

A STUDY OF SELECTED PERSONALITY AND OCCUPATIONAL  
ASPIRATION VARIABLES ASSOCIATED WITH  
ACHIEVEMENT LEVEL

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ASPIRATION VARIABLES ASSOCIATED WITH  
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## PREFACE

Educators have been constantly perplexed by inferior academic performance on the part of students who apparently have superior ability. Conversely, they have been surprised to find superior performances by students whose measured ability was not indicative of such achievement. It is becoming increasingly necessary that educators understand each individual student to the fullest extent possible in order to provide an environment within which the individual can make the modifications necessary to better prepare him to meet the demands placed upon him both by himself and by society.

The investigation reported herein was based on the premise that an individual will respond in the most adequate manner he can to a given stimulus at the time that particular stimulus is presented. The principal objective of the study was to see if certain nonintellectual variables could be identified with specific levels of achievement with enough consistency to identify or predict the achievement level of high school students more accurately than is now being done.

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Special recognition is also due Mr. Ocie Anderson, Blackwell High School Principal, for his wholehearted cooperation in providing time and personnel to administer all of the tests required by this study.

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## CHAPTER I

### INTRODUCTION

This dissertation reports an investigation of some factors pertaining to selected personality and aspirational variables as they relate to the level of achievement of selected high school students. It examines certain variables that are felt to affect the student's capability to be effective and efficient in the use of his abilities.

It is very apparent that one of the great concerns of the American public today in regard to education is the school dropout problem. In addition to the dropout problem educators have been constantly perplexed by inferior academic ability. Conversely, educators have been surprised to find superior performance by students whose measured academic ability was not indicative of such achievement.

Educators have consistently placed the blame for the similarities and discrepancies between predicted achievement and actual achievement in school on the student and have labeled him as an "overachiever", "average achiever", or "underachiever." The basis for these predictions range all the way from teachers' opinion to using the results of an extensive series of achievement and academic ability tests. Numerous studies have been made concerning the "underachiever" and the "overachiever" from this point of view.

In the American society "underachievement" carries a value judgment closely akin to delinquency, or, as stated by William Deagon (19), "a

major educational disease." The "average achiever" is classed as one who is just getting along, which, in accordance with American value standards, is mediocrity, while the "overachiever" is placed in the position of being the ideal pupil. Robert Dulles (23) suggests that "simply changing the terminology from 'underachieving' to 'overpredicted' would perhaps eliminate some of the value connotations related to the students."

A survey of the literature, which will be considered in more detail in chapter 3, indicates a definite trend toward the re-evaluation of the predictive criteria whereby prediction of academic success will be a result of a more complete understanding of the individual. An investigation by Rath (68) indicates that certain values or lack of these values is an important factor in the level of achievement. Duff and Siegel (22) investigated the biographical factors associated with the achievement phenomena to determine whether certain types of personal data might be more meaningful as an aid to the lowering of prediction error.

Hummel and Sprinthall (41) have related interests, attitudes, and values to the low achiever. It is their thesis that low achievement, particularly in bright students, is a valid indicator of an immature ego thus, low achievement is a problem in adaptive ego functioning.

The basic assumption underlying this study is that each individual gives the best response possible to any stimulus at the particular time the stimulus is presented, thus there is no such thing as overachievement or underachievement.

The focus of this investigation shall be on the attempt to determine the relationship of certain personality traits and level of occupational aspiration to level of achievement which might add to the

knowledge of existing differences among those who achieve as now predicted, those who achieve above the predicted level, and those who achieve below the predicted level.

#### Importance of the Study

"The future of any country which is dependent on the will and wisdom of its citizens is damaged, and irreparably damaged, whenever any of its children is not educated to the fullest extent of his capacity, from grade school through graduate school. Today an estimated four out of every ten students in the fifth grade will not even finish high school--and that is a waste we cannot afford," stated the late President John F. Kennedy in this "State of the Union" message to Congress on January 14, 1963.

School personnel are obligated to provide each individual with the acceptance and understanding necessary for him to develop his maximum potentials. This includes the ability to predict his future academic achievement level as accurately as possible.

Prediction is an essential component of life in America. Fortunes are made and lost due to predictions concerning the stock market. Lives are saved or lost depending upon an automobile driver's prediction concerning whether he can safely pass the car ahead. Many people avidly watch the meteorologist on television for his prediction of future weather conditions. The accuracy of any prediction depends upon the dependability of the criteria used by the predictor and his ability to translate these criteria correctly.

Educational systems are based on the prediction that the curricula provided for the students will equip these students to adjust to future environmental situations which they will encounter. Students enroll in certain courses or prepare for certain vocations because either they have, or someone else has, made predictions about their ability or

fitness to achieve satisfaction or fulfill a need by so doing.

As the complexity of society intensifies, it becomes increasingly necessary that more accurate criteria be made available for competent school personnel to interpret to school students that the students in turn may more adequately predict the level of their future achievement.

For many years the expected level of academic achievement of a given student has been predicted on the basis of how he scored on a particular aptitude or IQ test. A given score on this particular instrument has been used to indicate a given level of achievement. The failure of the student to attain the predicted level of achievement has branded him as an "underachiever," while achievement above the predicted level has won him the accolade of "overachiever."

Robert L. Thorndike (87) says, "In much of the work on prediction of academic achievement, educators (and psychologists) have suffered from a kind of single-minded obsession with intelligence or scholastic aptitude tests or predictions. These tests have at times been virtually deified as an exemplification of exact and absolute truth. And it has been assumed that achievement somehow 'ought' to correspond exactly to the level of performance on the aptitude test."

In order for school personnel to effectively fulfill their obligations to the student it will be necessary for a better understanding of what is his "real" capacity. This will necessitate the dispersement of the deified cloud which surrounds the scholastic aptitude test and re-evaluate the criteria for predicting achievement.

#### Statement of the Problem

It is becoming increasingly necessary that educators understand each individual student to the fullest extent possible in order to provide an environment within which the individual can make the modifications necessary to better prepare him to meet the demands placed upon

him by both himself and by society. There are certain variables, such as sex, ability, and socio-economic status over which the school environment has no manipulatory control. Many personality and aspirational variables, however, are being modified through the environmental structure of school situations.

One of the basic tenets of educational philosophy is that each individual be provided with the tools and the environment which will permit him to develop his abilities to the greatest degree possible. In order to do this it is necessary to consider variables other than academic ability which might enhance or lessen the student's possibilities for maximum development.

Flaherty and Reutzel (30) report that "Today especially, there is a growing realization that non-intellectual factors must be assessed in order to diminish the margin of error in the prediction of intellectual achievement."

The problem investigated by this study deals with certain personality variables and occupational aspirations as they relate to various levels of achievement within prescribed ability limits. It is a descriptive study of relationships that exist in a natural setting. It is the purpose of this investigation to determine, by using a selected group of high school students, whether any of these personality traits or occupational aspiration qualities are peculiar to each of the levels of achievement and distinct from the other levels.

The hypotheses state the specific investigations that were made relevant to the variables under consideration in this study.

## Description of Population

The student body of Blackwell High School, the population from which the sample for this study was selected, has some unique characteristics which must be discussed. These include (1) its stability, (2) its low dropout rate, (3) the number of students who plan for training beyond high school, and (4) the lack of minority race groups.

A survey was conducted for this study to determine the degree of stability of the student body. The total enrollment of Blackwell High School for the 1964-65 school term was 555. Of this total enrollment, 68% of the pupils had received all of their school training in Blackwell schools, or rural schools feeding into Blackwell High School. Another 27% of this population had entered the Blackwell schools at the beginning of, or before, the seventh grade. A combination of these statistics shows that 95% of the high school population had been in the Blackwell system since the beginning of, or preceding, the 7th grade.

An analysis of these data by grade levels is presented in Table I.

The holding power of Blackwell High School is evidenced by a compilation of the student withdrawals during the school year 1964-65 which shows a total loss of only 36 pupils, or 6.4%. Of this number 9, or 1.6% were transferred to other schools so would not be classified as dropouts. The dropout rate of the 1965 graduating class from 1962-65 was 11.3% compared to the national average of 26.1% for this period.

The Blackwell High School student body is unique in its lack of ethnic groups. There are no negroes in the city of Blackwell nor in any of the outlying school districts served by Blackwell High School, consequently there are no negroes in the student body. Only two

TABLE I  
NUMBER AND PER CENT OF PUPILS WHO HAVE ATTENDED THE  
BLACKWELL SCHOOLS MORE THAN SIX YEARS

Classification	Total No. in Class	A*		B*		C*	
		No.	%	No.	%	No.	%
Sophomores	193	128	67%	61	32%	189	99%
Juniors	192	125	66	63	33	188	99
Seniors	170	126	75	24	14	150	89
High School Total	555	379	68	148	27	527	95

\* A = In Blackwell all school years.

B = In Blackwell more than 6, but less than 12 years.

C = Total of A & B.

minority racial groups were represented in the population for this study during the school year 1964-65. There were two Mexican students and one Indian student in the high school population.

While these characteristics enhance this study as it relates to this particular school system, it also limits generalizations which may be made from the results of the research.

The research population consisted of 452 subjects selected from the total high school population. These subjects were then divided by sex and placed in three ability levels: high, average, and low. The subjects within each ability level were then classified as high, average, or low achievers. A detailed discussion of the selection and classification of the subjects is presented in Chapter III of this report.

#### Hypotheses

There are two major areas of relationship being examined in this study. The first area studied concerns the relationship of the selected

personality traits as measured by the California Test of Personality to the three levels of achievement for each designated ability category.

The following six hypotheses delineate the relationships investigated in this area:

- I. There will be no significant difference in the measured personality traits among the three achievement levels of high school girls with high ability.
- II. There will be no significant difference in the measured personality traits among the three achievement levels of high school boys with high ability.
- III. There will be no significant difference in the measured personality traits among the three achievement levels of high school girls with average ability.
- IV. There will be no significant difference in the measured personality traits among the three achievement levels of high school boys with average ability.
- V. There will be no significant difference in the measured personality traits among the three achievement levels of high school girls with low ability.
- VI. There will be no significant difference in the measured personality traits among the three achievement levels of high school boys with low ability.

Hypotheses VII through XII define the relationships examined between the occupational aspiration variable as measured by the Level of Interest Scale of the Occupational Interest Inventory and the three achievement levels of each ability group.

- VII. There will be no significant difference in the measured level of occupational aspiration among the three achievement levels of high school girls with high ability.
- VIII. There will be no significant difference in the measured level of occupational aspiration among the three achievement levels of high school boys with high ability.
- IX. There will be no significant difference in the measured level of occupational aspiration among the three achievement levels of high school girls with average ability.



- X. There will be no significant difference in the measured level of occupational aspiration among the three achievement levels of high school boys with average ability.
- XI. There will be no significant difference in the measured level of occupational aspiration among the three achievement levels of high school girls with low ability.
- XII. There will be no significant difference in the measured level of occupational aspiration among the three achievement levels of high school boys with low ability.

#### Definitions and Discussion of Terms

1. CTMM - SF. The California Test of Mental Maturity--Short form, Advanced.
2. C. A. T. The California Achievement Test Battery
3. C. T. P. The California Test of Personality
4. O. I. I. - L. I. The Occupational Interest Inventory--Level of Interest
5. I. S. S. The Index of Socioeconomic Status
6. High Academic Ability Level. This refers to the category in which were placed those subjects whose score on the CTMM-SF was eleven or more IQ points above the mean IQ for their grade level.
7. Average Academic Ability level. This refers to the category in which were placed those subjects whose score on the CTMM-SF fell within a  $\pm$  ten IQ points around the mean IQ for their grade level.
8. Low Academic Ability Level. This refers to the category in which were placed subjects whose score on the CTMM-SF was 11 or more IQ points below the mean IQ for their grade level.
9. High Achiever. This is a subject whose score on the C. A. T. exceeds his score on the CTMM-SF and is beyond the limits of the designated confidence band.

10. Average Achiever. This is a subject whose score on the C. A. T. and the CTMM-SF are consistent within the limits of designated confidence band.
11. Low Achiever. This is a subject whose score on the C. A. T. is less than his score on the CTMM-SF and is beyond the limits of the designated confidence band.
12. A. O. V. This refers to the analysis of variance technique used in the analysis of the data.
13. L. S. D. This refers to the test of Least Significant Difference used to identify the significance indicated by the A. O. V.

#### Limitations and Assumptions

The nature of the population provides two limitations for the study. First, the unique stability of the population restricts the generalizations which can be made from the results. Second, the size of the sample population for this type of study limits the number in some of the achievement level calls which reduces the validity of the results obtained concerning these particular levels.

The investigator is aware of the limitations involved in measuring personality traits or the level of occupational aspiration by any criteria, particularly by group administered instruments. The limitations introduced by the use of only one criteria to determine the level of achievement are also recognized.

While three factors were utilized to determine the socioeconomic status of each subject, the investigator is aware that many other factors can influence this variable, thus only a partial control is

available.

For the purpose of this study it has been assumed that the instruments used are valid enough to be effective measures of the factors involved. It has further been assumed that the uncontrolled variables of participation in other than academic activities will not significantly effect the study.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Introduction

Educational and psychological literature concerning the discrepant achiever is voluminous. Many facets of both intellectual and non-intellectual factors have been studied in an attempt (1) to determine causes for the discrepant academic achievement pattern,

(2) to identify the discrepant achiever,

(3) to predict achievement, and

(4) to modify the behavior of the low achiever.

Researchers have run the gamut from studying discrepant achievement in a special subject area to the broad scope of total behavior patterns relating to academic performance.

An analysis of the literature and research pertaining to levels of achievement indicates that the consideration of both intellectual and nonintellectual factors in combination is necessary if the total academic behavior pattern is to be identified and understood. Dulles (23, p. 121) challenges all educators and researchers concerned with achievement level as follows:

Let us ask ourselves a question: Is the "real" capacity of a student what someone else judges it to be or is it the actual level of performance and achievement? Everyone "achieves" (i.e. approximates goal behavior) to some extent, but by absolute standards some accomplish more than others. There are reasons for this. Genetics is one important factor; social experience is another. And although it may be impossible at present to disentangle all the contributing

elements, in theory, a student's behavior is explainable and modifiable in terms of some observable conditions or events. Otherwise, we would not try--purposefully--to educate. It is fairly clear then that given all the biological and social factors every organism achieves what it can achieve.

Logic seems to urge us to direct our attention toward our measures of prediction rather than toward the underachievement.

Curry (17) determined that the problem of over-under achievement was not limited to any particular intelligence ability groups nor peculiar to any one socioeconomic status level. However, many studies have indicated that while the problem was not limited to any specific group as determined by Curry (17), the variables which caused the discrepant achievement could vary with the ability group, socioeconomic status level, or sex. (eg, (9), (31), (33), (44), (46), (63), (77), (91), (96)).

Since the format of this study is designed to investigate variables on different levels of ability, different levels of achievement within each ability level, and by differentiating between sexes, the review of the literature has been divided into two areas: (1) Research patterns concerning actual and predicted achievement, and (2) Factors pertaining to "overachievement" and "underachievement." The writer has selected those studies which he felt would provide the best background for understanding this investigation.

#### Research Patterns Concerning Actual and Predicted Achievement

During the past ten years there has been much interest in improving the prediction of school achievement. A selected list of the better studies in this area would include well over two hundred titles. With the recent emphasis on the school dropout problem the number of studies involving early identification and prediction is increasing. The trend has been toward the use of nonintellectual factors and away from the

traditional academic ability measures as predictors. Carter (10) suggests that the devices which are useful for the prediction of achievement will also be useful for the prediction of continuation in school.

For the purpose of this investigation the review of the literature concerning prediction will be pointed toward several areas which have been investigated with representative research from the various areas to give a general background pertinent to this study.

From their study of "Nonintellective predictors of academic success in school and college," Finger and Schlessler (28, p. 14) report that Underachievement in both school and college creates much frustration, frustration that is probably more often exhibited by parents and teachers than by the low-achieving student. The fact that many such students seem unconcerned about their poor performance suggests that underachievement is symptomatic of the possession of some attitudes or values that make it unnecessary to strive for school success. Not infrequently, however, does low achievement result in serious consequences. Some underachievers must face school dismissal, or give up well-established, long-range career plans. Yet, faced with this problem, many, perhaps most, underachievers do not change their school performance, although they may express much concern for their dilemma."

They conclude by saying (28, p. 27)

"School achievement must be related to a complex of cultural commitments stemming from self-, parental, and peer expectations for school and career. The individual adopts fantasy and real aspirations for himself in a wide variety of cultural contexts. Even when school success is a requirement for one's long-range plans, the day-to-day activities of school may be perceived either as satisfying and valuable or as something with which to contend. Attitudes and behaviors related to school become intertwined with one's long-range plans and aspirations."

The use of psychological tests and personality inventories in the public schools is still viewed with much pessimism and skepticism. There are strong implications that more research is needed to substantiate the predictive value of such instruments. However, the findings from many recent investigations are pointing toward the successful use of certain personality variables as predictors of academic achievement.

Pierce (65), using the California Psychological Inventory, contrasted high and low achieving tenth grade boys and twelfth grade boys. He found that both levels differed significantly on the scales measuring Responsibility, Tolerance, Achievement via Conformance, Achievement via Independence and Intellectual Efficiency. Lessinger and Martinson (49) reported findings which were in agreement with Pierce. Snider and Linton (79) supported the findings of these investigations and also reported that high achieving boys differed from low achieving boys on socialization, self control and good impression, while high achieving girls differed from low achieving girls on achievement via independence, intellectual efficiency and psychological mindedness. Morrow and Wilson (57) also emphasized the importance of socialization and impulse regulation as differentiating factors between levels of achievement.

Rosenberg and others (71) used a psychological inventory with the General Technical score on the Army Classification Battery to predict the academic grades of students in three military courses. They found this to be an effective screening device for all three courses. Holland (40) also studied the prediction of academic achievement from a combination of personality and aptitude variables. He concluded that non-intellectual variables such as super ego, persistence and deferred gratification are useful in predicting and understanding the academic achiever. Flaherty and Reutzel (30) suggest that certain psychological inventory scales may be used as possible nonacademic predictors of achievement.

Watley (94) approached the problem of prediction of academic achievement through personal adjustment. The basic hypothesis of his study was that "better adjusted students are more predictable than

maladjusted students." The results of this study indicated that "although the adjustment groups did not appear to be significantly different in terms of academic predictability, a definite relationship did exist between the groups on levels of achievement." Snider and Linton (29) also found that achievers were better adjusted than low achievers.

Another approach to the use of nonintellectual variables as achievement predictors was investigated by De Sena (20). The Brown-Holtzman Survey of Study Habits and the Barrow's College Inventory of Academic Adjustment were utilized to compare the effectiveness of these instruments in identifying nonintellectual factors which discriminate among over, under, and normal achievers and which may significantly influence academic achievement. It was found that both instruments show evidence of being useful predictor tools.

The reports of Shaw (73) and Bachman (2) are typical of the studies using need achievement scales as potential predictors of academic achievement. These investigators agreed that at the present time these scales showed no significant predictability patterns and that more research with instruments of this category is needed.

The variable of creativity has recently been the target for much emphasis and study. Edwards and Tyler (24, p. 99) express the feelings of many researchers in the summary of their study concerning the relationship of intelligence, creativity, and achievement which states

"The most important practical implication of findings like these is that time honored tests of scholastic aptitude have not been made obsolete by recent research on creativity. A test like the SCAT is a more dependable predictor of school achievement than creativity tests are."



## Factors Pertaining to "Overachievement and Underachievement"

A pupil does not succeed or fail in an intellectual or social vacuum. He achieves academically at a given level because of the interaction among all of the variables which make up his total inter-intrapersonal environment. There is an interplay between the intellectual and nonintellectual facets of this environment which indicates that there must be certain aspects of the personality which make the achievement of academic goals need satisfying.

Stagner (80) says that it is becoming increasingly clear that personality influences achievement in an indirect way by affecting the degree to which an individual makes use of his potentialities. He concludes by reporting that

"at some points along the distribution personality is an advantage in academic work while different amounts of the same personality variable may be disadvantageous, or may be operative in one direction in one case, the opposite in a similar situation." (80, p. 655)

Much of the literature concerning the influence of personality traits on academic achievement deals with the relation of the self concept to the level of academic achievement. Self-concept, as used in most studies, is a product of the personality structure of the individual which determines the degree of adequacy the individual sees himself as having.

Self-concept is generally accepted as being the degree of adequacy that an individual sees himself as having and is a product of the individual's personality structure.

Combs (13), in a study of self-perception in relation to the "underachievement" of academically capable students, says

"The underachiever cannot be treated in terms of any one facet of his problem. Underachievement must be understood to be a completely personal and consistent adaptation of the underachiever to his needs and capacities as he uniquely experiences them....The basic thread running through this study is that a major determinant of how well one will be able to function is his feeling of capability of functioning. Many times for the underachiever educational experiences are perceived by him, and are thus experienced by him, as being largely nonfacilitating experiences."

His study involved an exploration of the way underachievers see themselves and their interpersonal relations in comparison to the self-perception of students who were achieving well. The results of the study indicated significant and consistent differences in the areas of adequacy, acceptability, peer relations, adult relations, efficiency in approaching problems, and freedom and adequacy of emotional expression. In all of these areas the underachiever saw himself as being less competent and less adequate than did the achiever.

Fink (29), Grootof (16), and Morrow and Wilson (57), while using different approaches, all report evidence to support the hypothesis that an adequate self-concept is related to high academic achievement and that an inadequate self concept is related to low academic achievement to a significant degree.

The relationship between self-concept and academic achievement is described by Tuel and Wursten (92) and others (58), (83), (34), as being reciprocal. In some cases a negative self-concept seems to hinder academic achievement, while in other cases a negative self-concept appears to be the product of poor achievement. It is also important to note that low achievement does not always imply negative attitudes. Berger (4) reports that

"Students with high scores on 'willingness to accept limitations' tended to get better grades. Underachievers, by contrast, were able to accept only the good in themselves and evidenced idealized self-images which

did not correspond to reality. They established extremely high standards for themselves, denied wholeheartedness of effort, and expressed the belief that they should achieve at a high level with little effort. They were unwilling to risk being wrong, being disappointed, or doing poorly."

Many other researchers (eg., (75), (64), (52), (55), (84)), have shown that the low achiever tends to have more negative self-concept than does the high achiever. However, much caution must be exercised in predicting academic achievement from measures of self-concept. Borislow (6) reported that underachievers and achievers could not be distinguished on the basis of general self-evaluation before or after their first semester in college.

Not only does the low achiever have a tendency to have a negative self-concept but also a negative concept toward others in his environment as well. Ringness (70) reports that unsuccessful bright ninth grade boys were not "rebels" but that they failed to accept the academic norms established by their parents and by the schools. They also received more negative than positive reinforcement both at school and at home for their attainment. Miller's (55) subjects in a study of superior underachievers revealed a higher degree of hostility than did the high achievers. Corlis (14) also related hostility to low achievement. He found that the most common psychological pattern was that of a passive-aggressive in which there was a deep seated hostility toward the individual's parents. The low achievement resulted from the inability of the pupil to express his hostility directly toward the parents and the academic goals set for him by his parents. Wilson and Morrow (95) add to this from their investigation of bright high - low achieving high school boys as they report "underachievers expressed more negative attitudes toward school and teachers" than did their high achieving counterparts.

The literature in general supports the assumption that high achieving students have more favorable personality characteristics than low-achieving students. For example, Keimowitz and Ansbacher (45) found that high achievers emerged with statistically significant higher scores on twelve of the eighteen California Psychological Inventory scales than did the low achiever. Also using the California Psychological Inventory as one of their research instruments, Lessinger and Martinson (49) revealed that pupils displayed a level of personal and social maturity which was in keeping with their measured intelligence and achievement test performance. Pierce (65) says that high achievers, "show more favorable personality characteristics and reflect greater independence" than low achievers. Owens (62) concluded that it was possible to isolate certain measurable personality traits peculiar to the underachiever in his study, particularly the trait of social extroversion. Jamuar (43) confirmed this assumption when he found that satisfactory achievement depended greatly on personality adjustment and that introversion was also an important factor in achievement. A positive relationship between introversion and persistence which would be conducive to a high level of academic achievement was reported by Lynn and Gordon (53).

Snellgrove (78) found that underachievers scored below the test norms on Personal, Social, and Total Adjustment at the .01 confidence level to support his hypotheses that "Underachievers have personality disorders which are characteristic of this group of individuals."

The personality structure of an individual also determine his ability to control anxiety. The control of anxiety, in turn, is a strong determinant, of the individuals achievement level. McKenzie

(54) compared high and low achievers with average achievers on the clinical and validity scales of the MMPI. The differences indicated that both deviant groups are more anxious than normal achievers with the low achievers tending to externalize their conflicts while the high achievers tend to internalize their anxiety. He also reported, as did Wilson (95), that hostility was seen as playing an important role in the dynamics of the underachiever.

There is considerable literature concerning the effect of the home background on the personality development and hence, the achievement level students. Shaw and Dutton (74) compared the responses obtained from parents of bright academic achievers and from parents of bright academic underachievers. The parents of the bright academic underachiever had significantly stronger negative attitudes toward their child. It is evident that this negative attitude is then projected by the student on the school and the academic environment where he must achieve goals which are not meaningful to him.

A significant addition to the literature on the relationship of environmental and personality variables to high and low academic achievement was reported by Barton (3). The pertinent results of this study are as follows:

"Of those boys in the study who were classified as High Achievers, significantly more than the expected number had (a) fathers who attended college;

- (b) mothers who attended college;
- (c) fathers whose occupational level included professionals, semi-professionals, executives, and owners of large businesses;
- (d) mothers who were not employed outside the home; and
- (e) older siblings.

Of those boys in the study who were classified as Low Achievers, significantly more than the expected number had

- (a) fathers who had not attended college;
- (b) mothers who had not attended college;
- (c) fathers whose occupations were other than professional, semi-professional, executive, or large business owners;

- (d) mothers who were employed outside the home; and
- (e) no older siblings.

Jamuar (42) also indicated that the level of achievement is positively related to the home environment. However, Curry (18) said that this relationship is controlled to a degree by the intelligence of the individual. He reported that "As the intellectual ability decreases from high to low, the effect of social and economic conditions on scholastic achievement increases greatly."

The basic effect is primarily on language while arithmetic seems to be relatively free of the influence.

The relationship between the level of achievement and academic or occupational aspiration is still relatively free from valid research. Level of Aspiration constructs are limited in their usefulness for studying academic achievement by what Cassel (12) calls "irreality factors." In discussing the accuracy with which an individual's perception duplicate the inciting phenomena Cassel points to the "irreality dimension of the personality." He indicates that the inability or unwillingness to accurately assess the quality of a given performance may be a major factor in goal-setting behavior.

Frank (32) has defined level of aspiration 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." Lewin (50) has defined it as "the degree of difficulty of the goal toward which a person is striving." In applying these definitions to occupational aspirations it would anticipate the degree of occupational difficulty to which he aspired from his experience with and past performance in various levels of occupations. It has been indicated, Aronson & Carlsmith (1), Festinger (27), Frank (32), Gould (38), Murray (59),

that an individual's level of aspiration is not only influenced by his concept of his own past performance but also by the norms of the groups of which he is a part and whose values he has internalized. Aronson and Carlsmith (1) demonstrated the effect of group performance on individual aspiration in a study in which the subjects set their self-expectations according to the way they viewed their ability personally and then made upward or downward revisions to be more in keeping with the group performance. This study also indicates that individuals experience distress when their achievement either exceeds or falls short of their prediction. This could be anxiety producing and then effect the achievement level of the individual.

Mitchell (56) studied the relationship between self-concept, aspired grades, and actual grades. He reported that the self-rejectant low achiever exhibited very little difference between previous grades and present level of aspiration while the self-rejectant high achievers achieved or exceeded his aspired grade level. The self-acceptant underachiever demonstrated the most widely divergent overestimation.

The effect of teachers upon students' level of aspiration was demonstrated by Thistlewaite (86) who found that teachers who exerted a strong influence for development of independence and supportiveness caused students to raise their aspirations for advanced training.

That extreme caution should be used when dealing with any purported measure of aspirational level is demonstrated by Sears (72) in her study summary:

"It has been shown that self-confident, successful children react to the level of aspiration situation in a similar way, whereas unsuccessful children, lacking in confidence, may adopt one of a number of different behavior techniques in this situation. Furthermore, experimentally induced success brings the reactions of all subjects in regard to level of aspiration into a more homogenous distribution than do the neutral conditions of stimulation."

R. G. Taylor (84), in an extensive review of the literature relating to personality traits and discrepant achievement, determined that the following factors have been found to relate positively to achievement:

1. The degree to which a student is able to handle his anxiety.
2. The value a student places upon his own worth.
3. The ability to conform to authority demands.
4. The student's acceptance by peers.
5. There is less conflict over independence-dependence.
6. Activities which are centered around academic interests.
7. The realism of his goals.



## CHAPTER III

### METHODS AND PROCEDURES

#### Selection of Sample

The sample population for this study was selected from the total population of the Blackwell, Oklahoma, Senior High School during the spring semester of the 1964-65 school term. The California Test of Mental Maturity-Short Form, the California Achievement Test, the California Test of Personality, and the Occupational Interest Inventory Level of Interest were administered to the entire student body during the semester mentioned above. The California Test of Mental Maturity-Short Form is administered annually in the ninth grade as a part of the regular school testing program.

In order to facilitate the statistical analysis of these data, all scores were converted to a standard score with a mean of fifty and a standard deviation of ten. Each test manual, (82), (90), (89), (48), provides a conversion table for this purpose.

Three basic requirements were established for the selection of the sample population.

First, it was necessary for the subjects to have taken the California Test of Mental Maturity - Short Form while attending the ninth grade in the Blackwell Junior High School.

Second, the score achieved by the subject on the 1965 administration

of the CTMM-SF to the total high school population, grades ten through twelve, had to be consistent within one standard deviation with the score achieved on this test by the subject in the ninth grade. The higher score was used to determine the ability level of the subject.

Third, the subject had to complete all of the tests administered for this study.

Five hundred and fifty-five students were enrolled in Blackwell High School during the school year 1964-65, and were administered the tests listed above. One hundred and three were eliminated from the sample because there was no ninth grade CTMM-SF score available, they failed to qualify because there was an inconsistency of more than one standard deviation between the two CTMM-SF scores, or they did not complete all of the test batteries. This left 452 subjects who met the qualifications established for the sample population.

#### Classification of the Subjects

The students in the sample population were classified for treatment on the basis of three factors--sex, level of ability, and level of achievement.

The level of ability was divided into three categories: high, average and low. Subjects scoring in the upper quartile of the CTMM-SF were classified as having a high level of ability. Subjects scoring in the second and third quartile were classified as having average ability, and those subjects whose scores fell in the lower quartile were classified as having a low level of ability. Recognizing the fact that high school students are a more select group than the normal population because many of the low ability level students drop

out before reaching high school, the scale provided in the CTMM-SF manual (82) was utilized to classify the subjects according to level of ability. Table II is a reproduction of the sections of this scale pertinent to this study.

Each ability level was subdivided into high, average, and low levels of achievement.

Pippert and Archer (66) compared two methods for the classification of underachievers by classifying a selected population by each method. Significant differences between the groups selected by these two methods were observed. Farquhar and Payne (26) classified and compared several techniques used in selecting under- and over-achievers. They concluded the summary of their research with, "There appears to be little or no agreement among techniques by which discrepant achievers are designated."

For this investigation the standard scores achieved by each subject on the CTMM-SF and the C.A.T. were converted into confidence bands using  $\pm 1$  standard error of measure for the confidence band limits. The confidence band on the CTMM-SF was compared with the confidence band on the C.A.T. for each subject to show the relationship between predicted and actual achievement as follows:

- a. CTMM-SF band < C.A.T. band = High Achiever
- b. Overlapping bands = Average Achiever
- c. CTMM-SF band > C.A.T. band = Low Achiever

Table III shows the classifications into which the sample population was divided and the number in each category.

TABLE II

I.Q.'s FOR VARIOUS POPULATIONS FOR USE WITH LANGUAGE,  
NON-LANGUAGE, AND TOTAL DATA

Percentile	10th Grade I.Q.'s	11th Grade I.Q.'s	12th Grade I.Q.'s	Percentile
99	136+	137+	140+	99
98	131-135	133-136	135-139	98
95	125-130	127-132	129-134	95
90	120-124	121-126	123-128	90
80	115-119	116-120	118-122	80
70	110-114	111-115	113-117	70
60	106-109	107-110	108-112	60
50	101-105	102-106	103-107	50
40	96-100	97-101	98-102	40
30	92-95	93-96	95-97	30
20	88-91	89-92	90-94	20
10	78-87	80-88	81-89	10
5	73-77	75-79	77-80	5
2	68-72	70-74	72-76	2
1	67-	69-	71-	1
Median	103.0	104.0	105.0	Median

TABLE III  
CLASSIFICATION OF SAMPLE POPULATION

Girls		Boys
<u>High Achievers = 10</u>		<u>9 = High Achievers</u>
<u>Average Achievers = 11</u>	High Ability	<u>23 = Average Achievers</u>
<u>Low Achievers = 14</u>		<u>34 = Low Achievers</u>
<u>High Achievers = 27</u>		<u>15 = High Achievers</u>
<u>Average Achievers = 67</u>	Average Abil.	<u>44 = Average Achievers</u>
<u>Low Achievers = 32</u>		<u>62 = Low Achievers</u>
<u>High Achievers = 11</u>		<u>11 = High Achievers</u>
<u>Average Achievers = 9</u>	Low Ability	<u>11 = Average Achievers</u>
<u>Low Achievers = 25</u>		<u>14 = Low Achievers</u>

#### The Instruments

The CTMM-SF (1957 revision) was used for the purpose of selecting the sample population and grouping this population into three ability levels for two basic reasons. First, after reviewing the available academic ability tests, and after consulting the reviews of experts in this area, the researcher concluded that it was one of the most adequate instruments for group administration available. Representative of these reviews is the statement by Dr. Burt (8, p. 438), "This test, taken as a whole provided an excellent instrument for assessing general capacity. In the original form, the conceptual framework for the CTMM was that of the Stanford-Binet scale. The fuller version has been in use for over twenty years. The experience and the mass of data thus accumulated have been freely utilized in progressively improving the shortened series. The outcome is one of the best sets of group tests at present available."

Second, this test has been administered annually in the Blackwell school system for nine years, thus the pretest scores were available for an adequate number of subjects.

The CTMM-SF is made up of seven subtests, two major scales and a total score. There are three subtests with a total of eighty items which contribute to the Language scale and four subtests with a total of sixty-five items which contribute to the Non-Language scale.

The use of the subtests as measurement of separate mental factors has been criticized, but it is agreed that the total test score is satisfactorily reliable.

"Subtests taken alone are not reliable or valid for assessing specific factors but taken as a whole the test is very applicable." (8, p. 438) For the purpose of this study, then, it was the decision of the researcher to use only the total score.

By using only the total score the test data is secured on a total of one hundred and forty-five items. This helps to limit the chance errors of measurement as brought out by Thorndike and Hagen (88, p. 188) concerning the number of items in a test:

"As the length of the test is increased, the chance errors of measurement more or less cancel out; score comes to depend more and more completely upon the characteristics of the period being measured, and a more accurate appraisal of him is obtained."

The reliability of the total scale of this instrument as reported in the test manual (82, p. 4) is .94.

The authors of the CTMM-SF (82, p. 6), in substantiating the reliability of this instrument reported correlations of .88 and higher with the Wechsler-Bellevue and the Wechsler Intelligence Scale for Children.

## California Achievement Test

The California Achievement Test Battery was selected as the instrument for measuring the academic achievement of the subjects for two basic reasons. First, all factors taken into consideration, it seemed to be the most logical test to use to compare achievement level with ability level as it was normed on the same population as the CTMM-SF, the instrument used for determining ability level in this study.

Sullivan (82, p. 9) states that "The CTMM was used as the anchor test in the standardization of the WXYZ Series of the California Achievement Tests. Much was done to integrate the two series of instruments, making especially meaningful the results of the two when used together."

The second, and a very significant reason for using this battery, was its relationship to the courses of study presented in Blackwell High School. It was determined by a committee of faculty members representing the English, Mathematics, Science, and Social Science Departments of Blackwell High School that the content validity of the California Achievement Test Battery was as high or higher than any of the other achievement test batteries surveyed for the purpose of this investigation.

Neidt (60, p. 8) further substantiates the appropriateness of this instrument in his review published in the Fifth Mental Measurement Yearbook, "The 1957 edition of the CAT represents a well constructed achievement battery designed to measure the basic fundamentals of reading, mathematics, and language from grades one through fourteen. This test battery has many desirable features and can be recommended for the measurement of general achievement at the grade levels indicated."

Scores are yielded for the total battery and three main categories; reading, mathematics, and language with two subtests under each category. For the purpose of this study only the total battery score is being utilized. The primary interest in this investigation is the

total ability and total achievement level of the subjects, rather than the various subdivisions of ability and achievement. The authors of the test manual also warn particularly against placing too much confidence in individual subtest scores. (90, p. 8)

Because of the limited number of items (15-60), the section scores of each test should be used only as guides to indicate the presence of student difficulties.

#### Level of Interests

The Level of Interests section of the Lee-Thorpe Occupational Interest Inventory was selected as the instrument for measuring the level of aspiration of the subjects in this study after the writer had examined six other purported measures of aspirational level and after he had conducted pilot studies with three of these instruments.

Layton (47) recommends that the OII be used as an experimental inventory and that it be restricted to experimental and research purposes until it has been properly standardized. However, the OII received more favorable reviews (7) than other measures of this type except the Strong Vocational Interest Blank.

Reliability coefficients presented in the manual (90, p. 8) shows a range from .82 to .95. The reliability coefficient of the Total Battery score which was used in this study was indicated to be .98.

If any significance is found in the relationship between the Level of Interests and the achievement level it will be possible for Blackwell High School to include in its testing program an Occupational Interest Inventory which correlates highly (50) with the Strong Vocational Interest Blank, plus the additional measure of vocational aspiration, for a small addition to the testing budget.



Lee and Thorpe (48) describe the Level of Interests section of the O.I.I. in the following excerpt from the test manual:

The Level of Interests score is obtained from Part II which is composed of 90 items arranged in triads. Each triad is made up of a "high," a "medium," and a "low" level activity in one Field. The thirty triads are equally divided among the six Fields. The choice that the examinee makes is, therefore, not between Fields but between levels within a Field. The responses are weighted in the following manner: "low" level responses, one; "medium" level responses, two; and "high" level responses, three.

Steffle examined the relationship of Level of Interests scores to the Vocational Aspiration Level as indicated by 1,232 male public high school seniors. The criterion was a statement of the tentative vocational choice classified according to the Alba Edwards scale. The occupations of the seniors' parents were also classified. Comparisons were made for those who were aspiring to occupations at a higher level than their parents' (upward mobility), occupations at the same level (stability), and occupations at a lower level than their parents' (downward mobility). Significance of differences for the various groups were revealed, they showed that groups with higher Vocational Aspiration Levels had higher Level of Interests scores on the Occupational Interest Inventory. The author concluded that the Level of Interests score is a good rough index of the direction and extent of the student's aspiration as it will be expressed through the selection of a vocational objective.

#### California Test of Personality

The California Test of Personality (89) Form BB was the instrument selected as the measuring device for the personality variables in this study after reviewing the major tests in this area which would be appropriate for administration to a high school population. Since this study is a search for any clue which might prove valuable as an aid in understanding the achievement level of high school students in relation to their measured academic ability, it was decided to use all scores provided by this instrument in the final analysis. This decision was made with a full understanding of the limitations of the number of items, 15, on each of the twelve subscales.

The components of the California Test of Personality, described in

detail in the Appendix A are as follows:

- Personal Adjustment
  - Self-reliance
  - Sense of Personal Worth
  - Sense of Personal Freedom
  - Feeling of Belonging
  - Withdrawing Tendencies
  - Nervous Symptoms
- Social Adjustment
  - Social Standards
  - Social Skills
  - Anti-Social Tendencies
  - Family Relations
  - School Relations
  - Community Relations
- Total Adjustment

The reliability coefficients quoted in the test manual (89, p. 5) for the thirteen sub-tests range from .70 to .91. The reliability for the Total Personal Adjustment Scale was reported to be .90, the Total Social Adjustment scale .89 and the Total Adjustment scale .93.

Validity data of an empirical nature are not quoted by authors of this personality test. The writer found this position to be consistent with the ten other personality tests and inventories reviewed when selecting the instrument for study. The authors of the CTP defend its validity on the basis of success achieved with it by other investigators. The following quotations are taken from the validity section of the test manual (89):

The Educational Research Bulletin of the New York City Schools carries this statement regarding the California Test of Personality: 'This procedure, (inventories organized so students can answer questions by themselves) which is followed in the California Test of Personality is perhaps the most diagnostic of any test of this type. It is, however, best used for clinical procedure and is particularly useful with problem boys and girls.'

Syracuse University found that the California Test of Personality correlated more closely with clinical findings than any other personality test.

Buhler has pointed out that the California Test of

Personality provides a means of obtaining data for individuals usually obtained by time-consuming interviews, and that the instrument may be considered a 'Level I' projection test.

Reviews of the CTP indicate that it is regarded favorably in the area of personality evaluation but that it has the same limitations that other inventories purporting to measure similar characteristics. The major criticism related to the lack of established validity. Sims (76, p. 103) gives voice to this criticism as follows:

In spite of limitations, however, the additional evidence on validity reported or referred to in the manual not only answers some of the earlier criticisms but convinces this reviewer that as a measure of self-concept in the, as of now, vaguely defined area called adjustment, this test is as valid as most such instruments.

He concludes his review with, "All in all, in spite of criticism, as personality inventories go, the California test would appear to be among the better ones available."

#### Socioeconomic Status Index Instrument

It was felt by the writer and his committee that, although socioeconomic status was not a variable under consideration in this study, if the socioeconomic variable were used as a control the results of the study would be more valid and the interpretation of the findings more meaningful.

To develop an index of socioeconomic status the Warner's (93, Ch. 8) scale of status characteristics was used as a model and modified the scale under each characteristic to fit the community in which this study was conducted.

Three status characteristics, occupation, source of income, and house type were used in computing the socioeconomic status index with

seven point scale for each characteristic. Each characteristic was weighted according to Warner (93, p. 124) and a numerical index was derived in the following manner:

Occupation                    5 x rating = Product

Source of Income            4 x rating = Product

House Type                    3 x rating = Product

Index = Sum

This produces an index in which the small values indicate a high socioeconomic status and large numerical values indicate a low socioeconomic status.

Warner's revised occupational scale (93, pp. 140-141) was used basically as presented. With the help of the Personnel Directors of the leading industries in Blackwell, and appropriate members of the Chamber of Commerce, the occupations representing all the parents of the sample population were categorized resulting in the following scale:

1. Lawyers, engineers, chemists, doctors, dentists, veterinarians, optometrists, oil producers, extensive land owners (3+ section).
2. Bank Jr. Executives, teachers, chiropractors, morticians, Jr. executives of large businesses, own business in excess of \$25,000, large farm owners (1-3 sections), insurance salesmen (Major companies).
3. Jr. executive of local businesses, supervisors of skilled craftsmen, city government executives, postal clerks, own business \$10,000-\$25,000, moderate size farm owners (one section), auto salesmen, insurance salesmen (minor companies), accountants (not CPA), building contractors.
4. Factory foremen, skilled craftsmen, machinists, electricians, printers, postal carriers, carpenters, small building contractors, dry cleaners, sales persons in retail stores, own business \$5,000-\$10,000, small farm owners (½-1 section).

5. Skilled workers, tenant farmers (3/4 + sections), fry cooks, barbers, business \$2,000-\$5,000.
6. Semi-skilled workers, warehouse men, county maintenance (machine operators) men, tenant farmers (1/2 section or less), truck drivers, delivery men, filling station attendants, small neighborhood grocery stores.
7. Common laborers.

The second characteristic used in determining the socioeconomic index was the source of income. The Warner scale (93, pp. 138-142) was used without modification for this characteristic as follows:

1. Inherited wealth
2. Earned wealth
3. Profits and fees
4. Salary
5. Wages
6. Private relief
7. Public relief

House type was the third characteristic employed in determining the socioeconomic status index. In cooperation with two leading real estate brokers in Blackwell, the Warner House type scale was modified to fit the local condition in the following manner:

1. Excellent Houses = \$25,000 +
2. Very good houses = \$15-\$25,000
3. Good houses = \$10,000 - \$15,000
4. Average houses = \$7,500 - \$10,000
5. Fair houses = \$4,000 - \$7,500
6. Poor houses = \$2,000 - \$4,000
7. Very poor houses = \$2,000 and below

The two real estate brokers also established the appraisal pattern and requirements for this study.

#### Procedures

The basic procedures for this study are as follows:

1. Select the sample population as discussed in detail in Chapter III of this report.

2. Determine the socioeconomic status index of the family of each subject, discussed in detail in Chapter III, and use this index as a control factor for the socioeconomic variable.
3. Classify each subject according to level of academic ability and level of achievement as explained in Chapter III.
4. Administer the CTP to measure personality traits, or psychological traits. Analyze the results of this test as they relate to each level of achievement within the separate ability level groupings.
5. Administer the Level of Interest subtest of the Occupational Interest Inventory to indicate the level of occupational aspiration. Analyze the results of this inventory as they relate to each level of achievement within the separate ability level groupings.
6. Draw conclusions and state their implications for Blackwell High School in particular and for education in general.

#### Treatment of Data

Fifteen scale scores from the CTP and the score from the Level of Interest scale of the OII were obtained for each of the four hundred and fifty-two students included in this study. The normality and interval measurement assumptions for the analysis of variance procedure suggested by Guilford (39, p. 274) were met by converting all raw scores into T-scores with a mean of fifty and a standard deviation of ten. The conversions were made by using the tables provided in the respective test manuals (89), (48).

Tests for all of the hypotheses under investigation were provided

computing an analysis of variance for each of the scales listed in the preceding paragraph. F-ratio tests were made to determine whether or not the mean scores obtained for the subjects on each achievement level within the separate ability classifications differed significantly. The procedure explained by Guilford (39, p. 275) was followed for making the F-ratio tests.

All analyses of variance which produced an F-ratio significant at the .10 level or higher were followed by a t-test of Least Significant Difference following the model of Ostle (61, p. 113). This t-test was performed between the sets of means within each ability classification to determine the achievement level to which the particular variable was peculiar.

The socioeconomic status scores were computed and ranked. A standard deviation was computed for these scores. The sample population was divided into four socioeconomic groups according to the following scale:

$$\begin{array}{ccccccc} -2\sigma & & -1\sigma & & M & & -1\sigma & & +2\sigma \\ \hline & & \text{group 4} & & \text{group 3} & & \text{group 2} & & \text{group 1} \end{array}$$

The socioeconomic status groups were used as a control factor in the analysis of variance to strengthen the significance of the test by reducing the error mean square and removing the appropriate number of degrees of freedom from the "within" sets, thus controlling the influence of socioeconomic status on the interaction between the independent and dependent variables under consideration.

## CHAPTER IV

### RESULTS

#### Introduction

The findings of this investigation are reported under the two major headings previously stated on page 8 of this report. The first major area considers the statistical findings relevant to the relationship between the selected personality traits and the three levels of achievement in each ability group. Second, the relationships between the level of occupational aspiration and the three levels of achievement in each ability group are presented.

A separate analysis of variance was computed for each of the CTP scales and the Level of Interest scale of the OII in testing each hypothesis. The suggestions by Guilford (39, pp. 268-280) were followed in making these analyses. In interpreting the AOV, Guilford (39, pp. 275-276) says that a significant F indicates nonchance variations among means, and that a t test must be applied to locate the sets of means between which a significant difference exists. Conversely, if F is insignificant the t test should not be applied.

The t test of LSD following the model presented by Ostle (61, p. 310) was employed to determine the differences between the sets of means when the F ratio was found to be significant. The following formula was used for these calculations:



$$LSD = t \sqrt{\left(\frac{1}{N_1} + \frac{1}{N_2}\right) W_m^2}$$

The present study is concerned with any findings which might be significant, not only in the location of characteristics unique to a given level of achievement, but also in the indication of trends toward uniqueness which would be grounds for further investigation. Therefore, the .10 level of significance was accepted for both the F-ratio derived from the AOV and the  $t$  test of LSD.

The hypotheses are treated in the same order that they were stated in Chapter I. In order to provide clarity and continuity they are restated at the beginning of each set of analyses. Conclusions and recommendations are presented in the final chapter of this report.

#### Relationship Between the Selected Personality Traits

and

#### The Levels of Achievement Within Each Ability Group

#### Hypothesis I

There will be no significant difference in the measured personality traits among the three levels of achievement of high school girls with high ability.

The data examined here is related to fifty-eight girls who were classified in the high ability category. Following the procedure explained on page 30 of this report, ten of the subjects were identified as high achievers, thirty as average achievers, and eighteen as low achievers. An AOV was computed for each of the fifteen scales of the CTP. The personality traits will be considered in the order presented

in Table IV, where the AOV results are shown. Results of the LSD tests are reported in Table V.

When an LSD test was appropriate between the sets of means within a given ability range, means whose difference was observed to be less than the value of  $t$  were determined to be insignificant without computing a test of LSD. The means from the CTP for girls with high ability are shown in Table VI.

#### Self Reliance

The AOV for the variable of Self Reliance indicated an F ratio significant at the .01 level. This was followed by the LSD test between the sets of means to determine the nature of the significance. The difference between the means of the low achievers and average achievers was found to be significant at the .01 level. The means of the average and high achievers were also significantly different at the .01 level. The difference between the means of the low achievers and high achievers was observed to be so little that no test was made and it was determined that no significant difference existed.

The girls classified as average achievers scored significantly higher on the variable of Self-Reliance than did either the low achievers or high achievers.

#### Sense of Personal Worth - Sense of Personal Freedom

The F-ratios determined by the Analyses of Variance indicated that there were no differences among the three achievement levels of girls with high ability within the acceptable range of significance for the variables Sense of Personal Worth and Sense of Personal Freedom. Therefore, no test of LSD was applied to the sets of means in this category.

TABLE IV  
ANALYSIS OF VARIANCE FOR THE THREE ACHIEVEMENT LEVELS OF GIRLS WITH HIGH ABILITY  
CALIFORNIA TEST OF PERSONALITY

Personality Trait	Sum of Squares				Mean Squares			F-ratio Between Within	Sig. Level
	Between Groups df = 2	Within Groups df = 47	Socio- Econ. df = 8	Total df = 57	Between Groups	Within Groups	Socio- Econ.		
Self									
Reliance	738.37	3025.66	480.82	4244.85	369.18	64.38	60.10	5.74	.01
Sense of Personal Worth	348.24	3862.95	605.23	4816.42	174.11	82.19	75.65	2.11	NS
Sense of Personal Freedom	31.36	4338.77	594.39	4964.43	15.63	92.31	74.30	.17	NS
Feeling of Belonging	708.66	4417.98	1596.46	6723.10	354.33	93.99	199.56	3.77	.05
Withdrawing Tendencies	673.53	4525.55	960.85	6159.93	336.77	96.29	120.11	3.50	.05
Nervous Symptoms	139.35	2921.74	363.83	3424.92	69.67	62.16	45.48	1.12	NS
Total Personal Adjustment	419.79	3365.54	749.77	4535.11	209.90	71.61	93.72	2.93	.10
Social Standards	8.72	983.61	101.07	1093.40	4.36	20.93	12.63	.20	NS
Social Skills	89.34	3690.22	262.66	4042.22	44.67	78.52	32.83	.56	NS
Anti Social Tendencies	958.48	4084.45	1395.29	6438.23	479.24	86.90	174.41	5.51	.01
Family Relations	580.05	6121.24	799.61	7500.90	290.03	130.24	99.95	2.23	NS
School Relations	439.24	4212.48	437.40	5089.12	219.62	89.63	54.68	2.45	.10
Community Relations	147.12	5016.90	475.50	5639.52	73.56	106.74	59.44	.69	NS
Total Social Adjustment	407.03	2497.32	707.92	3612.28	203.52	53.14	88.49	3.83	.05
Total Adjustment	383.21	2624.49	703.21	3710.92	191.61	55.84	87.90	3.43	.05

TABLE V  
RESULTS OF TESTS OF LEAST SIGNIFICANT DIFFERENCES  
BETWEEN THE MEANS OF GIRLS WITH HIGH ABILITY  
CALIFORNIA TEST OF PERSONALITY

Personality Trait	Low	Means Ave.	High	Dif. Between Means	LSD	Sig. Level
Self-Reliance	48.77	55.37	47.39	6.60	6.46	.01
Feeling of Belonging	46.55	54.00	48.00	7.45	5.94	.05
Withdrawing Tendencies	41.00	48.70	46.70	6.00	5.95	.10
Total Personal Adjustment	43.94	49.87		7.70	7.09	.02
Anti Social Tendencies	41.00			5.70	6.49	NS
School Relations	45.39	54.37	53.50	8.98	5.13	.05
Total Social Adjustment	45.39	51.40	45.90	8.11	7.48	.01
Total Adjustment	45.89	51.40	47.50	5.50	6.17	.10
Total Adjustment	45.89	51.40	45.90	5.50	4.77	.10
Total Adjustment	46.44	52.30	47.50	5.86	5.72	.10
Total Adjustment	46.44	52.30	47.50	5.86	5.25	.02
Total Adjustment	46.44	52.30	47.50	5.86	4.42	.10
Total Adjustment	46.44	52.30	47.50	5.86	4.52	.10
Total Adjustment	46.44	52.30	47.50	5.86	5.40	.02

TABLE VI  
 MEANS FOR CALIFORNIA TEST OF PERSONALITY TRAITS  
 FOR GIRLS WITH HIGH ABILITY

Personality Trait	Achievement Levels		
	Low	Average	High
Self			
Reliance	48.78	55.37	47.40
Sense of Personal Worth	47.78	52.47	54.20
Sense of Personal Freedom	45.83	47.17	45.50
Feeling of Belonging	46.56	54.00	48.00
Withdrawing Tendencies	41.00	48.70	46.70
Nervous Symptoms	44.50	47.87	47.80
Total Personal Adjustment	43.94	49.87	45.90
Social Standards	55.72	55.87	54.80
Social Skills	50.22	52.77	50.40
Anti Social Tendencies	45.39	54.37	53.50
Family Relations	45.89	52.83	48.10
School Relations	45.89	51.40	45.90
Community Relations	47.83	51.30	51.20
Total Social Adjustment	46.44	52.30	45.50
Total Adjustment	45.50	51.20	47.60

### Feeling of Belonging

The F value obtained through the AOV for Feeling of Belonging was found to be significant at the .05 level. The succeeding LSD Tests, indicate that the average achieving girls of high ability scored higher on this trait than did the girls classified as high achievers and low achievers at the .05 and .10 levels of significance respectively. It was determined from observing the means that there was no significant difference between the high achievers and low achievers.

### Withdrawing Tendencies

A difference among the three achievement levels of girls with high ability in relation to the degree of freedom from withdrawing tendencies was found to be significant at the .05 level.

Supporting the results of the AOV, significant differences were found between the sets of means when analyzed by the LSD tests. Low achievers differed from the average achievers at the .05 level. The difference between the low achievers and the high achievers approximated the .10 level. In both cases the low achievers displayed less freedom from, or conversely, more Withdrawing Tendencies than did the high or average achievers. No test was made between the means of the high and average achievers since the observed difference between these two means was small enough to safely assume that it was not significant.

### Nervous Symptoms

The F value indicating the relationship between the independent variable of Nervous Symptoms and the three achievement levels of girls with high ability was not equal to the F value required to show significance at the .10 level. Since F was insignificant no LSD test was applied.

### Total Personal Adjustment

The scale measuring Total Personal Adjustment is very important because it is a composite of one through six which have been discussed above. The results of the AOV applied to determine whether any significant difference existed among the three levels of achievement in relation to Total Personal Adjustment show an F value significant at the .10 level.

A difference between the low achievers and high achievers was found to be significant at the .05 level by using the LSD technique. The differences between the means of low achievers -- high achievers and average achievers -- high achievers were observed to be too small to be significant.

These findings indicate that average achieving girls with high ability have a better total personal adjustment than do low achieving girls within the same ability level. There are no finding which would suggest a significant difference between either of the other sets of means within this category.

### Social Standards - Social Skills

In neither case of the variables concerned with Social Standards or Social Skills was the F value from the AOV equal or approximate to the F value required for significance at the .10 level. Since no F value was found which would indicate that a significant difference existed among the sets of means, no LSD technique was applied.

### Anti-Social Tendencies

A difference among the three achievement levels of girls with high ability in their relationship to Anti-Social Tendencies was found to be significant at the .01 level.

The LSD Tests applied following this significant F value indicated that low achieving girls with high ability significantly demonstrate more Anti-Social Tendencies as measured by the CTP than do either the high achievers or the average achievers. The difference between the means of the low achievers and average achievers was significant at the .01 level. The means of low achievers and high achievers were found to be different at the .10 level of significance.

It was determined from observing the means that there was no significant difference between the average and high achievers on this ability level.

#### Family Relations

The F value obtained from the analysis of variance was too small to meet the requirement for significance at the .10 level. Since no significance was found by computing the F ratio, no LSD was applied.

#### School Relations

The AOV treatment of the data pertaining to School Relations revealed an F ratio significant at the .10 level. This merited an examination of the differences among the means of the three achievement levels within the category of high ability girls.

The LSD test computed for the difference between the means of the low achievers and the average achievers was significant at the .10 level. The difference between the means of the average achievers and high achievers was found to be close enough to the required difference to be considered significant at the .10 level also. The difference between the means of the high and low achievers was less than the  $t$  value, so it was considered to be insignificant.



It may be interpreted from these data that average achieving girls with high ability tend to be more satisfactorily adjusted to the school environment than do high and low achieving girls of the same ability level.

#### Community Relations

The F value derived from the AOV applied to the variable of Community Relations was not great enough to meet the requirement for significance at the .10 level. Since the F-value was insignificant, no further test was applied to these data.

#### Total Social Adjustment

The Total Social Adjustment Scale is a composite of variables eight through thirteen as listed in Table IV. Because of the number of test items used in compiling this scale score, findings regarding this variable would be of more significance than those on the subtests which are a part of the social adjustment measurement. An F score significant at the .05 level was found by computing an AOV with the data derived from the Total Social Adjustment scores.

The results of the LSD tests between the various sets of means in this category indicated that average achieving girls with high ability have a higher degree of total Social Adjustment than do their high and low achieving counterparts. The difference between the means of average and low achievers was found to be significant at the .02 level and the difference between average and high achievers significant at the .10 level.

It was determined from observing the means that there was no significant difference between the high and low achieving girls with high ability.

### Total Adjustment

The relationship among the three achievement levels of girls with high ability on the Total Adjustment scale is almost identical to the relationship found on the Total Social Adjustment scale. The results of the AOV indicated that difference existed among the three levels which was significant at the .05 level.

Again, average achieving girls with high ability tend to have a higher degree of Total Adjustment than do the high or low achievers. The difference between the means of the average and low achievers was significant at the .02 level. The difference between the average and high achievers met the requirements for significance at the .10 level.

It was determined from observing the means that there was no significant difference between the means of the high and low achievers.

Fifteen analyses of variance were computed to test the significance of the independent variables related to Hypothesis I. Eight of the variables reported in Table IV, were found to have F values significant at the .10 level or higher. The three most reliable scales of the CTP, Total Personal Adjustment, and Total Adjustment, were among those which were found to have significant differences among the means of the three levels of achievement.

On the basis of these results Hypothesis I was rejected.

### Hypothesis II

There will be no significant difference in the measured personality traits among the three achievement levels of high school boys with high ability.

The data reported here is related to sixty-six boys who were classified in the high ability category. Distribution of the subjects among the three achievement levels was made following the procedure explained in Chapter III of this report. Nine students were classified as high achievers, twenty-three as average achievers, and thirty-four as low achievers. An AOV was computed for each of the fifteen scales of the CTP.

Results of the Analyses of Variance for the variables related to Hypothesis II are reported in Table VII. The means for boys with high ability are shown in Table VIII.

An F value equal to or exceeding the value required for significance was found in only one of the variables, Feeling of Belonging, which was found to be significant at the .10 level.

The results of the LSD Tests applied following this significant F value indicated that high achieving boys with high ability had a greater degree of Feeling of Belonging as measured by the CTP than did either the average achievers or the low achievers. The difference between the means of the high achievers and the low achievers, reported in Table IX, was significant at the .10 level. The means of the high achievers and average achievers was also found to be significant at the .10 level.

It was determined from observing the means that there was no significant difference between the average and low achieving boys of high ability.

Since none of the other traits measured by the CTP were found to have significant F values, no test of LSD was applied.

TABLE VII  
ANALYSIS OF VARIANCE FOR THE THREE ACHIEVEMENT LEVELS OF BOYS WITH HIGH ABILITY  
CALIFORNIA TEST OF PERSONALITY

Personality Trait	Sum of Squares				Mean Squares			F-ratio	Sig. Level
	Between Groups df = 2	Within Groups df = 55	Socio-Econ. df = 8	Total df = 65	Between Groups	Within Groups	Socio-Econ.		
Self									
Reliance	49.53	4720.88	278.19	5048.49	24.71	85.83	24.71	.28	NS
Sense of Personal Worth	293.50	7532.89	1382.27	9208.67	146.75	136.96	172.78	1.07	NS
Sense of Personal Freedom	26.39	5405.32	296.65	5728.37	13.20	98.28	37.08	.13	NS
Feeling of Belonging	490.19	5225.87	1357.11	7073.17	245.00	95.02	169.64	2.58	.10
Withdrawing Tendencies	15.52	5518.71	554.85	6089.09	7.76	100.34	69.35	.08	NS
Nervous Symptoms	141.09	4348.70	327.97	4817.76	70.54	79.07	40.99	.89	NS
Total Personal Adjustment	112.96	5117.94	484.69	5715.59	56.48	93.05	60.59	.61	NS
Social Standards	20.62	2734.74	215.63	2970.99	10.31	49.72	26.95	.21	NS
Social Skills	99.94	5623.01	1191.91	6914.87	49.97	102.24	148.99	.49	NS
Anti Social Tendencies	34.00	6529.51	422.26	6985.77	17.00	118.72	52.78	.14	NS
Family Relations	241.94	5676.30	968.08	6886.32	120.97	103.21	121.00	1.17	NS
School Relations	113.82	4233.73	587.54	4935.00	56.91	76.98	73.44	.74	NS
Community Relations	297.72	5931.53	839.38	7068.62	148.86	107.85	104.92	1.38	NS
Total Social Adjustment	9.72	3677.97	374.67	4062.37	4.86	66.87	46.83	.07	NS
Total Adjustment	39.63	3649.95	354.36	4043.94	19.82	66.36	44.29	.30	NS

TABLE VIII  
 MEANS FOR CALIFORNIA TEST OF PERSONALITY TRAITS  
 FOR BOYS WITH HIGH ABILITY

Personality Trait	Achievement Levels		
	Low	Average	High
Self			
Reliance	52.79	52.13	54.89
Sense of Personal Worth	46.18	47.00	52.56
Sense of Personal Freedom	45.47	44.87	46.89
Feeling of Belonging	46.76	41.17	53.78
Withdrawing Tendencies	44.09	44.87	43.44
Nervous Symptoms	50.26	47.07	49.56
Total			
Adjustment	46.24	45.04	49.22
Social Standards	52.88	51.87	51.56
Social Skills	47.15	44.74	44.56
Anti Social Tendencies	46.38	46.48	44.33
Family Relations	46.74	46.30	52.11
School Relations	44.50	47.35	46.22
Community Relations	49.29	45.04	50.11
Total Social Adjustment	45.62	45.13	46.33
Total Adjustment	45.94	45.30	47.78

TABLE IX  
RESULTS OF TESTS OF LEAST SIGNIFICANT DIFFERENCES  
BETWEEN THE MEANS OF BOYS WITH HIGH ABILITY  
CALIFORNIA TEST OF PERSONALITY

Personality Trait	Low	Means Avg.	High	Dif. Between Means	LSD	Sig. Level
Feeling of	46.76		53.78	7.02	6.15	.10
Belonging		45.17	53.78	8.61	7.71	.05

Fifteen analyses of Variance were computed to test the significance of the independent variables related to Hypothesis II. One variable was found to have an F value significant at the .10 level. Scores on fourteen of the variables failed to yield F values equal to or exceeding the requirements for significance at the .10 level.

On the basis of these results Hypothesis II cannot be accepted, nor can the alternate hypothesis be confirmed.

#### Hypothesis III

There will be no significant difference in the measured personality traits among the three achievement levels of high school girls with average ability.

One hundred and twenty-six girls were classified in the average ability range. The distribution of the subjects by achievement levels categorized twenty-seven as high achievers, sixty-seven as average achievers, and thirty-two as low achievers.

The results of the analyses of variance computed for each of the personality variables related to this hypothesis are reported in Table X. The findings from the LSD tests applicable to this hypothesis are shown in Table XI. The means from the CTP for girls with average

TABLE X

ANALYSIS OF VARIANCE FOR THE THREE ACHIEVEMENT LEVELS OF GIRLS WITH AVERAGE ABILITY  
CALIFORNIA TEST OF PERSONALITY

Personality Trait	Sum of Squares				Mean Squares			F-ratio Between Within	Sig. Level
	Between Groups df = 2	Within Groups df = 114	Socio- Econ. df = 9	Total df = 125	Between Groups	Within Groups	Socio- Econ.		
Self									
Reliance	272.71	10672.85	1805.14	12750.80	136.36	93.62	200.57	1.46	NS
Sense of Personal Worth	40.73	12305.71	1765.02	14111.47	20.37	107.94	196.11	.19	NS
Sense of Personal Freedom	21.69	8616.81	579.83	8918.33	10.84	72.95	64.43	.15	NS
Feeling of Belonging	9.95	11592.46	1595.47	13197.88	4.97	101.69	179.27	.05	NS
Withdrawing Tendencies	348.79	8816.74	1159.29	10324.82	174.40	77.34	128.81	2.25	NS
Nervous Symptoms	418.03	8739.64	691.04	9848.71	209.01	76.66	76.78	2.73	.10
Total Personal Adjustment	73.23	7778.60	1543.39	9395.22	36.61	68.23	171.49	..54	NS
Social Standards	19.23	2431.20	273.61	2724.04	9.62	21.33	30.40	.45	NS
Social Skills	53.64	11581.23	1847.67	13482.54	26.81	101.59	205.30	..26	NS
Anti Social Tendencies	497.74	11289.59	1466.71	13254.04	248.87	99.03	162.97	2.51	.10
Family Relations	987.63	13287.62	3602.14	17877.38	493.81	116.56	400.24	4.24	.05
School Relations	447.02	8592.84	1672.97	9712.83	223.51	75.38	74.77	2.96	.10
Community Relations	102.60	11507.53	3040.20	14650.33	51.30	100.94	337.80	.51	NS
Total Social Adjustment	180.72	6979.26	2033.01	9192.99	90.36	61.22	225.89	1.48	NS
Total Adjustment	118.75	7200.96	1805.67	9125.38	59.37	63.17	200.63	.94	NS

TABLE XI

RESULTS OF TESTS OF LEAST SIGNIFICANT DIFFERENCES  
 BETWEEN THE MEANS OF GIRLS WITH AVERAGE ABILITY  
 CALIFORNIA TEST OF PERSONALITY

Personality Trait	Low	Means Ave.	High	Dif. Between Means	LSD	Sig. Level
Nervous Symptoms	42.84		48.11	5.27	4.64	.10
Anti-Social Tendencies	44.34		50.15	5.81	5.26	.05
Family Relations	43.28	46.01	51.37	8.04	7.61	.01
School Relations	44.06	48.42		4.32	3.84	.05

ability are presented in Table XII.

In the area of personal adjustment the *F* values obtained for the variables of Self-Reliance, Sense of Personal Worth, Sense of Personal Freedom, Feeling of Belonging, and Withdrawing Tendencies were not great enough to meet the requirements for the .10 level of significance. Since the *F* values were insignificant, no test of LSD was applied to the various sets of means.

The *F* value obtained from the AOV computed for the trait of Nervous Symptoms was found to be significant at the .10 level. The results of the LSD test show a difference significance at the .10 level between the means of the low achievers and the high achievers.

It was determined by observing the means that no significant difference existed between the means of either the low and average achievers or the average and high achievers.

The probability that girls with average ability who are low achievers have more nervous symptoms than do their ability counterparts who achieve on an average or high level was indicated.



TABLE XII  
 MEANS FOR CALIFORNIA TEST OF PERSONALITY TRAITS  
 FOR GIRLS WITH AVERAGE ABILITY

Personality Trait	Achievement Levels		
	Low	Average	High
Self			
Reliance	49.00	47.87	51.63
Sense of Personal Worth	48.67	49.84	50.22
Sense of Personal Freedom	43.69	44.61	43.93
Feeling of Belonging	46.63	47.06	47.44
Withdrawing Tendencies	40.75	43.70	40.00
Nervous Symptoms	42.84	45.87	48.11
Total Personal Adjustment	42.81	44.57	44.56
Social Standards	55.69	54.84	55.52
Social Skills	48.31	49.70	50.00
Anti Social Tendencies	44.34	47.37	50.15
Family Relations	43.28	46.01	51.37
School Relations	44.06	48.42	45.70
Community Relations	46.81	48.76	49.11
Total Social Adjustment	45.13	47.30	48.52
Total Adjustment	43.88	46.03	46.26

The scores on the Total Personal Adjustment scale when analyzed by an AOV, did not yield an F ratio great enough to meet the requirement for significance at the .10 level. Because the F value was insignificant, no test of LSD was applied.

The AOV's computed on the six personal adjustment subscales yielded three significant and three insignificant F values.

The variables of Social Standards, Social Skills, and Community Relations were found not to have a difference among the means of the three achievement levels significant at the .10 level. No test of LSD was applied because no F value was significant.

The F value obtained for the Anti-Social Tendencies variable indicated that there was a difference among the three achievement levels significant at the .10 level. The results of the succeeding LSD test indicated a difference between the means of the low achievers and high achievers significant at the .05 level with the low achievers having more Anti-Social Tendencies than the high achievers.

There were no significant differences found between the means of the low and average, or the average and high achievers.

The AOV for the variable of Family Relations indicated an F ratio significant at the .05 level. The LSD test was applied to the three sets of means to determine the nature of the significance. The difference between the means of low achievers and high achievers was found to be significant at the .01 level. The difference between the average and high achievers, was found to be significant at the .10 level. There was no significant difference indicated between the means of the low and average achieving girls with average ability.

The results of the LSD tests indicated that high achieving girls with average ability have a more compatible relationship with their families than do the average or low achievers in the same ability group.

A difference among the three achievement levels of girls with average ability was found to be significant at the .10 level regarding the variable of School Relations. Following the AOV employed to determine this significance, a test of LSD was applied to the set of means between the average and low achievers. The results of this test, indicated that the difference between these two means was significant at the .05 level. The average achievers appeared to be better adjusted to the school environment than the low achievers.

It was determined from observing the means that there was no significant difference between the low and high achievers nor between the average and high achievers.

The F values determined by the computation of analyses of variance for the Total Social Adjustment and Total Adjustment scales of the CTP were not equal to or greater than the value required for significance at the .10 level. Since these F values were insignificant, no further test was applied.

Four of the fifteen CTP traits analyzed in relation to Hypothesis III were found to have F values equal to or exceeding the value required for significance at the .10 level. On the basis of these results Hypothesis III was rejected.

#### Hypothesis IV

There will be no significant difference in the measured personality traits among the three achievement levels of high school boys with

average ability.

The data examined here is related to one hundred and twenty-one boys who were classified in the average ability category. Following the procedure explained in Chapter III of this report, fifteen of the subjects were identified as high achievers, forty-four as average achievers, and sixty two as low achievers.

An AOV was computed for each of the fifteen scales of the CTP. The results of these computations are reported in Table XIII. The means from the CTP for boys with average ability are shown in Table XIV.

In none of the variables examined did the F value obtained by dividing the "between" variance by the "within" variance equal or exceed the F value required for significance at the .10 level. Because all of the F values were found to be insignificant, no test of LSD was applied to the sets of means for any of the independent variables.

Since no acceptably significant F values were found, Hypothesis IV was accepted.

#### Hypothesis V

There will be no significant difference in the measured personality traits among the three achievement levels of high school girls with low ability.

Following the procedure explained in Chapter III of this report, forty-five girls were found to be in the low ability range. Distribution among the three achievement levels within this range classified eleven girls as high achievers, nine as average achievers and twenty-five as low achievers.

TABLE XIII

ANALYSIS OF VARIANCE FOR THE THREE ACHIEVEMENT LEVELS OF BOYS WITH AVERAGE ABILITY  
CALIFORNIA TEST OF PERSONALITY

Personality Trait	Sum of Squares				Mean Squares			F-ratio Between Within	Sig. Level
	Between Groups df = 2	Within Groups df = 109	Socio- Econ. df = 9	Total df = 120	Between Groups	Within Groups	Socio- Econ.		
Self									
Reliance	24.54	7375.32	605.98	8005.84	12.27	67.66	67.33	.18	NS
Sense of Personal Worth	653.31	13940.42	1270.97	15864.70	226.66	127.89	141.22	1.77	NS
Sense of Personal Freedom	126.00	8943.97	1220.72	10290.69	63.00	82.05	137.64	.77	NS
Feeling of Belonging	5.64	10060.30	1014.03	11079.97	2.82	92.30	112.67	.03	NS
Withdrawing Tendencies	84.38	9093.84	681.06	9859.30	42.19	83.43	75.67	.51	NS
Nervous Symptoms	68.78	7343.49	266.73	7678.99	34.39	67.37	29.64	.51	NS
Total Personal Adjustment	34.07	6894.12	832.07	7760.26	17.04	63.25	92.45	.26	NS
Social Standards	106.60	8962.72	946.20	10015.52	53.00	82.23	105.13	.65	NS
Social Skills	142.21	10436.84	1290.66	11869.70	71.11	95.75	143.41	.74	NS
Anti Social Tendencies	124.26	13784.83	1334.97	15244.07	62.13	126.47	148.33	.49	NS
Family Relations	165.94	11811.08	1209.77	13186.79	82.97	108.36	134.42	.77	NS
School Relations	174.96	7702.09	624.51	8501.97	87.48	70.67	69.39	1.24	NS
Community Relations	155.94	12261.50	832.56	13250.00	77.97	112.49	92.51	.69	NS
Total Social Adjustment	73.34	8683.92	682.53	9439.79	36.67	79.67	75.84	.46	NS
Total Adjustment	94.45	7058.83	710.72	7864.00	47.22	64.76	78.97	.73	NS

TABLE XIV  
 MEANS FOR CALIFORNIA TEST OF PERSONALITY TRAITS  
 FOR BOYS WITH AVERAGE ABILITY

Personality Trait	Achievement Levels		
	Low	Average	High
Self			
Reliance	48.77	50.73	50.47
Sense of Personal Worth	45.37	47.86	52.53
Sense of Personal Freedom	44.31	45.64	47.33
Feeling of Belonging	46.81	47.25	47.20
Withdrawing Tendencies	42.71	43.43	45.33
Nervous Symptoms	47.50	48.98	47.13
Total Personal Adjustment	44.15	45.29	44.67
Social Standards	49.32	51.09	51.47
Social Skills	44.08	45.70	47.13
Anti Social Tendencies	43.66	44.36	46.87
Family Relations	45.24	46.18	48.93
School Relations	45.11	43.07	42.00
Community Relations	44.52	46.98	45.60
Total Social Adjustment	42.74	43.91	44.93
Total Adjustment	43.44	44.98	45.67

The results of the analyses of Variance computed for the fifteen personality traits measured by the CTP are reported in Table XV, and the means for girls with low ability are shown in Table XVI. None of the F values obtained from the AOV computations was found to equal or exceed the value required for significance at the .10 probability level. No tests of LSD were applied since all of the F values reported were insignificant.

On the basis of these results Hypothesis V of this study was accepted.

#### Hypothesis VI

There will be no significant difference in the measured personality traits among the three achievement levels of high school boys with low ability.

The data examined here is related to thirty-six boys who were classified in the low ability category. Eleven of the subjects were identified as high achievers, eleven as average achievers, and fourteen as low achievers.

An AOV was computed for each of the fifteen scales of the CTP. The results of these computations are reported in Table XVII. The means from the CTP for boys with low ability are shown in Table XVIII.

In none of the variables examined did the F value obtained by dividing the "within" variance into the "between" variance equal or exceed the F value required for significance at the .10 level. Therefore, because all of the F values were found to be insignificant so far as this study is concerned, no LSD tests were applied to the sets of means within

TABLE XV  
ANALYSIS OF VARIANCE FOR THE THREE ACHIEVEMENT LEVELS OF GIRLS WITH LOW ABILITY  
CALIFORNIA TEST OF PERSONALITY

Personality Trait	Sum of Squares				Mean Squares			F-ratio Between Within	Sig. Level
	Between Groups df = 2	Within Groups df = 35	Socio- Econ. df = 7	Total df = 44	Between Groups	Within Groups	Socio- Econ.		
Self Reliance	1.85	1984.61	989.19	2975.65	.92	56.70	141.31	.02	NS
Sense of Personal Worth	176.05	3739.14	419.92	4335.11	88.03	106.83	59.99	.82	NS
Sense of Personal Freedom	191.29	1731.80	884.91	2808.00	95.65	49.48	126.41	1.93	NS
Feeling of Belonging	6.60	3019.56	1766.41	4792.58	3.30	86.27	252.35	.04	NS
Withdrawing Tendencies	341.21	3287.97	705.80	4234.98	170.61	91.08	100.82	1.87	NS
Nervous Symptoms	363.00	2465.89	829.90	3658.80	81.50	70.45	118.56	1.15	NS
Total Personal Adjustment	181.98	1929.32	1027.95	3139.25	90.99	55.12	146.85	1.65	NS
Social Standards	297.80	1428.29	684.88	2410.98	148.90	140.81	97.84	1.06	NS
Social Skills	25.24	3743.11	621.96	4390.31	12.62	106.95	88.85	.12	NS
Anti Social Tendencies	323.09	3073.61	928.61	4326.31	162.04	87.82	132.66	1.85	NS
Family Relations	394.87	3154.46	888.59	4437.91	197.43	90.13	126.94	2.19	NS
School Relations	14.78	2516.94	874.19	3405.91	7.39	71.91	124.88	.10	NS
Community Relations	246.28	2834.88	281.29	3362.44	123.14	80.99	40.18	1.52	NS
Total Social Adjustment	23.24	1704.50	521.46	2249.20	11.62	48.70	74.49	.24	NS
Total Adjustment	106.51	1723.28	650.21	2480.00	53.26	49.24	92.89	1.08	NS



TABLE XVI  
 MEANS FOR CALIFORNIA TEST OF PERSONALITY TRAITS  
 FOR GIRLS WITH LOW ABILITY

Personality Trait	Achievement Levels		
	Low	Average	High
Self			
Reliance	46.48	46.22	46.00
Sense of Personal Worth	47.32	43.11	43.55
Sense of Personal Freedom	45.48	40.78	41.91
Feeling of Belonging	47.52	46.78	46.73
Withdrawing Tendencies	43.84	40.56	37.27
Nervous Symptoms	49.52	45.22	43.00
Total Personal Adjustment	45.28	41.56	41.00
Social Standards	50.32	56.22	54.73
Social Skills	49.00	47.89	47.27
Anti Social Tendencies	50.60	44.44	46.00
Family Relations	50.12	51.56	43.73
School Relations	45.00	44.44	46.09
Community Relations	44.68	39.67	46.45
Total Social Adjustment	46.44	45.11	44.91
Total Adjustment	46.04	43.11	42.82

TABLE XVII  
ANALYSIS OF VARIANCE FOR THE THREE ACHIEVEMENT LEVELS OF BOYS WITH LOW ABILITY  
CALIFORNIA TEST OF PERSONALITY

Personality Trait	Sum of Squares				Mean Squares			F-ratio Between Within	Sig. Level
	Between Groups df = 2	Within Groups df = 25	Socio- Econ. df = 8	Total df = 35	Between Groups	Within Groups	Socio- Econ.		
Self									
Reliance	135.28	1334.72	396.00	1866.00	67.64	53.39	49.50	1.27	NS
Sense of Personal Worth	41.81	1692.50	1083.58	2817.89	20.91	67.70	135.45	.31	NS
Sense of Personal Freedom	264.19	2093.96	397.10	2755.55	132.25	83.76	49.64	1.56	NS
Feeling of Belonging	40.59	1991.33	335.05	2366.97	20.30	79.65	41.88	.25	NS
Withdrawing Tendencies	242.34	1812.32	939.34	2994.00	232.27	72.49	117.42	1.67	NS
Nervous Symptoms	302.31	1697.40	375.51	2375.22	151.56	67.90	46.94	2.23	NS
Total Personal Adjustment	50.75	1212.88	380.25	1643.88	25.38	48.52	47.53	.52	NS
Social Standards	142.36	1461.93	758.02	2362.31	71.18	58.48	94.75	1.23	NS
Social Skills	47.59	2685.93	585.71	3319.23	23.79	107.44	73.21	.22	NS
Anti Social Tendencies	169.51	2915.58	1920.80	5005.89	84.75	116.62	240.10	.73	NS
Family Relations	131.24	2853.57	1277.75	4262.56	65.62	114.14	159.72	.58	NS
School Relations	70.44	1079.72	1128.15	2278.31	35.22	43.19	141.01	.82	NS
Community Relations	316.29	2551.80	1092.46	3960.55	158.15	102.07	136.56	1.02	NS
Total Social Adjustment	66.27	1516.60	930.13	2493.00	33.14	60.66	113.77	.55	NS
Total Adjustment	38.13	1402.98	917.17	2358.30	19.07	56.12	114.63	.33	NS

TABLE XVIII  
 MEANS FOR CALIFORNIA TEST OF PERSONALITY TRAITS  
 FOR BOYS WITH LOW ABILITY

Personality Trait	Achievement Levels		
	Low	Average	High
Self			
Reliance	49.78	45.18	48.54
Sense of			
Personal Worth	41.86	42.82	44.45
Sense of			
Personal Freedom	46.43	47.00	40.82
Feeling of			
Belonging	45.07	47.55	45.55
Withdrawing			
Tendencies	38.93	35.73	42.36
Nervous			
Symptoms	46.00	39.09	44.00
Total Personal			
Adjustment	42.50	40.18	43.00
Social			
Standards	46.71	51.27	50.09
Social			
Skills	42.00	44.45	41.90
Anti Social			
Tendencies	42.07	36.91	40.64
Family			
Relations	42.50	47.09	44.09
School			
Relations	43.50	40.18	41.45
Community			
Relations	44.86	50.82	43.91
Total Social			
Adjustment	42.00	44.00	40.55
Total			
Adjustment	40.78	41.82	43.27

any of the variables.

Since no F values were found to be significant at the .10 or less probability level, Hypothesis VI was accepted.

#### Relationship Between the Level of Occupational Aspiration

and

#### The Levels of Achievement Within Each Ability Group

The hypotheses in this section were tested by computing an AOV for the Level of Occupational Interest scale of the Occupational Interest Inventory as it related to the levels of achievement within the separate ability groupings. The sum of squares, degrees of freedom, mean squares, and obtained F value for the analyses relating to Hypotheses VII, VIII, IX, X, XI, and XII are reported in Table XIX. The means from the Level of Interest scale of the OII for all achievement levels classified within the various ability groups are shown in Table XX.

When the F values were found to be equal to or greater than the value required for significance at the .10 level, the test of LSD was applied to the separate sets of means within the ability level to determine which mean was significantly different.

#### Hypothesis VII

There will be no significant difference in the measured level of occupational aspiration among the three achievement levels of high school girls with high ability.

The data examined here is related to the groups of girls with high ability previously described in this Chapter. The F value obtained

TABLE XIX

ANALYSIS OF VARIANCE FOR THE SIX ABILITY LEVEL GROUPS  
IN RELATION TO THE LEVEL OF INTEREST INVENTORY

	Sum of Squares				Mean Squares			F-ratio Between Within	Sig. Level
	Between Groups df = *	Within Groups df = *	Socio- Econ. df = *	Total df = *	Between Groups	Within Groups	Socio- Econ.		
Girls with High Ability	154.29	3163.86	429.79	3747.93	77.14	67.31	53.72	1.15	NS
Boys with High Ability	423.43	7689.30	1200.30	9313.03	211.72	139.81	150.04	1.51	NS
Girls with Average Ability	641.75	8700.99	584.25	9926.99	320.87	76.32	64.92	4.20	.05
Boys with Average Ability	254.47	11306.26	848.52	12409.25	127.23	103.73	94.28	1.23	NS
Girls with Low Ability	193.53	2000.07	694.71	2888.31	96.77	57.14	99.24	1.69	NS
Boys with Low Ability	268.31	2220.53	213.91	2702.75	135.15	88.82	26.73	1.51	NS
Girls with High Ability	*2	*47	*8	*57					
Boys with High Ability	2	55	8	65					
Girls with Average Ability	2	114	9	125					
Boys with Average Ability	2	109	9	120					
Girls with Low Ability	2	35	7	44					
Boys with Low Ability	2	25	8	35					

TABLE XX  
MEANS FOR LEVEL OF INTEREST INVENTORY

Ability Levels	Achievement Levels		
	Low	Average	High
Girls			
High Ability	49.89	51.13	46.60
Boys			
High Ability	54.24	49.39	48.67
Girls			
Average Ability	48.31	46.82	52.59
Boys			
Average Ability	50.39	53.27	53.33
Girls			
Low Ability	44.72	46.78	49.73
Boys			
Low Ability	53.86	47.27	51.36

from the AOV computed to test this hypothesis was not sufficiently great to meet the prescribed .10 level of significance. Because the F value was insignificant it was not necessary to apply the LSD test.

On the basis of the above findings, Hypothesis VII was accepted as stated.

#### Hypothesis VIII

There will be no significant difference in the measured level of occupational aspiration among the three achievement levels of high school boys with high ability.

The subjects whose scores are examined here are described under Hypothesis II, in this Chapter. The F value obtained from the AOV was not large enough to meet the requirements for significance at the .10 level. Since the F value was insignificant, the above hypothesis was accepted and no further tests were applied to the sets of means.

## Hypothesis IX

There will be significant difference in the measured level of occupational aspiration among the three achievement levels of high school girls with average ability.

The number and achievement level classification of the high school girls with average ability was described in detail previously in this chapter. The F value obtained from the AOV computed to test this hypothesis was found to be significant at the .05 level. Because of this significance, further testing was required to locate the specific variances.

The results of the LSD tests applied to the various sets of means in this category indicated that the high achieving girls with average ability demonstrated a significantly higher level of occupational aspiration than did the average achievers or the low achievers. As shown in Table XXI the difference between the low and high achievers was found to be significant at the .10 level and the difference between the average and high achievers was significant at the .01 level.

On the basis of these findings, the null hypothesis stated above was rejected.

TABLE XXI

RESULTS OF TESTS OF LEAST SIGNIFICANT DIFFERENCES  
BETWEEN THE MEANS OF GIRLS - LEVEL OF INTEREST

Ability Level	Low	Means Avg.	High	Dif. Between Means	LSD	Sig. Level
Average	48.31		52.59	4.28	3.86	.10
Ability		46.82	52.59	5.77	5.63	.01

### Hypothesis X

There will be no significant difference in the measured level of occupational aspiration among the three achievement levels of boys with average ability.

The data examined here is related to the one hundred twenty-one subjects described under Hypothesis IV in this Chapter. The F value reported from the computation of the analysis of variance does not meet the requirement for significance at the .10 level. Since the F value was insignificant no test of LSD was applied to the sets of means.

Since the F value is insignificant the null hypothesis stated above was accepted.

### Hypothesis XI

There will be no significant difference in the measured level of occupational aspiration among the three achievement levels of girls with low ability.

The forty-five girls with low ability whose achievement classification were explained under Hypothesis V, were also the subjects considered in relation to Hypothesis XI. The results of the AOV computed to test the above hypothesis did not yield an F value equal to or exceeding the F value required for significance at the .10 level as specified in this study. On the basis of the insignificant F value, the null hypothesis was accepted and no further tests were applied.

### Hypothesis XII

There will be no significant difference in the measured level of



occupational aspiration among the three achievement levels of boys with low ability.

The data examined here relates to the same group of boys described in relation to Hypothesis VI. According to the results of the AOV computed to test the above hypothesis, the F value was too small to meet the requirements for significance at the .10 level. Since the F value was found to be insignificant at the specified level of acceptance, no tests of LSD were applied to the sets of means. The null hypothesis as stated was accepted on the basis of the insignificant F value.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The primary purpose of this investigation was to determine whether the relationship between any of the personality traits measured by the CTP, or the occupational aspiration as measured by the Level of Interest scale of OII, and any level of achievement within a given ability range was unique.

The subjects were selected from the 555 students enrolled in Blackwell, Oklahoma, High School during the school year 1964-65. Four hundred and fifty-two met the qualifications established for the sample population, which required that the scores on two successive administrations of the CTMM-SF fall within the range of one standard deviation, and that the subject had completed the Level of Interest scale of the OII, and the CAT Battery, and the CPT Battery.

The sample population of 452 subjects were then differentiated by sex and divided in high, average, and low ability groups. Each ability group was then subdivided into high average, and low levels of achievement.

The scores yielded by each subtest of the CTP and the OII Level of Interest Scale were treated by an AOV for each separate ability level to determine whether there was any significant difference among the means of the three achievement levels within the separate ability levels. Where the F value derived from the AOV computation was equal to, or exceeded, the F value required for significance at the .10

level, a t test of Least Significant Difference was applied to the sets of means within the specified ability level to determine which mean differend significantly from the other two.

An index of socioeconomic status was developed to fit the community in which the subjects lived. The application of this index identified four socioeconomic levels which were used as a control factor when computing the analyses of variance.

A summary of results from the analyses of variance for each independent variable and the succeeding LSD tests, are presented in Table XXII. These findings will be summarized in two ways as they appear on this table. First, the results will be viewed horizontally as they relate to each independent variable. Second, they will be viewed vertically to summarize the findings as they relate to the ability and achievement levels.

#### Summary by Independent Variables

The variable of Self Reliance was found to be significant only with girls who were in the high ability range. The high ability girls who were classified as average achievers demonstrated a higher degree of self-reliance than did those who were classified as high or low achievers.

There were no significant differences found among the means of the three ability levels of either the boys or girls with regard to the variables of Sense of Personal Worth or Sense of Personal Freedom.

Girls with high ability who were average achievers and high ability boys classified as high achievers demonstarted a greater degree of Feeling of Belonging than did those who were classified in the other

TABLE XXII

SUMMARY OF RESULTS FROM ANALYSES OF VARIANCE  
AND TESTS OF LEAST SIGNIFICANT DIFFERENCE

Independent Variable	AOV Ability Levels						LSD Ach. Levels with Sig. Dif.					
	Girls			Boys			Girls			Boys		
	H	A	L	H	A	L	H	A	L	H	A	L
Self Reliance	.01	NS	NS	NS	NS	NS				X		
Sense of Personal Worth	NS	NS	NS	NS	NS	NS						
Sense of Personal Freedom	NS	NS	NS	NS	NS	NS						
Feeling of Belonging	.05	NS	NS	.10	NS	NS			X		X	
Withdrawing Tendencies	.05	NS	NS	NS	NS	NS			X			
Nervous Symptoms	NS	.10	NS	NS	NS	NS					X	
Total Personal Adjustment	.10	NS	NS	NS	NS	NS			X			
Social Standards	NS	NS	NS	NS	NS	NS						
Social Skills	NS	NS	NS	NS	NS	NS						
Anti Social Tendencies	.01	.10	NS	NS	NS	NS					X	
Family Relations	NS	.05	NS	NS	NS	NS			X			
School Relations	.10	.10	NS	NS	NS	NS					X	
Community Relations	NS	NS	NS	NS	NS	NS						
Total Social Adjustment	.05	NS	NS	NS	NS	NS			X			
Total Adjustment	.05	NS	NS	NS	NS	NS			X			
Level of Occup. Interest	NS	.05	NS	NS	NS	NS			X			

two achievement level categories within the respective ability level.

Girls with high ability who were average achievers expressed a greater degree of freedom from Withdrawing Tendencies than those girls with high ability who were classified as high or low achievers.

More Nervous Symptoms were expressed by low achieving girls with average ability than were demonstrated by the average ability level girls who were average or high achievers.

Average achieving girls with high ability appeared to have a better Total Personal Adjustment than high or low achieving girls with high ability.

An analysis of the scores on the variables of Social Standards and Social Skills failed to yield any significant F values from any of the ability levels of either sex.

More Anti-Social Tendencies were expressed by low achieving girls with both high and average ability than were demonstrated by the average and high achievers in both ability levels.

Better Family Relations appeared to exist between high achieving girls with average ability and their families than between girls classified as low and average achievers with the average ability level, and their families.

Adjustment to the total school environment as indicated by the examination of the means reported from the School Relations scale was indicated to be better for girls classified as average achievers in both the high and average ability ranges.

The analysis of variance computed for Community Relations failed to yield significant F values from any of the ability levels.

Significant results from the Total Social Adjustment and Total Adjustment scales were obtained. Average achieving girls with high ability showed significantly higher scores on both of these variables than did the high achievers or low achievers in the corresponding ability levels.

The analyses of variance computed to test the hypotheses related to occupational aspirations yielded only one F value which met the requirements for significance at the .10 level. High achieving girls with average ability indicated a significantly higher level of occupational interest than did the high or low achieving girls with average ability.

#### Summary by Ability and Achievement Levels

Girls with high ability who were classified either as high or low achievers were not found to have scores significantly different from the other two achievement levels on any of the sixteen independent variables examined. Average achieving girls with high ability produced more indications of uniqueness than was found in any other classification examined. They were found to have significantly higher scores on Self-Reliance, Feeling of Belonging, freedom from Withdrawing Tendencies, Total Personal Adjustment, School Relations, Total Social Adjustment, and Total Adjustment.

Girls with average ability who were classified as high achievers scored significantly higher on but one variable, that of Family Relations. Average achieving girls in the average ability range were found to have better School Relations and a higher Level of Occupational Interest than the high and low achievers in this ability range.

Those girls in the average ability category who were classified as low achievers indicated more Nervous Symptoms and more Anti-Social Tendencies than did the girls on the other two achievement levels.

There were no significant differences found among the means of the three achievement levels of girls with low ability.

The only significant difference found among the means produced by all classifications of boys was related to the independent variable Feeling of Belonging. Boys with high ability who were classified as high achievers evidenced a significantly greater degree of this trait than did the average or low achievers within the same ability range.

On the basis of the data available and the statistical analyses made using these data, nine of the twelve null hypotheses stated as a basis for this examination were accepted and three were rejected.

Hypothesis I, relating to the personality traits of girls with high ability was rejected because a significant difference among the means of the three achievement levels was found to exist relating to eight of the personality traits. Average achieving girls with high ability were found to differ significantly from the other two achievement levels regarding the variables of Self-Reliance, Feeling of Belonging, freedom from Withdrawing Tendencies, Total Personal Adjustment, and Total Adjustment. Low achievers in this category were found to have more Anti-Social Trends.

Hypothesis III, relating to the personality traits of girls with average ability was rejected because a significant difference was indicated among the means of the three achievement levels in regard to four of the personality traits. Girls with average ability who were classified as low achievers were found to have more Nervous Symptoms and more

Anti-Social Tendencies than either of the other two achievement groups. High achievers in this ability group indicated better Family Relations while the average achievers appeared to have better School Relations.

Hypothesis IX, related to the occupational aspirations of girls with average ability, was rejected because the results of the statistical analyses indicated that girls with average ability who were classified as high achievers had a significantly higher level of occupational aspiration than did the average or low achievers.

The null hypotheses relating to the low ability girls and all three ability levels of boys were accepted.

#### Conclusions and Recommendations

The limitations discussed in Chapter I would indicate that only conservative interpretations and generalizations be made from the findings of this investigation. Therefore, the conclusions derived from this study are considered to be applicable only to the particular school from which the research population was selected.

It was observed that only two of the six null hypotheses, which were the basis for examining the relationship between the personality traits measured by the CTP and the achievement levels within each ability level, were rejected. Even though these hypotheses were rejected, there were still four of the personality traits which did not yield a significant difference among the means of one ability level and eight of the variables which were not considered significantly different within the second ability level. This would lead one to question full confirmation of the alternate hypothesis even though the null hypothesis were rejected.



It was concluded from these findings that the personality traits as measured by the CTP did not differentiate among the achievement levels of the separate ability categories with enough consistency to suggest that this instrument be used on a group phenomena basis to identify or predict a level of achievement for an individual. This does not infer that the CTP is not valid as a personality inventory when used with individual subjects as an indicator of their personality strengths and weaknesses.

The statistical analyses of the data examined to determine the relationship between the level of achievement and occupational aspiration resulted in the rejection of one, and the acceptance of five, null hypotheses related to the second major area of investigation. It was therefore concluded that the Level of Interest Scale of the OII did not differentiate among the three achievement levels within the stated ability levels to a degree that it could be used to identify or predict the level achievement either on a group or an individual basis. This conclusion is not meant to infer that this instrument is not valid for the identification of occupational interests or to determine the level of occupational aspiration of a subject when used on an individual basis.

With respect to future research on the identification and prediction of the level of achievement attained by a subject in relation to his ability, the results of this investigation suggest that factors other than personality traits and occupational aspirations as measured by the instruments used in this study should be considered.

A further recommendation would be to increase the size of the

sample population to provide a greater number of subjects in the high and low ability categories which would possible contribute to more valid results.

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## APPENDIX A

The components of the California Test of Personality, are defined in the test manual (89, pp. 3-4) in this manner:

### Personal Adjustment

1A. SELF-RELIANCE--An individual may be said to be self-reliant when his overt actions indicate that he can do things independently of others, depend upon himself in various situations, and direct his own activities. The self-reliant person is also characteristically stable emotionally, and responsible in his behavior.

1B. SENSE OF PERSONAL WORTH--An individual possesses a sense of being worthy when he feels he is well regarded by others, when he feels that others have faith in his future success, and when he believes that he has average or better than average ability. To feel worthy means to feel capable and reasonably attractive.

1C. SENSE OF PERSONAL FREEDOM--An individual enjoys a sense of freedom when he is permitted to have a reasonable share in the determination of his conduct and in setting the general policies that shall govern his life. Desirable freedom includes permission to choose one's own friends and to have at least a little spending money.

1D. FEELING OF BELONGING--An individual feels that he belongs when he enjoys the love of his family, the well-wishes of good friends, and a cordial relationship with people in general. Such a person will as a rule get along well with his teachers or employers and usually feels proud of his school or place of business.

1E. WITHDRAWING TENDENCIES--The individual who is said to withdraw is the one who substitutes the joys of a fantasy world for actual successes in real life. Such a person is characteristically sensitive, lonely, and given to self-concern. Normal adjustment is characterized by reasonable freedom from these tendencies.

1F. NERVOUS SYMPTOMS--The individual who is classified as having nervous symptoms is the one who suffers from one or more of a variety of physical symptoms such as loss of appetite, frequent eye strain, inability to sleep, or a tendency to be chronically tired. People of this kind may be exhibiting physical expressions of emotional conflicts.

## Social Adjustment

2A. SOCIAL STANDARDS--The individual who recognizes desirable social standards is the one who has come to understand the rights of others and who appreciates the necessity of subordinating certain desires to the needs of the group. Such an individual understands what is regarded as being right or wrong.

2B. SOCIAL SKILLS--An individual may be said to be socially skillful or effective when he shows a liking for people, when he inconveniences himself to be of assistance to them, and when he is diplomatic in his dealing with both friends and strangers. The socially skillful person subordinates his or her egoistic tendencies in favor of interest in the problems and activities of his associates.

2C. ANTI-SOCIAL TENDENCIES--An individual would normally be regarded as anti-social when he is given to bullying, frequent quarreling, disobedience, and destructiveness to property. The anti-social person is the one who endeavors to get his satisfactions in ways that are damaging and unfair to others. Normal adjustment is characterized by reasonable freedom from these tendencies.

2D. FAMILY RELATIONS--The individual who exhibits desirable family relationships is the one who feels that he is loved and well-treated at home, and who has a sense of security and self-respect in connection with the various members of his family. Superior family relations also include parental control that is neither too strict nor too lenient.

2E. SCHOOL RELATIONS--The student who is satisfactorily adjusted to his school is the one who feels that his teachers like him, who enjoys being with other students, and who finds the school work adapted to his level of interest and maturity. Good school relations involve the feeling on the part of the student that he counts for something in the life of the institution.

2F. COMMUNITY RELATIONS--The individual who may be said to be making good adjustments in his community is the one who mingles happily with his neighbors, who takes pride in community improvements, and who is tolerant in dealing with both strangers and foreigners. Satisfactory community relations include as well the disposition to be respectful of laws and of regulations pertaining to the general welfare.

VITA

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