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An analysis and evaluation of the experimental data of the will-temperament test results of sixty-seven Spelman freshmen (girls)

Josephine Henrietta Washington

Atlanta University

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AN ANALYSIS AND EVALUATION OF THE EXPERIMENTAL
DATA OF THE WILL-TEMPERAMENT TEST RESULTS OF
SIXTY-SEVEN SPelman FRESHMAN (girls)

A THESIS
SUBMITTED TO THE FACULTY OF ATLANTA UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF ARTS

BY
JOSEPHINE HENRIETTA WASHINGTON

DEPARTMENT OF EDUCATION

ATLANTA, GEORGIA
JUNE, 1940
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CHAPTER I

INTRODUCTION

Historical Background.—The man on the street and the man of affairs have always been interested in character. The early aptitude psychologists, on the other hand, were engrossed by the symbolic, verbal, or intellectual phases of behavior largely to the neglect of the more general and elusive tendencies to actions. The layman, lacking the inhibitions of the trained psychologist, consequently has exploited this important field almost exclusively. Within the last few years, however, the psychologists have begun to realize that the ordinary tests of intelligence and ability were failing to measure in one way or another a great variety of character traits. Recently a vast amount of energy and ingenuity has been devoted to the devising of tests to measure these character traits. The task has proved a difficult one. As yet no very great success has been attained, but the future holds considerable promise.

The subject of character, or in the wider sense, personality within the last few years has come to occupy the forefront of the psychological sciences. Character and temperament are generally referred to as interlocked subjects and form the core of any study of human behavior. Character and temperament have been so interlocked in their ordinary usage that confusion of the two terms has invariably been the result.

June E. Downey defines character as "the organization of native and acquired traits affected through inner subjective factors and outer objective factors. Character, in this sense, will be influenced by
intelligence or by power to reflect upon and discover the significance of experiences and by the capacity to form ideals; it will also be determined by sensitiveness to social control; and it will be modified by external pressure and by the acquisition of specific habits through pressure of the environment."

Temperament has been defined by G. W. Allport as "the characteristic phenomena of an individual's emotional nature, including his susceptibility to emotional stimulation, his customary strength and spread of response, the quality of his prevailing mood, and all the peculiarities of fluctuations and intensity in mood; these phenomena being regarded as dependent upon constitutional make-up, and therefore largely hereditary in origin."2

In 1905, Binet proposed to measure intelligence in man by an exact standard. Thus began the first practical analysis of human personality and the foundation of a new science which in a quarter of a century has almost revolutionized our social thought. In our educational procedure intelligence testing has become an established factor. Although much can be learned concerning tests and interpretation of results, we have learned to measure satisfactorily one of the important factors of personality.

Intelligence tests have made a large contribution to the analysis of the capacity of pupils to do school work. There is a marked correlation between the scores made by pupils on intelligence tests and the achievement of these pupils in their courses. The correlation is far from perfect, however, and there is clear evidence that the lack of

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2 G. W. Allport, Personality: A Psychological Interpretation (New York, 1937).
correlation is due not simply to errors in the measurement of intelligence and of achievement but to the presence in achievement of factors other than intelligence. Attempts to explain the discrepancy between intelligence and achievements in individual cases frequently produce convincing evidence that the discrepancy is due to some characteristic of the individual other than intellectual capacity. Measurement of the factors involved in school work, therefore, must include other traits.

These other traits have been grouped under the general term personality. This is not a technical or psychological term but it serves to include a number of varieties of mental traits which are not intellectual and seem to depend on the individual's inherited make-up. Personality includes such aspects as attitudes, preferences, interests, moral judgments, social sense and adjustment, conduct reactions, emotions, temperament and the like. The unit of personality is hard to define and the behavior of an individual is not consistent from one situation to the next. With respect to emotion, the person who is angry today may be affable tomorrow. Alterations of mood, or differences in a situation may bring about changed responses.

The measurement of intelligence does not give an analysis of the make-up of an individual that will enable us to understand his character, predict his behavior, decide his fitness for a position. Intelligence tests must be supplemented by tests for measuring other factors of personality, before we can make any complete scientific analysis of human character.

The enthusiastic advocates of intelligence tests have recognized the limitations of such in predicting success in school and success in specific vocations.
The Purpose of the Study.—The purpose of this study is to identify certain types of personality among sixty-seven freshmen girls as may be determined from their responses and behavior under conditions of the Will-Temperament Test criteria. Also, correlations will be made between the Will-Temperament Test results and the raw scores of the subjects on the Psychological Examination of the American Council of Education to ascertain what phases of personality, if any, are related to general intelligence.

Subjects Used in This Study.—Sixty-seven students entering Spelman College in September, 1936, were used in this study. The subjects' range in age was fifteen to twenty-two years. The ages are grouped into a frequency distribution in Table I found in the Appendix on page . In this group there were twenty-two states represented.

The Test.—One of the most enterprising of the investigators in the field of personality was June E. Downey. She took her point of departure from the field of handwriting. Basing her tests upon ingenious conjectures as to the nature of various aspects of action such as speed of decision, freedom from load, motor inhibitions, motor impulsion, self-confidence, and finality of judgment, she attempted to evoke generalized reactions on the basis of handwriting. For example, "freedom from load" in general was thought to be indicated by the difference between the ordinary rate of writing and the rate under command to write at top speed. As a second example, "motor inhibition" was thought to be revealed by the slowness with which writing could be done when the task was to write as slowly as possible.

The Downey scale of individual will-temperament was devised to bring to light some of these factors. The Downey group test grew out of the individual test. When the Carnegie Institute of Technology made a com-
prehensive study of successful and unsuccessful salesmen, if the Downey scale were to be included, a group method of giving the test was necessary. Accordingly, the Downey scale was modified at the Carnegie Bureau of Personnel Research.

The group test follows the individual scale rather closely in the test situations presented. Handwriting is used in eight of the eleven parts of the test.

The group test differs from the individual test in three important aspects. First, the work-limit is changed to a time-limit basis. Second, the giving of the test is less subjective and the scoring more objective and quantitative. Third, the group test is much shorter and can be given in thirty minutes.

Doctor Downey's choice of tests for the will-temperament series was determined by more than a decade's experimental work in handwriting and muscle-reading.

Her experiments on muscle-reading—carried out in the hope of finding a method for the discovery of temperamental types—convinced her that such types did reveal themselves in the reactions by which the muscle-reader is guided but that muscle-reading was too dependent upon the skill of the reader to be a good psychological method. During the experiment, she discovered that it was a simple matter to select exceptionally good guides for demonstrations in muscle-reading by a preliminary trial of writing under distraction of attention. The good guides under such distraction produced an enlarged and rapid hand. Extensive observation thoroughly convinced her that this magnified writing produced by the simple device of writing when attention is distracted by a concurrent process distinguishes the impetuous individual from whom the motor discharge takes place easily and readily. Writing, decreased in size or
greatly retarded in speed, distinguishes those individuals who do not yield readily to automatism, who respond with increased effort of attention to the demand to handle a double situation. The latter are the inhibited, obstructed, pondering types of individuals.

To balance the test on impulsion as an indication of the individual's reaction tendencies when the brakes are off, she sought to introduce reactions when, by instructions, the brakes are on. This led to the utilization of retarded and disguised writing and accurate graphic imitation. Moreover, she found that ease or difficulty with which a set for speed or accuracy could be established was a most interesting individual difference.

The Downey Group Will-Temperament Test is made up of three groups of sub-tests: tests of speed, tests of aggressiveness, and tests of carefulness and perseverance.

The first group includes four sub-tests:
- Speed of Movement
- Freedom from Load
- Flexibility
- Speed of Decision

The second group is made up of four sub-tests for:
- Motor Impulsion
- Self-Confidence
- Non-Compliance
- Finality of Judgment

The third group is composed of sub-tests for:
- Motor Inhibition
- Interest in Detail
Coordination of Impulses
Volitional Perseveration

Writing reactions are represented in all but three of the sub-tests.

Sub-test I—Speed of Decision. In this test the examinee is asked to check a list of character traits which are descriptive of himself. The purpose of this test is to determine the examinee's speed in reaching decisions. Whether the examinee correctly describes himself is immaterial. It is the time required to reach a decision and the reasons for the delay that are significant.

Sub-test II—Freedom from Load. In this test under item I the subject is asked to write his name in his usual style and at his usual speed. Under item II the subject is asked to write his name as rapidly as possible. The results of the test are used with test VI in scoring for Freedom from Load. The test also supplies a copy of the subject's signature written at normal speed and normal size for use in comparison with the automatic writing in test X. The test gives the usual speed of writing the name and allows a comparison of this with the speed when something is at stake. Very great difference between one's usual and one's possible speed shows excessive load—a tendency to relax, to procrastinate, to move on at an unnecessarily slow pace except under inner or outer pressure. Very little difference between one's usual and one's speeded record indicates exceptional freedom from load—a tendency to exert one's self to the limit. In the latter case there may be little reserve energy—failure to rise to an emergency because the driving force has been exhausted. The test assumes that some persons habitually work near their maximum level of achievement and that others are subject to a load or inhibition which keeps their activities at a level below their maximum.
Sub-test III—Writing name at retarded speed. This is merely a preliminary practice test for test VII. The results are not used in making up the score.

Sub-test IV—Memory test. This test is given in preparation for test XI. The results are not used in making up the final score.

Sub-test V—Coordination of Impulses. The examinee is asked to write as rapidly as possible and at the same time to keep the writing within a small space. The purpose of the test is to determine his capacity to handle a complex situation.

Sub-test VI—Speed of Movement and Freedom from Load. In this test under item I the subject is asked to write "United States of America" in his usual style and at his usual speed. Under the second item the subject is asked to write the same phrase as rapidly as possible. Speed of Movement is scored from the first part of the test. The whole test is a repetition of the Freedom from Load test and is used with test II in scoring this trait. This test assumes that individuals, if left to themselves, take on a characteristic speed of movement and that handwriting is a typical activity which fairly represents the individual's general speed of movement.

Sub-test VII—Motor Inhibition. In this test the subject is asked to trace the scrolls given as slowly as possible. He is given three trials. In retarded writing, the examiner should record the time taken to write each word, in order to notice any tendency to increased speed or retardation at different parts of the test. The object of this test of Motor Inhibition is to determine the subject's power to hold back a motor impulse. It tests capacity to keep steadily at work—patience in the face of a disagreeable piece of work.
Sub-test VIII—Flexibility and Volitional Perseveration. This is a test in imitation. The examinee is asked to imitate the model of writing given as rapidly as possible. The object of the test for Flexibility is to determine the examinee's capacity to modify a routine situation. This capacity is correlated with the ability to meet varying situations that arise in life. The object of the Volitional test is to determine the amount of time the examinee will spend in trying to reach a subjectively determined end; how long he will continue to drive himself on toward the reaching of a standard he has set for himself.

Sub-test IX—Interest in Detail. In this test the examinee must copy two models, taking as much time as he wishes. Interest in detail is scored from the time consumed in copying these models in comparison with the rapid imitation in Test VIII. In life, interest in detail manifests itself in matters like exact clerical work, in precision in manipulation of apparatus in laboratory science.

Sub-test X—Motor Impulsion. In this test the examinee is first asked to write his name in the usual way, then with his eyes closed, then write it while counting the number of times the examiner taps his pencil and finally write his name while counting the number of times the examiner repeats the word "fly" while reading a list of words that rime with "fly". The object of this test is to measure the examinee's tendency to express himself actively—his inherent energy.

Sub-test XI—Self-confidence. In this test the examinee must check a list of sentences as true or false. The object of this test is to determine the examinee's confidence, his readiness to make decisions and accept the responsibility for them.

Sub-test XII—Non-compliance. The examinee is asked to go over the
list in test XI and re-check them, being told that eight of the sentences are true and eight are false. The object of this test is to determine the strenuousness with which the examinee will maintain an activity he has initiated.

Sub-test XIII—Finality of Judgment. In this test the examinee is asked to go back to Sub-test I and make any revisions he wishes. Its object is to measure the examinee's tendency to revise decisions.

Relatively high scores on the traits, speed of movement, freedom from load, flexibility, and speed of decision characterize a quick, adaptable, fluidic type of person; relative emphases on the traits, motor impulsion, self-confidence, non-compliance, and motor inhibition characterize an aggressive type of person; relative emphases on the remaining four traits, namely, interest in detail, coordination of impulses, volitional perseveration, and finality of judgment characterize the deliberate, pondering, careful type of person.

Definitions of Terms.—Will-temperament is concerned with the individual's overt reactions—whether he is energetic or weak, prompt or slow, persistent or vascillating, cautious or reckless, and so on. His ideas may be carried out into action easily, or there may seem to be a blocking or obstruction which must be overcome before the action can take place. In the final analysis, Doctor Downey thinks of the will-temperament as based, for the most part, on two fundamental factors. The first of these is the amount of energy at the disposal of the individual and the second is "the tendency of such nervous energy to discharge immediately into the motor areas that innervate the muscles and glands, or, on the contrary, to find a way out by a roundabout path of discharge."

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3J. E. Downey, op. cit., p. 59.
Will-profile: The results of the will-temperament are presented in the form of a graph called the will-profile.

Speed of Movement: Speed of movement is relative to the size of the person and his age; whether a person naturally moves quickly or slowly.

Freedom from Load: This is the tendency to work at one's highest speed without external pressure; there is little tendency to relax; there is quickness in warming up to the task.

Flexibility: This is ease and success in readjustment; capacity to modify one's routine reactions.

Speed of Decision: This means quickness in reaching decisions or conclusions.

Motor Impulsion: This means impetuosity and energy to reaction.

Self-Confidence: This refers to the degree of confidence with which one maintains his opinion against contradiction.

Non-Compliance: This refers to the vigor with which one reacts immediately to a blocking of one's purpose.

Finality of Judgment: This shows a tendency to think a matter through and abide by one's decision.

Motor Inhibition: This gives the capacity to keep in mind a set purpose and achieve it slowly. It involves power of motor control and patience.

Interest in Detail: This means giving attention to details.

Coordination of Impulses: This means a capacity to handle a complex situation successfully without forgetting any of the factors involved.

Volitional Perseveration: This means absorption in a task: willingness to keep at a task because he has set a goal for himself.
M. T. Harrell and R. A. Davis, Jr., made a study of the effect of institutional life on character traits as evidenced by the Downey Group Will-Temperament test. They concluded that the difference found in the median score between the institutional children and home-school children would seem to warrant that character is affected in the power of changing individual response to differing environments adequately and quickly by differences in the personal influence situation. The effect seems to be negative in the environment of institutional children and positive in the closer personal relationship of home-school life. The factor of personal influence represented by institutional life affects child character in the power to make a decision quickly about his own make-up. The child subjected to group life is less acquainted with himself. Children subjected to many personal influences every day develop greater ability to resist compliance with the demands of others. The institutional children showed a 56% lower median score on the power to inhibit motor impulses. The group was less able to hold back an impulse. The effect of the institutional life as a factor in development of volitional perseveration was shown to be a positive one in power to keep on working.

Elizabeth B. Hurlock made a study of will-temperament among white and Negro children. In this experiment 110 white and 101 Negro boys

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from Sections A and B of the seventh and eighth grades of Public School 119, Manhattan, New York City, were chosen. The Downey method of scoring was modified slightly. The tests for flexibility, non-compliance, and interest in detail were omitted, being considered unsatisfactory for testing children. The author concluded from the results that white boys are speedier in decision and movement and possess greater volitional perseveration than Negro boys; that Negro boys have greater self-confidence, finality of judgment, motor inhibition, and power of coordination of impulses than white boys; that there was no apparent difference in freedom from load.

Buchanan made a study of the group test by comparing the scores of a group of school children in the test with the judgments of the teachers of these children with regard to the traits measured by the test. He calculated the correlations between certain of the estimates of the teachers and the correlations between the teachers' estimates and the scores on the test. He found that in general the correlations between the estimates of the teachers were somewhat higher than the correlations between the teachers' estimates and the scores on the test. He made the study in a low sixth grade and a high sixth grade. In the lower grade, six out of nine correlations between the scores on particular items of the test and the teachers' estimates were negative. In the higher grade, four out of six correlations were positive. The result of this study, then, seems to be inconclusive and indicates that refinement is necessary in both the tests and the estimates in order that the tests may be relied upon to the

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same extent that we rely upon intelligence tests.

A study of the correlation between profiles obtained on the Downey
Will-Temperament Test and a subjective estimate of the subject compiled
from the results of a psychometric examination, a social history, clinical
notes, and a personality study was made by Emily Wires. The tests were
administered to sixty-seven unselected subjects examined at the Wayne County
Psychopathic Clinic. Her conclusions were as follows: (a) In no instance
was the score indicated on the profile opposed to personality of the sub-
ject as given by the analysis; (b) There were a number of traits, notice-
able in the individual, in which the subject scored high; (c) There were
a number of traits in which the individual scored high, but which were
not noticeable in the individual; (d) There is no profile characteristic
of any one type of delinquency; (e) The Downey Will-Temperament profile
method is of great value in establishing a favorable approach for analyz-
ing personality difficulties and factors in delinquency, in that subjects
are led to introspect in a pleasant way without making them self-conscious.

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Emily Wires, The Downey Will-Temperament Profile in Personality
Studies of Juvenile Delinquents," Journal of Abnormal and Social Psy-
chology, XX (1925-1926), 416-440.
CHAPTER III

THE PROCEDURE

Administration of the Test.—The Downey Will-Temperament Test was administered in February, 1937, by Dr. O. W. Eagleson and Mr. J. L. Whiting.

In this test the time-limit factor is of prime importance and in giving the instructions, particular emphasis was laid upon the time requirements. The subjects were told in every case whether they were to work as quickly as possible, as slowly as possible, or at their own speed.

The oral directions were given as indicated in the manual of directions.

The scores for general intelligence, used for the purpose of correlation, were obtained from the results of the Psychological Examination of the American Council of Education. This examination was administered to the Spelman freshmen in September, 1936, by Mr. J. L. Whiting.

Scoring of the Test.—The norms for scoring the group test were obtained from an approximately small number of adults and therefore are only tentative.

Sub-test I—Speed of Decision. This is scored on the number of decisions made in the time-limit. See Table II, page 39.

Sub-test V—Coordination of Impulses. This test is scored on the basis of the number of letters omitted or over the line. See Table II, page 39.

Sub-test VI—Speed of Movement and Freedom from Load. The first trait is scored from VI, 1 on the number of letters written at normal
speed within the time-limit. See Table II, page 39.

In scoring for Freedom from Load the number of letters written during the speeded trial (VI,2) is divided by the number written at normal speed (VI,1). See Table II, page 39.

Sub-test VII—Motor Inhibition. Each scroll is divided into 33 equal parts, and the scoring is based on the number of parts traced. See Table II, page 39.

Sub-test VIII—Flexibility. Scoring is based on the amount of change in writing in first and second attempts (VIII,1 and 2), each 0, 1, and 2.

In scoring Rapid Imitation of Model A (VIII,3), quality and speed are both considered.

The quality is rated as A, B, C, D, or E according to general effect; E signifying complete reversion to the subject's own hand. See Table III, page 40.

Sub-test VIII,2—Volitional Perseveration. This trait is scored by determining the amount of time spent in practice on the disguise. See Table II, page 39.

Sub-test IX—Interest in Detail. This test is scored according to quality and speed. Model A (IX,1) and Model B (IX,2) are rated jointly, as A, B, C, D, E, or F, according to accuracy in details.

For speed find the difference in number of letters written for rapid imitation (VIII,3) and for slow imitation (IX,1) of Model A. See Table IV, page 41.

Sub-test X—Motor Impulsion. This test is scored by means of a schedule, according to size and amount written as compared with normal size and amount written at normal rate. See Table V, page 42.

Sub-test XI—Self-confidence. This trait is scored on the number
of items doubly underlined. See Table II, page 39.

Sub-test XII—Non-compliance. The score is determined by the number of changes made after the suggestion has been made by the examiner. See Table II, page 39.

Sub-test XIII—Finality of Judgment. This score is determined by the time spent in rechecking list in Sub-test I. See Table II, page 39.

All items are scored on a scale of ten.

Doctor Downey has found that four factors may influence the total score on the will-temperament test, namely; specific habits, age, intelligence level, and sex.

Some specific habits are acquired which are never carried over into other situations but are used only in the field in which they were acquired. Some critics of the Downey Will-Temperament test say that writing habits are of this type, but reports on a number of investigations show that handwriting reactions used in the test do have general significance.

Doctor Downey through a study of the relationship of age to score found that from thirteen to seventeen years speed of movement and motor inhibition increase with age, whereas speed of decision decreases. At nineteen and in the early twenties the greatest freedom from load occurs.

It is possible that low intelligence would prevent a good understanding of the directions given in the test, but however Doctor Downey has found that it is possible to administer this test to morons omitting the sub-test which measure speed of decision.

In the study of the relationship of sex to the score Doctor Downey came to two conclusions; both of which are important: 8

8 J. E. Downey, op. cit., p. 259.
(1) The much greater power of motor inhibition shown by men, (seventy percent equal or exceed the median record of women); and

(2) The tendency toward a more definitely patterned reaction on the part of young men college students than was found for women students.
Individual Profiles.—After a psychologist has measured intelligence, there is still much that he has to measure in order to complete his description of an individual. He has to measure one's personality.

When describing a person’s personality, it may be stated, that he has a pleasing personality, that he is cheerful, reliable, persistent and energetic. One can readily see that these words tell how a person behaves; they are names of qualities of behavior.

In measuring personality, since we have no system of dimensions with which we can map out an individual's characteristics, the profile shows to the eye in what respects the individual stands high, low or average in comparison with another individual. The individual is measured or rated in various traits, and his standing in each trait is shown by a point suitably placed above or below the middle line which represents the average of the population in general. The profile thus conveys some impression of the individual's standing and of his evenness or unevenness of development.

In testing the validity of the will-profile, twelve profiles were given to an individual and the names of the persons from whom the profiles were obtained. The individual was asked to pair each name on the list with a profile. This experiment showed that such an identification required much attention and analysis on the part of those who attempted

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9 J. E. Downey, op. cit., p. 190.

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the task. In the experiment correct identification of profiles ranged from 0 to 5 out of 12.

The profiles which are here selected for study are representative of the group of the sixty-seven subjects in this study.

Profile I (Figure I)—Quick type. This profile shows a quick-reacting, rapid-fire, explosive sort of individual only slightly interested in detail, with some inadequacy on the side of motor inhibition. She is given to maintaining her opinion against contradiction and pursues her course of action vigorously when she meets opposition.

Profile II (Figure II)—This individual is very low in speed represented in the first four traits. She is very slow in speed of movement and decision, seems to be characterized by considerable load, possesses little ease and success in readjustment. In the second group of traits this individual scores high in two traits and low in the other two traits. This individual does not react immediately to a blocking of her purpose, but shows a tendency to abide by her own decision. In the last group of traits this individual scores very low in the first two traits, comparatively high in the third and very high in volitional perseveration. The high rating in this last trait is in all probability the outstanding characteristic of this individual.

Profile III (Figure III)—This individual scored very high in speed of movement, freedom from load, speed of decision, finality of judgment, interest in detail and coordination of impulses. This individual scored very low in flexibility, motor impulsion, self-confidence, non-compliance, motor inhibition and volitional perseveration. This is a very irregular profile. This person's chronological age is 17 years, 8 months; mental age, 11 years, 6 months; and an Intelligence Quotient of 72. This
RECORD CARD

Name: M. G.  No.: 20
Address:

A. Speed of Movement VI-1
B. Freedom from Load VI-1, 2
C. Flexibility VIII
D. Speed of Decision I
E. Motor Impulsion X
F. Self-confidence XI
G. Non-compliance XII
H. Finality of Judgment XIII
I. Motor Inhibition VII
J. Interest in Detail IX
K. Coordination of Impulses V
L. Volitional Perseveration VIII-2

Date: February 11, 1957
Age: 21  Sex: Female
Grade (or Education): Freshman Psychol.
Total Score: 81
Type: Quick, Forceful, Slow, Careful, Balanced, Atypical.
Remarks: Quick, reactive type

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Yonkers-on-Hudson, New York
DOWNEY GROUP WILL-TEMPERAMENT TEST
Devised by June E. Downey, Ph.D.

RECORD CARD

Name..............................................M. T..............................................No...55......

Address...........................................................................................

A. Speed of Movement VI-1
B. Freedom from Load VI-1, 2
C. Flexibility VIII
D. Speed of Decision I
E. Motor Impulsion X
F. Self-confidence XI
G. Non-compliance XII
H. Finality of Judgment XIII
I. Motor Inhibition VII
J. Interest in Detail IX
K. Coordination of Impulses V
L. Volitional Perseveration VIII-2

Date........February 11, 1937..............Age........17..............Sex........Female

Grade (or Education)........Freshman Psychol.

Total Score.........49..............Type: Quick, Forceful, Slow, Careful, Balanced, Atypical.

Remarks........Slow deliberate type

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DOWNEY GROUP WILL-TEMPERAMENT TEST

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RECORD CARD

Name: I. W. ................................................................. No. 67

Address .................................................................

A. Speed of Movement VI-1 ........................................
B. Freedom from Load VI-1, 2 ....................................
C. Flexibility VIII .....................................................
D. Speed of Decision I ..............................................
E. Motor Impulsion X ............................................... 
F. Self-confidence XI ............................................... 
G. Non-compliance XII .............................................
H. Finality of Judgment XIII .......................................
I. Motor Inhibition VII ............................................
J. Interest in Detail IX ..............................................
K. Coordination of Impulses V ...................................
L. Volitional Perseveration VIII-2 .............................

DATE: February 11, 1937
Age: 17 .................................................. Sex: Female
Grade (or Education): Freshman Psychol.
Total Score: 75 ..............................................

Type: Quick, Forceful, Slow, Careful, Balanced, Atypical.

Remarks: Quick-reacting type with some difficulty in making adjustments.

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individual is of the quick-reacting type, lacking capacity to keep a set purpose in mind and willingness to keep at a task. Apparently this individual is utilizing what capacity she has, since she is holding her own in a group that ranks quite a little higher in general intelligence.

Profile IV (Figure IV)—This individual's profile shows that she possesses great speed and fluidity of reaction and a tendency to think a matter through and abide by her own decision. She seems to work at her highest speed when under external pressure. This individual lacks power of motor control and patience.

Profile V (Figure V)—This individual's profile shows high scores in all the traits with the exception of two, namely, finality of judgment and motor inhibition. The ability to inhibit reactions is very much under the average. This individual pursues her task when she meets opposition but finally is inclined to revise her decisions when contradicted.

Profile VI (Figure VI)—The impression received from this profile is that of vivacity, alertness, and decisiveness. The profile shows very great care and deliberateness in forming a judgment and great sensitivity to detail. This individual is apt to hold vigorously to decisions when once she has made them.

Profile VII (Figure VII)—This is a most irregular profile. The individual made a very low score of 38. This individual is characterized as being very slow in making decisions and in carrying them out, but when once a decision has been made this individual seldom changes it. This person shows very little interest in detail and is easily swerved from a set purpose. The very high score made on finality of judgment might indicate that this individual might abide by her decision no matter what
Name............. E. T. No. 57
Address

Date........ February 11, 1937
Age........... 18 Sex Female
Grade (or Education)........ Freshman
Total Score........ 65

Type: Quick, Forceful, Slow, Careful, Balanced, Atypical.
Remarks... Works at top speed under...
           external pressure

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DOWNEY GROUP WILL-TEMPERAMENT TEST
Devised by June E. Downey, Ph.D.

RECORD CARD

Name: E. F. ........................................ No. 15
Address .................................................................

A. Speed of Movement VI-1
B. Freedom from Load VI-1, 2
C. Flexibility VIII
D. Speed of Decision I
E. Motor Impulsion X
F. Self-confidence XI
G. Non-compliance XII
H. Finality of Judgment XIII
I. Motor Inhibition VII
J. Interest in Detail IX
K. Coördination of Impulses V
L. Volitional Perseveration VIII-2

Date: February 11, 1937
Age: 18     Sex: Female
Grade (or Education): Freshman Psychol.
Total Score: 78     IQ: 83
Type: Quick, Forceful, Slow, Careful, Balanced, Atypical.
Remarks: The quick-reacting type.

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DOWNEY GROUP WILL-TEMPERAMENT TEST
Devised by June E. Downey, Ph.D.

RECORD CARD

Name: J. E. W.  No. 65
Address

A. Speed of Movement VI-1
B. Freedom from Load VI-1, 2
C. Flexibility VIII
D. Speed of Decision I
E. Motor Impulsion X
F. Self-confidence XI
G. Non-compliance XII
H. Finality of Judgment XIII
I. Motor Inhibition VII
J. Interest in Detail IX
K. Coordination of Impulses V
L. Volitional Perseveration VIII-2

Date: February 11, 1937
Age: 17  Sex: Female
Grade (or Education): Freshman
Total Score: 53
Type: Quick, Forceful, Slow, Careful, Balanced, Atypical.
Remarks: Slow, deliberatetype.

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**RECORD CARD**

<table>
<thead>
<tr>
<th>Name</th>
<th>No. 49</th>
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</table>

| A. Speed of Movement VI-1             |        |
| B. Freedom from Load VI-1, 2          |        |
| C. Flexibility VIII                   |        |
| D. Speed of Decision I                |        |
| E. Motor Impulsion X                  |        |
| F. Self-confidence XI                 |        |
| G. Non-compliance XII                 |        |
| H. Finality of Judgment XIII          |        |
| I. Motor Inhibition VII               |        |
| J. Interest in Detail IX              |        |
| K. Coordination of Impulses V         |        |
| L. Volitional Perseveration VIII-2    |        |

<table>
<thead>
<tr>
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<th>February 11, 1957</th>
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<tbody>
<tr>
<td>Age</td>
<td>17</td>
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<tr>
<td>Sex</td>
<td>Female</td>
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<td>Grade (or Education)</td>
<td>Freshman</td>
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<td>Total Score</td>
<td>85</td>
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<tr>
<td>Type</td>
<td>Quick, Forceful, Slow, Careful, Balanced, Atypical.</td>
</tr>
<tr>
<td>Remarks</td>
<td>Vivacious, alert person</td>
</tr>
</tbody>
</table>

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Yonkers-on-Hudson, New York
DOWNIE GROUP WILL-TEMPERAMENT TEST
Devised by June E. Downey, Ph.D.

RECORD CARD

Name: ____________________________ No. ____________
Address: _______________________________________

A. Speed of Movement VI-1
B. Freedom from Load VI-1, 2
C. Flexibility VIII
D. Speed of Decision I
E. Motor Impulsion X
F. Self-confidence XI
G. Non-compliance XII
H. Finality of Judgment XIII
I. Motor Inhibition VII
J. Interest in Detail IX
K. Coordination of Impulses V
L. Volitional Perseveration VIII-2

Date: February 11, 1937
Age: ______ Sex: Female
Grade (or Education): __________

Total Score: 68

Type: Quick, Forceful, Slow, Careful, Balanced, Atypical.

Remarks: __________

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Yonkers-on-Hudson, New York
the outcome of such a decision.

Profile VIII (Figure VIII) -- This individual is very slow in making decisions and in carrying them into action but possesses great ease and success in readjustment. Although this person shows great self-confidence in herself, she is easily swayed from her decision. She shows scarcely any interest in details and possesses little motor inhibition. Slowness and load will probably be quite noticeable in this student's college work. Although this individual lacks the capacity to keep a set purpose in mind, she shows a willingness to keep at a task.

Profile IX (Figure IX) -- This individual shows the capacity to make decisions rapidly and abide by them absolutely. There is definitely inadequacy on the part of both motor impulsion and motor inhibition. The individual exhibits a fair interest in detail and average perseverance. Although this individual prefers to abide by her own decisions, she lacks confidence in herself.

Profile X (Figure X) -- This individual is average in speed of reaction; shows a tendency to relax; shows capacity to keep a set purpose in mind and achieve it rather slowly. This individual is able to handle a complex situation successfully. There is little attention given to details and very little perseverance.

Description of Patterns. -- Doctor Downey has proved that "a temperamental pattern carries with it implications concerning the quality of intelligence, although not indicating the level of intelligence."\(^{10}\)

This was proved by studying the mental reactions of twenty college students classified into four groups giving different temperamental patterns, shown by their reactions to the test.

\(^{10}\) J. E. Downey, op. cit., p. 278.
### Downey Group Will-Temperament Test

**Record Card**

- **Name**: [Name]
- **Address**: [Address]
- **Date**: February 11, 1937
- **Age**: 19
- **Sex**: Female
- **Grade (or Education)**: Psychol.
- **Total Score**: 40
- **Type**: Quick, Forceful, Slow, Careful, Balanced, Atypical.
- **Remarks**: Showing ease in readjustment.

#### Profile VIII

<table>
<thead>
<tr>
<th>A. Speed of Movement VI-1</th>
<th>B. Freedom from Load VI-1, 2</th>
<th>C. Flexibility VIII</th>
<th>D. Speed of Decision I</th>
<th>E. Motor Impulsion X</th>
<th>F. Self-confidence XI</th>
<th>G. Non-compliance XII</th>
<th>H. Finality of Judgment XIII</th>
<th>I. Motor Inhibition VII</th>
<th>J. Interest in Detail IX</th>
<th>K. Coordination of Impulses V</th>
<th>L. Volitional Perseveration VIII-2</th>
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---

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Yonkers-on-Hudson, New York
DOWNEY GROUP WILL-TEMPERAMENT TEST
Devised by June E. Downey, Ph.D.

RECORD CARD

Name ........................................ A. A. ................................................. No. 1

Address ........................................ ..................................................................

A. Speed of Movement VI-1
B. Freedom from Load VI-1, 2
C. Flexibility VIII
D. Speed of Decision I
E. Motor Impulsion X
F. Self-confidence XI
G. Non-compliance XII
H. Finality of Judgment XIII
I. Motor Inhibition VII
J. Interest in Detail IX
K. Coordination of Impulses V
L. Volitional Perseveration VIII-2

Date .......... February 11, 1937
Age ............... 16........... Sex .... Female

Grade (or Education) .... Freshman

Psychol.

Total Score .... 89........... 127

Type: Quick, Forceful, Slow, Careful, Balanced, Atypical.

Remarks. This is an atypical type.

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Yonkers-on-Hudson, New York
### DOWNEY GROUP WILL-TEMPERAMENT TEST

**Devised by June E. Downey, Ph.D.**

### RECORD CARD

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<table>
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<tr>
<th>A. Speed of Movement VI-1</th>
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</tr>
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<tbody>
<tr>
<td>B. Freedom from Load VI-1, 2</td>
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</tr>
<tr>
<td>C. Flexibility VIII</td>
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<tr>
<td>E. Motor Impulsion X</td>
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<td></td>
</tr>
<tr>
<td>F. Self-confidence XI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. Non-compliance XII</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. Finality of Judgment XIII</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. Motor Inhibition VII</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Interest in Detail IX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K. Coördination of Impulses V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L. Volitional Perseveration VIII-2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Remarks
- Careful and balanced.

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Yonkers-on-Hudson, New York
On page 21 is Profile I, that of a girl twenty-one years of age. This temperamental pattern suggests quick reaction, and much flexibility. There is an average interest in detail and some perseveration.

Profile II on page 22 is that of a girl seventeen years old. It suggests a slow deliberate temperamental pattern. There is slow reaction, little flexibility, little compliance, and little reaction to opposition. This type is unable to adjust quickly to a complex situation but shows long perseveration.

On page 23 is Profile III, that of a girl seventeen years of age. This pattern exhibits quick reaction, difficulty in making adjustments and little self-confidence. The keenest interest in detail is shown, but little perseveration.

Profile IV given on page 25 is that of a girl eighteen years old. The temperamental pattern suggests little motor control and patience. It shows quick reaction under external pressure.

Profile V given on page 26 is that of a girl eighteen years old. It gives us a rapid-fire or fluidic temperamental pattern. This temperamental pattern exhibits quick reactibility, little load, and much flexibility. Frequently, compliance is shown by a mild reaction to contradiction and considerable capacity for enthusiasm is suggested by the results from the motor impulsion test. There is little interest in detail and not much perseveration.

Profile VI given on page 27 is that of a girl seventeen years of age. This gives us a temperamental pattern that suggests vivacity, alertness and finality of judgment. In making important decisions the temperamental pattern suggests great care and deliberateness.

On page 28 is Profile VII, that of a girl seventeen years old. It
gives a slow deliberate temperamental pattern. The pattern suggests that the individual might show some enthusiasm for a set purpose but lacks the capacity to keep this purpose in mind.

On page 30 is Profile VIII. This profile is that of a girl nineteen years of age. The temperamental pattern shows little reaction, little compliance and little interest in detail. The pattern suggests that this individual is unable to abide by any of her own decisions.

On page 31 is Profile IX. This profile is that of a girl nineteen years old. The pattern shows quick reaction and a capacity to be guided by her own decisions. It also gives the impression that this individual is unable to make adjustments easily and to handle complex situations successfully.

Profile X given on page 32 is that of a girl fifteen years of age. This is the youngest student in the group. The temperamental pattern suggests an individual who will achieve any purpose she sets her mind to, but will accomplish all purposes slowly. Although she reacts slowly in making decisions, she is able to handle a complex situation without confusion due to her carefulness and persistence.

Correlation with General Intelligence.—To show the relationship of one ability to another is more important than to measure performance in any one trait alone. Are some factors closely related, and some others relatively independent? If we know a child's general intelligence, can we say what will be his scholastic achievement? It is problems like these that are studied by correlation.

Correlation, in the first place, determines whether a test gives consistent results; in the second place, it indicates to what extent various tests measure the same capacities; and finally, it can show the
relationship between the scores on one test and some other factor. A study of the scatter-diagrams shows that there is a positive correlation of $0.23 \pm 0.078$ between will-temperament and general intelligence.

In the student material under consideration it is interesting to note that the three groups of tests taken separately give the following coefficients of correlation with general intelligence: the first four tests, $+0.13 \pm 0.081$; the second four, $+0.01 \pm 0.082$; and the last four, $+0.23 \pm 0.078$. These coefficients of correlation are rather small but they tend to show a relationship between will-temperament and general intelligence. According to these results, the temperamental type that makes the best showing is the slow, deliberate, pondering type; the quick-reacting type being at a disadvantage. Such an assumption, however, needs to be confirmed. However, we sometimes wonder if the mind that works with considerable friction would do itself justice in an intelligence test, especially of the group type.
In this problem the personality traits of sixty-seven Spelman freshmen (girls), as evidenced by the results from the Downey Group Will-Temperament Test, were studied.

Certain types of personality were determined from the results of the test. Since personality traits are combinations and integrations of interlocking factors, it is impossible to set their impression down in numerical values. Hence the futility of expecting to find clear-cut types among human beings. In the search for types, the best that can be hoped for are rather generalized patterns.

In this group of girls the profiles seemed to fall into ten groups. A profile from each group was selected for special analysis.

An attempt was also made to determine the degree of correlation, if any, that existed between will-temperament and general intelligence.

Findings.—(1) The coefficient of correlation between will-temperament and general intelligence is $+.23 \pm .078$.

(2) The coefficients of correlation between intelligence and the three groups of tests, namely, speed, aggressiveness, and carefulness are $+.15 \pm .081$, $+.01 \pm .082$, and $+.23 \pm .078$.

(3) There is a slight relationship between intelligence and will-temperament.

Although the coefficient of correlation between intelligence and will-temperament is not high, it seems safe to conclude that an individual

\[\text{G. C. Schwesinger, Heredity and Environment, p. 461.}\]
with a high intelligence quotient will possess the characteristics that make for a good personality. It is also feasible to believe that students with a high intelligence rating but a low volitional score may succeed academically although not to the degree warranted by their intelligence. With certain combinations of habits, they may even fail. But students of inferior intelligence but strong volitional qualities may succeed in maintaining a passing grade.
TABLE 1

AGE DISTRIBUTION

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# TABLE 2
## SCORING

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<th>Score</th>
<th>Test I</th>
<th>Test V</th>
<th>Test VI,1 &amp; 2</th>
<th>Test VI,1</th>
<th>Test VII</th>
<th>Test VIII,2</th>
<th>Test XI</th>
<th>Test XII</th>
<th>Test XIII</th>
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<td>under 1.09</td>
<td>56 &amp; over</td>
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<td>24-29</td>
<td>1-2 letters</td>
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<td>54-55</td>
<td>4-5</td>
<td>245-310</td>
<td>13-14</td>
<td>.11-.35</td>
<td>27-30</td>
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<td>8</td>
<td>21-23</td>
<td>3 letters</td>
<td>1.16-1.17</td>
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<td>6-7</td>
<td>195-240</td>
<td>12</td>
<td>.36-.59</td>
<td>33-36</td>
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<td>7</td>
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<td>4 letters</td>
<td>1.18-1.21</td>
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<td>8-0</td>
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<td>.60-.79</td>
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<th>Item on Profile</th>
<th>Speed of Decision D</th>
<th>Coordination of Impulses K</th>
<th>Freedom from Load B</th>
<th>Speed of Movement A</th>
<th>Motor Inhibition I</th>
<th>Volitional Perseveration L</th>
<th>Self-confidence F</th>
<th>Non-compliance G</th>
<th>Finality of Judgment H</th>
<th>Item on Profile</th>
</tr>
</thead>
</table>

1Cut the score one for every change in decision made during revision.
**TABLE 3**

**SCORING**

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<th>Number of Letters Written</th>
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<td>Differences in Number of Letters</td>
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<tr>
<td>36 &amp; over</td>
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<td>Moderate Magnification (about 25%)</td>
<td>Slight Magnification</td>
<td>Normal</td>
<td>Slight Decrease in size</td>
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<td>Freedom from Lead</td>
<td>Attention</td>
<td>Memory</td>
<td>Speed of Reading</td>
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TABLE 6

Scores Made on the Denny Group Will-Temperament Test and Psychological Test
### TABLE 7
COEFFICIENTS OF CORRELATION

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<tr>
<th>Item</th>
<th>Will-Temperament Score</th>
<th>Score of Tests in Group I</th>
<th>Score of Tests in Group II</th>
<th>Score of Tests in Group III</th>
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<td>Intelligence</td>
<td>.23 ± .078</td>
<td>.13 ± .081</td>
<td>.01 ± .082</td>
<td>.23 ± .078</td>
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</table>
BIBLIOGRAPHY

Books


Roback, A. A. *The Psychology of Character*.


Articles


Kornhauser, A. W. "Results from the Testing of a Group of College Freshmen with the Downey Group Will-Temperament Test," Journal of Educational Psychology, Vol. XVIII (January, 1927), 40-42.