation, social rejection and social ostracism which are consequences of transgressing social boundaries and which constitute a form of stimulus deprivation will not have a negative valence for the SI. The SI will, therefore, not develop fear of success from these sources. Similarly, actions and demonstrations of competence that may lead to success or transgression of social boundaries will not arouse fear of success in him. Therefore, the SI will not show fear of success where the negative consequences of success are social rejection, isolation, ostracism, loss of friendships, etc.

Statement of the Problem and Hypothesis

In sum, the purpose of this study is to provide a greater understanding of the psychodynamics of fear of success by investigating the relationship between fear of success and personality factors of E and N. The often inconclusive results obtained in fear-of-success studies necessitate further research into both the development and arousal of fear of success. The specific question to which this study is addressed is: How are extraversion and neuroticism related to fear of success?

From the analyses, in the preceding section, of the relationships among E, N, and fear of success, an interaction hypothesis is generated:

Hypothesis

Extraversion-introversion and neuroticism dimensions of personality interact in their effect on fear of success. Specifically,

> stable introverts and neurotic extraverts show less fear of success than do neurotic introverts and stable extraverts, respectively.

The experimental design used in this study is explained in the following chapter.

CHAPTER II

EXPERIMENTAL DESIGN

In this chapter are described the research subjects, the measuring instruments, the procedures for data collection and the proposed data analysis.

Research Subjects

The research subjects were 324 grade 12 high school students in the 1978/79 academic year. This number was made up of both male and female volunteers from three schools under the same Board of Education. Two of these schools were located in the suburbs of a large city in eastern Canada. The third school was located in a rural and agricultural area which is within a commuting distance from the city. A breakdown according to sex and school for subjects with complete data on fear of success (M_{-s}) and the Eysenck Personality Inventory (EPI), is given in Table 1. Also given in Table 1 by school are the means and standard deviations of the age of subjects. The ages of the subjects ranged from 15 to 20 years with an overall mean of 16.99 and a standard deviation of .67. A one-way analysis of variance (see Table 2) and Scheffé simultaneous-confidence-interval post hoc procedures showed that the subjects in School 1 were significantly younger than subjects in either School 2 or School 3.

Table 1

Number of Research Subjects by School and Sex, and the Mean and Standard Deviation (Sd) of Subjects' Ages by School

	Sex				
School	Boys	Girls	Total	Mean Age	Sd
1	78	73	152[a]	16.82	.63
2	43	70	114[a]	17.10	.69
3	31	27	58	17.17	.57
Total	152	170	324[b]	16.99	.67

[a]Total includes one subject who did not indicate his/her sex.

[b]Total includes two subjects who did not indicate their sex.

Table 2

Results of an Analysis of Variance Test with School as the Independent Variable and Age of Research Subjects as the Dependent Variable

Source	MS	df	F	p
School	4.025	2	9.687	.0001
Error	.415	318		

Subjects in Schools 2 and 3 did not differ significantly in age.

This grade level was chosen because it was expected to contain a good representation of individuals high and individuals low in fear of success. This is because at this level many individuals high in fear of success would probably not have dropped out of the school system or diverted into less threatening goals as might be the case at the university or college level.

Measuring Instruments

In this section the instruments used to measure the variables are examined. Fear of success was measured using a Thematic Apperception Test (TAT) whereas extraversion-introversion and neuroticism were measured using the Eysenck Personality Inventory (EPI), Form A.

The TAT for fear of success (M_{-s}) comprises four non-specific verbal cues. Verbal cues were used rather than pictures because the use of the former eliminates differences in connotations which age, race, dress, and appearance of the characters in the pictures often carry. The problems associated with picture cues were first noted, in relation to n Achievement measurement, by McClelland et al. (1976). Verbal cues have been used successfully in previous studies of fear of success (Crealock, 1978; Fleming, 1977b; Hoffman,

1974; Horner, 1968; Karabenick, 1977).

The characters portrayed in 2 of the 4 stimulus cues used in this study were females while those in the remaining 2 were males. Horner's study (1968) and her conclusions were criticized because she let male subjects respond to a cue which depicted a male character and female subjects to respond to a cue which presented a female character (Bishop, 1974; Tresemer, 1974). Therefore, to facilitate comparability of results in the present study it was thought better to have every subject write stories to the same cues.

Each of the four cues was neutral as it did not portray a success situation. Each cue depicted an ambiguous situation to which a subject can associate his own meaning or perception. The cues were selected from a sample of neutral verbal cues in the fear-of-success scoring manual (Horner & Fleming, Note 1) which have characteristically been used in achievement motivation research. A copy of the TAT instrument used in this study is in Appendix A.

The subjects were required, in 4 minutes, to make up and write short imaginative stories about each verbal cue by answering four guide questions. These questions elicited information regarding the nature of the situation, what led up to it, what the character(s) was(were) thinking or feeling and what he/she/they would do. The stories were later content-analyzed, to obtain M_{-s} scores, with respect to the

number of M_{-s} categories represented in each story. The criteria for the scoring of each story are the six categories given below (Horner & Fleming, Note 1). The numbers in parentheses are the relative weights assigned to the categories:

1. Contingent negative consequences (+1)
2. Non-Contingent negative consequences (+1)
3. Interpersonal engagement (+1)
4. Relief (+1)
5. Absence of instrumental activity (+1)
6. Absence of mention of other persons (-1)

A copy of the categories with brief explanation of each is attached in Appendix B.

Horner and Fleming (Note 1; and also Fleming et al., Note 2) have noted that this new scoring system does not centre on success avoidance per se because only the first two categories relate to the consequences, contingent and noncontingent, of actual success. The next three categories relate to either activities and ways of preventing success from occurring or to denials of responsibility for competence and actions that may lead to success. Specifically, under the Interpersonal Engagement category are imageries which indicate attempts by an individual to direct the situation or action towards an affiliative rather than a strictly achievement-oriented goal. The fourth category, Relief,

involves an inhibition or denial of responsibility for a goal attainment. The fifth category, Absence of Instrumental Activity, reflects a complete suppression of activities that may be indicative of success. The sixth and final category, Absence of Others, has to do with whether or not other characters are mentioned in a story apart from that (or those) in the cue.

The scoring system was empirically derived. The procedure was basically a comparison of thematic contents of stories that were written under arousal and non-arousal conditions (Horner et al., 1973, in Tresemer, 1977). Fifty-nine female subjects participated in this study. All subjects first wrote stories about three nonspecific verbal cues under neutral conditions. They also were given the Scrambled Word Test (Lowell, 1952) under achievement-oriented conditions. Under these conditions subjects were made to feel that their performance would be evaluated. They were later randomly assigned to two experimental conditions--arousal (competition against a male subject) and non-arousal (noncompetitive) conditions.

Following these experimental conditions subjects were asked to respond to another set of verbal TAT cues and then to complete a Generation Anagram task.

The TAT stories written by the 31 females in the aroused condition were compared to those of the 28 females written in

the non-aroused condition. A content-analysis of the differences in story-themes between the two sets of stories resulted in 43 thematic elements or categories that were suggestive of success avoidance (Fleming et al., Note 2). To test the functional significance of the categories, each was used as an independent variable in a two-way analysis of variance with experimental condition (aroused/non-aroused) as the second independent variable. The dependent variable was performance change measured by the difference between the standardized Scrambled Word Test score and standardized

Generation Anagram score. The six categories whose main effects approached statistical significance were selected and used in a multiple linear regression as the independent variables and performance change (as defined above) as the dependent variable.

It was found that the six categories accounted for 44% of the variance in performance change (Fleming et al., Note 2). Also it was found that the female subjects who scored high in M_{-s} on these six categories were more likely to perform at a lower level after a successful competition against a male than were females with low scores on M_{-s}. These six categories first outlined by Horner et al. (1973, in Tresemer, 1977) and updated by Horner and Fleming (Note 1) formed the new scoring categories.

The initial scoring weights--+2, +2, +2, +1, +1, -2--assigned to the categories, respectively, were based on the regression beta weights. Subsequent researchers have indicated, however, that the differential scoring weights do not improve prediction and are probably unstable (Fleming et al., Note 2; Fleming, Note 3; Karabenick, 1977; Marshall & Karabenick, 1977). Thus the weights have been reduced to unity but their signs remain unchanged (Fleming, Note 3).

Results from some studies in which the new instrument has been used provide additional evidence for the validity of the instrument. Stories written by 28 subjects selected

from Horner's study (1968) were rescored by Horner et al. (1973, in Tresemer, 1977) using the new system. The stories were those written about neutral cues which in that study were used for measuring n Achievement. These subjects had performed intellectual tasks in both a noncompetitive condition and a mixed-sex group competitive condition. The difference in their standardized performance scores in the 2 conditions--performance change--was used as the dependent variable. It was discovered that the six categories accounted for 36% of the variance in performance change scores (Horner et al., 1973, in Tresemer, 1977; in Fleming et al., Note 2).

Jackaway and Teevan (1976) found that fear of success elicited in an aroused condition was higher than that elicited in a non-aroused condition. This is an additional support for the construct validity of the instrument. Karabenick (1977) and Marshall and Karabenick (1977) also reported that, as expected, on masculine sex-typed tasks females high in fear of success showed lower performance increments than females low in fear of success from noncompetitive to competitive conditions. However, Marshall and Karabenick (1977, p. 570) have reported that there is no evidence of validity for the scoring system among males. Esposito (1977) has also reported, for males, a positive correlation between fear of success and occupational aspiration, contrary to expectation, and contrary to the negative relationship found

between the two variables among females. Thus Esposito's result for males supports that of Marshall and Karabenick (1977). Nevertheless, some other researchers have reached the opposite conclusion. Karabenick (1977), in his study reviewed previously, found that fear of success interacted with n Ach in men to influence performance in intellectual tasks in achievement-oriented conditions. He concluded that this was an evidence of the construct validity of the fear of success instrument.

With the availability of the scoring system (Horner et al., 1973, in Tresemer, 1977) and a revised scoring manual (Horner and Fleming, Note 1) scoring procedures have become more systematic. Practice materials are provided in the manual. Consequently, a minimum interscorer reliability coefficient of .85, on the practice material, is suggested before scoring new data (Horner & Fleming, Note 1, p. 54). Interscorer reliability coefficients which are as high or higher have been reported (Esposito, 1977; Fleming, 1978; Griffore, Note 4; Karabenick, 1977).

Studies on other forms of reliability are few. Marshall and Karabenick (1977, p. 568) reported low inter-cue correlations: ranging from .16 (n.s., N = 98) to .21 ($p = .05$, N = 98) for females and from .21 to .28 (N = 33) for males. The researchers did not calculate an overall internal consistency (alpha) coefficient. However, judging from the

inter-cue correlations, the internal consistency coefficient would also be low.

In summary, the new fear-of-success scoring system is employed in this study. The researcher is, nonetheless cognizant of the limitations in the system.

Extraversion-introversion (E) and neuroticism (N) were measured using the Eysenck Personality Inventory (EPI; Form A). The EPI is a pencil and paper personality questionnaire developed by Eysenck and Eysenck (1963). It has two alternate Forms A and B. These parallel forms of the test can be used with high school children in Grades 9 and above and also with adults (Buros, 1975).

Each form comprises 57 questions, 24 of which measure extraversion-introversion, and 24 neuroticism. The remaining 9 questions form the Lie or response distortion scale. This helps one to detect attempts to falsify responses. The examiner responds 'Yes' or 'No' to each question. The testing time is approximately 10 minutes.

High reliability coefficients have been reported for the EPI Scales, Form A. Test-retest reliability coefficients range from .82 (N = 92; 1 year interval) to .97 (N = 27; 9 months interval) (Eysenck & Eysenck, 1968, p. 14-15).

The criterion-related validity of the EPI is established via its relationship to Maudsley Personality Inventory (MPI) --its predecessor, the construct validity of which has been

previously established. Correlations between EPI-extraversion scale (EPI-E) and MPI-extraversion scale (MPI-E) range from .69 (N = 50) to .79 (N = 50) (Farley, 1970, p. 75). Similarly, correlations between EPI-neuroticism scale (EPI-N) and MPI-neuroticism scale (MPI-N) range from .70 (N = 50) to .80 (N = 50) (Farley, 1970, p. 75). The results of many studies in which the instrument was used provide additional support for its construct validity (Carr, 1970; Farley & Farley, 1967; Vando, 1970). Thus the EPI can be concluded to be both valid and reliable.

Data Collection

The tests were administered in group settings in the subjects' schools. For every group in each school all the tests were given in a single testing session in convenient locations chosen by school authorities--classroom, cafeteria, library, or school theatre.

The TAT for fear of success, entitled "Cue Interpretations", and the EPI were previously placed in folders in the order in which they were to be administered. The TAT was entitled Cue Interpretations to ensure the neutrality of the testing condition. The four stimulus-cues for M_{-s} measurement were arranged in such a way that half of the subjects would write stories about the female characters first before writing about male characters. The remaining half, on the

other hand, would write stories about male characters first. This arrangement would permit the verification of any order effect that may occur. Each cue was written at the middle of a page. Such a page was followed by another on which were written four questions that served as a guide to developing the plot of a story. A copy of the TAT instrument is attached in Appendix A.

As soon as the subjects were all seated the folders were randomly distributed to the subjects by the researcher and her aide. In each testing session, one or two teachers from the participating school acted as proctors. The subjects were requested not to open the folders until instructed to do so. After all the subjects had each received a folder, they were asked to open the folder and to write, in the space provided, their names, the name of their school and the date. They were also requested to take note of the code number on the top left-hand corner of the cover-page and to use it on subsequent pages where their code number was required. The subjects were allowed one minute in which to complete the required information. The subjects were then asked to read silently the instructions for the TAT task while these were played from a tape.

The instructions were the standard instructions for a neutral condition as described by McClelland et al., (1976) and as used by Horner (1968). In these instructions, subjects

were informed of the nature of the task, that is, writing stories about verbal stimulus cues. They were also informed of the length of time they were going to be allowed for each story. Finally, the subjects were told that there was no right or wrong kind of story and that spelling, punctuation and grammar were not important. A copy of these instructions is included in Appendix A.

The subjects were allowed 20 seconds to read each verbal cue and 4 minutes to write each story. The timing for the whole procedure was indicated using taped instructions.

The EPI was administered immediately after the fear-of-success TAT. The instructions from the test-booklet were also previously placed on tape. As these were played aloud, the subjects read the same silently. In the instructions, subjects were told that they were going to answer some questions regarding how they behave, feel or act. The subjects were requested not to omit any questions. They were also informed that there were no right or wrong answers, and that the test was not a test of intelligence or ability but simply a measure of the way they behaved.

The administration of the EPI was timed for a maximum of 10 minutes. In some groups, however, all subjects completed the questionnaire within 6 to 9 minutes. In all the groups, every subject finished within 10 minutes. In most of the groups, some subjects indicated that they misunderstood

or were not clear about the meaning of Item 25. This difficulty arose because of a word 'gay' which has, since the publication of the test, acquired a new (or additional) meaning.

A copy of the instructions and of the EPI, Form A, are found in Appendix C.

Scoring

The TAT stories, identified only by subjects' code numbers, were arranged by cue and typed. These steps were necessary to eliminate the effect of the knowledge of the sex of the writer and also to prevent a 'halo' effect among each subject's four stories. The stories were then content-analyzed to obtain M_{-s} scores. The continuous scoring method (Horner & Fleming, Note 1) was employed. With this method an M_{-s} score is determined for each story. The scores are then summed across stories to obtain an M_{-s} score for each subject. The range of scores for each story was from -1 to +5. Thus in this study, the minimum possible score for each subject was -4 and the maximum possible was +20. It is recommended, however, to adjust the TAT scores if the correlation between total score and total story-length is .25 or above (Fleming, 1977a; Horner & Fleming, Note 1; Veroff, Atkinson, Feld, & Gurin, 1960). The formula for this correction, an adapted regression equation, provided by Veroff

et al. (1960) is given in Appendix D.

The scoring was done by two professional scorers* whose inter-scorer reliability coefficient, for the total fear of success scores, for this study is .92.

The EPI was scored using three hand overlay stencils, one for E scale, one for N scale and one for the Lie (L) Scale. As advised in the EPI manual (Eysenck & Eysenck, 1968, p. 20), an L-score of 5 was considered the cut-off point beyond which a subject's entire questionnaire was rejected. Consequently, 16 subjects were eliminated, 6 from School 1, 7 from School 2, and 3 from School 3. High scores on Extraversion and Neuroticism Scales indicate extravertedness and high neurotic predisposition, respectively. Item 25 was not scored for the reason stated earlier. As a result, the range of scores on Extraversion was 0 to 23, Neuroticism 0 to 24, and Lie Scale 0 to 9.

Planned Analysis

It was proposed to test the interaction hypothesis in the null form by using a two-way analysis of variance technique. The independent variables were extraversion-introversion and neuroticism-stability. The dependent variable

*From Fear of Success Scoring Services in New York. (Information available from Dr. Jacqueline Fleming).

was fear of success. Statistical significance was set at .05 level.

In summary, in this chapter the description of the methodology of this study has been presented. This was done with reference to the type of subjects, measuring instruments, data collection procedures, methods of scoring, and the statistical technique employed. The results obtained from testing the hypothesis are presented and discussed in the next chapter.

CHAPTER III

PRESENTATION AND DISCUSSION OF RESULTS

In this chapter are presented and discussed the results of this study. The formation of the criterion groups and the descriptive statistics for the groups are presented first. Next are the results of the test of the hypothesis. This is followed by a discussion of the results. Implications for further research are considered and suggestions are made. The chapter ends with a summary of the study.

Formation of Criterion Groups

To test the hypothesis it was decided to use extreme groups on the Extraversion (E) and the Neuroticism (N) Scales. These were selected as described in this section.

Following the recommendation in the Eysenck Personality Inventory (EPI) manual (Eysenck & Eysenck, 1968), the 31st and the 70th percentile points were used as cut-off points on E and N scales. The 31st and 70th percentile points in the current study are 11.69 and 15.22, respectively, on E and 9.96 and 14.09 on the N scale. The frequency distributions of E and N scores from which these were estimated are shown in Appendix E (the raw scores are included in Appendix G). Subjects who scored above and below these percentile points were regarded as high and low, respectively, on either

E or N. Specifically, subjects who scored 16 and above on E and 15 and above on N scales were regarded as extraverted and neurotic (high in N), respectively. Those who scored 11 and below on E and 9 and below on N scales were designated as introverted and stable, respectively.

This method of splitting the sample into criterion groups resulted in 26 stable extraverts (SE), 15 neurotic extraverts (NE), 16 stable introverts (SI) and 33 neurotic introverts (NI). However, research subjects used in this study were significantly more extraverted ($\bar{X}$ = 13.85;* sd = 3.77;* n = 308) and significantly more neurotic ($\bar{X}$ = 12.04; sd = 4.053; n = 308) at .05 level than college students. The college norms, presented in the EPI manual, are as follows: Extraversion: $\bar{X}$ = 13.1; sd = 4.1; (n = 1,003) and Neuroticism: $\bar{X}$ = 10.9; Sd = 4.7 (n = 1,003) (Eysenck & Eysenck, 1968, p. 8). That the subjects in the present study scored higher in E and N than the norms is consistent with Eysenck's theory. Eysenck and Eysenck (1968) indicate that E and N are developmental in nature--with E and N decreasing with age.

It was found too that E and N were negatively and significantly correlated ($r = -.169$, $p = .003$; $n = 308$) while sex

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*The mean and standard deviation for Extraversion were adjusted for the one item (Item 25) that was not scored, for reasons stated in chapter II.

was significantly related to N (r_{pb}* = .26, p = .00, n = 306) but not to E (r_{pb} = -.050, n = 306). Theoretically, E and N are not related though correlations of up to .16 have been reported (Eysenck & Eysenck, 1968, p. 15).

The positive and significant correlation between N and Sex shows that females were more neurotic than males. This is reflected in the number of males and females in the criterion groups as shown in Table 3. This sex-neuroticism relationship is consistent with Eysenck and Eysenck's report in the EPI manual (1968). There was no significant correlations between the dependent variable, fear of success, and any of the following variables: sex (r_{pb} = .022, n = 306); extraversion (r = .069, n = 308); and neuroticism (r = -.001, n = 308). The nonsignificant relationship of fear of success to sex supports the findings, reported in Chapter I, that fear of success is not sex-related. The nonsignificant linear relationship between fear of success, E and N is as would be expected since an interaction was hypothesized.

Fear of success, however, showed some association with School (eta = .141). This relationship was almost significant (F = 3.021, df: 2,305, p = .0502), as shown in Table 5, in an analysis of variance test. Thus using Scheffé simultaneous-confidence-interval post hoc technique, none of the contrasts was significant. The fear-of-success mean scores for the three schools, presented in

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* r_{pb} = point biserial correlation coefficient.

Table 3

Number of Male and Female Subjects in Each Criterion Group

		Stable	Neurotic
Extravert	Male	19[a]	8
	Female	6[a]	7
Introvert	Male	10	7
	Female	6	26

[a]SE group includes one subject who did not indicate his/her sex.

Table 4, indicate that the greatest difference was between Schools 1 and 3--with School 3 showing greater fear of success than School 1.

It may be noted that School 3 also had the highest mean age while School 1 had the lowest (see Table 1, p. 76). Nevertheless, there was no significant relationship between age and fear of success ($r = -.082$, $n = 306$).

School was not related to the other criterion measures, extraversion (eta = .089; F = 1.213; df: 2,305, n.s.) and neuroticism (eta = .066; F = .661, df: 2,305, n.s.). Thus the subjects from the three schools may be regarded as belonging to the same population with regard to the independent variables in this study.

Nonsignificant correlation between the order of cue-presentation and fear of success (total) ($r_{pb} = .051$, $n = 308$) shows that there was no order effect on the dependent measure. This is further supported by the nonsignificant difference (F = .807, df: 1,306, n.s.) between fear-of-success mean score (2.170) for individuals who responded to female cues first and fear-of-success mean score (2.336) for those who responded to male cues first.

In Table 6 are presented the fear-of-success means and standard deviations for each criterion group. The mean score on fear of success for the total sample ($n = 308$) elicited using four cues is 2.250, sd = 1.618. This mean value though low is consistent with those reported by Kimball and Leahy

Table 4

Fear-of-Success Means ($\bar{X}$), Standard Deviations (sd) and Number of Subjects (n) by School

School	n	$\bar{X}$	sd
1	146	2.027	1.648
2	107	2.374	1.581
3	55	2.600	1.547

Table 5

Results of an Analysis of Variance Test with School as the Independent Variable and with Fear of Success as the Dependent Variable

Source	df	MS	F	p
School	2	7.806	3.021	.0502
Error	305	2.584		

Table 6

Fear-of-Success Means ($\bar{X}$), Standard Deviation (sd) and n for the 4 Extraversion by Neuroticism Groups

Groups		Stable	Neurotic
Extravert	$\bar{X}$	2.462	2.933
	sd	1.529	1.668
	n	26	15
Introvert	$\bar{X}$	2.375	1.879
	sd	1.455	1.746
	n	16	33

Note. The fear-of-success mean score and standard deviation for the whole sample from which the criterion groups were selected are $\bar{X}$ = 2.250, sd = 1.618, n = 308.

(1976) for Grade 12 subjects. Kimball and Leahy obtained fear-of-success mean scores, on 2 stories, of 1.26 (n = 19) for males and 1.23 (n = 67) for females. However, on 3 stories, Jackaway and Teevan (1976) obtained a mean fear-of-success score of 8.05 and 9.02 for male and female high school seniors, respectively. The empirically-derived scoring system with differentially weighted categories (Horner et al., 1973 in Tresemer, 1977) was employed in either study. With only two studies at the high school level for comparison, it is difficult to conclude whether or not the fear-of-success scores in the current study are typical of the age level involved. The cell means show that NEs and SIs scored higher in fear of success than SEs and NIs, respectively, contrary to expectation.

Using the F_{max} test for unequal cells (Hartley, 1950) the assumption of homogeneity of variance was not rejected (F_{max} = 1.44, n.s., df = 4, 33). The results of the hypothesis testing are reported in the next section.

Results

In Table 7 are presented the results of an analysis of variance test of the null hypothesis. An unweighted means analysis of variance for unequal cells was used. This approach was used because it is a more conservative test than a data-dependent analysis (see Timm & Carlson, Note 5). As

Table 7

Results of Analysis of Variance Test with Extraversion and Neuroticism as the Independent Variables and Fear of Success as the Dependent Variable

Source	df	MS	F	P
Extraversion (E)	1	6.578	2.496	.118
Neuroticism (N)	1	.003	.001	.973
E x N	1	4.734	1.796	.184
Error (Within Cell)	86	2.636		

shown in Table 7, neither the main effect of E nor that of N was significant. Similarly, the interaction between E and N on fear of success was not significant. As was noted earlier, the SIs and NEs scores slightly higher in fear of success than NIs and SEs, respectively, contrary to expectation.

In the following section possible explanations for the results are considered.

Discussion

The results presented in the preceding section failed to support the research hypothesis. To explain these results the interpretations of the theories will be re-examined. Other possible causes of the failure to obtain the expected results are also explored. The theories are examined first. This is followed by a discussion of design problems that may have affected the results.

Theory. There is evidence to support the expectation that neuroticism (N) interacts with extraversion (E) in their effect on various behaviours in normal individuals (Furneaux, 1961; Hare, 1965; Hetherington & Klinger, 1964; Theron, 1948). Nevertheless, Eysenck and Eysenck (1968) noted that high N individuals may not manifest the characteristics expected of neurotic individuals until they experience emotional breakdown or stress that initiates those behaviours.

If N is not involved in the development or expression of fear of success extraverts can be argued to show greater

fear of success than introverts. This is because extraverts have lower cortical excitation/inhibition balance. This engenders in them stimulus-seeking, a liking for social interaction and group activities. Through these extraverts obtain the needed additional stimulation. Consequently, they should, more-than introverts, be concerned about and affected by negative consequences of success such as loss of friendships, social rejection and ostracism. The results of this study fail to support this explanation (see Table 7). The main effect of extraversion was not significant, ($F = 2.496$, $p = .118$), though in the expected direction.

Additionally, if one accepts that high N does not influence behaviour until some stress occurs no interaction would be expected between E and N on fear of success. However, the mean scores in Table 6 show that there is virtually no difference in fear of success among the stable individuals, whereas there is a considerable difference between the neurotic groups (NE: $\bar{X} = 2.933$; NI: $\bar{X} = 1.879$). This relationship is shown more clearly in Table 8 which shows the correlations between extraversion and fear of success associated with various cut-off points on N. Among the stable individuals ($N < 10$) there is no relationship between E and fear of success but among the neurotic individuals ($N > 14$) there is a positive but nonsignificant relationship between fear of success and extraversion ($p = .07$). This is an indication

Table 8

Correlations between Extraversion and Fear of Success Scores of Subjects Above and Below Different Cut-Off Points on Neuroticism

Cut-Off Point on Neuroticism	Below CP[a] (n)	r	P	Above CP (n)	r	P
5	11	.032	NS	297	.064	NS
6	31	.004	NS	277	.066	NS
7	43	.023	NS	265	.069	NS
8	66	-.031	NS	242	.085	NS
9	86	.039	NS	222	.071	NS
10	109	.014	NS	199	.087	NS
11	141	.007	NS	167	.100	NS
12	165	.002	NS	143	.115	NS
13	192	.029	NS	116	.112	NS
14	232	.011	NS	76	.210	.068
15	248	.010	NS	60	.202	.122
16	263	.040	NS	45	.149	.329
17	277	.045	NS	31	.165	.376
18	287	.039	NS	21	.280	.219
19	296	.045	NS	12	.330	.300

[a]CP - Cut-off point.

that perhaps N does play a role in fear of success. Thus, alternative explanations for the results of the study need to be explored. This is done in the rest of this chapter.

A second consideration with respect to Eysenck's theory is the possibility that socialization, rather than sociability, is more important in the development and manifestation of fear of success. If this were true, NIs would be expected to show greater fear of success than NEs, SEs and SIs. This is because NIs condition well and acquire societal expectations and mores (Eysenck, 1957, 1967). In fact they have been described as oversocialized (Eysenck, 1957, 1967) and as very sensitive to punishment (Gray, 1972). Thus NIs would be very conscious and aware of the extent to which an individual's success is tolerated without envy or social rejection. NEs, on the other hand, would be expected to show less fear of success. This is because they condition poorly (Eysenck, 1967), are less sensitive to punishment (Gray, 1972), and are poor in learning anticipatory and avoidance responses (Trasler, 1973).

The results of the present study (see Table 6) do not support this alternative explanation. Neurotic extraverts, in fact, showed greater fear of success ($\bar{X}$ = 2.933, sd = 1.668; n = 15) than NIs ($\bar{X}$ = 1.879, sd = 1.746; n = 33).

This result may have an important implication for the development of fear of success. It is assumed that fear of

success is developed early in life in conjunction with sex role standards (Horner, 1968), in other words, through the process of socialization. This trend for NEs to be higher in fear of success than NIs indicate that probably sociability, rather than socialization, is more relevant to the development and the incidence of fear of success. This speculation is strengthened by the significant correlation ($r = .57$, $p = .001$ (for women); $r = .35$, $p = .05$ (for men)) which Karabenick (1977) obtained between fear of success and n Affiliation. The latter shares with sociability the same physiological bases--low excitation/inhibition balance and the consequent need for additional stimulation.

It may be desirable to investigate more directly and systematically the relationship among sociability, socialization and fear of success. If such an investigation shows a stronger association between fear of success and sociability than with socialization, it may help explain the non-significant relationships often reported between fear of success and sex role orientations (Depner & O'Leary, 1976; Peplau, 1976). Researchers relating fear of success to sex role orientation, and similar concepts, base their expectations on Horner's assumption that fear of success is a function of socialization.

As noted in Chapter I, Eysenck postulated that physiological differences lead to differences in excitation/inhibition

balance and in the reactivity of the autonomic systems. These phenomena form the bases of personality differences.

Specifically, Eysenck proposed that excitation/inhibition balance is the basis of extraversion and introversion. Low cortical excitation and high inhibition characterize the extravert while the introvert is characterized by high excitation and low inhibition. The extravert seeks additional stimulation in order to maintain optimal levels of arousal required for any activity. He obtains this stimulation through social interaction and physical activities. He is thus described as sociable and outgoing. The introvert, on the other hand, seeks to reduce his arousal to the optimal level that is conducive for normal functioning. Consequently, he avoids social interaction and is withdrawn.

Extraversion-Introversion interacts with Neuroticism-Stability to produce specific characteristics (Eysenck, 1967). N is proposed to be a function of the threshold of activation of the visceral brain and the hypothalamus (Eysenck, 1967). The lower the threshold of activation of these structures, the higher the neuroticism. The individual with a high threshold of activation of the structures is said to be stable.

Among the individuals high in N, predominance of the sympathetic system is said to characterize NIs. Conversely, a predominance of the parasympathetic system characterizes

the NE (Eysenck, 1967). Sympathetic and parasympathetic autonomic systems are associated with unpleasurable and pleasurable emotions, respectively (Eysenck, 1967; Gellhorn, 1968). A combination of high E and high N (NE) gives rise to such characteristics as outgoingness, impulsiveness, stimulus-seeking, low sensitivity to pain (Eysenck, 1967), low sensitivity to punishment (Gray, 1972), and inability to learn anticipatory responses (Trasler, 1973). The NE is undersocialized as a consequence of these characteristics.

The NI, on the other hand, is excessively fearful, unsociable, withdrawn, oversocialized, and has a low self-esteem (Eysenck, 1957, 1967). The SE is outgoing, sociable, and active while the SI is introspective, stimulus-avoiding, and prefers to be alone (Eysenck, 1967).

If one accepts Eysenck's theory of personality with respect to E and N, it seems reasonable to expect as was hypothesized in this study that NIs and SEs show greater fear of success than NEs and SIs. But if N is not effectively involved in the behaviour of normal individuals then extraverts would be expected to show greater fear of success than introverts.

A third theoretical consideration is the possibility that some of the origins of fear of success examined in Chapter I are not applicable to the age group used in the present study. Tresemer (1977) extended the origin of fear

of success proposed by Horner (1968) and made it more general and applicable to both sexes. According to Tresemer's propositions (1977), fear of success arises from the concern about maintaining social and/or personal boundaries. This concern, in turn, is a function of anxiety arising from three sources:

1. performance, or competence that is inconsistent with one's ability or inconsistent with socially expected standard;

2. sacrifices one makes and inconveniences one endures in an attempt to remain successful; and

3. social ostracism or rejection as a consequence of performing at a higher level, or showing greater competence, than the rest of the group can tolerate.

The first and third origins are likely to be more pertinent for this age group than the second one. Adolescents like to have a feeling of belongingness to their social group. Therefore, social rejection and performing at a level which the group considers inappropriate would be of greater concern to these high school subjects. Given these sources of fear of success, SEs who depend on group activities and social interactions for stimulation would show greater concern about being rejected by their social group or friends. Similarly, NIs who avoid social interactions, avoid being the centre of attraction and have excessive anxiety reactions and low self-esteem (Eysenck, 1957, 1967) would also show

fear of success. Their anxiety arises more from the fact that success or competence may draw attention to them.

NEs are not expected to show fear of success because they are impulsive, not sensitive to punishment and unable to learn and make anticipatory responses. NEs would fail to anticipate or show concern for future negative consequences of success or competence. SIs are socially withdtawn and prefer to work alone. The consequences of success that have to do with loss of friendships and ostracism which amount to stimulus deprivation would not arouse anxiety in them.

These expectations are the same as those tested in this study. Apart from theoretical problems, other aspects of the research design which may have affected the results are the nature of research subjects and the measurement techniques employed. These and the analysis techniques are considered next.

Research Subjects. It is possible that the research subjects were chosen from a population that is too young to show individual differences in fear of success. Horner's study (1972) showed a tendency for a greater percentage of college students (undergraduates) and professional secretaries to show fear of success than high school subjects. She concluded that fear of success is also a function of age.

At the high school level, remaining and succeeding in

school are taken for granted and striving for success is encouraged because schooling is compulsory and only very few students are ever unsuccessful. Therefore, the incidence and impact of fear of success are probably subdued and most people are low in fear of success. Subjects at the high school level, especially senior high school, comprise mainly adolescents some of whom are rebellious against adult standards and expectations. Thus some of these subjects may consider success undesirable simply because the parents or the adults in their lives not only consider success desirable but push these students towards success. This would, on the average, tend to lower the incidence of fear of success at the high school level. This is because according to Horner's formulations, fear of success occurs in individuals who consider success as important and for whom it is a possibility.

Students at the university level, on the other hand, comprise a more selected group for whom success is important, if not for their own sakes, for the sake of whoever has encouraged them to go on to college or university. Thus success may be considered to be more desirable, on the average, to university students than to high school students. Therefore, if negative consequences attend success or a show of competence, there should be greater incidence of fear of success at the university level than at the high school

level. Also at the college or university level, the individual makes a voluntary, personal and overt decision to stay in school, to strive or not to strive for success. Additionally, the individual has alternatives, such as marriage, taking a job, which may suffer or be deferred if he decides to remain in school or strive to succeed. Williams (1977) holds a similar view on the influence of age on fear of success.

Not only should fear of success be accentuated at the university level because of age and selectness of the population but the extent to which an individual can risk negative consequences in pursuit of a valued goal becomes more important. Since individuals decide what options to take or forgo, individual differences in personality may begin to play a greater role in the incidence of fear of success than at the high school level. This is because only those who are susceptible to fear of success will manifest the increase in fear of success at the university level. Individuals who do not expect negative consequences and/or who do not perceive the consequences of success as negative will not show increased fear of success at the university level, though the situational variables are more conducive for arousing fear of success.

If fear of success is a function of age one would expect to find a marked difference in the fear-of-success mean

scores for high school and college (university) students. An examination of some data in the literature does not indicate such a trend. The 1973-empirically derived scoring system was used in all the studies examined below.

Kimball and Leahy (1976) obtained fear-of-success mean scores ranging from -.38 (n = 21) to 2.27 (n = 37) on two stories for Grades 6 to 12 subjects. (No standard deviations were reported.) On three stories, Jackaway and Teevan (1976) obtained mean fear-of-success scores of 8.05 and 9.02 for male and female high-school seniors, respectively. At the college level, Esposito (1977) obtained a fear-of-success mean score of 4.4 (sd = 3.6, n = 75) for female subjects. There were five stories per subject. Finally, Griffore (Note 4) obtained a median of 5 (and a range of 0 to 13) for 68 graduate students who wrote three stories each.

Though no inferential test was performed to test the difference in fear-of-success mean scores between high school and university levels, the scores do not indicate any great increase at the university level. If any thing, the means are lower at the university level. However, no serious conclusion can be drawn from only four studies.

Another way the age and nature of research subjects may help explain the results of the present study is if the patterns of the relationship between E, N, and fear of success are similar to those between E, N, and achievement at different

age levels. Studies relating extraversion with performance show that extraversion correlates positively to performance in junior high school (Entwistle, 1973; Ridding, 1967) but negatively in senior high school and university (Entwistle, 1973; Lavin, 1967; Savage, 1962). The effect of N is inconsistent (Entwistle, 1973). If such a changeover relationship exists between E, N, and fear of success then perhaps at younger ages NEs and SIs show greater fear of success while later the NIs and SEs would show greater fear of success than NEs and SIs. No ready explanation of such an interaction is available, however. The possibility of such a relationship needs first to be investigated through a longitudinal or a cross-sectional study.

The various ways in which the nature of the research subjects may have affected the results of the study have been examined above. The plausibility of some of the speculations need to be ascertained through systematic studies. Another area in which to seek for explanations for the results obtained in this study is the measurement technique. This is examined in the following section.

Measuring Instrument. The internal consistency reliability (alpha) coefficient for the TAT for fear of success was .141. The inter-cue correlations are shown in Table 9. Only cues 1 and 3 were significantly correlated with each other ($r = .137$, $p = .02$, $n = 308$). Both the alpha

Table 9

Intercorrelations among the Four TAT Cues Used in Eliciting Fear of Success in Research Subjects

Cues	1	2	3	4
1		.020	.137[a]	.031
2			.058	-.039
3				.003

[a] $p = .02$ (two-tailed test), $n = 308$.

coefficient and inter-cue correlations are typically low. Marshall and Karabenick (1977) reported inter-cue correlations ranging from .16 to .21. Entwistle (1972) in a study on the reliability of TATs for n Achievement obtained equally low inter-cue correlations and comparably low alpha coefficients (alpha: from .27 to .43) (Entwistle, 1972, pp. 380-381). Doubts have often been raised about the validity of measures obtained from such unreliable instruments (Entwistle, 1972). Atkinson has, however, argued that the construct validity of the TAT n Ach score does not depend upon the internal consistency reliability of the test (Atkinson & Raynor, 1978, p. 197).

Atkinson and his colleagues explain low inter-cue correlations in TAT measurements in the following manner: Cues provide an opportunity for a subject to write about achievement (or the pertinent motive). In so far as cues similar to those appearing in the picture (or verbal leads) have been associated with achievement in the past experience of the person, the picture will elicit achievement-related associations in the story (McClelland et al., 1976, p. 201). The degree to which a given stimulus cue was associated to the subjects' past experiences differs from person to person. Thus one cue may elicit more of the given motive in one subject than in another while the next cue makes no difference or is reversed. The above arguments are applicable to TAT

tests of fear of success since equivalent, and even the same, cues are used to elicit both n Achievement and fear of success.

Therefore, though the alpha coefficient is low, the results of the study may not be a function of low test reliability or low test validity.

The response patterns of the criterion groups were examined to investigate any differences in the frequency of imageries in the six scoring categories. The number of subjects who wrote fear-of-success imageries classified into given categories is shown by cue in Appendix F. It was found that, for any given cue, the pattern of responses was similar for all the criterion groups. This pattern, however, varied from cue to cue. In other words, any given cue elicited similar fear-of-success imageries from each criterion group. These imageries were different for the different cues, however. For Cue 1, the most frequent category for all criterion groups was Category 5: Absence of Instrumental Activity. This was followed by the sixth category--Absence of Others. In Cue 2, the most frequent categories were the fifth (Absence of Instrumental Activity) and the third (Interpersonal Relationship). In Cue 3, the most frequent categories were the first (Contingent Negative Consequences) followed by the sixth (Absence of Mention of Other Persons). For the fourth cue, the third and first categories were the most frequent, that is, the Interpersonal

Relationship and the Contingent Negative Consequences, respectively.

An examination of the cues showed that Cues 1 and 3 appear to be at a different level of ambiguity from cues 2 and 4 (the cues are included in Appendix A).

Cues 1 and 3 are comparable to the cues which McClelland et al. (1976, p. 199) described as suggestive of achievement. Those cues in McClelland et al.'s study were designated as such because they contained obvious intimations of work situations e.g. machinery, work aprons, tools, desks, and papers. An example of this type is "Two men working in a shop" (McClelland et al., 1976, p. 200). Cues 1 and 3 in the current study contain similar achievement-related intimations such as microscope (Cue 1) and Chemistry Lab (Cue 3) and thus can be classified as suggestive of achievement. McClelland et al. (1976) designated a second type of cue as less suggestive of achievement because they have fewer intimations of work situations. An example of this type is "Two men, apparently conversing, standing in a well furnished room" (McClelland et al., 1976, p. 200). In the present study Cues 2 and 4 are of this type.

Tresemer (1977) discussed what he called two opposing views on the incidence of negative imagery in TAT stories in varying arousal conditions. Different arousal strengths can be attained by either varying the specificity of the cue or

by varying the situation through different instructions (McClelland et al., 1976; Scott, 1956).

McClelland (1951) proposed that under low arousal conditions, called the Wish-Fulfilment stage, positive imageries outnumber negative ones. At an intermediate level of arousal, --Push Toward Reality--negative imageries outnumber the positive ones. Finally, at high levels of arousal--the Defense stage--negative imageries decrease while positive ones increase. McClelland's model, essentially, presents a curvilinear relationship between the incidence of negative imageries and arousal power of the situation.

Scott (1956) holds the other view. Scott investigated what happens when an individual is faced with a situation that poses both a goal as well as a threat. He concluded from his findings that there is an increasing monotonic relationship between fear of an event (and consequent avoidance imageries) and arousal level of the situation or cue. Scott (1956, pp. 344-345) further proposed that at very high levels of arousal, the subjects suppress imageries related to the motive in question. This stage would coincide with McClelland's third stage--Defense stage. Thus McClelland's and Scott's models cannot be described as opposed to each other. However, McClelland's model deals with negative imageries under the n Ach scoring system. These imageries are not all necessarily avoidance imageries. Thus McClelland's model may not be

totally applicable to the present study.

In either model, as Tresemer (1977, p. 101) aptly noted, the onset of the Defense Stage (McClelland), or the suppression of the pertinent imageries (Scott, 1956) varies with individuals. Both McClelland (1951) and Scott (1956) imply that the onset of these stages depended on the intensity of arousal associated either with the cue or with the situation. Neither considered the individual differences in arousal. This third source of variation in the arousal intensity in a given situation will be considered with respect to the present study.

Introverts have been found to be higher in arousal than extraverts. This difference is manifested in various behaviours such as stimulus avoidance (Farley, 1967), stimulus-deprivation tolerance (Lynn & Eysenck, 1961), and greater vigilance (Carr, 1970; Hogan, 1966). These differences in arousal stem from the fact that introverts have higher cortical excitation/inhibition balance than extraverts. Extraverts require additional stimulation for normal functioning thus they seek additional stimulation to raise their arousal levels to an optimal level for a given task or condition. Thus any given intensity of stimulation would be experienced as effectively lower by extraverts than by introverts (Eysenck, 1967, p. 110). Consequently, given a certain intensity of stimulation, introverts would be expected to

reach their optimal level of arousal earlier than extraverts (Eysenck, 1967).

Additionally, it has been demonstrated that high neuroticism provides an added stimulation to an individual (Eysenck, 1967; Furneaux, 1961; Gellhorn, 1968). This is not surprising since the stimulation of the hypothalamus--one of the main physiological substrata of neuroticism--generates facilitatory impulses to the cortex (Gellhorn, 1968; Morgan, 1965).

Consequently, it can be said that the SE has the lowest level of arousal because he is low in both cortical excitation and neuroticism. The SI and the NE would come next, because each is high on only one of the two sources of arousal--cortical excitation (SI), and neuroticism (NE). The NI would be highest in arousal in any given condition because he is high in both sources. Thus the NI would be expected to experience any given intensity of arousal as highest and would be the first to reach his optimal level. The SI and NE would be next followed by SE.

In an arousing situation such as is presented in Cues 1 and 3 in the present study, it may be hypothesized that the NI's arousal is increased beyond his optimal level--i.e. over-arousal. Over-arousal has been postulated to have a similar effect on various behaviour as under-arousal (Atkinson & Raynor, 1978; Eysenck, 1967; Yerkes & Dodson,

1908). Thus NIs would be expected to respond to the cues with few avoidance imageries (Scott, 1956).

The SE is low in arousal and the arousing power of the cues raises the arousal level to a level, presumably, still below the optimal level. He may thus write a few negative imageries. In accordance to Scott's model (1956) the SE's stories should have more nonavoidance imageries than avoidance ones at this level.

Cues 1 and 3 provide additional stimulation to NEs and SIs. In Scott's model, increased arousal will lead to an increase in avoidance imageries. Thus NEs and SIs who may be regarded to be at an intermediate level of arousal, compared with NIs and SEs would be expected to have more success avoidance imageries.

In a less arousing situation such as is presented in Cues 2 and 4, however, it would be predicted from Scott's model that the criterion groups do not differ in fear of success. It would also be predicted that fear-of-success mean score would be lower than that elicited by Cues 1 and 3 since the number of avoidance imageries increases with cue strength (Scott, 1956, p. 344).

The above speculations imply a three-way interaction among E, N, and cues. This was, however, not supported by the data. A repeated-measures analysis of variance test, shown in Table 11, indicates a nonsignificant extraversion,

by neuroticism by cue interaction.

The significant main effect of cue, ($F = 48.685$, df: 1, 86, $p = .001$) and the cell means in Table 10 show that Cues 2 and 4 elicited more fear-of-success imageries than Cues 1 and 3. This is contrary to what would be expected from Scott's model. Therefore, this model fails to explain adequately the nature of the results obtained in the current study.

An alternative model can explain why Cues 2 and 4 elicited higher fear-of-success imageries than Cues 1 and 3. Kenny and Bijou (1953), Murstein (1964) and Fleming et al. (Note 2) have concluded that cues at an intermediate level of ambiguity are most appropriate for use in projective measurements, with particular respect to TAT. The more specific ones have been found either to arouse anxiety and to lead to the suppression of the imageries that are of interest (defensive responses) or to lead to cue-dominated imageries (Murstein, 1964). Thus it is possible that in the present study, Cues 1 and 3, which were more achievement related, aroused greater anxiety and led to defensive responses, hence the lower fear-of-success scores. On the other hand, Cues 2 and 4 which were less specific and less achievement-related, possibly, did not arouse much anxiety and the students thus wrote less defensively.

This alternative explanation accounts for the higher

Table 10

Fear-of-Success Means ($\bar{X}$), Standard Deviation (sd) for the Criterion Groups on Cues 1 and 3 (FO13) and Cues 2 and 4 (FO24)

		Stable		Neurotic	
		FO13	FO24	FO13	FO24
Extravert[a]	$\bar{X}$	.423	2.038	.933	2.000
	sd	1.172	1.183	.961	1.069
Introvert	$\bar{X}$	.750	1.625	.424	1.455
	sd	.931	.957	1.032	1.227

[a]Number of subjects in each group:
SE - 26
NE - 15
SI - 16
NI - 33

Table 11

Results of Analysis of Variance Test With Repeated Measures with Extraversion, Neuroticism and Cues as Independent Variables and with Fear of Success as the Dependent Variable

Source	df	MS	F	P
Between Groups				
Extraversion (E)	1	3.289	2.496	.118
Neuroticism (N)	1	.002	.001	.973
E x N	1	2.367	1.796	.184
Error	86	1.318		
Within Group				
Cues (C)	1	53.159	48.685*	.0001
E x C	1	1.524	1.396	.241
N x C	1	.391	.358	.551
E x N x C	1	1.252	1.147	.287
Error	86	1.092		

*Significant at .05 level.

fear-of-success imagery elicited by Cues 2 and 4 than by Cues 1 and 3. But it does not provide bases on which to make specific speculations or predictions regarding the criterion groups.

It appears that many of the models relating to projective TAT measurements are based on the intensity of arousal of the cue and/or the situation. Little consideration was given to the arousal level of the individual. It has been argued that the arousal power of a situation will differ for different individuals and that different predictions could be made for them depending on their locations on the arousal continuum. This location for any given individual is probably never known. However, it is possible to locate the criterion group to which he belongs on the continuum in relation to other groups. A prior knowledge of one's position in regard to the E and N dimension makes this possible.

An important factor that may influence the intensity of arousal for an individual in a given situation is the salience of the situation to him. Fear of success is part of a tradition of expectancy-value theory of achievement motivation (Horner, 1968). One postulate of these theories is that the strength and direction of one's behaviour are determined by the belief or expectation one has about the probability and consequences of one's behaviour and by the value which one places on these consequences (Atkinson, 1964;

Horner, 1968). Thus a particular cue may not possess the same arousal power to SEs and NEs because SEs, for example, may expect negative consequences from actions implied in the cue while NEs may not. In another case, two different individuals may expect negative consequences from an action, but only one is worried about these consequences while the other is not. The cue may thus arouse anxiety in one individual and not in the other.

If the salience of the situation is important then, there is yet another alternative explanation for the behaviour pattern of the criterion groups in this study. If SEs and NIs were more attentive to fear-of-success arousing situations as hypothesized, Cues 1 and 3 would be effectively more arousing to them than to NEs and SIs. Thus possibly SEs and NIs were at the 'Defense Stage' (McClelland, 1951; Scott, 1956) of arousal while writing about Cues 1 and 3. On the other hand, NEs and SIs might have been at the low-to-intermediate level of arousal. In other words, SEs and NIs might have been so sensitized by the anticipated consequences of competence and striving for success implied in Cues 1 and 3 that they suppressed their fear-of-success imageries. Conversely, SIs possibly did not have a great concern about the negative consequences of the situation in Cues 1 and 3. Also NEs perhaps did not anticipate as much, the negative consequences of the situation. Thus Cues 1 and 3 might have been

only mildly arousing to SIs and NEs. The NEs and SIs might have been at intermediate level of arousal where in Scott's model avoidance imageries are highest. SEs and NIs were perhaps at the stage of high arousal where avoidance imageries are suppressed due to excessive anxiety. As a result, SEs and NIs may appear to show less fear of success than NEs and SIs on Cues 1 and 3. In Cues 2 and 4, however, since there were no obvious achievement intimations to arouse anxiety, SEs and NIs would be expected, as hypothesized in this study, to show greater fear of success than NEs and SIs.

As shown in Table 11, however, the E by N by Cue interaction was not significant. The nonsignificance of this three-way interaction may possibly be a function of the nature of the subjects as has been suggested in a preceding section. Grade 12 subjects were used in this research because it was felt that, if fear of success has the debilitating effect it is proposed to have (Horner, 1968), at the Grade 13 or university level some students who are high in fear of success would have left the school system. In retrospect, however, this decision or choice may have affected the results of this study. A review of some of the assumptions underlying the arousal of fear of success shows how this could have happened.

Fear of success is assumed to be more strongly aroused in individuals who are motivated and aspire to succeed and

who are capable of succeeding. It is also assumed to be more strongly aroused in competitive achievement situations (Horner, 1968, pp. 22-23). It can be argued that the select population at the Grade 13 or the university level comprises motivated and aspiring individuals who are not only capable but are striving to succeed. It may also be argued that competition is keener and more evident at these levels than at Grade 12 or below because the students at Grade 13 and at the university level are mutually aware of one another's capabilities. Thus it may be that it is among such a select group that personality/individual differences in anxiety or concern about negative consequences of success or competence would be more evident than at the Grade 12 level.

The above discussion indicates that a fear-of-success score from a TAT story is probably a function of more variables than was envisaged or considered. The exact nature of the relationships of these variables need to be more systematically investigated.

In summary, the results of testing the hypothesis of this study failed to support the expectations. Possible explanations and sources of error were suggested and discussed. These include the following:

1. It was suggested that a nonsignificant interaction result was possible if neuroticism did not play any role in the behaviour of normal subjects. If this were true, it was

argued that extraverts would be expected to show greater fear of success than introverts. The results of the test of the hypothesis of the study showed a positive but nonsignificant trend in this direction. It was, however, noted, based on (a) results of previous studies and (b) a comparison of the difference in fear-of-success mean scores between NIs and NEs and that between SEs and SIs, that neuroticism possibly plays some role in the behaviour of normal subjects.

2. Examined also was the possibility that sociability was more relevant than socialization to the development and incidence of fear of success.

3. The possibility that some of the sources of fear of success postulated by Tresemer (1977) may not be pertinent to high school subjects was also considered. It was argued that the expectation would remain the same even if only 2 of the 3 sources of fear of success were present in that age group.

4. The possibility that the research subjects were selected from a population where individual differences in the incidence and the impact of consequences of fear of success and still low was considered. Some researchers suggested that fear of success comes into play only when the individual is ready to take up his/her role as an adult member of the society (Horner, 1972).

It was argued that one additional reason to expect a

lower incidence of fear of success, on the average, in high school students is the unselected nature of the population compared to the college population. An examination of fear-of-success mean scores reported in previous studies with high school and university subjects, however, did not indicate an increase in fear of success among university students. However, only data from four studies were available for such a comparison.

5. The possibility of an interaction among extraversion, neuroticism, and age on fear of success was also considered.

6. The reliability and validity of the fear of success instrument was reconsidered.

7. The response patterns of the criterion groups for each cue were examined. It was found that for any given cue, the pattern of responses among the criterion groups was similar. This pattern, however, varied from cue to cue.

8. Examined also were the complex relationships that possibly exist among the arousal level of an individual, the arousal power of the cue or a situation, the salience of the situation depicted in the cue and the incidence of fear of success. No one variable provided a satisfactory explanation of the results of this study. The discussion served, however, to make one aware that a TAT score, such as fear-of-success score may be a function of a complex relationship among many variables.

In conclusion, it appears that greater care is required in the choice of (a) research subjects and (b) stimulus cues used in fear-of-success studies. It may turn out that it is not enough for a cue to be conceptually classified as non-specific. Perhaps it is important to know, beforehand, the exact levels of specificity or ambiguity of cues as this may affect subjects' responses differently. In addition, it seems appropriate to re-evaluate the assumption regarding the role of socialization in the development of fear of success. The importance of the above variables need first to be systematically investigated through further research. Suggestions to this end are presented in the next section.

Implications for Further Research

Results of this study led to certain speculations and questions which need to be investigated further. First, it may be desirable to replicate this study using undergraduates in order to determine if the results obtained here are restricted to Grade 12 subjects, as speculated. This may also be important since the bulk of the research on fear of success has been done with university students. It may be that there is an interaction among E, N, and age on fear of success similar to that reported between extraversion-introversion and age on achievement.

Secondly, it is suggested to investigate whether

cue-ambiguity interacts with extraversion and neuroticism on fear of success. To do this, it may be necessary, with the aid of trained judges, to predetermine the ambiguity levels of cues to be used.

Thirdly, if cue-ambiguity interacts with E and N on fear of success, it will be necessary to find out how these fear of success scores relate to performance in an intellectual task in competitive and noncompetitive conditions.

Fourthly, it is suggested to investigate more directly and systematically the relationship among sociability, socialization, and fear of success.

SUMMARY

The nature of results from studies reviewed in the area of fear of success precipitated this investigation. The purpose of the study was to examine and to facilitate an understanding of the incidence and psychodynamics of fear of success. An examination of Horner's formulations on fear of success indicated that only (a) individuals who expect that negative consequences will follow their success or show of competence in a situation and (b) those who are concerned about these negative consequences would manifest fear of success. These negative consequences of success were mainly interpersonal in nature. It was argued that Eysenck's personality theory of extraversion and neuroticism would help in the identification of the individuals who are likely to expect their success or show of competence to be followed by negative consequences or who are likely to be worried by such an occurrence. Eysenck's theory has as its basis individual differences in physiological constitutions which manifest in various behaviour patterns.

It was predicted that stable extraverts and neurotic introverts, because of their functional differences in some physiological structures, would show greater fear of success than neurotic extraverts and stable introverts. This hypothesis was not supported, however.

Various possible sources of invalidity to the study were considered. It was concluded that probably more variables need to be considered before an accurate prediction can be made regarding the incidence and the dynamics of fear of success. It was also felt that greater care need to be taken in the choice of research subjects and the choice of stimulus cues employed in fear-of-success studies.

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APPENDIX A

INSTRUCTIONS AND TESTING MATERIALS FOR FEAR OF SUCCESS

CODE_____ NAME_____

DATE_____

SCHOOL_____

CUE INTERPRETATIONS

Instructions

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

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

You will have twenty (20) seconds to look at a verbal cue and then 4 minutes to write your story about it. Write your first impressions and work rapidly. I will keep time and tell you when it is time to finish your story and to get ready for the next cue.

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

Notice that there will be one page for writing each story, following the page on which the verbal cue is given. If you need more space for writing any story, use the reverse side of the previous page — the one on which the cue was presented. Do not turn or go on to the next page until I tell you to do so.

CAROL IS LOOKING INTO HER MICROSCOPE

Cue Number_____ Code Number_____

1. What is happening? Who are the persons?

2. What has led up to this situation? That is, what has happened in the past?

3. What is being thought? What is wanted? By whom?

4. What will happen? What will be done?

A YOUNG WOMAN IS SITTING IN A CHAIR
WITH A SMILE ON HER FACE

Cue Number_____ Code Number_____

1. What is happening? Who are the persons?

2. What has led up to this situation? That is, what has happened in the past?

3. What is being thought? What is wanted? By whom?

4. What will happen? What will be done?

AT THE END OF THE DAY

JOHN IS GOING BACK TO THE CHEMISTRY LAB

Cue Number_____ Code Number_____

1. What is happening? Who are the persons?

2. What has led up to this situation? That is, what has happened in the past?

3. What is being thought? What is wanted? By whom?

4. What will happen? What will be done?

A YOUNG MAN IS TALKING ABOUT
SOMETHING IMPORTANT WITH AN OLDER PERSON

Cue Number_____ Code Number_____

1. What is happening? Who are the persons?

2. What has led up to this situation? That is, what has happened in the past?

3. What is being thought? What is wanted? By whom?

4. What will happen? What will be done?

APPENDIX B

FEAR OF SUCCESS SCORING SYSTEM (1977-VERSION)

FEAR-OF-SUCCESS CATEGORIES

1. Contingent Negative Consequences (+1). These are scored when there is a movement, in the story, towards misfortune/disaster, tension or deprivation which comes because of something about the character involved. To be contingent, the fault for one's suffering must be one's own (Horner & Fleming, Note 1, p. 8).
2. Non-Contingent Negative Consequences (+1). These are scored when an event comes about through the impingement of external forces (Horner & Fleming, Note 1, p. 9).
3. Interpersonal Engagement (+1). This is scored when there is evidence that two or more people are actively involved with each other on an interpersonal level. This is often evidenced in instrumental activity toward an affiliative goal (Horner & Fleming, Note 1, p. 22).
4. Relief (+1). This is scored when there is movement from a state of relative tension or deprivation to a relief of that tension that takes place without the instrumental intervention of the character involved (Horner & Fleming, Note 1, p. 35).
5. Absence of Instrumental Activity (+1). This is defined as the absence of any overt activity or thoughts of a problem-solving nature by one or more characters in the story indicating that something is being done about attaining a goal (Horner & Fleming, Note 1, p. 41).

6. Absence of Others (-1). This is scored when there is no mention of another person or persons in the story besides the character in the stimulus (Horner & Fleming, Note 1, p. 49).

APPENDIX C

EYSENCK PERSONALITY INVENTORY
FORM A

PREVIOUSLY COPYRIGHTED MATERIAL

IN APPENDIX C, LEAF 160,

NOT MICROFILMED

160 - Eysenck Personality Inventory, Form A. by H.J. and Sybil B.G. Eysenck.

MAY BE OBTAINED FROM

Educational and Industrial Testing Service
Box 7234,
San Diego, California 92107

APPENDIX D

CORRECTION FORMULA FOR FEAR OF SUCCESS

Formula for Adjusting Fear of Success Scores for Story-Length

$$Y' = Y - \left| \left(r_{xy} * \frac{sd_y}{sd_x} \right) * X \right|$$

where Y' = the corrected fear of success score

Y = the uncorrected fear of success score

r_{xy} = the correlation between fear of success and TAT story-length for the group

sd_y = the standard deviation of the uncorrected fear of success for the whole group

sd_x = the standard deviation of TAT story-length for the group

$*$ = multiply

X = TAT story-length for a given individual

(Horner & Fleming, Note 1, pp. 55-56)

APPENDIX E

FREQUENCY DISTRIBUTION OF EXTRAVERSION AND NEUROTICISM SCORES FOR ALL SUBJECTS

The Frequency Distribution of Extraversion and Neuroticism Scores for all Subjects (N = 308)

Extraversion Score	Frequency	Neuroticism Score	Frequency
24	0	24	0
23	2	23	0
22	2	22	1
21	1	21	5
20	5	20	6
19	7	19	9
18	19	18	10
17	25	17	14
16	23	16	15
15	30	15	16
14	28	14	40
13	38	13	27
12	40	12	24
11	27	11	32
10	24	10	23
9	6	9	20
8	13	8	23
7	7	7	12
6	3	6	20
5	3	5	6
4	2	4	1
3	1	3	2
2	2	2	1
1	0	1	1

APPENDIX F

DISTRIBUTION OF FEAR-OF-SUCCESS IMAGERIES ACCORDING TO CRITERION GROUP, CUE AND SCORING CATEGORIES

The Distribution of Fear-of-Success Imageries Written by the Criterion Groups According to Cue and Scoring Categories

Cues	Criterion Groups	Scoring Categories* 1	2	3	4	5	6	Total
1	SE	2	0	1	0	9	6	6
	NE	2	1	2	0	7	2	10
	SI	1	1	1	0	9	3	9
	NI	1	0	1	0	10	7	5
	Total	6	2	5	0	35	18	
2	SE	1	1	15	0	21	3	35
	NE	2	1	9	0	9	0	21
	SI	3	0	8	0	11	1	21
	NI	2	0	17	0	19	4	34
	Total	8	2	49	0	50	8	
3	SE	6	1	3	0	0	5	5
	NE	4	0	2	0	0	2	4
	SI	3	1	0	0	0	1	3
	NI	9	1	1	1	3	6	9
	Total	22	3	6	1	3	14	
4	SE	6	2	6	0	4	0	18
	NE	5	1	2	0	1	0	9
	SI	1	1	2	0	1	0	5
	NI	3	0	9	0	2	0	14
	Total	15	4	19	0	8	0	

*Categories 1 to 5 have a weight of +1 each, while Category 6 has a weight of -1.

APPENDIX G

SUBJECTS' DATA ON ALL VARIABLES

Code Interpretation

CODE - Students' Code Numbers

SCHOOL - 1 - School 1
2 - School 2
3 - School 3

SEX - 1: Male Subject
2: Female Subject

CORD - Order of Cue Presentation
1: 2 Cues Depicting Female Characters presented first
2: 2 Cues Depicting Male Characters presented first

FOS1 - Fear of Success Score from Cue 1

FOS2 - Fear of Success Score from Cue 2

FOS3 - Fear of Success Score from Cue 3

FOS4 - Fear of Success Score from Cue 4

FOST - Total Fear of Success Score

E - Extraversion-Introversion

N - Neuroticism - Stability

L - Lie Scale

AGE - Students' Age in Years

STL - Total Story Length of Each Subjects 4 TAT Stories

* - Subjects deleted because they have either (a) Incomplete Data on Fear of Success or (b) L-Score greater than 5.

CODE	SCHOOL	SEX	CORD	FOS1	FOS2	FOS3	FOS4	FOST	E	N	L	AGE	STL
1	1	1	1	-1	0	2	1	2	10	11	4	16	276
2	1	2	1	0	2	0	0	2	16	8	3	16	394
3	1	1	1	-1	1	0	0	0	17	12	5	17	307
4	1	1	1	-1	2	1	0	2	14	13	3	17	321
5	1	1	1	-1	0	0	0	-1	14	10	0	17	276
6	1	1	1	0	0	2	0	2	10	11	1	17	341
7	1	1	1	0	2	0	0	2	16	6	5	17	358
8	1	2	1	-1	0	0	0	-1	17	14	4	17	311
9	1	1	1	0	1	0	0	1	13	9	0	17	416
10	1	2	1	1	1	0	0	2	17	14	1	17	231
11	1	1	1	0	0	0	0	0	13	6	4	16	295
12	1	1	1	1	1	2	0	4	12	4	1	16	417
13*	1	2	1	-1	0	-1	0	-2	9	4	6	17	148
14	1	1	1	2	1	1	1	5	17	10	5	16	218
15	1	1	1	0	0	1	0	1	12	11	5	17	386
16	1	1	1	-1	1	1	0	1	12	13	3	17	291
17	1	2	1	0	2	0	1	3	12	8	1	16	418
18	1	2	1	0	1	0	1	2	14	15	1	18	391
19	1	2	1	0	1	1	0	2	10	16	3	17	438
20	1	1	1	-1	0	0	1	0	12	8	3	17	313
21	1	1	1	1	2	1	2	6	9	20	2	17	354
22	1	2	1	0	2	0	0	2	18	17	0	17	367
23	1	2	1	1	0	-1	0	0	2	17	3	--	150
24	1	-	1	0	0	1	1	2	11	12	5	--	371
25	1	2	1	-1	1	0	0	0	17	14	5	17	386
26	1	2	1	0	2	1	0	3	10	7	5	17	231
27	2	2	1	0	1	1	1	3	12	14	3	17	337
28	1	2	1	1	2	0	1	4	20	14	2	16	313
29	1	1	1	-1	2	0	0	1	10	11	1	17	159
30	1	2	1	0	1	1	0	2	16	11	3	17	265
31*	1	1	1	.	1	0	0	.	7	8	1	17	303
32*	1	2	1	0	2	1	0	3	19	4	7	17	371
33	1	2	1	-1	2	0	-1	2	10	10	4	17	299
34	1	2	1	0	2	1	1	4	11	12	3	17	281
35	1	2	1	0	2	0	0	2	11	13	0	17	423
36	1	2	1	0	1	0	2	3	18	8	0	17	395
37	1	2	1	1	1	0	0	2	16	11	2	17	382
38	1	2	1	0	3	1	1	5	2	17	1	16	398
39	1	2	1	0	0	-1	0	-1	11	20	5	16	305
40	1	1	1	0	1	1	0	2	10	14	5	17	245
41	1	1	1	0	1	-1	0	0	19	11	2	17	333
42	1	1	1	1	1	0	0	2	8	8	4	17	193

CODE	SCHOOL	SEX	CORD	FOS1	FOS2	FOS3	FOS4	FOST	E	N	L	AGE	STL
43	1	2	1	0	2	0	0	2	13	12	1	16	340
44	1	2	1	1	2	0	0	3	12	12	5	17	398
45	1	1	1	1	1	1	1	4	17	6	3	17	412
46	1	1	1	0	0	0	1	1	12	7	1	16	182
47	1	1	1	0	1	-1	1	1	19	7	1	16	304
48	2	2	1	0	0	1	0	1	15	13	3	16	294
49*	2	2	1	0	2	0	1	3	11	9	6	17	303
50	2	2	1	0	-1	0	0	-1	11	16	3	17	204
51	1	1	1	1	-1	0	1	1	15	5	4	16	349
52	1	2	1	0	2	0	1	3	12	11	2	17	431
53	1	2	1	0	2	-1	0	1	10	18	2	18	312
54	1	2	1	-1	0	-1	0	-2	15	10	1	17	337
55	1	2	1	0	0	0	0	0	10	16	2	17	346
56	1	2	1	0	0	-1	1	0	13	12	3	16	359
57	1	1	1	0	0	0	0	0	19	8	5	17	343
58	1	1	1	1	1	0	1	3	10	9	1	17	291
59	1	2	1	1	1	0	1	3	7	15	1	17	393
60	1	1	1	1	2	0	0	3	19	12	0	16	281
61	1	1	1	0	1	1	0	2	8	6	0	17	308
62	1	2	1	0	1	-1	0	0	9	9	3	17	200
63	1	2	1	1	1	1	0	3	4	18	4	17	252
64	1	2	1	0	2	2	0	4	7	15	2	17	381
65	1	1	1	1	2	3	0	6	16	12	4	16	353
66	1	2	1	1	1	1	1	4	15	11	4	17	344
67	1	1	1	0	1	1	0	2	16	19	0	18	232
68	1	2	1	0	0	0	0	0	14	13	4	17	214
69	1	1	1	1	2	1	0	4	13	14	2	17	296
70	1	1	1	0	2	-1	0	1	16	6	3	17	331
71	1	2	1	1	1	0	0	2	23	11	0	17	406
72	1	2	2	1	1	0	0	2	7	13	3	15	216
73	1	2	2	-1	3	1	0	3	8	15	4	17	297
74	1	2	2	0	0	-1	1	0	15	14	1	17	313
75	1	2	2	1	0	-1	0	0	13	13	3	16	236
76	1	1	2	2	2	0	2	6	13	15	0	17	284
77	1	1	2	0	2	-1	1	2	15	12	3	17	178
78	1	1	2	0	2	0	0	2	11	12	1	17	368
79	1	1	2	0	1	0	0	1	18	13	2	17	376
80	1	1	2	0	-1	0	1	0	10	13	4	18	285
81	1	1	2	1	0	0	1	2	12	6	3	17	246
82	1	1	2	2	2	1	2	7	20	8	3	16	396
83	1	2	2	0	2	1	0	3	16	14	1	17	266
84	1	1	2	0	0	0	1	1	16	9	2	16	300

CODE	SCHOOL	SEX	CORD	FOS1	FOS2	FOS3	FOS4	FOST	E	N	L	AGE	STL
85	1	1	2	0	-1	-1	1	-1	15	8	3	16	208
86	1	1	2	0	1	0	0	1	4	9	4	17	173
87	1	2	2	1	2	0	0	3	15	11	1	17	321
88	1	2	2	0	0	1	1	2	6	18	2	17	247
89	1	2	2	1	0	0	1	2	13	14	2	17	273
90	1	1	2	1	1	0	0	2	13	13	2	17	388
91	1	2	2	0	2	0	1	3	15	18	1	17	365
92	1	2	2	1	1	0	1	3	10	6	5	17	472
93	1	2	2	1	2	0	2	5	9	14	3	17	410
94	1	2	2	-1	-1	0	1	-1	11	19	2	16	198
95	1	2	2	0	1	0	0	1	15	14	4	15	387
96	1	2	2	2	0	0	1	3	15	10	3	16	605
97	1	1	2	1	2	0	0	3	5	16	2	17	237
98	1	1	2	0	1	0	1	2	17	12	3	17	229
99	1	1	2	-1	1	0	1	1	7	7	3	16	296
100	1	1	2	0	2	0	0	2	18	21	1	17	332
101	1	1	2	-1	2	0	1	2	12	5	2	17	298
102	1	1	2	0	1	1	0	2	14	8	1	17	214
103	1	2	2	0	0	0	1	1	14	15	1	17	299
104	1	1	2	0	2	-1	1	2	12	11	4	17	234
105	1	1	2	2	[illegible]	1	0	2	17	20	2	18	200
106	1	1	2	0	1	1	0	2	18	5	4	17	364
107	1	2	2	1	1	0	1	3	13	16	2	17	252
108	1	1	2	-1	2	-1	1	1	15	7	4	17	293
109	1	2	2	-1	1	-1	1	0	17	10	2	16	221
110	1	1	2	0	2	0	0	2	3	22	2	17	548
111	1	1	2	1	2	0	0	3	12	10	0	16	301
112	1	1	2	2	2	0	0	4	13	14	3	18	390
113	1	2	2	1	0	0	1	2	12	14	1	16	190
114	1	1	2	0	2	-1	1	2	22	6	4	17	328
115	1	2	2	1	2	0	1	4	17	14	3	17	340
116	1	1	2	0	2	0	0	2	11	10	3	17	266
117	1	1	2	1	1	1	1	4	10	10	4	17	225
118	1	1	2	0	2	0	0	2	8	16	2	17	311
119	2	1	2	0	2	0	0	2	8	10	3	17	265
120	2	2	2	0	2	2	0	4	13	14	1	17	322
121	2	2	2	-1	1	0	0	0	13	13	4	18	331
122*	1	1	2	-1	-1	0	1	-1	13	12	6	17	301
123	1	2	2	-1	1	0	0	0	13	1	4	16	327
124*	1	2	2	0	0	0	1	1	11	15	7	--	157
125	1	2	2	1	2	2	1	6	10	12	2	17	427
126	1	2	2	1	1	0	0	2	13	16	3	17	369

CODE	SCHOOL	SEX	CORD.	FOS1	FOS2	FOS3	FOS4	FOST	E	N	L	AGE	STL
127	1	2	2	1	1	0	1	3	10	17	3	18	314
128	1	1	2	2	1	1	1	5	12	9	3	19	280
129	1	1	2	0	1	-1	1	1	13	17	2	18	215
130	1	1	2	1	1	0	0	2	11	11	3	17	406
131	1	1	2	0	1	0	1	2	13	14	2	16	353
132	1	1	2	1	2	1	0	4	11	8	2	17	221
133	1	2	2	1	2	0	1	4	10	13	3	17	387
134	1	2	2	1	2	0	0	3	11	8	2	16	420
135	1	2	2	1	0	0	1	2	23	13	0	17	314
136	1	2	2	1	-1	1	1	2	8	14	1	17	360
137	1	1	2	0	2	0	0	2	17	14	1	17	247
138	1	1	2	0	2	0	1	3	10	11	5	16	329
139	1	1	2	0	2	-1	1	2	13	7	4	17	275
140	1	1	2	0	2	1	1	4	18	2	2	17	330
141	1	1	2	0	2	0	1	3	13	13	2	16	262
142	1	1	2	-1	2	0	0	1	15	14	2	17	314
143	1	1	1	2	1	0	1	4	20	16	2	16	370
144	1	1	1	0	1	0	0	1	12	9	2	17	342
145	2	2	1	0	0	-1	0	-1	16	14	3	17	302
146*	1	1	1	1	-1	0	0	0	19	8	6	17	261
147	3	1	1	0	0	0	1	1	14	5	4	17	320
148	2	2	1	0	2	0	0	2	14	10	2	17	372
149	2	2	1	0	0	-1	0	-1	15	18	0	17	263
152	3	1	1	1	2	0	0	3	12	6	2	16	389
153	3	1	1	1	2	2	0	5	12	8	3	17	312
154	3	1	1	1	0	0	1	2	12	8	1	17	300
156	2	1	1	0	1	1	1	3	15	8	4	17	255
157	2	1	1	0	0	0	1	1	13	11	5	17	234
158	1	2	1	-1	0	0	1	0	16	11	0	17	299
159	1	2	1	-1	1	1	1	2	15	19	1	17	372
160*	1	2	1	1	2	0	0	3	10	16	6	17	249
161	1	1	1	-1	1	-1	1	0	13	6	5	18	294
162	1	2	1	0	1	1	1	3	14	7	3	16	343
163	1	1	1	0	1	1	1	3	17	10	1	17	338
164	1	2	1	1	2	1	1	5	17	19	1	16	347
165	2	1	1	0	2	-1	0	1	18	7	2	17	298
166	2	2	1	0	2	0	0	2	11	12	4	17	412
167	2	1	1	1	1	0	0	2	11	13	2	17	279
168	2	2	1	0	1	0	0	1	13	9	1	17	418
169	2	1	1	1	1	1	0	3	14	10	2	16	317
170	2	1	1	3	2	0	0	5	14	9	1	17	277
171	3	1	1	1	1	0	0	2	15	14	3	17	386
172	1	2	2	0	-1	0	1	0	8	13	1	18	273
173	2	2	2	0	1	1	0	2	5	12	3	17	252
174	1	1	2	-1	1	-1	0	-1	11	12	3	18	371
175	1	1	2	0	1	-1	0	0	14	12	1	16	329

CODE	SCHOOL	SEX	CORD	FOS1	FOS2	FOS3	FOS4	FOST	E	N	L	AGE	STL
176	3	1	2	0	-1	0	0	-1	7	16	4	17	387
177	2	2	2	1	1	0	1	3	15	5	1	17	198
178	2	2	2	1	1	0	1	3	17	17	3	17	208
181	3	1	2	-1	2	0	1	2	13	14	3	17	323
182	3	1	2	-1	3	1	2	5	20	9	2	17	312
184	3	1	2	0	1	0	1	2	17	6	1	17	280
185	2	1	2	-1	0	0	1	0	14	8	0	17	263
186	2	1	2	0	1	1	0	2	12	14	0	17	299
187	1	2	2	1	1	1	1	4	12	9	0	17	326
188	1	2	2	0	1	0	0	1	8	13	3	18	374
189	1	1	2	1	0	0	0	1	13	15	2	17	282
190	1	1	2	-1	1	1	0	1	12	7	3	17	440
191	1	2	2	-1	-1	1	1	0	12	20	2	15	367
193	2	2	2	0	2	1	0	3	13	17	1	17	297
194	2	2	2	1	1	1	1	4	15	15	3	17	364
195	2	1	2	0	0	1	0	1	15	13	2	17	397
196	2	2	2	1	1	-1	0	1	18	18	2	16	248
197	2	2	2	1	0	0	0	1	17	12	3	17	322
198	2	1	2	1	0	1	0	2	16	14	1	17	308
199*	2	2	2	-1	1	-1	1	0	6	9	6	17	297
200	3	1	2	-1	2	0	1	2	17	8	1	17	272
201	2	1	1	0	1	-1	0	0	11	11	3	18	174
202	2	1	1	0	2	0	1	3	18	9	2	16	257
203	2	1	1	1	1	1	0	3	9	10	3	17	265
205	3	2	1	0	2	0	1	3	18	8	1	16	416
206	3	2	1	0	1	1	1	3	12	14	3	16	419
207	3	1	1	-1	1	0	1	1	12	11	1	17	240
209	3	1	1	1	0	1	1	3	15	11	2	17	403
210	3	1	1	1	1	2	0	4	14	13	4	17	393
211	2	1	1	0	-1	0	1	0	13	8	1	18	269
212	2	2	1	-1	1	1	0	1	13	9	5	17	285
213	2	2	1	0	1	1	1	3	17	13	3	17	421
214	2	2	1	0	1	2	0	3	9	16	3	18	298
215	2	2	1	1	1	1	0	3	13	20	1	17	275
216	2	2	1	1	0	1	0	2	13	12	3	17	383
217	2	2	1	1	1	0	1	3	16	13	3	17	332
218	2	1	1	0	1	0	0	1	16	19	2	17	269
219*	2	1	1	0	1	2	1	4	6	12	7	16	471
220	2	1	1	0	1	0	1	2	12	7	2	18	370
221	2	2	1	-1	1	0	0	0	5	17	2	18	265
222	2	2	1	0	0	0	1	1	18	14	0	18	203
223	2	2	1	0	0	0	1	1	12	21	0	17	394
224	2	2	1	1	0	-1	0	0	10	14	4	17	297
225	2	1	1	-1	1	0	0	0	19	11	1	18	203

CODE	SCHOOL	SEX	CORD	FOS1	FOS2	FOS3	FOS4	FOST	E	N	L	AGE	STL
226	2	1	1	0	-1	3	1	3	18	6	3	16	407
227	2	1	1	2	3	0	0	5	10	8	1	17	304
228	2	1	1	-1	1	2	0	2	16	19	1	17	296
229	2	2	1	1	1	2	1	5	13	15	2	17	353
230	2	1	1	1	1	-1	1	2	18	6	2	17	190
231	2	2	1	0	2	1	1	4	14	16	2	17	397
232	2	2	1	0	1	1	1	3	22	10	2	16	376
233	2	2	1	0	2	1	0	3	12	13	3	17	200
234	2	2	1	1	2	0	0	3	18	7	3	16	231
235	2	1	1	0	1	0	0	1	17	14	1	17	365
236	2	2	1	-1	1	-1	0	-1	11	17	0	18	253
237	2	2	1	1	2	0	0	3	14	18	2	17	427
238*	2	2	1	0	2	0	1	3	11	9	6	16	354
239	2	2	1	0	2	0	2	4	19	14	0	17	380
240	2	2	1	1	3	0	1	5	18	11	1	18	369
241	2	1	1	1	0	-1	0	0	14	9	2	18	301
242	2	2	1	3	1	0	1	5	19	15	0	17	352
243	2	2	1	0	2	0	1	3	11	8	5	17	382
244	2	2	1	0	1	0	0	1	12	10	0	17	443
245	2	1	1	1	2	1	0	4	15	17	2	17	356
246	2	1	1	0	0	0	0	0	16	8	4	19	218
247	2	2	1	0	2	0	0	2	17	8	5	17	246
248	2	2	1	0	1	1	0	2	18	10	3	17	243
249	2	1	1	0	2	0	1	3	11	11	3	17	354
250	2	2	1	0	1	0	1	2	14	19	1	17	344
251	2	2	1	2	1	1	1	5	21	12	1	16	434
252	2	2	1	0	2	0	1	3	16	16	4	17	458
253	3	2	1	0	1	0	1	2	11	15	3	18	183
254	3	2	1	0	1	0	0	1	13	7	4	17	380
255	3	2	1	0	2	1	0	3	15	14	1	17	443
256*	3	2	1	1	2	0	1	4	13	18	6	17	360
257	3	2	1	2	0	1	1	4	14	15	4	18	323
258	3	1	1	0	2	0	0	2	10	10	5	19	225
260	3	2	1	2	1	2	1	6	14	11	4	17	452
261	3	2	1	0	0	0	1	1	12	13	3	17	338
262	3	1	1	1	1	1	1	4	8	6	3	17	310
263	3	1	1	0	2	-1	1	2	10	17	0	17	315
264	3	1	1	1	1	-1	0	1	15	10	4	17	318
265	3	2	1	0	1	-1	1	1	18	14	2	17	334
266	3	2	1	1	2	0	0	3	17	11	3	17	404
267	3	2	1	1	1	1	1	4	12	12	1	17	329
268	3	1	1	1	2	1	1	5	13	14	2	17	509
269	3	1	1	1	1	0	0	2	11	13	1	17	400
270	3	1	1	1	1	1	0	3	15	11	2	17	464

CODE	SCHOOL	SEX	CORD	FOS1	FOS2	FOS3	FOS4	FOST	E	N	L	AGE	STL
272	3	1	1	1	1	0	1	3	15	18	4	17	275
274	3	1	1	1	1	0	0	2	17	9	3	18	365
275	3	1	1	0	4	2	1	7	17	20	3	17	245
276	2	2	2	2	1	0	1	4	16	10	2	17	384
277	2	1	2	0	0	0	2	2	16	17	1	18	359
278	2	-	2	0	0	2	1	3	16	3	4	18	262
279	2	1	2	0	0	2	1	3	20	14	1	18	223
280	3	2	2	0	1	0	0	1	14	8	5	17	445
281*	3	2	2	1	0	0	0	1	12	15	8	17	249
282	3	2	2	0	1	0	0	1	13	10	3	18	221
287*	2	2	2	.	1	-1	0	.	9	12	2	17	257
288*	2	2	2	.	1	0	1	.	18	16	1	17	242
289*	2	2	2	.	2	0	1	.	12	7	3	17	400
290*	2	2	2	.	1	-1	1	.	18	8	4	17	319
291*	2	2	2	.	2	0	0	.	13	7	5	17	401
292*	2	2	2	.	2	0	0	.	18	8	4	16	386
293	2	2	2	0	1	0	1	2	6	16	3	17	313
294	2	1	2	0	2	0	0	2	12	15	2	17	324
295	2	1	2	1	1	1	0	3	8	14	2	16	331
296	2	1	2	0	1	1	1	3	6	19	2	18	330
297	2	2	2	1	2	0	0	3	10	3	5	18	227
298	2	2	2	0	1	1	1	3	17	14	2	17	274
299*	2	2	2	1	1	1	0	3	1	12	6	17	330
300	2	1	2	1	2	1	1	5	14	18	0	18	310
301	2	2	2	0	2	1	0	3	11	17	2	16	309
302	2	1	2	1	-1	0	0	0	11	9	2	19	268
303	2	1	2	1	2	1	1	5	16	11	3	18	251
304	2	2	2	-1	1	0	1	1	13	11	2	17	266
305	2	2	2	1	1	0	0	2	14	9	1	17	307
306	2	2	2	-1	2	1	0	2	7	19	1	17	519
307	2	2	2	1	1	0	1	3	16	16	2	16	247
308	2	2	2	1	2	0	0	3	14	17	3	17	324
309	2	1	2	0	1	0	1	2	12	6	3	20	241
310	2	2	2	1	0	0	0	1	8	21	1	17	324
311	2	1	2	-1	1	0	1	1	11	13	2	17	321
312	2	2	2	1	2	0	1	4	15	6	4	17	359
313	2	2	2	1	1	1	1	4	11	10	3	17	264
314	2	2	2	1	1	0	1	3	11	21	3	17	371
315	2	2	2	0	2	1	0	3	12	6	3	17	370
316	2	2	2	1	1	1	0	3	18	12	2	17	296
317	2	1	2	1	1	1	0	3	12	14	2	18	268
318	2	2	2	3	2	1	0	6	7	12	2	17	424
319	2	2	2	1	1	1	1	4	13	9	4	17	368
320	2	2	2	1	1	-1	1	2	13	9	0	16	348

CODE	SCHOOL	SEX	CORD	FOS1	FOS2	FOS3	FOS4	FOST	E	N	L	AGE	STL
321	2	1	2	1	0	0	0	1	15	5	1	19	264
322*	2	2	2	1	3	-1	0	3	12	14	6	17	396
323	2	2	2	2	1	2	1	6	13	6	2	17	373
324	2	1	2	1	1	1	1	4	14	11	5	17	353
325	2	2	2	1	1	0	1	3	9	15	1	16	447
326	2	1	2	2	1	2	0	5	14	12	4	16	286
327*	2	1	2	0	2	0	0	2	14	9	7	18	266
328	3	2	2	0	1	0	1	2	10	10	2	17	406
329	3	2	2	1	1	0	1	3	15	12	5	18	363
330	3	2	2	1	1	1	0	3	12	15	4	17	396
331	3	2	2	2	2	0	0	4	16	6	0	17	378
332	3	2	2	-1	2	0	1	2	15	14	0	17	351
334	3	1	2	-1	2	0	0	1	14	14	3	17	270
335	3	2	2	0	1	0	1	2	11	16	3	18	244
336	3	2	2	1	1	1	0	3	18	11	1	17	421
337	3	2	2	0	-1	0	0	-1	12	14	2	18	331
339	3	1	2	3	0	0	1	4	12	11	2	19	309
340	3	1	2	0	1	1	1	3	11	11	0	17	200
341	3	1	2	1	2	2	0	5	13	9	1	17	172
342	3	1	2	0	1	0	0	1	8	6	5	18	249
345	3	2	2	1	1	0	0	2	10	11	2	17	421
348	3	1	2	0	1	0	1	2	14	15	5	18	314
349*	3	1	2	-1	-1	0	0	-2	13	6	6	17	281
350	3	1	2	2	0	2	0	4	17	13	3	17	238
357	3	2	1	1	2	0	1	4	12	13	1	17	405
363	3	2	2	0	1	0	1	2	12	21	4	17	372
364	3	2	2	1	0	1	0	2	8	18	2	17	294

APPENDIX H

ABSTRACT OF
The Personality Correlates of Fear of Success

APPENDIX H.

ABSTRACT OF

The Personality Correlates of Fear of Success[1]

The purpose of this study was to investigate the personality variables that may help to explain the incidence and dynamics of fear of success, as proposed by Horner (1968) and elaborated by Tresemer (1977). They proposed that fear of success arises from anxiety about the negative consequences of success and competence.

Tresemer proposed three origins of fear of success: (a) anxiety about a performance or show of competence that is inconsistent with one's personal or social expectation; (b) anxiety about personal and social sacrifices one usually makes in order to remain successful; and (c) anxiety about direct social consequences of success or competence, for example, social ostracism, social rejection, and loss of friendships. These anxieties are aroused in (a) individuals who expect negative consequences to follow their performance or show of competence and (b) individuals who are concerned about these consequences which are, in the main, interpersonal. Eysenck's two personality dimensions, extraversion-introversion and neuroticism-stability were argued to be related to the incidence of such anxieties.

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[1]Winifred C. Ejeckam, doctoral thesis presented to the School of Graduate Studies of the University of Ottawa, Ontario, 1979, ix-180 p.

It was hypothesized that extraversion and neuroticism interact in their effect on fear of success: with stable extraverts (SE) and neurotic introverts (NI) showing greater fear of success than stable introverts (SI) and neurotic extraverts (NE).

Research subjects included 324 Grade 12 high school volunteers from three schools under the same Board of Education.

Fear of success was measured using 4 nonspecific verbal cues. The TAT stories were content-analyzed using the revised empirically-derived scoring system for fear of success (Horner & Fleming, 1977). The Eysenck Personality Inventory (Eysenck & Eysenck, 1963) was used as a measure of extraversion, neuroticism and response distortion (Lie).

Subjects who scored greater than 5 on the Lie Scale were eliminated. The criterion groups were formed in the following manner: subjects who scored above the 70th percentile on Extraversion and Neuroticism Scales were regarded as extraverted (E) and neurotic (N), respectively. Those who scored below the 31st percentile on either scale were regarded as introverted and stable, respectively. This resulted in 26 SEs, 15 NEs, 16 SIs, and 33 NIs--a total of 90 subjects.

The research hypothesis was not supported. Specifically, extraversion and neuroticism did not interact in their effect

on fear of success. The interaction also tended in the opposite direction to that hypothesized. There was in addition a nonsignificant trend for extraverts to show greater fear of success than introverts. Possible explanations for this result were suggested and discussed. It was concluded that probably many more variables need to be considered before a more precise and accurate hypothesis can be made with respect to the incidence of fear of success.

Suggestions were made for further research to investigate and isolate some of these variables. It was also suggested to re-evaluate the assumption regarding the role of socialization in the development and incidence of fear of success.