

ABSTRACT OF THESIS

A MEASURE OF LEVEL OF ASPIRATION BEHAVIOR
AS A
DIAGNOSTIC COUNSELING TECHNIQUE

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Submitted by
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A MEASURE OF LEVEL OF ASPIRATION BEHAVIOR AS A
DIAGNOSTIC COUNSELING TECHNIQUE

Guidance and Counseling has been concerned with gaining an understanding of the total structure of the individual. A knowledge of patterns of behavior collectively termed "personality" appeared to be of particular significance to such understanding. Of specific interest as a counseling problem have been those inadequate forms of social or personal behavior labeled personality maladjustments.

Numerous diagnostic instruments have been devised for eliciting symptoms considered indicative of personality disturbance. Reliable but weakly valid questionnaires, although of limited clinical value, are used extensively. The newer, projective-type tests presenting more revealing clinical pictures, nevertheless must rely on clinician and counselor translations, which in turn reduce the efficacy of diagnosis. Concerned as it has been with the effects of success or gratification and failure or frustration in a dynamic situation, the "aspiration-level method" may supply an objective diagnostic technique for a counseling situation.

The problem

How may a measure of aspiration-level behavior function as a diagnostic counseling technique?

Problem analysis.--1. What scores indicating personality tendencies were obtained from The Minnesota Multiphasic Personality Inventory for the experimental group?

2. What average difference scores for "induced-success situations" were obtained from the experimental digit-symbol test for the experimental group?

3. What average difference scores for "induced-failure situations" were obtained from the experimental digit-symbol test for the experimental group?

4. What average difference scores for the "complete-test-session" were obtained from the experimental digit-symbol test for the experimental group?

5. What relationships were noted in a comparison of average difference scores for "induced-success" and personality variables as measured by The Minnesota Multiphasic Personality Inventory?

6. What relationships were noted in a comparison of average difference scores for "induced-failure" and personality variables as measured by The Minnesota Multiphasic Personality Inventory?

7. What relationships were noted in a comparison of average difference scores for the "complete-test-session" and personality variables as measured by The Minnesota Multiphasic Personality Inventory?

Delimitation.--The term "diagnostic counseling technique" has been limited to connote a method for identifying personality variables, specifically those measured by The Minnesota Multiphasic Personality Inventory. Consequently, the function of a measure of aspiration-level behavior as a diagnostic counseling technique has been determined only in

terms of the relationships between a quantitative measure of aspiration-level behavior and scores on The Minnesota Multiphasic Personality Inventory. Of particular concern were aspiration-levels arising from induced-failure and induced-success situations. An operational method of arriving at a quantitative measure of level-of-aspiration behavior was utilized.

A sample group of 30 men students of freshman and sophomore standing enrolled at Colorado Agricultural and Mechanical College for the Spring Quarter, 1949, served as a nucleus for the study. The group consisted of eight war veterans and twenty-two non-veterans, all members of the same social fraternity, with ages ranging from 18 to 25 and a mean age of 19.7 years. Vocational aspirations within the group varied, as might be expected in a collection of students with mixed backgrounds and diversified occupational-objective values.

Definition of terms.---Average difference score (D-score) as used here, was defined as a single score, for a given individual, the mean of the differences between each performance and the following estimate of future performance, considered representative of the quantitative aspects of the level of aspiration in a given task.

Experimental digit-symbol test referred to the digit-symbol substitution test devised to provide a controllable "familiar task" situation in order to arrive at a quantitative measure of aspiration-level behavior.

Induced-failure pertained to those situations during the administration of the experimental digit-symbol test in which the experimental subject was prevented, through time reductions, from attaining or surpassing his preceding estimate of future performance.

Induced-success pertained to those situations during the administration of the experimental digit-symbol test in which the experimental subject was permitted, through time increases, to attain or surpass his preceding estimate of future performance.

Level of aspiration, as used here, referred to the level of future performance in a familiar task which an individual, knowing his level of past performance in that task, explicitly undertook to reach.

Test session referred to the period during which the experimental subject performed on ten separate experimental digit-symbol tests, each performance except for the first being preceded by an estimate of future performance.

T scores pertained to translated raw scores quantitatively representative of the nine personality variables purportedly measured by The Minnesota Multiphasic Personality Inventory.

Method and material

The general procedure for collecting experimental data involved first, the administration of The Minnesota Multiphasic Personality Inventory to each member of the sample group, and second, the administration of both the Digit

Symbol Test from the Wechsler-Bellevue Intelligence Scale, Record Form I (used only for orientation), and the experimental digit-symbol test battery devised for this study, to each sample group member. The test period involving administration of both digit-symbol tests was preceded by an orientation session and followed by a discussion between experimenter and subject.

The level-of-aspiration test.--The task, digit-symbol test, selected for eliciting level-of-aspiration behavior was patterned after the Digit Symbol Test in the Wechsler-Bellevue Intelligence Scale. As devised for this study 1/ it contained a sample demonstration which permitted the examiner to make certain that the experimental subject understood the mechanics of the task. Through variations in performance time, the induction of success or failure was made easily possible. The digit-symbol test required a minimum of time, approximately twenty minutes per individual for a ten-trial test session.

Of the ten trials comprising the test battery, four (trials 2, 4, 7, and 9) were induced-failure situations and five (trials 3, 5, 6, 8 and 10) were induced-success situations. The design for the ten trials then was a systematic failure-followed-by-success except for trials 5 and 6, both of which were success situations. The latter break in the failure-success pattern seemed advisable to forestall any predicting of pattern on the part of experimental subjects

1/ See appended sample.

which might in turn have eliminated the conflict of whether to go up, down, or stay at the same level.

Out of the experimental-test session came nine performance scores and nine estimates of future performance, plus one performance and estimate considered neutral, for each of 30 subjects. From these were drawn three average difference scores for each subject, one considered reaction to success, another reaction to failure, and a third reaction to the complete-test-session.

Data for analytical purposes included Minnesota Multiphasic Personality Inventory T scores, nine for each of 30 subjects, and experimental digit-symbol test D-scores for reactions to induced-success, induced-failure, and the complete-test-session.

Data analysis

Nine T scores measuring personality tendencies were obtained for each of 30 subjects. Approximately half of the group had two or more T scores of 65 and above (70 is considered borderline but all scales have been shown to have meaning within the normal range) suggesting maladjustment. Twelve had one or more T scores of 70 and above, with the greatest number of T scores of 65 and above, 12, under any one variable coming under hypomania. Hypochondriasis on the other hand had the least, 1.

D-scores for induced-success situations were derived giving a total of 30 of both plus and minus values (an estimate below previous performance was considered nega-

tive). Induced-success D-scores ranged from -11.6 to 3.6 with slightly more than half of the scores minus values.

D-scores for induced-failure situations were derived giving a total of 29 plus and one minus value. D-scores ranged from -1.5 to 10.3. For the complete-test-session D-scores were found to range from -6.1 to 6.3 with a total of 24 plus and 6 minus values.

Using the method of correlation for small samples ($N=30$), nine coefficients of correlation were obtained for success-induced D-scores and nine personality variables. The largest obtained r was .29, D-score and psychopathic deviate, and the smallest r .01, D-score and hypomania. All r 's were in a positive direction but none were statistically significant (based upon 3 times the standard error as necessary for significance and the fact that two unrelated variables can have a maximum r of $\pm .50$ for $N=36$).

Using the same method, nine r 's were obtained for failure-induced D-scores and nine personality variables with the largest .44, D-score and psychopathic deviate, and the smallest an inverse $-.05$, D-score and paranoia. Seven r 's were direct correlations while two were inverse. The highest coefficient, .44, approached statistical significance but like the remaining r 's could not be described so.

Nine coefficients of correlation were obtained for complete-test-session D-scores and the nine personality variables. The largest coefficient was .32, D-score and psycho-

pathic deviate, and the least .01, D-score and masculinity-femininity. Seven r's were direct correlations and two inverse but none were statistically significant.

Table 1.--RELATIONSHIPS OF COEFFICIENTS OF CORRELATION (r) DERIVED FROM INDUCED-SUCCESS, INDUCED-FAILURE, AND COMPLETE-TEST-SESSION D-SCORES AND PERSONALITY VARIABLES

Personality variable	r Induced success	r Induced failure	r Complete test
Hypochondriasis	.27	.26	-.18
Depression	.23	.36	.23
Hysteria	.14	.15	.14
Psychopathic deviate	.29	.44	.32
Masculinity-femininity	.12	.08	.01
Paranoia	.17	-.05	.06
Psychasthenia	.02	.12	.02
Schizophrenia	.25	.23	.22
Hypomania	.01	-.15	-.04

An examination of the 27 correlation coefficients, shown in Table 1, obtained from the three delineated test situations brought forth several patterns. Hypochondriasis-related r's varied little from induced-success to induced-failure but dropped from a direct to an inverse correlation in the total-test-session. Depression-related r's varied .23, to .36, to .23. The coefficients related to psychopathic deviate varied a good deal, .29, .44, .32, but maintained the highest r in each of the three test situations. Schizophrenia-related r's showed little variation remaining positive, .25, .23, .22, throughout. Psychasthenia-related r's neared zero twice, .02, .02, but deviated .12 from zero in the induced-failure situation.

Conclusions

Because the largest obtained coefficient of correlation for induced-success D-scores and T scores for the nine personality variables was found to be too small, .29, to be deemed statistically significant and the remaining 8 r's were still smaller, the inference was made that probably no important relationship existed between T scores and the method used for eliciting and measuring success-induced, aspiration-level behavior. These results precluded further inference that the employed measure of such behavior following induced-success could function as a diagnostic counseling technique.

For induced-failure the largest obtained T score-D-score coefficient was .44. Although approaching significance it still fell below the established critical r. Consequently it was again necessary to infer that probably no important relationship existed between T scores and D-scores. Apparently the employed measure of aspiration-level behavior following induced-failure could not function as a diagnostic counseling technique.

No statistically significant coefficients were manifested in the study of relations between complete-test-session D-scores and T scores. The highest coefficient, .32, was below the critical r, hence it was reasoned that the employed measure of aspiration-level behavior for the complete-test-session could not serve as a diagnostic counseling technique.

Although knowledge of patterns of r's found via the

three structured situations, success, failure, and complete test, had not appeared essential to answering the primary problem, such patterns were thought of not only as possible areas for future investigation but as useful knowledge for understanding the interrelations among obtained coefficients.

Psychopathic deviate-related r 's were persistently high, the largest in each of the structured situations. The question arose of whether some factor or factors common to each of the situations or inherent in the experimental subjects themselves could account for these results. Slight variation in schizophrenia-related r 's suggested the possibility that schizophrenic behavior was relatively constant despite variations in the external milieu (catatonic-like inflexibility?). Depression-related r 's were maintained above .22, and hysteria-related r 's varied ever so slightly, .14, .15, .14, possibly due to certain internal coherence although such coherence conceivably could be characteristic of psychopathic deviate-related r 's.

Twenty-three of the 27 coefficients of correlation were direct correlations.

Findings and the literature

Numerous experimenters have expressed the belief that the level-of-aspiration method appeared to be a new, fruitful approach to the study of personality. The present study found no significant relationships between measured personality tendencies and the devised method for measuring level-of-aspiration behavior.

One writer felt that aspiration-level situations elicited the individual's repertoire of defense mechanisms, which supposedly are incorporated in the measured tendencies hypochondriasis, psychasthenia, etc. However, no important relationships between the defense mechanisms incorporated in the measured personality variables and those supposedly elicited in the structured level-of-aspiration situation were apparent.

Another contention was that the level of aspiration generally will be raised and lowered respectively as the performance reaches or does not reach the level of aspiration. Present study findings did not support the contention. On the contrary, in D-score reactions to success more than half were negative, indicating that lowered levels of aspiration followed performances which reached previous levels of aspiration. Furthermore, except for one instance, the general reaction to failure was a raised level of aspiration.

Suggestions for future study

First in mind were improvements in methodology for the present study in order to facilitate greater validity and reliability of results. An increase in sample size to "large sample" proportions seemed essential. Elimination of rigid time patterns to provide for individual differences appeared desirable just as incorporation of females did. Finally, greater heterogeneity of the sample educationally, socially, and economically seemed advisable.

Further suggestions were implied in the section on findings and the literature.

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EXPERIMENTAL DIGIT SYMBOL TEST

1	2	3	4	5	6	7	8	9
Δ	○	+	∨	≈	∩	L	□	∩

Sample																								
2	1	3	1	2	4	3	5	3	1	2	1	3	2	1	4	2	3	5	2	3	1	4	6	3
1	5	4	2	7	6	3	5	7	2	8	5	4	6	3	7	2	8	1	9	5	8	4	7	3
6	2	5	1	9	2	8	3	7	4	6	5	9	4	8	3	7	2	6	1	5	4	6	3	7

Test No.		Subject No.	
Score		Estimate	

T H E S I S

A MEASURE OF
LEVEL-OF-ASPIRATION BEHAVIOR
AS A
DIAGNOSTIC COUNSELING TECHNIQUE

Submitted by
Walter Lesiw

In partial fulfillment of the requirements
for the Degree of Master of Education
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Agricultural and Mechanical College
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I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY
SUPERVISION BY WALTER LESIW

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AS A DIAGNOSTIC COUNSELING TECHNIQUE

BE ACCEPTED AS FULFILLING THIS PART OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF EDUCATION

MAJORING IN GUIDANCE AND COUNSELING

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Permission to publish this thesis or any part of it
must be obtained from the Dean of the Graduate School.

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Chapter I

INTRODUCTION

Guidance and Counseling is concerned, among other things, with gaining an understanding of the total structure of the individual. Of particular significance to such understanding is a knowledge of patterns of behavior collectively termed "personality." Of specific interest as a counseling problem is personality maladjustment, by implication, those inadequate forms of social or personal behavior utilized by some individuals in adjusting to the life situation.

4 Many diagnostic tools have been devised in an attempt to bring to the surface symptoms considered indicative of personality disturbance. Highly reliable but weakly valid inventories are in general use at present, although such measures have limited use clinically. The newer projective-type tests, Rorschach and Thematic Apperception for instance, seem to present a more revealing clinical picture but must rely on clinician or counselor translations which in turn permit the possibility of incomplete or inadequate interpretations. Concerned

as it is with the effects of success or gratification, and failure or frustration in a dynamic situation, the aspiration-level technique may well supply an objective diagnostic tool in a counseling situation.

The level-of-aspiration technique, as established in previous experimental studies, pertains to a method for exploring individual behavior by providing a situation which offers "a threat and a challenge to the ability and very integrity of the individual." Gould (10), 1939, elaborated upon this threat to "personal integrity" or "psychic equilibrium" with the statement:

.....probably the most basic need, common to most humans in every culture is the need to avoid failure since failure offers a threat to the most cherished value and object, the self, howsoever the essence of self be conceived. Failure must be avoided because of the potential catastrophic resultants, i.e., losing faith in the one force that makes for unity of being and acting. From early childhood on, one is impressed by the need to protect oneself from outside belittlement, possibly because disapproval meant the temporary loss of love and security, and in time this need becomes more or less internalized and it is also necessary to protect oneself from self-disapprobation. Experiences of failure would be the most severe taxing of a laboriously won psychic equilibrium. (10:82-83)

In the same study, Gould went on to assert that aspiration-level situations are differentiated from situations in general only in that ordinary pressures upon the individual are intensified. This means, she

continued, that there is provoked or elicited the individual's repertoire of defense mechanisms, as well as a variety of other attitudes toward the self and toward basic cultural factors. If the individual's repertoire of protective mechanisms can be elicited by threatening his psychic equilibrium via the level-of-aspiration technique, is it not conceivable that some relationships may exist between the quantitative expressions of these defense mechanisms, i.e., the degree to which they are indulged, and some reasonably valid measure of personality variables incorporating such defense mechanisms? And if the relationships are significantly meaningful, can the aspiration-level technique be utilized as a shorter method for identifying certain personality tendencies further facilitating clinical diagnosis of maladjustment?

In accord with general procedure in earlier experimental studies of aspiration-level behavior, the present study involved structuring a situation so that a simple, familiar task, symbol substitution, provided the medium for the systematic induction of success and failure in order to bring about a quantitative expression of what Gould termed protective mechanisms. In this context then, level of aspiration has reference to the level of future performance in a familiar task which

an individual, knowing his level of past performance in that task, explicitly undertakes to reach. Furthermore, the quantitative aspect of aspiration-level in a given task, for a given individual, has been represented by the average difference score, a single score, the mean of the differences between each performance and the following estimate.

The problem

How may a measure of aspiration-level behavior function as a diagnostic counseling technique?

Problem analysis.--1. What scores, indicating personality tendencies, were obtained from The Minnesota Multiphasic Personality Inventory for the experimental group?

2. What average difference scores for "induced success situations" were obtained from the experimental digit-symbol test for the experimental group?

3. What average difference scores for "induced failure situations" were obtained from the experimental digit-symbol test for the experimental group?

4. What average difference scores for the complete test session were obtained from the experimental digit-symbol test for the experimental group?

5. What relationships were noted in a compari-

son of average difference scores for "induced success" and personality variables as measured by The Minnesota Multiphasic Personality Inventory?

6. What relationships were noted in a comparison of average difference scores for "induced failure" and personality variables as measured by The Minnesota Multiphasic Personality Inventory?

7. What relationships were noted in a comparison of average difference scores for the complete test session and personality variables as measured by The Minnesota Multiphasic Personality Inventory?

Delimitation.--The term "diagnostic counseling technique" has been limited to imply a method for identifying personality variables, specifically those measured by The Minnesota Multiphasic Personality Inventory. Consequently, the function of a measure of aspiration-level behavior as a diagnostic counseling technique has been determined only in terms of the relationships between a quantitative measure of aspiration-level behavior and scores on The Minnesota Multiphasic Personality Inventory. Of particular concern were aspiration-levels arising from induced failure and induced success. An operational method of arriving at a quantitative measure of level of aspiration behavior was utilized.

The experimental group consisted of 30 men

students of freshman or sophomore standing who attended Colorado Agricultural and Mechanical College the Spring Quarter of 1949.

Definition of terms.--Level of aspiration, as used here, refers to the level of future performance in a familiar task which an individual, knowing his level of past performance in that task, explicitly undertakes to reach.

The average difference score (D-score) is a single score, for a given individual, the mean of the differences between each performance and the following estimate, which may be considered representative of the quantitative aspects of aspiration-level in a given task.

Experimental digit-symbol test refers to the substitution test devised to provide a controllable "familiar task" situation in order to arrive at a quantitative measure of aspiration level behavior.

Personality variable (tendency) refers to any one of the nine (9) scale items which The Minnesota Multiphasic Personality Inventory purports to measure.

Induced success pertains to those situations during the administration of the experimental digit-symbol test in which the experimental subjects were permitted, through time increases, to attain or surpass their preceding estimates.

Induced failure pertains to those situations during the administration of the experimental digit-symbol test in which the experimental subjects were prevented, through time reductions, from attaining or surpassing their preceding estimates.

Test session refers to the period during which the experimental subject performed on ten separate experimental digit-symbol tests.

This study then has been concerned with establishing, if practicable, the use of a measure of level-of-aspiration behavior as one kind of diagnostic counseling technique. Conclusions have been drawn only through a comparison of behavior in a level-of-aspiration situation (expressed quantitatively as the difference score) and results from a measure of personality variables, The Minnesota Multiphasic Personality Inventory.

Chapter II

REVIEW OF LITERATURE

Since guidance and counseling is interested in the proper adjustment of individuals to various life situations, it would appear that adjustive behavior following success feelings and failure feelings should come within that interest sphere. Lewin (23), 1936, has categorically asserted that fundamental for the experience of success and failure is an expression, implicit or explicit, of a level of aspiration. Therefore, a study of aspiration-level behavior is in turn a method of approach in viewing or measuring reactions to success and failure. Consequently, this study is concerned with indicating, if possible, the use of a measure of aspiration-level behavior as a diagnostic counseling technique.

This section deals with a review of experimental and speculative work done with the level of aspiration, the meaning of the D-score, the use of a digit-symbol test as a measure of aspiration-level behavior, the function of The Minnesota Multiphasic Personality Inventory, and finally an attempt to inte-

grate the parts, via a summary, with a view toward crystallizing the study theme.

Level of aspiration

Although the term "level of aspiration" is of rather recent origin, it nevertheless represents some earlier ideas about the meaning of success and failure. However, until the work of Hoppe and other students of Lewin, very little was understood about reactions to experiences of success and failure. Hoppe (17), 1930, showed that the occurrence of experiences of success and failure is not a simple function of the result of an activity but depends, although not entirely, upon the relation of this result to the estimated or immediate or momentary level of aspiration of the individual and upon acceptance by the individual of the result as a performance by the self. He further found that intimate relations existed between the level of aspiration and the self-consciousness of the individual as a social person. And more important, pronounced and apparently profound individual differences were discovered. Hoppe also asserted that the level-of-aspiration technique had possibilities as a method of studying some personality traits.

Hausmann (14), 1933, interested in abnormal

reaction to success and failure, took the level-of-aspiration method of studying behavior into a psychiatric clinic. He believed that in many psychopathic cases an abnormal reaction to success and failure would have to be included in the very definition of their personality make-up. He found variations in the reaction to success and failure which differ greatly from one individual to the next and which, he said, can fairly be assumed to be representative of the individual's behavior in similar situations. Hausmann asserted that the advantage of a test like his (dart-throwing task) was that it brought the person into a situation where the personality traits were observed within a short time and where the reactions found an overt expression which were readily recorded in objective and quantitative terms, thus circumventing in the record the subjective interpretation of the observer.

Individual differences became increasingly popular as an area for investigation. Frank (5), 1935, attempted a quantitative approach to the study of level of aspiration as a method of studying personality. He began the standardization and quantification of results so that they were amenable to further investigations. Included in his study was an operational definition of level of aspiration. Frank defined it as "the level of future performance in a familiar task which an indi-

vidual, knowing his level of past performance in that task, explicitly undertakes to reach." He was concerned primarily with one measure, the difference between average level of aspiration and median level of performance.

Frank agreed with Hoppe that the "ego" was involved. This involvement, he said, was determined by three needs: (1) the need to keep the aspiration level as high as possible regardless of level of performance, which tends to drive level of aspiration above performance; (2) the need to make the level of aspiration approximate the level of future performance as closely as possible (the need to keep in contact with reality), which tends to keep the level of aspiration at the level of performance; (3) the need to avoid failure, which tends to drive the level of aspiration below the level of performance. The point was made that the first and third needs develop from the more primary need to keep the "I" or "ego" level as high as possible.

Lewin (23), 1936, in a discussion of the psychology of success and failure, stated that there is a significant difference between individuals in response to failure in level-of-aspiration situations. Some are easily influenced to lower their levels of aspiration whereas others rigidly are not. Some may maintain their level and prefer to leave the activity entirely rather

than lower it. Lewin expressed the belief that in problems of guidance involving unusually high or low persistency, the possible reasons behind such behavior should be carefully examined, because the counseling measures should be different in accordance with the underlying psychological facts. Lewin went on to say that both success and failure occur only if the difficulty of the task lies close to the upper limit of achievement. That is, the feeling of failure occurs only if there is a chance for success, and a feeling of success occurs only if there is a chance for failure. Therefore a conflict situation always precedes experiences of success and failure. Also of importance to the present study was Lewin's observation that the tendency to shift the level of aspiration as high as possible seemed to be closely related to self-esteem, especially to the feeling of the person about his status in the social group. The effects of being successful and being recognized or being loved, he noted, resemble each other closely.

In discussing level of aspiration as a test, Frank (6), 1938, stated that the experience of a performance as a success or failure does not depend alone on its objective goodness, but on whether the level of aspiration appears to be reached or not reached. He

reaffirmed a previous observation that the levels of aspiration in different tasks are in a sense parts of the ego-level (wide embracing goals of the individual related to self-confidence), or are, at least, closely related to it. He also noted that the fundamental property of the ego-level is that it tends to be held high at all costs, and insofar as the single levels of aspiration are related to the ego-level, they, too, tend to be kept high. He concluded that the behavior of the level of aspiration represents the resultant of the conflict arising from the desire to keep the ego-level high on the one hand and the desire to have as many successes as possible on the other.

In discussing reactions to failure in an experimental analysis of level of aspiration, Gould (1), 1939, stated that reactions to failure are undoubtedly expressive of some basic aspects of the individual's personality organization, a function of his past experiences, general "sensitivity" to the environment, and indicative not only of the presence or absence of anxiety feelings, but also of the presence or absence of repression of such feelings, and the extent of the field of his insecurity feelings. She further asserted that undoubtedly aggression, insecurity, aspiration, and achievement are closely related to one another and to the ego structure

of the individual.

Could believed that level-of-aspiration situations are differentiated from situations in general only in that ordinary pressures upon the individual are intensified. This, she concluded, meant that there is projected or elicited the individual's repertoire of defense mechanisms, as well as a variety of other attitudes toward the self and toward basic cultural factors.

Could felt that the average difference score (a single score, for a given individual, the mean of the differences between each performance and the following estimate, which may be considered representative of the quantitative aspects of aspiration-level in a given task) represented not the height of the level of momentary strivings, but a kind of protective response consistent with the individual's personality structure and past experiences.

In evaluating the aspiration-level technique, Could believed that without doubt it brought to the surface certain significant personality characteristics. Whether it did so more easily and more completely than other laboratory methods, she believed, was an experimental problem.

In analyzing low intercorrelations of the six level-of-aspiration tasks she used to arrive at differ-

ence scores, Gould wrote:

These results lose their character of self-inconsistency, become less enigmatic, when we realize the nature of this "personality" measure, the difference score between performance and "aspiration." We are simply dealing with an end process, a complex overt behavior manifestation which has its roots and receives sustenance from sources largely below the surface. It is psychologically not implausible that quite different inner motivations will, under certain circumstances, make for apparently similar overt behavior responses, and as a corollary, similar inner motivations and needs will produce apparently opposite behavior reactions. The same end may be achieved in different ways and from different starting points. (10:35-36)

Adams (1), 1939, reported individual differences in a variety of relations in a study of age, race and responsiveness of levels of aspiration to success and failure.

A study was conducted by Gardner (8), 1940, in which he endeavored to clarify the meaning of the term "level of aspiration." He concluded that there was only one meaning to the term:

.....it can only refer to a quantitative indication which an individual makes concerning his future performance in an activity. Such quantitative indications concerning future performance occur sporadically in certain appropriately-structured life situations (e.g., on the golf course, in a shooting gallery) but their systematic evocation demands a specially designed experimental situation. This "specially designed experimental situation" has two important features. In the first place, it demands that the subject make some public indication of what he intends to

achieve..... The second important feature of the situation is that the subject is required to put this information concerning his aims in quantitative terms. (8:66)

Gardner (9), 1940, used a digit-symbol type task as a method of testing level of aspiration. However, he reported a series of prearranged scores to the subject rather than actual scores in an attempt to exert some control over the test situation. In his analysis of relationships between level of aspiration and a number of personality variables, Gardner found no significant correlations, but mention might be made of the fact that Gardner's subjects were rated relatively subjectively, by four "judges" on eight personality traits. No personality inventories of the questionnaire type were used.

In a study of the effect of success and failure upon the level of aspiration and behavior in manic-depressive psychoses, Escalona (3), 1940, found that the manics, as compared with the depressives, had a greater mobility of the level of aspiration and a shorter duration of "choice of a task" (considered the subject's momentary level of aspiration in her study). Manics, in addition, were more sensitive to success and failure and particularly to failure as reflected in their overt behavior and shifts of level of aspiration. Depressives,

on the other hand, although equally affected by success or failure, made choices which appear to depend to a very high degree upon such factors as duty and accepted social standards (what a person "ought to do") and are therefore less directly dependent upon the experience of success and failure on the task.

Level of aspiration, reasoned Escalona, presents a particularly difficult problem because in such behavior one deals with a combination of cognitive problems related to the realistic judgment of one's own ability and of the difficulty of the task on one side, and with questions of values, needs, and goals on the other.

Gould and Kaplan (11), 1940, saw restrictions and limitations in the use of a measure such as the difference between average level of aspiration and median level of performance. They believed that the average difference score is subject to the same fallacy inherent in questionnaire studies, that is, invalidly assuming that individuals receiving the same average difference score have similar psychological characteristics. They saw a need for a detailed understanding of the average difference score or D-score before the aspiration-level technique could further the understanding of human motivation.

Frank (7), 1941, in reviewing recent studies of the level of aspiration decided that it may have many different meanings. A high level, for example, may represent a direct goal expression, a better performance incentive, or an ego-protecting mechanism. A low level, on the other hand, may express an objective judgment, a tension-avoiding method, or a method of avoiding failure manifestation. Also, successes and failure may, in addition to influencing the behavior of level of aspiration, cause it to change from one meaning to another.

Klein and Schoenfeld (19), 1941, investigated the effect of ego-involvement upon confidence. Their findings led them to conclude that confidence ratings may at one time be really ratings of accuracy or ability, and thus related to the nature of the task utilized to elicit confidence, and at another time a measure of aspiration and thus related to the personality of the subject. They further inferred that generality of confidence may be evoked under certain conditions of situation-set, especially those which bring into play Ego or personality factors like the "level of aspiration."

Sears (30), 1941, applied the level of aspiration technique to the study of some variables of personality. Her findings indicated that the low-positive discrepancy (D-score) reaction is found only in indi-

viduals who feel a confident security in their own achievement. Furthermore, the high-positive discrepancy reaction was found in individuals who feel insecure about their own achievement, and who, in addition, are, because of particular personality structures, able to admit failure without too serious damage to self-esteem. The negative-discrepancy response was found in those who may have felt some insecurity with respect to their achievement, but who markedly show defensive reactions in situations fraught with the possibility of failure in the sight of other people.

Sears supposed that the aspiration-level response formed a part of a cluster of associated personality attributes which may function as a whole in a number of different situations, this because the specific aspiration-level response fitted into the more general reaction patterns of the individual.

In a study of correlations between levels of aspiration, Preston and Bayton (25), 1942, found that in more than half of the instances the aspiration-level task inducing the greater degree of ego-involvement yields the higher coefficient. Correlations reviewed were between "three defined levels" of aspiration -- the maximum, the actual, and the least. The maximum level represented the ultimate goal of the individual

with respect to performance on the task. That which the subject actually expected to do on the next trial was represented by his actual level of aspiration. The least level was that performance below which the subject was sure he would not fall. These three levels suggested three ranges -- distance between maximum and least, maximum and actual, and actual and least levels.

Hilgard (15), 1942, discussed success in relation to level of aspiration. He reiterated what others had said, that success and failure meant different things to different people because the measuring rods are so diverse. He wrote:

It is evident that the ways in which individuals set goals for themselves, and their interpretation of success and failure in relation to these goals constitute interesting psychological problems, the answers to which have importance for education. (15:424)

In discussing estimated future scores as an indication of level of aspiration, Hilgard asserted that such estimates are always distorted in various ways by the persons participating in the experiment. However, he believed that "There is.....much of interest in what the person says he is trying to do." (15:424)

In the light of the nature of success in relation to aspiration, as presently understood, Hilgard suggested certain responsibilities for those with a

share in assisting children and youth to set their goals.

He said:

As a first suggestion, every effort should be made to keep goals realistic and attainable. As goals are permitted to become too remote and unreal, reactions tend to take the form of phantasy, or effort seems futile and discouragement results. It is desirable to have a backlog of success experiences in order to keep the learning situation realistic. The consequence of an unrealistic goal is eventual disillusionment..... How much better it would be if our guidance procedures were more nearly adequate, so that the student would direct his energies along lines in which he would have a higher probability of success..... The second suggestion, something of a corollary of the first, is that social pressure toward unattainable goals must be reduced if goals are to be realistic. To the extent that all prestige is showered upon the high-school student who wishes to go to college, an unrealistic pressure for a collegiate goal is placed upon those unlikely to go to college. (15:427)

Rotter (26, 27, 28, 29), 1942, prepared an elaborate series of papers on the level of aspiration as a method of studying personality. The papers consisted of a review of methodology, the development and evaluation of a controlled method of studying level-of-aspiration behavior, experimental group validity studies, and an analysis of patterns of response for his experimental situation. He reasoned that the level-of-aspiration technique had potential importance in the study of personality development and in clinical diagnosis and description. His series of studies then purported to

analyze as far as possible some of the factors operating in the level-of-aspiration situation with the aim of further evaluation of its possible usefulness in the above areas. He found it possible to study, fairly objectively, the effect of success and failure on the explicitly set goals of an individual, where success and failure were defined as reaching or not reaching the previously set goal. He further asserted that in every level-of-aspiration situation the nature of the situational factors and certain individual "personality" factors interact to determine the response. He was acutely aware of the fact that very little or nothing is known about the stability or the nature of these personality factors.

Aware of the existence of ambiguity in earlier instructions for level-of-aspiration tasks, Rotter (27) stated that the ideal set of instructions could not expect to eliminate the difference between explicit and implicit goals but could lead to the avoidance of misinterpretation on the part of the subject so that all subjects approached the problem of estimate of future scores with clear ideas of what was expected of them. Rotter reported slightly higher test-retest reliability through the use of a figure obtained by taking the mean of the differences between each performance and the

following estimate as his main measure. In his conclusions, Rotter stated:

.....that stable personality traits or characteristic modes of behavior enter into the individual differences in the level of aspiration situation. When individuals are placed in groups on the basis of their attitudes and past behavior, particularly where the selection is made in terms of feelings of inferiority or emotional instability in meeting problems, significant group differences appear either in the height or spread of scores obtained.There is no linear relationship present between a particular trait or traits and a particular score or index. The analysis of extreme scores [down after success and up after failure] suggests the presence of several patterns of response. (28:273)

Rotter concluded his investigation with the statement:

.....this particular technique, which directly observes the individual's actual behavior in a dynamic situation, shows considerable promise for the experimental study of personality. At this point in its development it appears to be clinically diagnostic to a high degree at the extreme or statistically unusual responses. Diagnostic accuracy within the group of less extreme responses appears reasonably high but further work is necessary to determine this more accurately. (29:176)

In considering the realism of expectations, Irwin (18), 1944, was of the opinion that levels of expectation (aspiration) could be thought of as distributed along a continuum, the extremes labeled realistic and unrealistic. Accordingly, expectations were more unrealistic the more closely they varied with the individual's

wants, intelligence being held constant; and they were realistic to the extent they were independent of wants.

Lewin and others (24), 1944, attempted a summarization of the work done with level of aspiration in order to crystallize thought upon the concept. Several generalizations were submitted among which were the following: (1) generally the level of aspiration will be raised and lowered respectively as the performance reaches or does not reach the level of aspiration; (2) the realistic attitude will produce a small discrepancy score with a level of aspiration that is flexible and responsive to changes in performance, while the unrealistic attitude will produce a large discrepancy score with a level of aspiration which is unresponsive to reality influence, and may reflect a wishful attitude toward the attainment of the action or stated goal; (3) all workers in this field are agreed that the level of aspiration situation is a favorable milieu in which to observe individual traits relating to the competitive and goal behavior of the subject; (4) most of the qualitative and quantitative results related to the level of aspiration can be linked with three factors, namely, the seeking of success, the avoiding of failure, and the cognitive factor of a probability judgment. These forces operate in a setting which has to be character-

ized as a choice for a future objective.

Gruen (12), 1945, appeared interested in level-of-aspiration behavior in relation to personality adjustment in adolescents, as determined by the Rogers Test of Personality Adjustment. Her level-of-aspiration task (administered to a maladjusted and a well-adjusted group) consisted of a modified symbol substitution test. Results indicated that the differences in D-scores and average deviations were significant at the 1 per cent level between the adjusted and maladjusted groups. A negative discrepancy was found to be characteristic of the maladjusted subjects only. Gruen advanced the hypothesis that a negative D-score might be indicative of personal insecurity and maladjustive tendencies.

In an analysis of D-scores, Gruen found that the maladjusted subjects tended to average approximately zero as a result of making very large over-estimates and under-estimates, whereas the well-adjusted subjects tended to have low-positive mean D-scores, as a result of more or less consistent positive discrepancies. The mean D-score for the maladjusted group was 0.08, for the well-adjusted 1.14. The difference was 1.06 and the "t" equal to 3.155, with significance beyond 1 per cent. N equalled 16 for each group.

In an analysis of average deviations (defined

as the average of the deviations of the individual discrepancies from the D-score), which Gruen used as an index of variability, she found that the maladjusted subjects tended to show significantly greater variability in their deviations from the D-score than the well-adjusted subjects. Actually, the maladjusted subjects tended either to over-estimate their ability, creating large positive discrepancies, or to under-estimate their ability, yielding large negative discrepancies. The mean of average deviations for the maladjusted group was 1.24, for the well-adjusted 0.78. The difference was 0.46 and "t" equal to 3.833, with significance beyond 1 per cent.

Eysenck and Himmelweit (4), 1946, in an experimental study of the reactions of neurotics to success and failure experiences, maintained little doubt that experiences of success and failure, and the individual's reactions to these experiences, played an important part in the lives of normal and neurotic subjects. They reported that quite generally, the reactions to success and failure of their hysterical group were more objective, taking more account of external reality (test scores), while the reactions of the affective group were more subjective, taking more account of subjective states of mind. Also, hysterics showed a greater intra-

personal variability, while the affectives as a group showed a greater interpersonal variability.

Holt (16), 1946, attempted to test two conceptions of the level of aspiration: (1) that levels of aspiration directly reflect the degree of a person's motivation in the task being performed, and (2) that levels of aspiration are to be understood primarily as part of the defensive behavior of a person whose self-esteem is threatened. Partialling out past level of achievement, he found no correlation between aspiration and achievement. Evidence indicated that the more aspirations diverged from realistic predictions, the more defensive the behavior of the subject became. D-scores based upon goals were significantly larger than D-scores based upon expectations. Male and female D-scores differed significantly.

Klugman (21), 1947, attempted to gather further information about the aspiration board used by Rotter. Specifically he was interested in determining (a) whether differences in performance are due to mental ability, schooling, or mechanical ability, and (b) how well board performance correlates with an objective criterion -- a personality inventory.

The highest correlation (rank difference method) found by Klugman, was between performance and

personality measure. This, he clarified, meant that the more stable the personality (as measured by the Psychosomatic Inventory by McFarland and Seitz -- a measure of psychoneurotic tendencies -- the higher the score the better) the higher the performance score. However, the relationship, "low but present," was barely three times its probable error. Between performance and the other factors he found a negligible relationship.

In an analysis of emotional stability and level of aspiration, Klugman (20), 1948, asserted that his data did not support Lewin's and others' (24) contention that "nearly all individuals of western culture, when first exposed to a level of aspiration situation, give usually a level of aspiration which is above the previous performance score." Klugman found little or no relationship between emotional stability and aspiration estimates. He learned that nine per cent of his cases were atypical, i.e., raised the level of aspiration after failure, and found seven per cent showed the reverse atypical reaction, i.e., lowered the level of aspiration after success. Finally he discovered that subjects with poor performance scores tended to get higher goal discrepancy scores than those with better performance scores.

Escalona (2), 1948, in an application of the

level of aspiration experiment to the study of personality, used the method of clinical observation within the level of aspiration experiment and drew conclusions about the psychological state of the subject in much the same way as is customary in drawing conclusions from a clinical interview. She compared behavior for an "experimental group" of overtly maladjusted subjects and a "control group" of overtly well-adjusted subjects. Solving jigsaw puzzles provided the activity for the observation of level of aspiration behavior, and in order to facilitate comparison of records, Escalona kept the sequence of success and failure (induced artificially by a timing device) constant for all subjects. In addition, she administered The California Personality Adjustment Scale, Form A, to the subjects.

Of her observations and conclusions, Escalona (2) wrote:

In the literature on the subject it has at times been suggested that the LA [level of aspiration] experiment lends itself to the development of a standardized test of personality. The present study has emphasized the infinite variety of psychological meaning in the LA situation. For this reason it is considered that any attempt to establish a one-to-one correlation between a given reaction, or a specific quantitative aspect of LA behavior, and personality variables must meet with difficulties which appear unsurmountable at the present time. (2:121)

Despite this apparently negative outlook,

Escalona's experience lead her to conclude that the aspiration-level experiment provided a direct approach to problems of character formation and adjustment. Furthermore, she believed that the aspiration-level experiment could be a valuable instrument to the clinical psychologist where the psychologist needed an opportunity to observe directly an important part of the person's adjustment mechanisms in operation. Escalona concluded her discussion by theorizing:

If further investigation confirms the impression that behavior in the LA experiment permits specific inference in regard to maladjustment types, the LA experiment should prove valuable especially for the exploration of adjustment problems in persons who resist clinical interview methods, as well as the usual types of personality testing. (2:122)

The average difference score or D-score

Frank (5), 1935, was primarily concerned with one measure, "the difference between average level of aspiration and median level of performance." This he used as a quantitative measure of the level of aspiration.

Gould (10), 1939, observed that an analysis and interpretation of the average difference score as an aspiration-level measure is made difficult because one is dealing with the end results of a process. And yet, Gould felt there was no doubt that the aspiration-level

technique does bring to the surface certain significant personality characteristics.

Gould and Kaplan (11), 1940, saw restrictions and limitations in the use of the D-score. Rotter (27), 1942, on the other hand, suggested the use of the mean of the differences between each performance and the following estimate to increase D-score reliability.

The digit-symbol substitution test

Gould (10), 1939, used a type of symbol-digit substitution as one of six task tests in her experimental analysis of level of aspiration. She described the symbol-digit test inadequately, hindering a complete understanding of its structure and administration. Gardner (9), 1940, used a digit-symbol type task as a method of studying level of aspiration. He reported a series of prearranged scores to each of the subjects, rather than actual scores, in an attempt to exert some control over the experimental situation.

Wechsler (31), 1944, stated that the digit-symbol test, as used in the Wechsler-Bellevue Intelligence Scale, is not only one of the oldest but one of the best established of all psychological tests. The subject is required to associate certain symbols with certain other digits, and the speed and accuracy with

which he does it serve as a measure of his intellectual ability. Of definite significance is Wechsler's assertion that neurotic and unstable individuals tend to do rather badly on the digit-symbol test. Wechsler ascribed this poor performance to difficulty in concentrating and applying themselves for any length of time and to their emotional reactivity to any task requiring persistent effort. Pertinent, too, was the statement that the poor performance of the neurotic represents a lessened mental efficiency rather than an impairment of intellectual ability.

Features of a digit-symbol substitution type test made it readily adaptable to the testing of level-of-aspiration behavior.

The Minnesota Multiphasic Personality Inventory

A commonly employed method of personality study is the inventory or questionnaire. In general, this technique is considered relatively inadequate from a validity standpoint. However, the Minnesota Multiphasic Personality Inventory (13) seems to be an exception in that it is being utilized quite extensively clinically with excellent diagnostic results. McKinley and Hathaway (13), 1943, authors of The Minnesota Multiphasic Personality Inventory, in discussing the efficacy of their

test scales, asserted that a high score on a scale has been found to predict positively the corresponding final clinical diagnosis or estimate in more than 60 per cent of new psychiatric admissions. They found that even in cases in which a high score is not followed by a corresponding diagnosis, the pressure of the trait to an abnormal degree in the symptomatic picture will nearly always be noted.

McKinley and Hathaway, in presenting theory, structure, and scoring of their inventory, wrote:

The personality characteristics now in available form for scoring are hypochondriasis, depression, hysteria, psychopathic personality, masculinity-femininity, paranoia, psychasthenia, schizophrenia, and hypomania. Although the scales are named according to the abnormal manifestation of the symptomatic complex, they have all been shown to have meaning within the normal range. In the presentation of the results the usual procedure is to translate the raw score of the measured trait into a standard score (the T-score) and plot it on a profile chart. This procedure permits analysis of the real strengths of the various phases, the pattern of which is often more important than the presence of any one phase to an abnormal degree. (13:2-3)

Summary

Various approaches to the study of level-of-aspiration behavior have been made. Hoppe (17) found that intimate relations existed between the level of aspiration and the self-consciousness of the individual

as a social being. He then pointed out the use of the level-of-aspiration technique as a possible method for studying some personality traits.

Hausmann (14), interested in abnormal reaction to success and failure, took the level-of-aspiration method of studying behavior into the psychiatric clinic. He found individual variations in the reaction to success and failure and acclaimed the level-of-aspiration test as a useful, objective, clinical device.

Frank (5) quantified the approach to the study of level of aspiration as a method of studying personality. He defined level of aspiration operationally as "the level of future performance in a familiar task which an individual, knowing his level of past performance in that task, explicitly undertakes to reach." One measure, the difference between average level of aspiration and median level of performance, was of primary importance to him.

In a discussion of the psychology of success and failure, Lewin (23) expressed the belief that in problems of guidance involving unusually high or low persistency, the possible reasons behind such behavior should be carefully examined, because the counseling measures should be different in accordance with the underlying psychological facts. He also observed that

the tendency to shift the level of aspiration as high as possible seemed to be closely related to self-esteem.

Frank (6), in writing about the level of aspiration as a test, concluded that the behavior of the level of aspiration represents the resultant of the conflict arising from the desire to keep the ego-level high on the one hand and the desire to have as many successes as possible on the other.

Gould (10) stated that reactions to failure are undoubtedly expressive of some basic aspects of the individual's personality organization. She felt that level-of-aspiration situations are different from situations in general only in that ordinary pressures upon the individual are intensified. This meant that there is projected or elicited the individual's repertoire of defense mechanisms. Gould felt that the average difference score (now, a single score, for a given individual, the mean of the differences between each performance and the following estimate, considered representative of the quantitative aspects of aspiration-level in a given task) represented a kind of protective response consistent with the individual's personality structure and past experiences. However, she was aware of the fact that the difference score was merely an end process and that quite different inner motivations might conceivably, under cer-

tain circumstances, make for apparently similar overt behavior responses.

Adams (1) reported individual differences in a number of relations in a study of age, race and responsiveness of levels of aspiration to success and failure.

Gardner (8), in an attempt to clarify the meaning of "level of aspiration," concluded that it can only refer to a quantitative indication which an individual makes concerning the future performance in an activity. Furthermore, its systematic evocation demands a specially designed experimental situation which has two important features: (1) It demands that the subject make some public indication of what he intends to achieve. (2) The subject must put this information in quantitative terms.

Using a digit-symbol type task, Gardner (9) found no significant correlations between level-of-aspiration behavior and a number of "judged" personality variables. Escalona (3), on the other hand, found that manics, as compared with depressives, had a greater mobility of level of aspiration, and were more sensitive to success and failure and particularly to failure, while depressives made "choices of a task" (considered the momentary level of aspiration) which appear to depend to a very high degree upon such factors as duty and

accepted social standards.

Could and Kaplan (11) believed that the average difference score is subject to the same fallacy inherent in questionnaire studies, that is, invalidly assuming that individuals receiving the same average difference score have similar psychological characteristics. Frank (7) also decided that the level of aspiration may have many different meanings.

Klein and Schoenfeld (19), investigating the effect of ego-involvement upon confidence, inferred that generality of confidence may be evoked under certain conditions of situation-set, especially those which bring into play ego or personality factors like the level of aspiration.

In applying the level-of-aspiration technique to the study of some variables of personality, Sears (30) found that feelings of insecurity were characterized by high-positive discrepancy reaction and some feelings of insecurity and defensive reactions were characterized by the negative-discrepancy response.

In a study of correlations between levels of aspiration, Preston and Bayton (25) found that in more than half of the instances, the aspiration-level task inducing the greater degree of ego-involvement yields the higher coefficient.

Hilgard (15), in discussing estimated future scores as an indication of level of aspiration, asserted that such estimates are always distorted in various ways by the persons participating in the experiment. He found implications in the study of level-of-aspiration behavior which he felt were of importance for guidance and education.

In a series of papers on the level of aspiration as a method of studying personality, Rotter (26, 27, 28, 29) reasoned that the level-of-aspiration technique had potential importance in the study of personality development and in clinical diagnosis and description. He reported slightly higher test-retest reliability through the use of a figure obtained by taking the mean of the differences between each performance and the following estimate as his main measure. He felt that at this point in its development the level-of-aspiration technique appeared to be clinically diagnostic to a high degree at the extreme or statistically unusual responses.

Irwin (18), in considering the realism of expectations, was of the opinion that levels of expectation (aspiration) could be thought of as distributed along a continuum, the extremes labeled realistic and unrealistic.

In a summary of work done with level of aspiration, Lewin and others (24) submitted several generaliza-

tions which approach laws. Among these were: (1) generally the level of aspiration will be raised and lowered respectively as the performance reaches or does not reach the level of aspiration; (2) the realistic attitude will produce a small D-score with a level of aspiration that is flexible and responsive to changes in performance, while the unrealistic attitude will produce a large D-score with a level of aspiration which is unresponsive to reality influence; (3) most qualitative and quantitative results related to the level of aspiration can be linked with three factors, namely, the seeking of success, the avoiding of failure, and the cognitive factors of a probability judgment; (4) all workers are agreed that the level-of-aspiration situation is a favorable milieu in which to observe individual traits relating to the competitive and goal behavior of the subject.

In an analysis of D-scores, Gruen (12) found that maladjusted subjects tend to average approximately zero as a result of making very large over-estimates and under-estimates, whereas well-adjusted subjects tend to have low-positive mean D-scores, as a result of more or less constant positive discrepancies. The mean D-score for the maladjusted group was 0.08, for the well-adjusted 1.14. The difference was 1.06 and "t" equal to 3.155, with significance beyond 1 per cent. In an analysis of

average deviations, Gruen found that the maladjusted subjects tend to show significantly greater variability in their deviations from the D-score than the well-adjusted subjects. The mean of average deviations for the maladjusted group was 1.24, for the well-adjusted 0.78. The difference was 0.46 and "t" equal to 3.833, with significance beyond 1 per cent.

Eysenck and Himmelweit (4) studied neurotic reactions to success and failure. They maintained that experiences of success and failure, and the individual's reactions to these experiences, played an important part in the lives of normal and neurotic subjects.

Holt (16) gathered evidence which indicated that the more aspirations diverged from realistic predictions, the more defensive the behavior of the subject became. D-scores based upon goals were significantly larger than D-scores based upon expectations and male and female D-scores different significantly.

Klugman (21) attempted to determine whether differences in performance on the Rotter Aspiration Board are due to mental ability, schooling, or mechanical ability and how well board performance correlated with an objective criterion -- a personality inventory. The highest correlation found by Klugman was between performance and personality measure.

In an analysis of emotional stability and level of aspiration, Klugman (20) asserted that his data did not support Lewin's and others' (24) contention that "nearly all individuals of western culture, when first exposed to a level-of-aspiration situation, give usually a level of aspiration which is above the previous performance score."

Escalona (2) used the method of clinical observation within the level-of-aspiration experiment and drew conclusions about the psychological state of the subject in much the same way as is customary in drawing conclusions from a clinical interview. Escalona's experience led her to conclude that the aspiration-level experiment provided a direct approach to problems of character formation and adjustment. She believed that this technique could be a valuable instrument to the clinical psychologist where the psychologist needed an opportunity to observe directly an important part of the person's adjustment mechanisms in operation.

Gould (10) and Gould and Kaplan (11) saw restrictions and limitations in the use of the average difference score. Rotter (27) suggested the use of the mean of the differences between each performance and the following estimate to increase D-score reliability.

Gardner (9) and Gould (10) used types of

symbol-digit substitution tasks in their experimental analyses of level of aspiration. Wechsler's (31) digit-symbol test provided a basis for constructing an experimental digit-symbol test which could be used to elicit level-of-aspiration behavior.

McKinley's and Hathaway's (13) personality inventory (The Minnesota Multiphasic Personality Inventory), because of its diagnostic excellence clinically, seemed a logical instrument with which level-of-aspiration behavior could be compared.

Chapter III

METHODS AND MATERIALS

Because of its concern with the effects of success or gratification and failure or frustration in a dynamic situation, the aspiration-level technique for observing and measuring personal behavior may serve as a diagnostic instrument in a counseling situation. Consequently, the purpose of this study has been to indicate, if practicable, the use of a measure of aspiration-level behavior as a diagnostic counseling technique. This section deals with the necessary procedures and materials utilized in the collection of data which were essential to answering the problem.

A sample group of 30 men students of freshman and sophomore standing, enrolled at Colorado Agricultural and Mechanical College for the Spring Quarter, 1949, served as a nucleus for the study. The group consisted of eight war veterans and twenty-two non-veterans, all members of the same social fraternity, with ages ranging from 18 to 25 and a mean age of 19.7 years. Vocational aspirations within the group varied, as might be

expected in a collection of students with mixed backgrounds and diversified occupational objective values.

The general procedure for collecting experimental data involved first, the administration of The Minnesota Multiphasic Personality Inventory to each member of the sample group, and second, the administration of both the Digit Symbol Test, taken from the Wechsler-Bellevue Intelligence Scale, Record Form I, and the experimental digit-symbol test battery devised for this study, to each sample group member. The test session involving administration of the Wechsler-Bellevue Digit Symbol Test and the experimental digit-symbol test battery was preceded by an orientation period and followed by a discussion between experimenter and experimental subject.

Approximately one-third of The Minnesota Multiphasic Personality Inventories were administered by members of the staff of the Testing Bureau of Colorado A. and M. College. The remainder, together with the Wechsler-Bellevue Digit Symbol Test and the experimental digit-symbol test battery, were administered by the author. The task of test scoring and recording of results was confined to the author. Testing Bureau facilities were graciously made available to the writer, reducing in a very great measure the customary diffi-

culties encountered during the data collection period.

The Minnesota Multiphasic Personality Inventory

The Minnesota Multiphasic Personality Inventory (13) is a device planned to give, in one test, scores on several phases of personality. Traits measured are those that are commonly considered indicative of psychological maladjustment or abnormality. The instrument, in booklet form, is made up of 566 statements -- answered "true," "false," or "cannot say" -- covering a broad range of subject matter -- from the physical condition to the morale and social attitudes of the testee.

Hypochondriasis, depression, hysteria, psychopathic personality, masculinity-femininity, paranoia, psychasthenia, schizophrenia, and hypomania were the personality characteristics in form available for scoring. Of particular significance to the present study, because of the nature of the sample group, was the knowledge that these scales, though named according to the abnormal manifestation of the symptomatic complex, have been shown to have meaning within the normal range.

The materials for administering the inventory included test booklets and special answer sheets. Instructions for the test were read aloud from the front of the test booklet as the subject read silently, and

questions which arose were answered before the subject began the test. After questions were cleared, the subject was told to go ahead and was not disturbed until he completed the Inventory. It might be noted that each subject received individual instructions.

Time required for administration varied roughly from 35 minutes to beyond 2 hours with most cases falling between 1 and 2 hours. Appointments for taking the Inventory were made at the convenience of the sample group members and ranged from 8:00 A. M. to 5:00 P. M., from Monday to Saturday, for the given Spring Quarter.

The procedure for presenting results followed the suggested method in The Manual for the Minnesota Multiphasic Personality Inventory, i.e., the raw scores of the measured traits were translated into standard scores (the T score) and plotted on a profile chart thus permitting analysis of the relative strengths of the various phases, the pattern of which is often more important than the presence of any one phase to an abnormal degree. In a further discussion of the T scores, Hathaway and McKinley (13), 1943, stated:

The T scores for each scale are in reality standard scores in which the mean of the normative group is assigned a value of 50 and the standard deviation adjusted to 10 When only one end of a scale has

been identified as abnormal in a clinically recognized sense, the scale is always oriented so that the larger T scores -- that is, those above 50 -- represent the abnormal direction. Experience has indicated that 70 is a borderline score, although useful interpretation will always depend upon the clinician's experience with a given group. (13:8)

As far as the present study was concerned, the profile chart, as such, served no real function other than to provide an easy method for the translation of raw scores to T scores. However, it did serve an immediate need for those who were interested in having their Inventory scores interpreted as well as those whose scores were patterned abnormally high, because each profile was placed in the hands of a psychologist and made available to a psychiatrist and each sample subject was given an opportunity to consult with either the psychologist or the psychiatrist or both.

A majority of the sample group took The Minnesota Multiphasic Personality Inventory at the College Testing Bureau under the direction of the psychometrician-in-charge or the author. The remainder had the inventory administered in complete privacy at various places designated for the convenience of several subjects unable to be at the testing bureau. In every case the subject was given individual instructions before taking the Inventory.

The level-of-aspiration "test"

Earlier level-of-aspiration studies have established the general structure of a laboratory level of aspiration situation. Briefly, the procedure has been to have the experimental subject, himself aware of his previous level of performance, make a verbal estimate of his level of future performance on some simple, familiar task. Methods of approach have varied mainly in the type of task considered appropriate for eliciting level of aspiration behavior.

Previous workers have also agreed upon a quantitative measure of level of aspiration behavior which they have termed the average difference score or D-score. The average difference score is a single score, for a given individual, the mean of the differences between each performance and the following estimate, which may be considered representative of the quantitative aspects of level of aspiration in a given task.

In the selection of a task which would provide optimum conditions for eliciting level of aspiration behavior, consideration was given to some criteria suggested by Rotter (27). The task was made novel so that the experimental subjects had no idea of how other people score nor could they have built up previous attitudes toward their ability with the task. The task was

neither too easy nor too difficult. It was interesting enough, as evidenced in the experimental situation, to "guarantee" sustained and uniform attention so that it was possible to have a sufficient number of trials for adequate quantitative results. Performance scores were variable enough so that subjects were able to gauge their scores only approximately and were unable to avoid the conflict of whether to go up, down, or stay at the same level merely on the basis of very stable scores. The learning factor seemed negligible so that subjects could not avoid conflict simply by assuming a regularly increasing ability. Finally, the task was generally convenient and seemingly adaptable to a clinical situation.

The task finally selected was a digit-symbol substitution test patterned after the Digit Symbol Test in the Wechsler-Bellevue Intelligence Scale. In addition to meeting most of Rotter's criteria, the "digit-symbol test" offered several features which made it readily adaptable to the testing of level of aspiration behavior. As devised for this study 1/ it contained a sample demonstration which permitted the examiner to make certain that the experimental subjects understood

1/ See sample of experimental digit-symbol test in Appendix B.

the mechanics of the task. Through variations in performance time the induction of success or failure was made easily possible. Above all, the "digit-symbol test" required a minimum of time, approximately twenty minutes per individual for a ten-trial test session.

The pattern for administration of the experimental digit-symbol test battery was relatively uninvolved. Initially the subject was informed that this test would be quite different from the Personality Inventory, that it would consist of a series of tests. Next the Wechsler-Bellevue Digit Symbol Test was placed before the subject and a card of printed instructions placed in his hands. The examiner then read aloud as the subject read silently: "At the top of this test paper, you see divided boxes or squares. This is the key. Notice that each divided box has a number on the upper part and a symbol on the lower part. Also, that with every number there is a different symbol. Now look below (at the test proper) where the boxes have only numbers, and the squares underneath are empty. I want you to put in each of these empty squares the symbol that should go there. You will be timed. When the signal is given, begin at the line ending the sample section (which the subject was permitted to work before beginning the timed portion) and fill as many squares

as you can. Do one right after another without skipping."

Following the reading of directions the subject was started and stopped via a stopwatch. No score was given the subject after the Wechsler-Bellevue Digit Symbol Test, and it was made clear to him that this test had been given merely for familiarization purposes. The subject was then asked if he had ever taken this kind of test before (each gave a negative reply), in order to insure against previous experience with the task. Finally the subject was told that he would be given a series of identical tests similar to the Digit Symbol Test he had just completed, the only difference being a change in symbols.

Before beginning on the experimental digit-symbol test, the subject was informed that following each performance he would be given his score (the number of symbols substituted for digits) and asked to estimate from that score what score he would attain on each succeeding trial. It was made clear to the subject that, with time constant, only "personal factors" would cause his performance to vary, if it varied at all. Just as in the Wechsler-Bellevue Digit Symbol Test, a sample section for orientation purposes preceded the experimental digit-symbol test proper.

The first estimate following the first performance could not be interpreted as reaction to success or failure, since to experience failure or success the subject would have had to have some definite goal in mind before performing (highly improbable because he was working on this task for the first time), consequently it was considered neutral. However each succeeding estimate became a reaction to either "induced success" or "induced failure."

Success was induced by allowing the experimental subject enough time so that his level of performance equalled or slightly surpassed his preceding level of estimate (level of aspiration). Failure was induced by reducing the trial time so that the experimental subject's level of performance fell slightly below his preceding level of estimate. Of the ten trials comprising the test session, four (trials 2, 4, 7, and 9) were induced failure situations and five (trials 3, 5, 6, 8, and 10) were induced success situations.

The design for the ten trials was a systematic failure-followed-by-success, except for trials 5 and 6, both of which were success situations. The latter break in the failure-success pattern seemed advisable to forestall any predicting of pattern on the part of experimental subjects which might in turn have eliminated the

conflict of whether to go up, down, or stay at the same level. The time scheme then was 90 seconds for trials 1 and 6, 60 seconds for trials 2, 4, 7, and 9, and 70 seconds for trials 3, 5, 8, and 10.

Out of the experimental test session came nine performance scores and nine estimates of future performance for each of 30 experimental subjects. From these were drawn three average difference scores (a single score, for a given individual, the mean of the differences between each performance and the succeeding estimate) for each subject, one considered reaction to success, another reaction to failure, and a third total reaction. In post-test discussions with subjects, induced success to them meant "feelings of accomplishment, gladness, goodness, success, meeting obligations, making a good estimate, fulfilling a contract," and similar remarks. Induced failure meant "disappointment, discouragement, surprise, makes me mad, annoyance, not important, nervousness, personal inadequacy," and similar remarks.

Discussion

In reviewing the procedure and methods utilized, several possibilities for improvement became apparent. First, of course, was the sample size. A

much larger sample would probably have provided a more valid picture of aspiration-level behavior via the experimental digit-symbol test session. Second, the time design as a control seemed much too rigid to apply to individual differences. Consequently a suggested change would be to vary the time so that failure for all subjects could be induced by observing performance and stopping the subject as he approaches (not less than 4 units before) his preceding estimate, and success induced by permitting every subject to just meet or exceed by one or two units his preceding estimate. Third, not only males but females as well should be included in a sample group. Finally, the sample should be much more heterogeneous educationally, socio-economically, mentally (intelligence), emotionally, and maturationally (chronological age).

Summary

Data collected for analytical purposes included Minnesota Multiphasic Personality Inventory scores, nine for each of 30 subjects, converted to T scores and experimental digit-symbol test performance scores together with estimates of future performance, nine of each for each of 30 subjects, converted to average difference scores for reactions to failure, success, and the total

test session.

Suggestions for improving the data gathering technique included an increase in sample size, varying the time design to fit individual differences in ability, incorporating females in the study sample, and allowing for greater heterogeneity educationally, socio-economically, mentally, emotionally, and maturationally.

Chapter IV

ANALYSIS OF DATA

The present study has been concerned with establishing, if practicable, a measure of level-of-aspiration behavior as one kind of diagnostic counseling technique. Briefly the procedure involved administration of The Minnesota Multiphasic Personality Inventory and an experimental digit-symbol substitution test battery (a level-of-aspiration technique) to a group of 30 male, college students. This section deals with an analysis and summary of study findings.

Obtained T scores for The Minnesota Multiphasic Personality Inventory

Nine raw scores measuring personality tendencies (hypochondriasis, depression, hysteria, psychopathic personality, masculinity-femininity, paranoia, psychasthenia, schizophrenia, and hypomania) were obtained from The Minnesota Multiphasic Personality Inventory for each individual of the experimental group (N=30). Each raw score was translated, as prescribed by the Test Manual (13), into a T score. Consequently

this meant nine T scores for each member of the experimental group or a grand total of 270 T scores 1/ leaving a total of 30 T scores for each personality tendency.

Of the experimental subjects, approximately half had two or more T scores of 65 and above (70 is considered borderline but all scales have been shown to have meaning within the normal range) and 12 had one or more T scores of 70 and above. The greatest number of T scores of 65 and above under any one variable, 12, came under hypomania. The least number of T scores of 65 and above under any one variable, 1, came under the hypochondriasis scale.

Obtained average difference scores for induced-success situations

The average difference score (D-score) had been defined as a single score, for a given individual, the mean of the differences 2/ between each performance and the succeeding estimate of performance. During the experimental digit-symbol test session each subject was asked to estimate (level of aspiration) his succeeding performance in terms of his previous achievement on the test. The induced-success situations were those within

1/ See Master Data Sheet in Appendix A.

2/ *ibid.*

which the subject was permitted to attain or slightly surpass his estimate. Five such situations were structured for each subject from which came five performance scores and five estimates of future performance. Average difference scores for each subject were calculated by taking the mean of the differences between each performance and the succeeding estimate. This gave a total of 30 D-scores of both plus and minus values since estimates below previous performances were considered negative quantities. D-scores ranged from an average discrepancy of -11.6 to 3.6. Slightly more than half of the scores were minus values.

Obtained average difference scores for induced-failure situations

Induced-failure situations were those within which the experimental subject was not permitted to attain his previous estimate of future performance. Four such situations were structured for each subject from which came four performance scores and four estimates of future performance. Average difference scores for each subject were calculated by taking the mean of the differences between each performance and the succeeding estimate. This gave a total of 30 D-scores of both plus and minus values since, as before, estimates below previous performances were considered negative quanti-

ties. D-scores ranged from an average discrepancy of -1.5 to 10.3. Only one score was of a minus value.

Obtained average difference scores for the complete-test-session

The complete-test-session refers to the period during which the experimental subject performed on ten separate experimental digit-symbol substitution tests, each of which had been followed by an estimate of future performance. Average difference scores were calculated for the discrepancies between each of the performances and succeeding estimates including induced-success and induced-failure situations, as well as the discrepancy between the first performance and succeeding estimate, heretofore considered neutral. This also gave a total of 30 D-scores of both plus and minus values. D-scores ranged from an average discrepancy of -6.1 to 6.3. Six of the D-scores were minus values while 24 were plus.

Relationships between D-scores for induced-success and personality variables

In determining relationship between reactions to induced-success, expressed quantitatively as the average difference score, and personality variables, expressed as T scores, the method of correlation for small ($N=30$) samples was used. This entailed computing the coefficients of correlation (r) for the average differ-

ence scores derived from induced-success situations and each of the nine personality variables. The result was a total of nine coefficients of correlation, Table 1.

Table 1.--COEFFICIENTS OF CORRELATION (r) FOR INDUCED-SUCCESS D-SCORES AND NINE PERSONALITY VARIABLES

Personality variable	<u>r</u>	Personality variable	<u>r</u>
Hypochondriasis	.27	Paranoia	.17
Depression	.23	Psychasthenia	.02
Hysteria	.14	Schizophrenia	.25
Psychopathic deviate	.29	Hypomania	.01
Masculinity-femininity	.12		

The largest r was .29 (D-score and psychopathic deviate) and the smallest r .01 (D-score and hypomania). All nine coefficients of correlation were in a positive direction. However, since the standard error of the largest coefficient, .29, was found to be .17 and the ratio of coefficient to standard error equal to 1.7 (3 essential for significance), no correlation of statistical significance could be attributed to that D-score-T score coefficient. Furthermore, because the number of subjects would remain the same in calculations of the remaining standard errors, none of the resulting ratios of coefficients to their standard errors could indicate a statistically significant relationship.

Relationships between D-scores for induced-failure and personality variables

In determining relationship between reactions to induced-success, again expressed as a D-score, and personality variables, T scores, the method of correlation for small samples was again used. Coefficients of correlation (r) were computed for D-scores derived from induced-failure situations and each of the nine personality variables. The result was a total of nine coefficients of correlation, Table 2.

Table 2.--COEFFICIENTS OF CORRELATION (r) FOR INDUCED-FAILURE D-SCORES AND NINE PERSONALITY VARIABLES

Personality variable	<u>r</u>	Personality variable	<u>r</u>
Hypochondriasis	.26	Paranoia	-.05
Depression	.36	Psychasthenia	.12
Hysteria	.15	Schizophrenia	.23
Psychopathic deviate	.44	Hypomania	-.15
Masculinity-femininity	.08		

The largest r was .44 (D-score and psychopathic deviate) and the smallest an inverse -.05 (D-score and paranoia). Seven of the coefficients were direct correlations while two were inverse. Because the standard error of the largest coefficient, .44, was calculated to be .15 and the ratio of coefficient to standard error was found to be 2.9, no relationship of significance could

be assumed. But with $N=30$ and the null hypothesis in mind a coefficient of .44 could be considered quite significant at .05 level of confidence, which required an r of only .361. Furthermore, depression-related r , .36, also bordered upon significance at .05 level.

Since the number of subjects would remain the same in calculations of the remaining standard errors, none of the resulting ratios of coefficients to their standard errors could indicate a statistically significant relationship.

Relationships between D-scores for the complete-test-session and personality variables

Relationships between the total-test-reaction, represented by the D-score for ten performances and estimates, and the T scores for personality variables were determined by the method of correlation for small samples. Correlation coefficients were computed for the D-scores and each of the nine personality variables, Table 3.

The largest coefficient of correlation was .32 (D-score and psychopathic deviate) and the least a .01 (masculinity-femininity and D-score). Seven coefficients were direct correlations and two were inverse. The highest coefficient, .32, with a standard error of .16 and a ratio of r to standard error of .32, could not be

described as statistically significant.

Table 3.--COEFFICIENTS OF CORRELATION (r) FOR COMPLETE-TEST-SESSION D-SCORES AND NINE PERSONALITY VARIABLES

Personality variable	<u>r</u>	Personality variable	<u>r</u>
Hypochondriasis	-.18	Paranoia	.06
Depression	.23	Psychasthenia	.02
Hysteria	.14	Schizophrenia	.22
Psychopathic deviate	.32	Hypomania	-.04
Masculinity-femininity	.01		

By the same token, with N constant, calculation of the remaining standard errors would have served no useful purpose since none of the resulting ratios of coefficients to their standard errors could indicate a statistically significant relationship.

Relationships of derived r's in the delineated test situations

An examination of the 27 derived coefficients of correlation in each of the structured test situations, as shown in Table 4, brought out r patterns as they evolved from one situation to the next.

The coefficient related to hypochondriasis varied little from induced-success to induced-failure but dropped to a negative value in the complete-test-session. On the other hand, the depression-related r

persisted in a positive direction as it passed through the three situations, from .23 in success to .36 in failure, to .23 again in the last. The hysteria-related r varied negligibly throughout and r related to psychopathic deviate, although varying a great deal, was still the highest coefficient in each of the three test situations.

Table 4.--RELATIONSHIPS OF COEFFICIENTS OF CORRELATION (r) DERIVED FROM INDUCED-SUCCESS, INDUCED-FAILURE, AND COMPLETE-TEST-SESSION D-SCORES AND PERSONALITY VARIABLES

Personality variable	r	r	r
	Induced success	Induced failure	Complete test
Hypochondriasis	.27	.26	-.18
Depression	.23	.36	.23
Hysteria	.14	.15	.14
Psychopathic deviate	.29	.44	.32
Masculinity-femininity	.12	.08	.01
Paranoia	.17	-.05	.06
Psychasthenia	.02	.12	.02
Schizophrenia	.25	.23	.22
Hypomania	.01	-.15	-.04

Masculinity-femininity r showed no unusual pattern as did paranoia and hypomania-related r 's. Schizophrenia-related r showed little variability and remained positive throughout. Psychasthenia-related r approached zero twice, .02 each time, but deviated .12 from zero in the induced-failure situation.

Statistical procedures used

The formula (method of correlation for small samples) used for computing the coefficients of correlation was:

$$\text{Coefficient of correlation (r)} = \frac{N \sum xy - \sum x \cdot \sum y}{\sqrt{[N \sum x^2 - (\sum x)^2][N \sum y^2 - (\sum y)^2]}}$$

where N = the size of the sample; x = the D-score; and y = the personality variable T score.

For computing the standard error of the coefficients of correlation the formula following was used:

$$\text{Standard error} = \frac{\sqrt{1 - r^2}}{N}$$

where r = coefficient of correlation and N = the size of the sample.

Summary

1. Nine T scores measuring personality tendencies were obtained for each of 30 subjects comprising the experimental group. Approximately half of the group had two or more T scores of 65 and above suggesting maladjustment. Twelve had one or more T scores of 70 and above with the greatest number of T scores of 65 and above, 12, under any one variable coming under hypomania.

Hypochondriasis had the least.

2. D-scores for induced-success situations were calculated giving a total of 30 of both plus and minus values. Induced-success D-scores ranged from -11.6 to 3.6 with slightly more than half of the scores minus values.

3. D-scores for induced-failure situations were calculated giving a total of 29 plus and one minus value. Induced-failure D-scores ranged from -1.5 to 10.3.

4. D-scores for the complete-test-session were computed giving a total of 24 plus and 6 minus values. D-scores ranged from -6.1 to 6.3.

5. Using the method of correlation for small samples ($N=30$), nine coefficients of correlation were obtained for success-induced D-scores and nine personality variables. The largest obtained r was .29 (D-score and psychopathic deviate) and the smallest r .01 (D-score and hypomania). All r 's were in a positive direction but none were statistically significant.

6. Using the method of correlation for small samples, nine coefficients of correlation were computed for failure-induced D-scores and nine personality variables. The largest obtained r was .44 (D-score and psychopathic deviate) and the smallest r an inverse -.05 (D-score and paranoia). Seven r 's were direct cor-

relations while two were inverse. The r of .44 was significant at .05 level of confidence, while depression-related r , .36, bordered significance at .05 level. But for these reservations, none could be termed statistically significant.

7. Using the method of small-sample correlation, nine coefficients of correlation were calculated for complete-test-session D-scores and the nine personality variables. The largest coefficient was .32 (D-score and psychopathic deviate) and the least .01 (D-score and masculinity-femininity). Seven r 's were direct correlations and two were inverse. None were statistically significant.

8. An examination of the 27 correlation coefficients obtained from the three delineated test situations, induced-success, induced-failure, and complete-test-session brought several patterns to the fore. The hypochondriasis-related r varied little from induced-success to induced-failure but dropped from a direct to an inverse correlation in the total-test-session.

Depression-related r varied as it passed through three situations, from .23 to .36 to .23. The coefficient related to psychopathic deviate varied a good deal but maintained the highest r , .29, .44, .32, in each of the three test situations. Schizophrenia-

related r showed little variability but remained positive throughout, .25, .23, .22. Psychasthenia-related r neared zero twice, .02, .02, but deviated .12 from zero in the induced-failure situation.

Chapter V

DISCUSSION

The primary objective of the present study has been to determine, if practicable, how a measure of aspiration-level behavior could function as a diagnostic counseling technique. The term diagnostic counseling technique was delimited to connote a method for identifying personality tendencies, specifically those measured by The Minnesota Multiphasic Personality Inventory. Consequently, the function of a measure of aspiration-level behavior as a diagnostic counseling technique has been determined only in terms of the relationships obtained between a quantitative measure of aspiration-level behavior expressed as an average difference score or D-score and T scores for the personality inventory. D-score has been defined as a single score, for a given individual, the mean of the differences between each performance and the following estimate, considered representative of the quantitative aspects of the level of aspiration in a given task. Of particular concern were relationships between inventory T scores and D-scores

derived from induced-success and induced-failure situations.

Induced-success coefficients of correlation and the primary objective

In the data analysis, the largest obtained coefficient of correlation for success-induced D-scores and T scores for nine personality variables was .29, D-score and psychopathic deviate. This r was found to be much too small to be considered statistically significant. Consequently, since the remaining 8 coefficients were even smaller than .29 and $N=30$ constant, it was assumed that a negligible relationship, possibly due only to chance, existed. The interpretation was made that probably no important relationship existed between T scores and the method used for eliciting and measuring, in D-score terms, level-of-aspiration behavior following induced-success. These results precluded any inference that the employed measure of aspiration-level behavior following induced-success could function as a diagnostic counseling technique.

Induced-failure coefficients of correlation and the primary objective

The largest obtained r for failure-induced D-scores and T scores for nine personality variables was .44, D-score and psychopathic deviate. Although approach-

10/10/51
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ing significance, it still could not be described as statistically so (except at .05 level). Since the remaining coefficients were all below .44, the assumption was made that the relationships were negligible and possibly due to chance. An inference was made that probably no important relationship existed between T scores and D-scores. Apparently the employed measure of aspiration-level behavior following induced-failure could not function as a diagnostic counseling technique.

Complete-test-session coefficients of correlation and the primary objective

No statistically significant coefficients were manifest in the study of relations between D-scores for the total-test-session and the T scores for nine personality variables. The highest coefficient, a negligible .32, D-score and psychopathic deviate, indicated no important relationship between T scores and the method used for eliciting and measuring level-of-aspiration behavior for the complete-test-session. Consequently, it was reasoned that the employed measure of level-of-aspiration behavior for the complete-test-session could not serve as a diagnostic counseling technique.

Patterns of correlation coefficients for the delineated test situations

Although knowledge of patterns of r's through

induced-success, induced-failure, and the complete-test-session had not been deemed essential to answering the major problem, such patterns were thought of not only as possible areas for future investigation but as useful knowledge for an understanding of the interrelationships among the computed coefficients.

D-score-and-psychopathic deviate r 's, although showing some variability from one situation to the next, were persistently high, the largest in each of the structured situations. The question arose of whether some factor or factors common to each of the situations or inherent in the experimental subjects themselves could account for these results. Schizophrenia-related r 's showed slight variability. The possibility arose that schizophrenic-behavior was relatively constant despite variations in the external milieu.

As they were obtained in the three situations, depression-related r 's varied somewhat but maintained coefficients above .22. Whether these were the result of situational or personal factors might well serve as a topic for future study. Hysteria-related r 's varied ever so slightly, .14, .15, .14, suggesting the possibility of certain internal coherence, although such coherence conceivably could be characteristic of the psychopathic deviate-related r 's.

Mention is made of the fact that 23 of the 27 coefficients of correlation were direct correlations.

The relation of findings to the literature

Although many workers (3, 5, 10, 24) saw the level-of-aspiration method as a new, fruitful approach to the study of personality, the present study found no significant relationships between the devised method of measuring level-of-aspiration behavior and nine personality tendencies measured by The Minnesota Multiphasic Personality Inventory.

Gould (10) felt that level-of-aspiration situations elicited the individual's repertoire of defense mechanisms which reasonably are incorporated in the tendencies, hypochondriasis, schizophrenia, etc., measured by the inventory. However, there seemed to be no important relationships between the defense mechanisms incorporated in the personality variables measured by the inventory and those supposedly elicited in the structured level-of-aspiration situation.

The present study results were consistent with those of Gardner's (9), who found no significant correlations between level-of-aspiration behavior and a number of "judged" personality variables. Because experimental situations differed, no comparison was made between this

study's findings and those of Escalona (3), who found that manics, as compared with depressives, had a greater mobility of level of aspiration, and were more sensitive to success and failure and particularly to failure.

Gould's and Kaplan's(11) belief that the average difference score is subject to the fallacy of invalidly assuming that individuals receiving the same D-score have similar psychological characteristics may, in a sense, be substantiated by the present study through the observation that both high inventory scores and low inventory scores were found with low D-scores, and high and low inventory scores were found with high D-scores as well as negative D-scores.

Lewin's and others' (24) contention that the level of aspiration generally will be raised and lowered respectively as the performance reaches or does not reach the level of aspiration found little support from present findings. On the contrary, in D-score reactions to success more than half were negative, indicating lowered levels of aspiration following performances which reached previous levels of aspiration. Furthermore, except for one instance, the general reaction to failure was a raised level of aspiration.

Suggestions for future study

Several possibilities for further study became evident as the present study progressed and neared completion. Some were touched in earlier sections but probably needed reiteration.

First in mind were improvements upon the methodology of the present study in order to facilitate greater validity and reliability of results. An increase in sample size to "large sample" proportions seemed essential. Restructuring of the level-of-aspiration situation to provide for individual differences in performance (possibly by reducing or eliminating the rigid time pattern) also appeared advisable. The experimental group, itself, should consist of both males and females with controls as to educational, economic, and social status as well as mental and chronological age.

Testing of the general contention that aspirations were raised following success, and lowered following failure required additional attention. Investigation of the assertion that extreme $\pm$ D-scores were characteristic of maladjustment appeared necessary. Patterns of coefficients of correlation for D-scores and personality variables as r 's were obtained for various structured situations seemed in need of investigation. Last, a greater application of the level-of-aspiration technique in clinical situations seemed essential to a better

understanding of its implications as a diagnostic instrument.

Chapter VI

SUMMARY

Guidance and Counseling has been concerned with gaining an understanding of the total structure of the individual. A knowledge of patterns of behavior collectively termed "personality" appeared to be of particular significance to such understanding. Of specific interest as a counseling problem have been those inadequate forms of social or personal behavior labeled personality maladjustments.

Numerous diagnostic instruments have been devised for eliciting symptoms considered indicative of personality disturbances. Reliable but weakly valid questionnaires, although of limited clinical value, are used extensively. The newer projective-type tests, presenting more revealing clinical pictures, nevertheless must rely on clinician and counselor translations, which in turn reduce the efficacy of diagnosis. Concerned as it has been with the effects of success or gratification and failure or frustration in a dynamic situation, the aspiration-level technique may supply an objective diag-

nostic technique for a counseling situation.

The primary objective of the present study has been to determine, if practicable, how a measure of aspiration-level behavior could function as a diagnostic counseling technique. The term "diagnostic counseling technique" was delimited to imply a method for identifying personality tendencies, specifically those measured by The Minnesota Multiphasic Personality Inventory. Consequently, the function of a measure of aspiration-level behavior as a diagnostic technique has been determined only in terms of the relationships obtained between a quantitative measure of level-of-aspiration behavior, expressed as an average difference score or D-score, and T scores for the personality inventory variables. Of particular concern were relationships between inventory T scores and D-scores derived from induced-success and induced-failure situations.

Level of aspiration, as used here, referred to the level of future performance in a familiar task which an individual, knowing his level of past performance in that task, explicitly undertakes to reach. D-score has been defined as a single score, for a given individual, the mean of the differences between each performance and the following estimate, considered representative of the quantitative aspects of the level of

aspiration in a given task.

A sample group of 30 men students of freshman and sophomore standing, enrolled at Colorado Agricultural and Mechanical College for the Spring Quarter, 1949, served as a nucleus for the study. The group consisted of eight war veterans and twenty-two non-veterans, all members of the same social fraternity, with ages ranging from 18 to 25 and a mean age of 19.7 years. Vocational aspirations within the group varied, as might be expected in a collection of students with mixed backgrounds and diversified occupational-objective values.

Data collected for analysis included personality inventory scores converted to T scores and experimental digit-symbol test (designed to elicit level-of-aspiration behavior for this study) performance scores together with estimates of future performance converted to D-scores for reactions to three structured situations, failure, success, and the complete-test-session.

Using the method of correlation for small samples, 27 coefficients of correlation were obtained, 9 for each of the three delineated test situations, induced-success, induced-failure, and total-test-session.

Results precluded any inference that the employed measure of aspiration-level behavior following induced-success, induced-failure, and complete-test-

session could function as a diagnostic counseling technique because 25 obtained coefficients of correlation were found to be too small to be considered statistically significant while one, .44, psychopathic deviate-failure situation, was significant at .05 level, and one, .36, depression-failure situation, bordered significance at .05 level.

APPENDIX

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APPENDIX A.--MASTER

DATA SHEET

KEY TO SYMBOLS AND ABBREVIATIONS
IN APPENDIX A

The Minnesota Multiphasic Personality Inventory

Hs - Hypochondriasis	Pa - Paranoia
D - Depression	Pt - Psychasthenia
Hy - Hysteria	Sc - Schizophrenia
Pd - Psychopathic deviate	Ma - Hypomania
Mf - Masculinity-femininity	

Experimental Digit-Symbol Test

Sc - Performance score
Est - Estimate of future performance

APPENDIX B.--EXPERIMENTAL

DIGIT-SYMBOL TEST

EXPERIMENTAL DIGIT-SYMBOL TEST

1	2	3	4	5	6	7	8	9
Δ	○	+	∨	≈	∪	L	□	∩

Sample																								
2	1	3	1	2	4	3	5	3	1	2	1	3	2	1	4	2	3	5	2	3	1	4	6	3

1	5	4	2	7	6	3	5	7	2	8	5	4	6	3	7	2	8	1	9	5	8	4	7	3

6	2	5	1	9	2	8	3	7	4	6	5	9	4	8	3	7	2	6	1	5	4	6	3	7

Test No.		Subject No.	
Score		Estimate	

BIBLIOGRAPHY

BIBLIOGRAPHY

1. Adams, Donald K. Age, race, and responsiveness of levels of aspiration to success and failure. (abstract). Psychological Bulletin, 36:537, July 1939.
2. Escalona, Sibylle K. An application of the level of aspiration experiment to the study of personality. New York, Teachers College, Columbia University, 1948. 132 p. (Contributions to education, no. 937.)
3. _____ The effect of success and failure upon the level of aspiration and behavior in manic-depressive psychoses. (In Studies in topological and vector psychology I. Iowa City, University of Iowa Press, 1940. p. 197-302. (University of Iowa studies in child welfare, v. XVI, no. 3.))
4. Eysenck, H. J. and Himmelweit, H. T. An experimental study of the reactions of neurotics to experiences of success and failure. Journal of General Psychology, 35:59-75, July 1946.
5. Frank, Jerome D. Individual differences in certain aspects of the level of aspiration. American Journal of Psychology, 47:119-128, January 1935.
6. _____ The level of aspiration test. (In Murray, H. A. and others. Explorations in personality. New York, Oxford University Press, 1938. p. 461-71.)
7. _____ Recent studies of the levels of aspiration. Psychological Bulletin, 38:218-226, April 1941.
8. Gardner, John W. The use of the term "level of aspiration." Psychological Review, 47:59-68, January 1940.
9. _____ The relation of certain personality variables to level of aspiration. Journal of Psychology, 9:191-206, 1940.

10. Gould, Rosalind. An experimental analysis of "level of aspiration." Genetic Psychology Monographs, 21:1-115, February 1939.
11. Gould, Rosalind and Kaplan, N. The relationship of "level of aspiration" to academic and personality factors. Journal of Social Psychology, 11:31-40, February 1940.
12. Gruen, E. W. Level of aspiration in relation to personality factors in adolescents. Child Development, 16:181-8, December 1945.
13. Hathaway, Starke R. and McKinley, J. Charnley. The Minnesota Multiphasic Personality Inventory. New York, The Psychological Corporation, 1943. 16 p.
14. Hausmann, Max F. A test to evaluate some personality traits. Journal of General Psychology, 9:179-89, July 1933.
15. Hilgard, E. R. Success in relation to level of aspiration. School and Society, 55:423-8, April 11, 1942.
16. Holt, R. R. Level of aspiration: ambition or defense? Journal of Experimental Psychology, 36:398-416, October 1946.
17. Hoppe, Ferdinand. Success and failure. Psychology Research, 14:1-62, 1930.
18. Irwin, F. W. Realism of expectations. Psychological Review, 51:120-6, March 1944.
19. Klein, George S. and Schoenfeld, N. Influence of ego-involvement on confidence. Journal of Abnormal and Social Psychology, 36:249-58, April 1941.
20. Klugman, S. F. Emotional stability and level of aspiration. Journal of General Psychology, 38:101-18, January 1948.
21. _____ Relationship between performance on the Rotter aspiration board and various types of tests. Journal of Psychology, 23:51-4, January 1947.

22. Lewin, Kurt. A dynamic theory of personality.
New York, McGraw-Hill Book Company, 1935. 286 p.
23. _____ Psychology of success and failure.
Occupations, 14:926-930, 1936.
24. Lewin, Kurt, and others. Level of aspiration.
(In Hunt, J. McV. Personality and the behavior
disorders. New York, The Ronald Press Company,
1944. v. I, p. 333-78.)
25. Preston, Malcolm G. and Bayton, James A. Correla-
tions between levels of aspiration. Journal of
Psychology, 13:369-373, April 1942.
26. Rotter, Julian B. Level of aspiration as a method
of studying personality: I. A critical review of
methodology. Psychological Review, 49:463-74,
September 1942.
27. _____ Level of aspiration as a method
of studying personality: II. Development and eval-
uation of a controlled method. Journal of Experi-
mental Psychology, 31:410-22, November 1942.
28. _____ Level of aspiration as a method
of studying personality: III. Group validity
studies. Character and Personality, 11:255-74,
March 1943.
29. _____ Level of aspiration as a method
of studying personality: IV. The analysis of
patterns of response. Journal of Social Psychol-
ogy, 21:159-77, May 1945.
30. Sears, Pauline Snedden. Level of aspiration in
relation to some variables of personality:
clinical studies. Journal of Social Psychology,
14:311-36, November 1941.
31. Wechsler, David. The measurement of adult intelli-
gence. Baltimore, Williams and Wilkins Company,
1944. 285 p.