

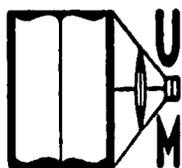
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To Objectionable Pupil Behavior

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1949

THE DETERMINATION OF THE RELATIONSHIP BETWEEN THE PERSONALITY
TRAITS OF TEACHERS AND THEIR EVALUATION OF
OBJECTIONABLE PUPIL BEHAVIOR

by

Elmer J. Clark

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy in the
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CHAPTER I

INTRODUCTION

. . . we have virtually no research about what the teacher, himself, is and what teaching does to the teacher. The consideration of teaching for the sake of the teacher as well as for children and society is a new principle in education. Educational research has now become occupied with the problem of what teacher personality does to children but teacher mental hygiene as a subject, itself, remains a neglected area.¹

The present study is an attempt to examine one phase of the neglected area of research indicated above. It has been specifically designed to determine the relationship between the personality traits of teachers and their evaluation of objectionable pupil behavior. In the opinion of the author, such an investigation should provide teachers, administrators, and guidance workers with valuable information concerning teacher mental health and teacher-pupil relationships.

Origin of the problem.--The writer first conceived of the present problem while teaching in an elementary school at Pontiac, Michigan. At that time, he became convinced that any two elementary school teachers react differently

¹Leo J. Allilunas, "Needed Research in Teacher Mental Hygiene," Journal of Educational Research, XXXVIII (May, 1945), 653.

to the same pupil behavior stimuli. The supposition which the author proposed at that time, and which he will attempt to examine partially in this paper, is that a teacher's reaction to various factors in the school environment is unalterably bound up with her personality. Specifically then, the purpose of the present study was to determine how teachers exhibiting various personality traits evaluated objectionable pupil behavior.

Objectives of the study.--It was proposed at the beginning of the chapter that the present study should provide school workers with valuable information concerning teacher mental health and teacher-pupil relationships. Specifically, the following objectives have prompted the writer to carry out the investigation:

1. To discern knowledge concerning teacher reaction to pupil behavior which might be of assistance to the school counselor in working with teachers and pupils.
2. To obtain information which would be of value to administrators and supervisors who are interested in improving teacher working conditions.
3. To secure knowledge concerning pupil behavior which would be of benefit to the teacher who is interested in improving her relationships with pupils.

In Chapter II, the reader will find a detailed discussion of the literature pertinent to the objectives of the present investigation.

Definition of terms.--In order that certain terms which are basic to this study might be used without confusion to the reader, they are defined as follows:

1. Teacher personality traits are considered to include those emotional aspects of teacher personality which especially refer to mood and degree of activity, and which are measurable by means of the Guilford-Martin Personality Inventories.

2. Personality is defined as the characteristic pattern of behavior through which the individual adjusts himself to his environment, especially his social environment.

3. A trait is considered to be a higher-order habit or pattern which is generalized out of specific experiences of the personality.

4. An emotion is defined as a specific response to a stimulus, characterized by a strong degree of feeling, typically involving both mental and physical reactions, and often accompanied by motor expression or readiness for overt physical action.

5. Mood is an enduring but not permanent emotional attitude.

6. Degree of activity refers to the amount of interaction displayed by a person while contacting his social environment.

7. An annoyance evaluation is a decision as to which of two pupil behavior stimuli has the greater degree of probable annoyance.

8. Objectionable pupil behavior refers to any thwarting situation or stimulus which is incited by the pupil and is annoying to the teacher.

Working hypotheses.--At the onset of the study, the investigator proposed to test the following hypotheses in connection with the above stated problem:

1. There is a significant relationship between the personality traits of teachers, as measured by the Guilford-Martin Personality Inventories, and their annoyance evaluations of objectionable pupil behavior.

2. There is a significant relationship between the personality traits of teachers, as measured by the Guilford-Martin Personality Inventories, and such factors as their age, marital and family status, training, teaching and pupil loads, and years of experience.

At the conclusion of the study, these hypotheses will be tested in light of the obtained data and conclusions will be drawn as to whether or not they have been substantiated.

Delimitations.--The present investigation was delimited in three respects. First of all, the subjects were chosen from teachers of the first six grades. This choice of subjects was made because the teaching experiences of the investigator had been confined exclusively to the elementary school level and because a majority of the studies which have been conducted in the area of pupil behavior have dealt only with children of the first six grades. The second delimitation was concerned with the location of the subjects. For reasons that are discussed in Chapter V, the present study was confined to the Flint, Michigan, public schools. As a final delimitation, only women teachers were used as subjects, since men are rarely employed as elementary school teachers in Flint.

DESCRIPTION OF THE PRESENT INVESTIGATION

The study was conducted in the Flint, Michigan, public schools during the spring of 1948. The purpose of the investigation, as indicated above, was to determine how teachers exhibiting various personality traits evaluated objectionable pupil behavior. A modification of the questionnaire method was employed, with information being supplied by selected elementary school teachers.

Construction of an annoyance evaluation instrument.--

As a first step in the construction of an annoyance evaluation instrument, the author surveyed pertinent literature in the fields of education, psychology, and sociology. A list was thus obtained containing 179 pupil behavior items which teachers had considered to be objectionable. All items of this list which would not be expected to occur in an elementary classroom were then eliminated. The remaining 130 items were revised so that they would be grammatically consistent and succinct.

The second phase in the construction of an annoyance evaluation instrument consisted in the drafting of a preliminary questionnaire designed to measure the frequency of occurrence and the degree of annoyance for each of the 130 behavior items. This questionnaire was submitted to a group of seventy-three Flint elementary school teachers who were enrolled in a University of Michigan course in

child growth and development. Detailed written and oral instructions accompanied this instrument, and responses were kept strictly anonymous. A total of seventy teachers completed this phase of the investigation.

The data thus obtained were utilized in the construction of a paired comparisons measure of annoyance. Through the use of these data, the behavior items were ranked both on the basis of annoyance and frequency. The thirty-five behavior items which had been ranked highest in both annoyance and frequency were chosen for the final annoyance evaluation instrument. These items were paired with each other, except that certain comparisons were eliminated in accordance with a method devised by Uhrbrock and Richardson.¹ The behavior items were placed in the final instrument in accordance with the Ross method.² For a detailed account of the construction of the annoyance evaluation instrument, the reader is referred to Chapter IV.

Collection of data.--For purposes of the final inquiry, administrative and supervisory officials of the Flint schools were contacted by the author, and arrange-

¹R. S. Uhrbrock and M. W. Richardson, "Item Analysis," Personnel Journal, XII (October, 1933), 141-54.

²Robert T. Ross, "Optimum Orders for the Presentation of Pairs in the Method of Paired Comparisons," Journal of Educational Psychology, XXV (May, 1934), 375-82.

ments were made for meetings with the teachers of the various schools. Two hundred teachers representing twenty-eight elementary schools took part in the project. The survey material consisted of three sections: (1) a personal data inventory, (2) the Guilford-Martin Personality Inventories, and (3) an annoyance evaluation instrument. Each teacher was asked to complete the survey material at her convenience and then return it to the author. All responses, except those for the personal data inventory, were placed on machine answer sheets by the respondents. A total of 181 teachers completed the project. Chapter V of this study contains a more detailed discussion of the methods used for collecting data.

Analysis of data.--Responses to the Guilford-Martin Personality Inventories and to the annoyance evaluation instrument were machine scored. All scores of the survey were codified and recorded on punched cards. These cards were then sorted so as to determine the required statistical information. Product-moment coefficients of correlation were computed for those variables indicated in the hypotheses above. Since the Guilford-Martin Personality Inventories were suspected to display a curvilinear relationship, the coefficient of non-linear relationship (eta) was also computed, and a test of linearity of regression was applied.

The reader will find, in Chapter VI, a more comprehensive account of how the data were analyzed. He will also find, in Chapter VIII, conclusions and recapitulations pertinent to the entire study.

CHAPTER II

REVIEW OF RELATED LITERATURE

The literature in the fields pertinent to this study is very extensive. Scores of recent investigations have been conducted in the areas of pupil-teacher relationships, pupil behavior, measurement of teacher personality, and measurement of annoyance. Many of these have dealt specifically with teacher evaluation of pupil behavior, but most of them have treated related aspects of the present study. Extensive research has failed to uncover a single investigation which would answer the questions proposed in the previous chapter.

It has not been intended that this chapter should treat exhaustively all phases of the current investigation. Rather, the discussion has been designed to give the reader a general understanding of the typical studies in that area. It has been necessary to delimit the literature in two respects: (1) only scientific literature in the fields of education, mental hygiene, psychology, and sociology has been considered, and (2) only studies which were made since 1925 have been included.

PUPIL-TEACHER RELATIONSHIP STUDIES

Boynton, Dugger, and Turner¹ approached the problem of pupil-teacher relationships by studying the stability of teachers. They attempted to determine whether unstable teachers tend to have unstable children around them and whether stable teachers tend to be associated with stable children. The Woodworth-Mathews Personal Data Sheet was administered to teachers and to their pupils. The authors summarized the investigation by stating:

When the study is looked at in its entirety, it seems to give very definite, clear-cut evidence to the effect that emotionally unstable teachers tend to have associated with them children who tend toward instability, whereas emotionally stable teachers tend to be associated with more emotionally stable pupils.²

O'Malley³ conducted an investigation similar in many respects to the present one. She attempted to determine what situations or stimuli were asserted by teachers to be annoying. A list of annoyances was collected from a random sampling of teachers. Each teacher was requested to write a description of the most irritating situation that she had experienced in teaching. A four-point annoyance

¹Paul L. Boynton, Harriet Dugger, and Masal Turner, "The Emotional Stability of Teachers and Pupils," Journal of Juvenile Research, XVIII (October, 1934), 223-32.

²Ibid., p. 232.

³Kathleen E. O'Malley, A Psychological Study of the Annoyances or Irritations of Teachers. Unpublished doctoral dissertation, New York University, 1935. Pp. xi + 214.

scale was then constructed, containing the items that the teachers had considered to be irritating. From the standpoint of the present study it is pertinent to point out that 10.1 percent of the total number of annoyances pertained to pupils. Teachers rated whispering and inattentiveness as the most annoying of all these.

Another study of pupil-teacher relationships which was pertinent to the present one was carried out by Cralle and Burton.¹ These investigators attempted to discover which factors irritated and frustrated teachers and which ones prevented the achievement of high teacher morale. A selected group of teachers was asked to make an anonymous list of irritations. Cralle and Burton concluded that teacher relationships with other persons constituted one of the major factors causing frustration and lowered morale.

Rechtenick² attempted to determine the extent to which the classroom situation is a factor in the emotional behavior of teachers. He studied sixty-four teachers of sixteen schools in New York City, eight of which operated

¹Robert E. Cralle and William H. Burton, "An Examination of Factors Stimulating or Depressing Teacher Morale," California Journal of Elementary Education, VII (August, 1938), 7-14.

²Joseph Rechtenick, Irritability and Nervous Gestures Among Teachers in Two Types of Classroom Situations. Unpublished doctoral dissertation, Columbia University, 1940. Pp. 54.

under the experimental activity program and eight of which operated under the traditional curriculum. Rechtenick concluded that there was no reliable difference in the irritability of the teachers in the two different classroom situations. He also concluded that older and more experienced teachers were generally less irritable than the younger and less experienced teachers.

Baxter¹ dealt extensively with the area of teacher-pupil relationships. She indicated the importance of such relationships by stating:

The educational significance of the direct influence of the mature personality of the teacher upon the impressionable personalities of children is worthy of careful evaluation. Especially is this true today. While the teacher's personal example and social outlook have always been factors to be considered, the scope of the teacher's potential influence is greater under the complex living conditions of today than ever before.²

Baxter emphasized that the modern teacher must help pupils adjust to changing conditions. She gave an extensive account of an observational study of teacher-pupil relationships. Baxter concluded that teacher-training institutions should place more emphasis on the prospective teacher's personal influence on children than is customarily done.

¹Bernice Baxter, Teacher-Pupil Relationships. New York: Macmillan Company, 1941. Pp. 166.

²Ibid., p. 1.

Kelley and Perkins¹ endeavored to construct and evaluate an instrument for measuring teachers' knowledge of the age characteristics, the needs and interests, the incipient maladjustments, the motivation of behavior, and the personality problems of children of elementary and high school ages. They studied the problems of children and adolescents as discussed in relevant psychological literature as well as problems obtained from classroom observation and from teachers' descriptions of problem children. Kelley and Perkins summarized the data obtained from 846 teachers of twenty schools by saying:

. . . There were significant relationships between mean scores and the following variables:

1. Number of years of training. For both grade school and high school.
2. Number of courses in education. For both grade school and high school.
3. Number of courses in psychology. For grade school.
4. Recency of training. For grade school.
5. Length of time in present position. For grade school.
6. Subjects taught. For high school.
7. Age. For high school.

¹Ida B. Kelley and Keith J. Perkins, An Investigation of Teachers' Knowledge of and Attitudes toward Child and Adolescent Behavior in Everyday School Situations. Purdue University Studies in Higher Education XLII. Lafayette, Indiana: Purdue University, Division of Educational Reference, 1941. Pp. 101.

8. Sex. For high school.
9. Marital status. For high school.
10. Having children. For high school.¹

Since the above study so closely parallels the current one, the reader will find many references to it in the later discussion.

Reed² approached the subject of pupil-teacher relationships by observing teacher contacts. She made an extensive observational study in order to compare two second grade rooms with each other as to teacher-group contacts, teacher individual contacts, and child behavior. She also compared the two groups of children in the second and third grades in consecutive years. Four teachers and 129 pupils were used as subjects, and time sampling observations were employed by four different observers. Reed summarized the obtained data as follows:

There was very little evidence to show that the children in the second grade had behavior patterns or personality characteristics that persisted into the third grade.

There was evidence to confirm the measured individual differences in teachers and to show that certain behavior patterns and personality characteristics in the teachers persisted into a second year even though the teachers were then with different groups of children.

¹Ibid., p. 75.

²Mary F. Reed, A Consecutive Study of the School Room Behavior of Children in Relation to the Teachers' Dominative and Socially Integrative Contacts. Unpublished doctoral dissertation, University of Illinois, 1941. Pp. 100.

There was evidence that one teacher, for example, was contributing to conflict and maladjustment in the children's behavior together with little evidence of behavior designed to alleviate such conditions.

There was evidence that another teacher was using considerable behavior designed to reduce conflict in the schoolrooms and to stimulate cooperative and harmonious activities.

There was evidence to show that the measured spontaneity and initiative of children was a reflection of measured behavior in the teachers.¹

Anderson and Brewer² employed many of the procedures established by Reed. By observing 101 children in both dominative and integrative environments, they studied the dominative and socially integrative behavior of kindergarten teachers. The following is a general summary of their findings:

. . . Dominative and socially integrative behavior were each . . . found to be "circular" in their effects: as a stimulus to others, each tended to produce its like. Dominative behavior, or the working against another, because of its tendency to intensify conflict, was regarded as a "vicious circle." Socially integrative behavior, because of its tendency to promote spontaneity, security, and understanding, was regarded as socially desirable.³

¹Ibid., p. 98.

²Harold H. Anderson and Helen M. Brewer, Studies of Teachers' Classroom Personalities, I. Applied Psychology Monographs of the American Association for Applied Psychology, No. 6. Stanford: Stanford University Press, 1945. Pp. 157.

³Ibid., p. 153.

The above discussion would seem to indicate that many approaches have been made to the study of pupil-teacher relationships. The framework which these authors have established should be of fundamental value in setting up the procedures for the present investigation.

PUPIL BEHAVIOR STUDIES

The discussion of pupil behavior studies has been divided into two phases. Investigations in which teachers and clinicians supplied items of objectionable pupil behavior will be considered first. The second phase of the discussion will be concerned with other related pupil behavior studies.

Objectionable pupil behavior studies.--Blatz¹ undertook a study of behavior phenomena in a typical school population. The preliminary survey was made in 1925-26 in all grades of the public schools of Toronto. Teachers were asked to refer to the research staff any case which they felt would benefit either from a social investigation, or from a psychological and psychiatric examination. From the data thus obtained, including the teachers' descriptions of these sample cases, Blatz compiled a list of mis-

¹William E. Blatz, "The Behavior of Public School Children," Pedagogical Seminary and Journal of Genetic Psychology, XXXIV (December, 1927), 556-82.

demeanors and a numerical index of their total incidence. He found that the number of misdemeanors fell off markedly in the higher grades, but at different rates for the various misdemeanors. The frequency was found to be greater among boys than girls; to be highest between ages seven and nine; and to vary inversely with the intelligence quotient for boys, but not for girls.

Betts¹ investigated teacher interpretation of pupil behavior. In 1927, five hundred teachers in city, town, and rural schools in six midwestern states were asked to answer the following question: "To help find out the classroom difficulties most commonly met by teachers in general, will you write down on this sheet the one, two, three, or more chief problems or difficulties which trouble you most in your classroom work?"² All told, 256 elementary and high school teachers responded to the questionnaire, giving a total of 773 problems. Betts classified these into ninety different categories. Problems which pertained to "study and lesson-getting" accounted for more than 35 percent of the difficulties mentioned by the elementary school teachers and more than 46 percent of those mentioned by the high school teachers.

¹George H. Betts, "Teachers' Diagnosis of Classroom Difficulties," Elementary School Journal, XXVII (April, 1927), 600-08.

²Ibid., pp. 600-01.

One of the most basic studies of pupil behavior was conducted by Wickman.¹ That author attempted to ascertain teachers' attitudes toward children's behavior. Twenty-nine Minneapolis teachers and twenty-seven Cleveland teachers listed types of problem behavior that they had observed in pupils. These behavior problems were then rated as to their relative seriousness by 511 teachers and thirty mental hygienists. Wickman interpreted the ratings thus obtained by stating:

The differences in attitudes toward behavior problems represented in the ratings obtained from mental hygienists and teachers should be interpreted as differences in stress laid upon the seriousness of the various problems. Teachers stress the importance of problems relating to sex, dishonesty, disobedience, disorderliness and failure to learn. For them, the problems that indicate withdrawing, recessive characteristics in children are of comparatively little significance. Mental hygienists, on the other hand, consider these unsocial forms of behavior most serious and discount the stress which teachers lay on anti-social conduct. Such differences in attitudes imply essential differences in methods of treatment and discipline.²

Martens and Russ³ conducted a survey to determine which behavior problems occurred in the Berkeley, Calif-

¹E. K. Wickman, Children's Behavior and Teachers' Attitudes. New York: The Commonwealth Fund, 1928. Pp. 247.

²Ibid., p. 129.

³Elsie H. Martens and Helen Russ, Adjustment of Behavior Problems of School Children. U. S. Office of Education Bulletin, No. 18. Washington: Government Printing Office, 1932. Pp. v + 78.

ornia, public schools. These investigators obtained their information from principals and teachers, who were asked periodically to report all serious behavior problems in their schools to the school behavior clinic. A serious behavior problem was defined as "one which varies sufficiently from normal behavior to cause the teacher to feel that the child can not be managed satisfactorily with the group."¹ For each child thus reported, principals and teachers made out a detailed record of objective evidence, indicating instances of unsocial behavior. The canvass revealed 250 behavior-problem children from the kindergarten through the ninth grade. Martens and Russ formulated the following conclusions concerning their study:

1. That all children really are "problem" children in that they do now or may present overt behavior difficulties which should receive attention looking toward early adjustment, and that such overt problem behavior varies in degree from that which is close to zero to that which places a child in the ranks of juvenile delinquency.

2. That serious problem behavior among children is the resultant of a combination of numerous factors, no one of which has been isolated as exclusively responsible, and that this principle of multiple causation demands careful observation of all children in order to detect the initial symptoms of maladjustment.

¹Ibid., p. 11.

3. That prolonged intensive study and clinical attention by a group of psychiatric, psychological, medical, and social specialists has a direct positive relationship to a progressive change for the better in the overt problem behavior of children.¹

MacClenathan² approached the study of pupil behavior in a manner very similar to that of Wickman, except that ratings were supplied by parents instead of by mental hygienists. A list of behavior items was obtained from teachers by the questionnaire method. The fifty items thus obtained were submitted to teachers, a child-study group of parents, and unselected parents. MacClenathan summarized the data by saying:

The cardinal tendency brought out by the study . . . certainly is that each group tends to rank as most serious those behavior patterns interfering most with the smooth functioning of that group's affairs.³

Ackerson⁴ obtained behavior problems from a study of clinical case histories. The recorded case material was secured from a consecutive series of five thousand children who had a complete examination at the Illinois Institute for Juvenile Research, Chicago, during the years

¹Ibid., p. 68.

²Ruth H. MacClenathan, "Teachers and Parents Study Children's Behaviors," Journal of Educational Sociology, VII (January, 1934), 325-33.

³Ibid., p. 333.

⁴Luton Ackerson, Children's Behavior Problems, Vol. I. Chicago: University of Chicago Press, 1931. Pp. xxi + 268.

1923-27. The material was closely analyzed with special reference to behavior difficulties and to reasons for being referred. Most of the children were under eighteen years of age and were still under the supervision of their parents or guardians. Only a small proportion had a record of police arrest or juvenile court appearance for reasons of misconduct, and even in these cases it seemed that the reason for their being referred to a clinical examination usually arose from their behavior in the home or neighborhood or at school rather than because of the court contact per se. Therefore, the children upon whom this study was based must not be thought of as delinquents. The largest single group consisted of problems which were combinations of undesirable traits and as a result of which a child was referred to the clinic. The second largest group consisted of children in whom the principal difficulties were inadequate intelligence and marked retardation in school studies. Another large group presented educational problems or questions not complicated with inadequate intelligence or any specific bad conduct in school. The remainder consisted of miscellaneous small groups of behavior problems.

Peck¹ employed the case study technique to identify types of objectionable pupil behavior. She asked 175 teachers of Texas public schools to write case studies concerning maladjusted pupils. Both elementary and secondary school teachers were represented in the survey. The directions given the teachers were brief: "Tell why you consider the pupil maladjusted, explain as well as you can the factors tending to cause the maladjustment, and state what you think should be done for the child."² A total incidence of 698 problems of ninety different types was reported for 175 children. Peck classified these problems into the following categories: (1) undesirable personality traits, 53 percent; (2) violations of general standards of morality and integrity, 16 percent; (3) violations of school work requirements, 16 percent; and (4) other violations, 15 percent.

In 1934, Laycock³ attempted to ascertain the various conditioning factors that operate in the production of be-

¹Leigh Peck, "Teachers' Reports of the Problems of Unadjusted School Children," Journal of Educational Psychology, XXVI (February, 1935), 123-38.

²Ibid., pp. 125-26.

³S. R. Laycock, "Teachers' Reactions to Maladjustments of School Children," British Journal of Educational Psychology, IV (February, 1934), 11-29.

havior problems in school children and to work out methods for the correction and treatment of those problems. He sent a questionnaire to 167 elementary school teachers of Saskatoon, Saskatchewan. The teachers were asked to answer the question, "What kind of behaviour in school children is undesirable?"¹ The teachers were instructed to list all kinds of behavior maladjustments that had come under their observation during their entire teaching experience. The 167 Canadian teachers listed a total of 2,306 items of undesirable behavior, an average of approximately fourteen per teacher. Laycock compared the data thus obtained with those obtained by Wickman. In general, agreement was found, except that Wickman had found aggressive personality traits to be listed more often than recessive traits. In the Laycock study, on the other hand, aggressive personality traits were found to be less serious than recessive ones.

Campbell² attempted to find out how a selected group of elementary school teachers in southern New Jersey treated certain outstanding classroom behavior problems of children; to learn how successful they considered their treatment of these problems; to compare the procedures of the

¹Ibid., p. 13.

²Nellie M. Campbell, The Elementary School Teacher's Treatment of Classroom Behavior Problems. Teachers College Contributions to Education, No. 668. New York: Teachers College, Columbia University, 1935. Pp. vi + 71.

teachers rated highly successful in classroom control with those of the teachers rated less successful in this respect; and to secure an evaluation of the procedures by experts. Data were obtained from diary records of student-teachers and experienced teachers and from questionnaires submitted to experts in education. Campbell summarized her findings as follows:

1. When treating undesirable classroom behavior of children, the teachers apply direct measures such as punishment or reward. . . .
2. The teachers rated highly successful in classroom control use rewards and give direct help more frequently than the other teachers. . . .
3. The teachers are familiar with the advantages claimed for the use of rewards and measures providing direct help in modifying the behavior of children, but the diary records concerning their classroom practice show a predominant use of punishment. . . .
4. The teachers judge their habitual forms of response to be successful even though they do not favor these measures aside from their own practice.¹

Anderson² conducted research at the University of Illinois in 1939, the objective of which was to measure the dynamic interplay between the child and his environment. Anderson described the study by saying:

¹Ibid., pp. 60-61.

²Harold H. Anderson, "The Construction of a Mental Hygiene Scale for Teachers," American Journal of Orthopsychiatry, X (April, 1940), 253-63.

For each of 23 problem situations at the high school level a list was compiled of techniques which teachers report they have used in dealing with each respective problem. These techniques thus constituted 23 attitudes tests. By means of the Thurstone method, a group of 114 selected judges validated, according to defined mental hygiene criteria, the mental hygiene value of each of the techniques. Eleven of the 23 problem situations have been retained for a mental hygiene scale for high school teachers.¹

Hayes² attempted to discern how the behavior of eighth grade boys and girls interfered with learning activities in the classroom by distracting or annoying others. The subjects for this study were the sixty-eight children in the eighth grade of the Milne School, Albany, New York, and their twenty-three practice teachers. The study was made during the school year 1938-39. Hayes used observational techniques in order to obtain a list of behavior items. While visiting eighth-grade classrooms, she set down types of behavior that seemed to constitute definite interferences with the teacher's purposes. This list of behavior items was then submitted to the supervising staff in order to determine whether or not they could be classified as interferences. All the supervisors agreed that all the categories constituted definite interferences with

¹Ibid., pp. 262-63.

²Margaret L. Hayes, A Study of the Classroom Disturbances of Eighth Grade Boys and Girls. Teachers College Contributions to Education, No. 871. New York: Teachers College, Columbia University, 1943. Pp. ix + 139.

orderly classroom procedure. Three categories were added by supervisors and a later evaluation was made of these.

The eleven studies which have just been discussed are very basic to the present investigation. The reader will find further discussion of these studies in Chapter III. A composite inventory of the objectionable pupil behavior items which appear in these eleven studies and a description of how these items were utilized in the construction of an annoyance evaluation instrument will also be presented in that chapter.

Related pupil behavior studies.--Several pupil behavior studies have been completed which are related to those mentioned above and which deserve mention in a discussion of this sort. One such investigation was conducted by Yourman¹ in the elementary schools of New York City. One hundred teachers evaluated pupil behavior by means of the Wickman scale. Yourman's data supported the conclusions drawn by Wickman.

Bain² made an analysis of the attitudes regarding the Wickman scale held by various teacher groups at Columbia

¹Julius Yourman, "Children Identified by Their Teachers as Problems," Journal of Educational Sociology, V (February, 1932), 334-43.

²Winifred E. Bain, "A Study of the Attitudes of Teachers toward Behavior Problems," Child Development, V (March, 1934), 19-35.

University. She found that problems relating to sexual immorality and dishonesty were assigned the place of greatest seriousness. Problems relating to difficulties which disturb a teacher in the conduct of school work were rated as least serious.

In 1935, Ellis and Miller¹ carried out a study in the Denver junior and senior high schools in which a variation of the Wickman behavior scale was employed. They concluded that the significant difference between the teacher ratings obtained in their study and those obtained by Wickman was the greater emphasis on the seriousness of the withdrawing and recessive personality traits.

Bott² used statistical procedures similar to those employed in the present investigation in order to evaluate adult attitudes toward childrens' misdemeanors. Twenty-one misdemeanors of children of public school age were studied by the method of paired comparisons, and scale values were assigned by means of the Thurstone method of attitude measurement. Five groups--teachers, parents, public health

¹D. B. Ellis and L. W. Miller, "Teachers' Attitudes and Child Behavior Problems," Journal of Educational Psychology, XXVII (October, 1936), 501-11.

²Helen Bott, Adult Attitudes to Children's Misdemeanors, University of Toronto Studies, Child Development Series, No. 8. Toronto: University of Toronto Press, 1937. Pp. 21.

nurses, social workers, and mental hygienists--were thus measured in respect to their attitudes toward misdemeanors. Bott found that the teachers and mental hygienists differed most in their estimates. She also found that parents, nurses, and social workers occupied a middle position between the two extremes, with social workers agreeing most closely with mental hygienists.

Symonds¹ attempted to discern the types of problems which serve to interfere with teaching efficiency. He asked teachers enrolled in a mental hygiene class to write freely concerning the personal problems which they had faced the preceeding year. Of those problems pertaining to pupil relationships, the subjects listed disciplinary problems as being most difficult.

Mitchell² conducted a follow-up study of the Wickman investigation. Ratings were made with reference to children in grades five and six by mental hygienists, psychiatrists, psychologists, and teachers. On the whole, the data were in agreement with the Wickman findings. However, Mitchell found that his teachers usually rated non-aggressive traits as being more serious than did Wickman's subjects.

¹Percival M. Symonds, "Problems Faced by Teachers," Journal of Educational Research, XXXV (September, 1941), 1-15.

²John C. Mitchell, "A Study of Teachers' and of Mental Hygienists' Ratings of Certain Behavior Problems of Children," Journal of Educational Research, XXXVI (December, 1942), 292-307.

MEASUREMENT OF TEACHER PERSONALITY

Several attempts have been made to measure the personality traits of teachers. One of the first of these was carried out by Peck¹ in 1936. Peck sought to ascertain the adjustment difficulties of a group of one hundred women teachers. Control groups of men and women students who were prospective teachers were used. The Thurstone Personality Schedule was administered to all subjects. Peck concluded that the women teachers were not as well adjusted as the women students and that as a whole the women were not as well adjusted as the men. That investigator found that one-third of the women teachers were definitely maladjusted and that only one-fifth of the women teachers could be classified as well-adjusted. In general, adjustment was found to improve with age. The peak of adjustment, however, was reached by the women teachers between the ages of twenty-six and thirty.

Olson and Wilkinson² attempted to measure student-teacher personality by making time-sampling records of

¹Leigh Peck, "A Study of the Adjustment Difficulties of a Group of Women Teachers," Journal of Educational Psychology, XXVII (September, 1936), 401-16.

²Willard C. Olson and Muriel M. Wilkinson, "Teacher Personality as Revealed by the Amount and Kind of Verbal Direction Used in Behavior Control," Educational Administration and Supervision, XXIV (February, 1938), 81-93.

the responses of those teachers to a constant group of children. The reactions of thirty student-teachers were studied in relation to each of thirty-nine children. The language and gestural responses of the teachers were recorded by critic teachers. Observers indicated by a plus and minus those verbal responses in the teacher that could be characterized as positive and directive as contrasted to those which were negative. A blanket score was also recorded when the teacher adjusted herself to the class as a whole rather than to an individual. The authors summarized the results of the study by saying:

. . . A finding of the study is that the quality of control exercised by the teacher is of little importance in relationship to teaching success. When, however, a calculation is made to reveal the quantity of the verbal control in terms of positive and directive statements, a significant index is secured. The per cent of positive language in the total used gives a coefficient of correlation of .59 with the rating scale. The blanket responses also proved to be a significant index with a correlation of -.62 between the quantity of blanket responses and teaching efficiency. The able student-teacher thus stands out as one who employs a high percentage of constructive verbalism and who avoids the use of blanket responses to the class as a whole. It would appear desirable for persons responsible for the preparation and supervision of teachers to give some special attention to the development of these qualities.¹

¹Ibid., pp. 92-93.

Boynton¹ constructed a personality inventory of fifty-two items. The desirable answer was "No," and three variations of maladjustment were indicated by scaled "Yes" responses. Fifteen hundred teachers, two-thirds of them women, completed the inventory. Boynton drew the following conclusions from the data thus obtained:

When the results are looked at in retrospect, certain conclusions appear relevant and in order. These are:

1. Age apparently can be said to be associated positively to a slight extent at least with emotionality or personality adjustment, as measured in this investigation. . . .

2. Elementary teachers, as a group, appear to have more distinct problems of adjustment than high school teachers. . . .

4. It is not possible from these data to say that age, or teaching assignment, or hobby participation has a direct causal relationship to personality adjustments, as here measured.²

Broxson³ administered the Bell Adjustment Inventory to fifty-one teachers of various schools. In terms of per-

¹Paul L. Boynton, "An Analysis of the Responses of Women Teachers on a Personality Inventory," Peabody Journal of Education, XX (July, 1942), 13-18.

²Ibid., pp. 17-18.

³John A. Broxson, "Problem Teachers," Educational Administration and Supervision, XXIX (March, 1943), 177-82.

centages, 35.2 percent of these were found to be emotionally maladjusted to a definite or serious degree; 28.8 percent were socially maladjusted; 49.0 percent were maladjusted with reference to home life and relationships.

Blair¹ attempted to measure teacher personality by means of a method quite different from those employed by the investigators listed above. He utilized the Multiple Choice Rorschach Test in attempting to measure the personality of 205 experienced teachers and 152 prospective teachers. Experienced teachers were found to be significantly more maladjusted than prospective teachers. No significant difference was found to exist between the maladjustment scores of younger and older experienced teachers.

MEASUREMENT OF ANNOYANCE

Cason carefully summarized the psychological aspects of annoyance by stating:

1. Feelings and emotions are unique processes in themselves, and deserve study on their own account.

¹Glenn M. Blair, "Personality Adjustment of Teachers as Measured by the Multiple Choice Rorschach Test," Journal of Educational Research, XXXIX (May, 1946), 652-57.

2. It has been customary to compare the pleasant and unpleasant activities with each other, but this alleged opposition is incomplete at several points.

3. Pain has a more positive character than pleasure; and the pleasant experiences frequently consist in a release from an unpleasant condition.

4. The pleasant and unpleasant experiences are on different planes, and are not psychological opposites of each other. The unpleasant activities are more basic and central in the organization of the personality. They are stronger and more insistent, and they play a more important role in motivating conduct.¹

The same author conducted an extensive investigation of the common annoyances of individual people.² A total of 659 subjects of both sexes and of various economic and social groups were asked to list their annoyances. Each of the twenty-one thousand annoyances thus collected was classified. A rating scale of annoyances was then established, and mean scores were calculated for 507 basic annoyances.

A more recent study of annoyance was carried out by Bennett, who summarized her study as follows:

A battery of five tests was administered to 250 hospital service patients, half of whom had no record of neurotic disorder. The tests consisted of 12 sets of descriptions of possibly annoying situations of a defined type, and the subjects were asked to record which of these situations annoyed them. Comparisons between scores on the various tests were made and the battery was found to discriminate between neurotic

¹Hulsey Cason, "Pleasant and Unpleasant Feelings," Psychological Review, XXXVII (May, 1930), 228-40.

²Hulsey Cason, Common Annoyances. Psychological Monographs, No. 182. Princeton, New Jersey: Psychological Review Company, 1930. Pp. 218.

and normal subjects. Attempts have been made to interpret these findings in the light of psychological content of the tests and to relate them to psychiatric theory.¹

SUMMARY

In the review of related literature just presented, as well as in the many studies not quoted herein, ample evidence exists to the following effect:

1. No investigation has been conducted which would completely answer the problems indicated in Chapter I.

2. The area of pupil-teacher relationships has been extensively surveyed, but primary emphasis has been placed on the effect of these relationships on pupils rather than on teachers.

3. Eleven investigations have been reviewed in which teachers and clinicians have contributed items of objectionable pupil behavior. These items were utilized in the construction of an annoyance evaluation instrument for use in the present inquiry.

4. On the whole, the related pupil behavior studies serve to corroborate the eleven basic investigations of pupil behavior.

¹Elisabeth Bennett, "A Comparative Study of Annoyances," British Journal of Psychology, XXXVI, Part 2 (January, 1946), 74-82.

5. Several investigations have been attempted with the purpose of measuring teacher personality, but from the standpoint of this study these findings have been so inconclusive that they are of minimum value.

6. Some evidence exists to the effect that a measure of annoyance can be devised.

CHAPTER III

THE PRELIMINARY QUESTIONNAIRE

In Chapter II it was pointed out that a few investigators have attempted to construct psychological scales of annoyance. However, since no instrument has yet been devised for teacher evaluation of pupil annoyance, it was necessary for the investigator to construct such a device. The discussion which follows is intended to inform the reader concerning the process by which items were obtained for this final annoyance evaluation instrument.

Construction of the preliminary questionnaire.--

Pertinent literature in the fields of education, mental hygiene, psychology, and sociology was surveyed in order that an inventory of pupil behavior items which teachers and clinicians have designated as objectionable might be obtained. Items for this inventory were secured from the eleven studies of objectionable pupil behavior which were described in Chapter II. Certain items were reworded and others were grouped in a new classification, but no behavior item was entirely eliminated. This composite inventory, consisting of 179 items, appears in Table I.

TABLE I

A COMPOSITE INVENTORY OF 179 OBJECTIONABLE PUPIL BEHAVIOR
ITEMS WHICH APPEAR IN ELEVEN STUDIES

Pupil Behavior Item	Studies in Which the Items Appear*										
	Ackerson	Anderson	Betts	Blatz	Campbell	Hayes	Laycock	MacClennathan	Martens	Pech	Wickman
	1	2	3	4	5	6	7	8	9	10	11
Absent-mindedness	X		X								
Acting queer											
Acting repressed	X										
Acting superior							X				
Aggressiveness								X			
Apprehensiveness	X										
Attracting attention	X				X			X		X	
Bad physical habits											X
Bad posture				X			X		X		
Begging	X									X	
Being a nuisance						X					
Being a sissy or tomboy											X
Being hypocritical											X
Being overcritical						X	X			X	X
Being unjust											X
Being violent	X	X									
Bluffing											X
Boisterousness							X				
Bullying	X	X				X	X	X	X	X	X
Carelessness in school work			X		X		X	X	X		X
Carrying grudges											X
Cheating	X	X	X		X		X	X	X	X	X
Conceitedness	X						X				
Contrariness	X							X			
Craving sympathy							X				
Cruelty to others	X							X			X
Crying easily	X								X		
Day dreaming	X	X	X				X		X	X	X
Deceitfulness				X			X				X
Defiance	X	X									X
Destroying property	X	X	X		X		X	X	X	X	X

*For a discussion of these studies the reader is referred to Chapter II.

TABLE I (Continued)

Pupil Behavior Item	Studies in Which the Items Appear*										
	1	2	3	4	5	6	7	8	9	10	11
Dirtiness	x		x	x			x		x	x	x
Discourteousness			x								
Disliking school						x				x	
Disorderliness			x		x		x			x	x
Displaying anger						x					
Disturbing others					x		x			x	
Doing extra work									x		
Doing poor school work	x		x								
Dominating others	x					x	x			x	x
Emotional instability	x			x			x			x	
Epileptic attacks										x	
Evading punishment			x				x		x		
Exaggeration						x					x
Excitability							x				
Failure to join group	x						x			x	
Fearfulness							x	x		x	x
Feeling unwanted										x	
Fighting	x					x	x	x	x	x	
Forgetting			x				x		x		
Forging signatures		x					x				x
Gambling	x									x	
Gossiping			x				x				
Grouchiness							x				
Gum chewing					x	x	x		x		
Having babyish habits									x		
Homosexual activity							x				
Hurting animals						x			x		
Idleness							x	x			
Impoliteness							x				
Impulsiveness							x				
Inattentiveness	x	x	x	x	x	x	x	x	x	x	x
Incorrigibility	x										
Indifference							x	x			
Inefficiency in work and play	x										
Inferiority feelings	x						x	x		x	
Injuring others									x		
Inquisitiveness							x				
Interrupting							x				x
Irregular attendance				x						x	
Irresponsibility	x							x			
Irritability	x						x	x			
Jealousy							x	x			
Lacking a sense of humor							x				

TABLE I (Continued)

Pupil Behavior Item	Studies in Which the Items Appear*										
	1	2	3	4	5	6	7	8	9	10	11
Lack of ambition	x						x			x	
Lack of bowel control	x										
Lack of concentration			x				x	x		x	
Lack of confidence							x				
Lack of desire to play							x				
Lack of group spirit			x				x				
Lack of honor											x
Lack of ideals											x
Lack of independence			x								
Lack of initiative	x		x								
Lack of interest	x	x	x				x			x	
Lack of perseverance								x		x	
Lack of respect for author- ity								x			
Lack of urine control	x							x			x
Laziness	x	x					x		x	x	x
Leading others into mischief	x									x	
Listlessness	x										
Loitering	x										
Lying	x	x	x		x		x	x	x	x	x
Making errors							x				
Making excuses	x									x	
Masturbation	x				x		x	x	x	x	x
Meanness							x				
Meddling							x	x			x
Mental conflict	x										
Mischievousness	x		x								
Moodiness	x						x				
Moral cowardice								x			
Moving around						x					
Nail-biting	x										
Neglectfulness											x
Nervousness	x						x			x	x
Noisiness			x			x	x				
Not cooperating								x			
Not studying			x								x
Obscenity, smuttiness		x	x				x	x	x	x	x
Officiousness							x				
Overactivity									x		x
Overconfidence							x				
Overconscientiousness							x			x	
Oversensitiveness			x				x				x
Oversuggestibility	x						x				x
Peevishness							x				

TABLE I (Continued)

Pupil Behavior Item	Studies in Which the Items Appear*										
	1	2	3	4	5	6	7	8	9	10	11
Persistency							X				
Physical cowardice								X			X
Playing jokes						X					
Poor sportsmanship			X				X				
Pretending											X
Protesting						X					
Pushing others						X					
Quarrelsomeness	X	X	X		X		X			X	X
Refusing to admit fault							X				
Refusing to answer						X					
Resentfulness	X						X			X	
Restlessness	X			X			X		X	X	
Retardation	X										
Revengefulness			X			X		X			
Ridiculing others						X	X				
Roudiness							X			X	
Rudeness	X	X			X	X	X		X	X	X
Scuffling						X					
Secretiveness							X				
Self-consciousness							X	X			
Selfishness	X										
Self-pity							X				
Sensitiveness	X									X	
Setting fires	X										
Sexual delinquency	X								X	X	
Showing interest in other sex	X					X	X	X	X	X	X
Showing off	X	X		X	X	X	X		X	X	X
Shyness	X	X		X	X		X	X	X	X	X
Silliness						X	X	X			
Smoking	X						X	X			X
Snobbishness			X								
Spitefulness							X				
Stealing	X	X	X			X	X	X	X	X	X
Stubbornness	X						X	X		X	X
Stuttering	X						X			X	
Sulkiness	X						X	X	X	X	X
Suspiciousness										X	X
Swearing	X		X	X	X		X	X	X	X	X
Talking aloud			X		X	X	X				
Talking to self	X										
Tardiness		X	X		X		X	X	X		X

TABLE I (Continued)

Pupil Behavior Item	Studies in Which the Items Appear*										
	1	2	3	4	5	6	7	8	9	10	11
Tattling					X		X			X	X
Teasing	X					X	X	X			
Telling imaginative tales							X				X
Temper outbursts	X						X	X	X	X	X
Thoughtlessness							X				
Throwing objects						X					
Thumb-sucking	X										
Truancy	X	X			X		X	X	X	X	X
Unhappiness	X						X			X	X
Unnecessary laughter						X					
Unpopularity	X									X	
Unpreparedness					X						
Unresponsiveness								X			
Unsociability							X	X		X	
Untrustworthiness							X				X
Wastefulness								X			
Whispering		X	X			X	X	X			X
Whistling				X							
Wilful disobedience	X	X		X	X	X	X		X	X	X
Worrying	X									X	
Writing notes			X		X	X			X		

The next phase in the construction of the preliminary questionnaire was to transform the behavior items into some sort of comparable form. It was felt that the items as obtained from the literature were too abstract and too indefinite to be measurable in an annoyance evaluation instrument. Upon submitting the items to several educational authorities, it was decided that all of them should be stated in a word or phrase denoting action. In order that the reader might become familiar with this method of rephrasing the behavior items, a few typical examples are listed below.

<u>Item in Literature</u>	<u>Item in Questionnaire</u>
Dirtiness	Wears dirty clothes
Gambling	Plays marbles for keeps
Lying	Lies when being questioned about misconduct
Self-consciousness	Acts self-conscious while in a group
Throwing objects .	Throws erasers in the classroom
Wastefulness . . .	Wastes paper while doing assignment
Worrying	Expresses worry about school work

A total of 130 items, rephrased in this manner, was obtained for use in the preliminary questionnaire.

Since the purpose of the preliminary measuring device was to select behavior items for use in the final annoyance evaluation instrument, it was necessary to make a decision as to the criteria for the selection of such items. It was decided that items would be selected on the basis of frequency of occurrence, and annoyance to teachers. In order to measure all behavior items on the basis of these criteria, two separate measuring instruments were invented. A five-point rating scale, similar to the one suggested by Guilford,¹ was devised for the recording of frequency judgments. Raters were asked to record their opinions concerning the question, "How often have you encountered this behavior among your pupils during the present school year?" The

¹J. P. Guilford, Psychometric Methods, pp. 270-72. New York: McGraw-Hill Book Company, Inc., 1936.

scale intervals were described by the following terms:

"Never," "Very Infrequently," "Frequently," "Very Frequently," and "Most of the Time."¹

An annoyance evaluation was also included in the preliminary questionnaire. Raters were asked to answer the question, "Does this behavior annoy you?" In making this annoyance evaluation, if a behavior would be likely to annoy the respondent he was instructed to answer "Yes." A "No" answer was to be recorded if a behavior was never annoying. If the respondent was doubtful as to whether or not the behavior item would be likely to annoy him, or if he did not clearly understand the item, he was instructed to encircle a question mark.

Administration of the preliminary questionnaire.--

The preliminary questionnaire was administered in March, 1948, to seventy-three elementary school teachers of the Flint, Michigan, public schools. As previously stated, the subjects were enrolled in a University of Michigan course in child growth and development. Detailed written and oral instructions accompanied the questionnaire. In order that all results might remain anonymous, two procedures were adhered to: (1) respondents were told not to

¹The reader will find a copy of the preliminary questionnaire, entitled, "My Opinions Concerning Pupil Behavior," in the Appendix.

sign their names, and (2) each respondent was provided with a stamped envelope to be mailed directly to the investigator. The subjects were encouraged to add and evaluate any behavior items which they believed should be included in a list of this sort. Completed questionnaires were obtained from seventy elementary school teachers.

Analysis of data.--In Table II the reader will find a summarization of the data obtained from the preliminary questionnaire. Items are presented in the order of their annoyance evaluation rank. This rank was determined by the number of "Yes" responses by seventy subjects. The last two columns of the table are devoted to the rating scale scores obtained from the frequency judgments. Since frequency judgments ranged from a low of "0" to a high of "4," the means scores could hypothetically range from 0.00 to 4.00.

Upon analysis of these data, thirty-five items were selected for use in the final instrument. These items, which are indicated in Table II by asterisks (*), were chosen on the basis of their high annoyance judgment ranks and their high frequency judgment ranks.

TABLE II

ANNOYANCE EVALUATIONS AND FREQUENCY JUDGMENTS OF 130 PUPIL
BEHAVIOR ITEMS BY 70 ELEMENTARY SCHOOL TEACHERS

Pupil Behavior Item	Annoyance Evaluation		Frequency Judgment	
	"YES" Response	Rank	Mean Score	Rank
*Coughs without covering his face	61	1	1.9	9
*Demands attention from the teacher even when she is busy	59	2	1.8	16
*Has dirty face and hands . . .	57	3	1.5	32
*Disturbs other pupils during study periods	56	4	1.7	23
*Has body odor	55	5	1.2	50
*Wears dirty clothes	53	6.5	1.4	38.5
Hurts animals	53	6.5	0.4	123.5
*Hands in papers that aren't neat	52	10	2.0	3
*Lies when being questioned about misconduct	52	10	1.2	50
*Picks on younger children . .	52	10	1.1	61
*Defaces library books	52	10	1.1	61
Carves initials on his desk .	52	10	0.7	101
*Crowds ahead of others in line	51	16.5	2.0	3
*Never gets things done on time	51	16.5	1.9	9
*Makes a disturbance when the teacher leaves the classroom	51	16.5	1.6	28
*Is tardy frequently	51	16.5	1.6	28
*Bullies other pupils on the playground	51	16.5	1.4	38.5
*Fails to obey a safety patrol boy	51	16.5	1.3	43.5
*Gets out of line during fire drills	51	16.5	1.2	50
Ridicules clothes of another pupil	51	16.5	0.6	108.5
Steals another pupil's lunch .	50	21	0.3	128
*Forgets to bring school supplies to class	49	25.5	2.0	3
*Doesn't pay attention to class discussion	49	25.5	1.9	9
*Slouches down in his seat . .	49	25.5	1.7	23

*Indicates items selected for final annoyance evaluation instrument.

TABLE II (Continued)

Pupil Behavior Item	Annoyance Evaluation		Frequency Judgment	
	"YES" Response	Rank	Mean Score	Rank
*Makes noises during study periods	49	25.5	1.2	50
Does the opposite of what the teacher tells him	49	25.5	1.0	72
Snoops in desks of other pupils	49	25.5	0.9	83
Won't hang up his clothes . . .	49	25.5	0.9	83
Breaks school windows	49	25.5	0.4	123.5
*Neglects to do his assignment .	48	31	1.7	23
*Interrupts during class discussions	48	31	1.7	23
*Picks his nose	48	31	1.5	32
Throws erasers in the classroom	47	35	0.4	123.5
*Wastes paper while doing assignment	47	35	1.8	16
*Blows bubble gum in the classroom	47	35	1.2	50
*Shows off when visitors enter the classroom	47	35	1.1	61
(Boy) pulls up girls' skirts .	47	35	0.6	108.5
*Won't start working without being prompted	46	38	1.9	9
*Is impolite to other pupils . .	45	41	2.0	3
*Is a tattle-tale	45	41	1.7	23
*Reads comic books during study periods	45	41	1.2	50
Causes a disturbance during assembly programs	45	41	1.0	72
Shoots spit balls in the classroom	45	41	0.6	108.5
Pushes pupils into their seats	44	44	1.0	72
*Chews gum in the classroom . .	43	47.5	1.8	16
*Copies another pupils answers .	43	47.5	1.7	23
*Teases other children	43	47.5	1.4	38.5
Trips another pupil	43	47.5	0.9	83
Writes smutty notes	43	47.5	0.8	92.5
Writes on the lavatory walls .	43	47.5	0.7	101
*Has a cluttered desk	42	52	1.7	23
Scuffles in the halls	42	52	1.4	38.5

*Indicates items selected for final annoyance evaluation instrument.

TABLE II (Continued)

Pupil Behavior Item	Annoyance Evaluation		Frequency Judgment	
	"YES" Response	Rank	Mean Score	Rank
Uses profane language	42	52	0.6	108.5
Defies the teacher to carry out her proposed punishment . . .	41	55	0.9	83
Whistles in the classroom . . .	41	55	0.7	101
Pinches other pupils	41	55	0.7	101
Invents false stories about the conduct of other pupils .	40	57.5	0.7	101
Smokes on school premises . . .	40	57.5	0.3	128
Shuffles his feet while walking	39	61	1.2	50
Pretends he doesn't hear the teacher	39	61	0.9	83
Refuses to answer questions . .	39	61	0.8	92.5
Wets his pants	39	61	0.5	116
Thumbs his nose at others . . .	39	61	0.4	123.5
Starts arguments about minor points	38	64.5	1.2	50
Forges signatures	38	64.5	0.5	116
Talks without permission during study periods	37	67	2.0	3
Laughs unnecessarily during class discussions	37	67	1.1	61
Pulls another pupil's hair . . .	37	67	0.6	108.5
Whispers during study periods .	36	70	1.9	9
Acts like a baby	36	70	1.0	72
Threatens to hurt other pupils	36	70	0.8	92.5
Fights on the playground . . .	35	75	1.5	32
Tracks dirt into the classroom	35	75	1.5	32
Won't cooperate with a group .	35	75	1.2	50
Wants to get a drink right after he has had one	35	75	0.9	83
Gossips about other pupils . . .	35	75	0.9	83
Draws belittling pictures of others	35	75	0.5	116
Masturbates	35	75	0.5	116
Gives silly answers to serious questions	34	79	0.7	101
Squirms in his seat	33	82	1.8	16
Can't be depended on to do an important job	33	82	1.2	50
Refuses to admit mistakes . . .	33	82	1.1	61

TABLE II (Continued)

Pupil Behavior Item	Annoyance Evaluation		Frequency Judgment	
	"YES" Response	Rank	Mean Score	Rank
Loiters around school after hours	33	82	1.0	72
Sucks his thumb	33	82	0.5	116
Makes excuses for his misconduct	32	85.5	1.5	32
Talks aloud to self	32	85.5	1.1	61
Is an apple polisher	30	87	0.8	92.5
Is easily distracted from one problem to another	29	89	1.9	9
Attracts attention of a group .	29	89	1.6	28
Bites finger nails	29	89	1.1	61
Passes notes in the classroom .	26	91	1.4	38.5
Always wants to be the leader .	25	93	1.8	16
Plays practical jokes on the teacher	25	93	0.4	123.5
Skips school	25	93	0.9	83
Braggs about his achievements .	21	97	1.1	61
Gets mad when his team loses .	21	97	0.8	92.5
Spends so much time checking his work that he can't finish his assignment	21	97	0.7	101
Says he won't study because he doesn't like the subject . .	21	97	0.5	116
Puts pencils in his mouth . . .	21	97	1.4	38.5
Learns very slowly	19	101	1.9	9
Shows excessive interest in opposite sex	19	101	1.4	38.5
Exaggerates injury from another pupil	19	101	1.0	72
Day dreams frequently	17	103.5	1.3	43.5
Cries easily	17	103.5	1.1	61
Wants to know his examination mark before other pupils are given theirs	16	105	0.7	101
Bluffs answer to question . . .	15	106	1.0	72
(Boy) acts like a sissy	14	107.5	0.5	116
Plays cards on school premises	14	107.5	0.4	123.5
Always plays with his own clique	13	110	1.4	38.5
Sulks after being punished . .	13	110	1.0	72
Never wants to go to the playground	13	110	0.8	92.5
Attempts to show off his physical strength	12	112.5	0.9	83
Shows sexual interest in persons of his own sex	12	112.5	0.5	116

TABLE II (Continued)

Pupil Behavior Item	Annoyance Evaluation		Frequency Judgment	
	"YES" Response	Rank	Mean Score	Rank
Never understands a joke . . .	11	115	0.8	92.5
Objects to physical work . . .	11	115	0.6	108.5
Is always too dressed up to do physical work	11	115	0.2	130
Avoids physical contact games	10	118	0.7	101
Complains to the teacher when he is given a bad mark . . .	10	118	0.5	116
Thinks slowly	10	118	1.8	16
Tells imaginative tales . . .	9	120.5	1.0	72
Withdraws from a group	9	120.5	0.9	83
Plays marbles for keeps	8	122.5	1.8	16
Won't speak to persons he dislikes	8	122.5	0.3	128
Is overconfident about his ability to do an assignment	7	125.5	1.1	61
Stammers	7	125.5	1.1	61
Acts self-conscious while in a group	7	125.5	1.0	72
Protests length of assignment	7	125.5	0.9	83
Acts shy among others	6	128	1.2	50
(Girl) acts like a tomboy . . .	5	129	0.8	92.5
Expresses worry about school work	4	130	1.1	61

SUMMARY

A total of 179 items of objectionable pupil behavior was secured from pertinent literature. These items were rephrased so as to be comparable in form and to denote action. The revised items were incorporated in the preliminary questionnaire, an instrument which was designed to measure both item occurrence and item annoyance. The preliminary questionnaire was administered to a selected group of elementary school teachers, and the data thus obtained were employed in the selection of thirty-five behavior items for use in the final annoyance evaluation instrument.

CHAPTER IV

CONSTRUCTION OF THE FINAL INQUIRY

The final inquiry consisted of three parts: (1) a personal data inventory, (2) the Guilford-Martin Personality Inventories, and (3) an annoyance evaluation instrument.¹ This chapter will be devoted to a discussion of the construction of each of these parts.

CONSTRUCTION OF A PERSONAL DATA INVENTORY

Since one of the hypotheses of the present investigation deals with the relationship between the personality traits of teachers and certain of their personal capacities, it was necessary to include a personal data inventory in the final inquiry. Such personal items as age, marital and family status, educational status, teaching and pupil loads, grades taught, teaching experience, and future vocational plans were included in this inventory. The subjects were also instructed to indicate the semester hours of college credit they had obtained in various education, psychology, and sociology courses. The inventory

¹The reader will find a copy of the final inquiry, entitled, "A Survey of Teacher Opinion Concerning Pupil Behavior," in the Appendix.

was prepared in such a manner that each item could be answered by a check (x) or a short response. Thus the scoring and coding of items entailed a minimum of statistical operations.

SELECTION OF A PERSONALITY INVENTORY

One of the most crucial decisions to be made by the author while proceeding with the present investigation involved the selection of a personality inventory. It was realized that personality is a relatively intangible quantity and that existing personality instruments are far from perfect. Cattell recently indicated the difficulties that are involved in personality measurement when he said:

Extremely little research has been directed, in fact, to obtaining meaningful, defined measurements of personality variables or toward systematizing the task of describing personality. Psychologists have met their difficulties with a vigorous smothering attack, but the apparently endless booty of this onslaught, sometimes of dazzling novelty, must not be allowed to blind us to the fact that exactness of prediction and depth of theoretical understanding have made practically no advance at all.¹

Ellis, after making an extensive survey of validity studies of personality questionnaires, came to a similar conclusion. He stated:

¹Raymond B. Cattell, Description and Measurement of Personality, p. 5. New York: World Book Company, 1946.

We may conclude . . . that judging from the validity studies on group-administered personality questionnaires thus far reported in the literature, there is at best one chance in two that these tests will validly discriminate between groups of adjusted and maladjusted individuals, and there is very little indication that they can be safely used to diagnose individual cases or to give valid estimations of the personality traits of specific respondents.¹

In spite of the shortcomings of personality evaluation devices as they now exist, they are widely used by current investigators. This fact was supported by Ellis, who recently made an examination of the research studies in the area of personality questionnaires. Ellis concluded that:

1. Paper and pencil tests of personality are still being very widely used by educators, psychologists, and sociologists for both research and clinical purposes.

2. Interest has shifted largely from the older personality inventories to the newer ones like the Guilford-Martin, Humm-Wadsworth, Cornell, and--especially--the Minnesota Multiphasic questionnaires.²

In making the final selection of a personality instrument for use in the present investigation, the author carefully considered the possibility of employing projective personality devices, as well as the four paper-pencil tests of personality suggested by Ellis. Projective in-

¹Albert Ellis, "The Validity of Personality Questionnaires," Psychological Bulletin, XLIII (September, 1946), 425.

²Albert Ellis, "Personality Questionnaires," Review of Educational Research, XVII (February, 1947), 59.

struments were rejected because the author lacked the skill to administer and to interpret such measuring devices. The Cornell Service Index was not deemed to be suitable for the present investigation because it was specifically designed for use with military personnel. The Humm-Wadsworth Temperament Scale is not sold on the open market and was therefore rejected for this project. Likewise, the Minnesota Multiphasic Personality Inventory was not chosen because it is essentially an instrument which attempts to differentiate between normals and abnormal, not to measure the personality traits of individuals.

The Guilford-Martin Personality Inventories.--The Guilford-Martin Inventories were selected for use in the present investigation because: (1) statistical studies have shown them to be among the most reliable and valid personality instruments now available; (2) the requirements of this study necessitated the use of instruments which would measure personality traits rather than differentiate normal individuals from abnormal; (3) the Inventories are available to any member of the American Psychological Association; and (4) the responses can be machine scored.

A complete discussion of scoring weights, reliability and validity studies, and norms for each of the inventories appears in the respective manuals. Since these manuals are readily available, such information is not included in this chapter. However, it would seem appropriate at this point to discuss the general nature of each of the three inventories. The Guilford Inventory of Factors STDCR, like the other two inventories, was developed on the basis of factor-analysis studies of items in personality questionnaires. It was designed to encompass the area of personality traditionally known as introversion-extraversion. The Guilford-Martin Inventory of Factors GAMIN (Abridged Edition) purports to measure such factors as general pressure for overt activity, ascendancy and submissiveness in social situations, masculinity and femininity, inferiority and self-confidence, and nervous tenseness and irritability. The Guilford-Martin Personnel Inventory was designed primarily to be used in industrial situations, and attempts to measure such traits as objectivity, agreeableness, and cooperativeness. A total of 511 questions appears in the Guilford-Martin Inventories, and all responses can be machine scored.

CONSTRUCTION OF AN ANNOYANCE EVALUATION INSTRUMENT

A description of the method for selecting thirty-five pupil behavior items for use in the final annoyance

evaluation instrument has been presented in Chapter III. The discussion which follows will be concerned with the procedures utilized in the construction of that final instrument.

The method of paired comparisons.--Upon surveying the various procedures which could be employed for the measurement of annoyance, the method of paired comparisons was selected. It was believed that such a procedure would be especially effective because the present investigation was essentially concerned with stimuli and responses. Thurstone, who is credited as being one of the major contributors to the method of paired comparisons, discussed the stimulus-response aspects of it by saying:

The stimuli whose magnitudes are to be measured are presented to the subject in paired comparisons. For each comparison he decides which of the two is the stronger. It is assumed that each of the stimuli has an unknown mean magnitude for the group and that there is a standard error of observation for each stimulus. Every judgment is assumed to be the result of four determinable factors, namely, the two stimulus magnitudes and the two standard errors of observation.¹

Uhrbrock and Richardson reduction method.--Guilford² has indicated that the chief objection to the method of paired comparisons is that it takes too much time and is

¹L. L. Thurstone, "The Method of Paired Comparisons for Social Values," Journal of Abnormal and Social Psychology, XXI (January-March, 1927), 397-98.

²Guilford, op. cit., p. 235.

wearying to the judges. He pointed out that when the number of stimuli is greater than fifteen, the task of judging pairs of stimuli becomes long and irksome. Guilford discussed the psychological basis for reducing the number of pairs of stimuli by saying:

There is nothing sacrosanct about pairing each stimulus with every other one in the series. To do so probably does tend to emphasize the unity of the continuum in question in the minds of the judges. And yet some stimuli in long series are so far apart psychologically that the proportions of judgments approach 1.00; hence the differences are so unreliable as to be useless for the computation of scale values. Therefore, not every stimulus is a good standard with which to compare all the stimuli of the series. It is often a proper procedure to select from all the stimuli a limited number to become the standards for the scale. These should be chosen at approximately equal intervals along the scale and they should be among the least ambiguous of the lot.¹

Since thirty-five stimuli were involved in the present investigation, it was decided that a reduction method suggested by Uhrbrock and Richardson² be employed. These investigators suggested a method whereby, in the case of the present study, the number of pairs could be reduced from a possible 595 to only 295. In adapting this device for use in the final annoyance evaluation instrument, the writer broke the list of thirty-five pupil behavior items

¹Ibid., p. 235.

²Uhrbrock and Richardson, op. cit., pp. 141-54.

into three groups of ten each and one group composed of the five key items. The key items were chosen in accordance with the procedure just suggested by Guilford. The remaining items were arbitrarily assigned to Groups A, B, and C.¹ The following comparisons were made:

<u>Items Compared</u>	<u>Number of Comparisons</u>
Items within Group A with each other	45
Items within Group B with each other	45
Items within Group C with each other	45
Items within Key Group with each other	10
Key Group items with all remaining items	150
TOTAL	295

Ross method for presentation of pairs.--Ross² devised a unique method for the presentation of pairs in paired comparisons instruments. He summarized the objectives of this method by stating:

It is desirable that the experimental series should (1) eliminate space and time errors, (2) avoid regular repetitions which might influence judgment, and (3) maintain the greatest possible spacing between pairs involving any given member of the stimulus group.³

¹The reader will find a list of the thirty-five items, grouped according to the Uhrbrock and Richardson procedure, in the Appendix.

²Ross, op. cit., pp. 375-82.

³Ibid., p. 375.

It was decided that the Ross method could be appropriately used in the construction of the final annoyance evaluation instrument. In applying this method to the present investigation, the following procedures were adhered to:

1. Within the order of the thirty-five behavior items, pairs involving the same member were separated by a maximum of seventeen pairs and by a minimum of sixteen pairs. A table prepared by Ross,¹ which requires the substitution of pertinent values, was utilized by the investigator for this process.

2. The series thus obtained was balanced so that any given member would appear an equal number of times as the first and second member of a pair.

3. Those pairs were eliminated which would not normally occur when the Uhrbrock and Richardson reduction method is employed.

SUMMARY

A final questionnaire consisting of a personal data inventory, a personality battery, and an annoyance evaluation instrument was devised. The personal data inventory contained personal items which would be required for the testing of one of the basic hypotheses. The Guilford-Martin Personality Inventories were selected because of their pertinence to the present investigation. The paired comparisons method, as modified by the Uhrbrock and Rich-

¹Ibid., p. 379, Table V.

ardson reduction method and the Ross method for presentation of pairs, was utilized for the construction of the final annoyance evaluation instrument.

CHAPTER V

COLLECTION AND TABULATION OF DATA

The preceding discussion has been concerned with the direction taken by the present investigation previous to the collection of final data. This chapter will deal with the procedures which were adhered to in order that the final data might be collected and tabulated.

SELECTION OF SUBJECTS

The subjects for the present investigation were selected in such a manner as to include teachers from all of the twenty-eight schools of Flint, Michigan. Thirty-seven of the two hundred subjects selected to answer the final questionnaire were enrolled in a University of Michigan course in child growth and development. These thirty-seven teachers were distributed among twenty-seven Flint schools. In order to secure the cooperation of the remaining teachers, the investigator went directly to thirteen of the twenty-eight Flint schools, which were selected at random from that number.

Table III indicates the distribution by schools of all the elementary school teachers in Flint, of teachers selected to answer the final questionnaire, and of teachers

TABLE III

DISTRIBUTION BY SCHOOLS OF ALL ELEMENTARY SCHOOL TEACHERS
IN FLINT (MICHIGAN), OF TEACHERS SELECTED TO ANSWER THE
FINAL QUESTIONNAIRE, AND OF TEACHERS COMPLETING IT

Name of School	Teachers on Staff	Teachers Selected to Answer Questionnaire	Teachers Completing Questionnaire
Civic Park . . .	25*	23	16
Clark	17	1	1
Cody	17*	13	13
Cook	15	3	2
Coolidge	13*	12	9
Dewey	13	1	1
Dort	18	1	1
Doyle	13	1	1
Durant	14	1	1
Fairview	13	3	3
Garfield	21*	11	11
Hazelton	21	2	2
Homedale	22*	9	9
Jefferson	12	2	2
Kearsley	9*	9	9
Lewis	24*	22	22
Lincoln	17*	6	5
Longfellow . . .	21	1	1
McKinley	12	1	1
Martin	18*	16	16
Oak Street . . .	11	1	1
Parkland	11	2	2
Pierson	23*	19	18
Roosevelt	13*	12	12
Stevenson	11	1	1
Walker	13*	11	9
Washington . . .	23	2	2
Zimmerman . . .	20*	14	10
Total	460	200	181

*Subjects contacted directly by the investigator. Remaining subjects were enrolled in a University of Michigan course in child growth and development.

completing it. It should be noted that out of the 234 teachers of the thirteen schools which the investigator contacted directly, 177 completed questionnaires. It should also be pointed out that over 90 percent of the teachers who volunteered to answer the final questionnaire actually completed it.

As was indicated in Chapter I, the subjects for the present study were confined to Flint, Michigan. It was contended that Flint is a fairly typical industrial city and that it is made up of a cross section of most creeds, races, and nationalities. Schools were selected on the basis of a random sampling in order that all types of schools might be included in the survey. The author attempted to select the subjects in such a manner that those selected would be representative of the entire teaching staff of the Flint schools.

ADMINISTRATION OF THE FINAL QUESTIONNAIRE

As a first step in the administration of the final questionnaire, administrative and supervisory officials of the Flint schools were contacted and arrangements were made for the various teacher groups to meet with the investigator. The thirty-seven teachers enrolled in a University of Michigan course were met by the investigator

during a part of three regular class periods. At the first of these meetings, the questionnaire material was distributed and directions were given concerning the completion of the project. At two subsequent meetings, questions pertinent to the project were answered and completed questionnaires were then collected.

In order to contact the remaining subjects, the investigator obtained permission from the assistant superintendent of schools to visit the principals of the thirteen schools discussed above. The writer explained the nature of the investigation to these principals, gave them sample questionnaires, and arranged for meetings with members of their teaching staffs. These meetings were conducted in a manner similar to those held with the members of the University of Michigan class and an attempt was made to carry out a common modus operandi for all meetings.

Instructions to respondents.--Detailed written and oral instructions were given to the respondents.¹ In a brief oral introduction, the nature and purpose of the project were explained. The subjects were told that their cooperation was not obligatory but that a large number of

¹The reader will find the written instructions on pages 1-2 of the final questionnaire in the Appendix.

respondents would be highly desirable. The subjects were informed that the project would take approximately three hours and that they could complete the questionnaire at their convenience.

The respondents were asked not to discuss the questionnaire with others before they had completed it. They were instructed to record their answers to the Guilford-Martin inventories and to the annoyance evaluation instrument on machine answer sheets. In the case of the annoyance evaluation instrument, detailed instructions were given concerning the method for making decisions.

Anonymity of responses.--Fischer¹ carried out extensive research to discover what effect the use of signatures on personal questionnaires would have on the results. He administered the college form of Mooney's Problem Check List to 102 upperclass women students in psychology, first with and then without the use of signatures. Upon analyzing the data and comparing his findings with those of other investigators, Fischer concluded that:

. . . it would appear that the use of signatures on personal questionnaires (particularly in the case of highly personal items or serious problems) might have a relative inhibitory effect on the honesty and frankness of the people responding to them.²

¹Robert P. Fischer, "Signed Versus Unsigned Personal Questionnaires," Journal of Applied Psychology, XXX (June, 1946), 220-25.

²Ibid., p. 225.

In order to profit from Fischer's findings, all responses in the present investigation were kept strictly anonymous. The following procedures were adhered to in order to attain anonymity of responses:

1. Each respondent was given an envelope containing all survey material. A code number had been previously placed on the envelope and on all material contained therein.

2. Each teacher who volunteered to answer the questionnaire was asked to hand in a "Teacher Identification Sheet," containing her code number, name, address, and school. This sheet was turned over immediately to a representative of the teacher's group, who was instructed to act as an intermediary between the investigator and each teacher.

3. Teachers were instructed to hand their completed questionnaires to another group representative, who in turn submitted all questionnaires directly to the investigator.

By means of this procedure, neither the investigator nor any of the group representatives had knowledge at any time of what responses were submitted by a certain teacher.

Final contacts with administrators and teachers.--In order that the completed questionnaires could be obtained soon after they were due, "reminder" letters were sent to those individual teachers who were late in submitting their responses. Also, all teachers received a form letter of thanks for taking part in the project. In addition, letters of acknowledgment were sent to the administrative officials and school principals who had assisted in the project.

SCORING OF RESPONSES

The responses to the Guilford-Martin inventories and to the annoyance instrument were machine scored. Machine scoring stencils, prepared by Guilford and Martin, were utilized for the computation of personality trait scores. The machine operator adhered to the directions which accompanied the stencils, and all raw scores were placed on the corresponding answer sheets.

In the case of the annoyance instrument, the investigator invented a separate machine scoring stencil for each of the thirty-five items of pupil behavior. The total score for each of these items represented the number of times it had been selected as being more annoying than the items with which it had been compared. Thus, scores could range from zero through thirty-four for each of the key items and from zero through fourteen for each of the group items. The machine operator recorded each of the thirty-five annoyance scores on the corresponding answer sheets.

The personal data inventory was hand scored by the investigator. Since the inventory was constructed in such a manner that responses could be indicated by a single check, the scoring process was actually incorporated into the coding procedure, both operations being conducted simultaneously.

CODING AND RECORDING OF DATA

All information obtained from the final questionnaire was codified and recorded on punched cards. The Guilford-Martin raw scores were simply transferred unaltered to these cards. The annoyance scores were first transmuted into annoyance percentages, thus a key item score of 14 out of a possible 34 would be equivalent to an annoyance percentage of 41. These annoyance percentages were then codified by the process of omitting the "ones" digit. In the case of the annoyance percentage of 41, for example, the code number would be "4." Similarly, an annoyance percentage of 82 would be codified "8." A numerical code was also established for the personal data inventory responses.

Upon completion of the codification process, the survey material was recorded on punched cards. The following data were recorded on the eighty columns of these cards:

1. Serial numbers of respondents: columns 1-3, inclusive.
2. Guilford-Martin raw scores (two columns each): columns 4-29, inclusive.
3. Annoyance evaluation coded scores (one column each): columns 30-64, inclusive.
4. Personal data coded scores (one column each): columns 65-80, inclusive.

SUMMARY

Two hundred teachers representing all of the twenty-eight Flint, Michigan, elementary schools volunteered to answer the final questionnaire and 181 actually completed it. After making arrangements with the proper authorities, meetings were held with various teacher groups and the survey materials were distributed. Detailed oral and written instructions accompanied the questionnaire and all results were kept strictly anonymous. Routine final contacts were made with the administrators and teachers concerned. Responses were machine scored and hand scored, and all responses were codified. Upon completion of the codification process, the scores were recorded on punched cards.

CHAPTER VI
ANALYSIS OF DATA¹

It is the function of this chapter to present an explanation of the principal statistical procedures which were employed in the analysis of final questionnaire data. The discussion will be primarily concerned with three phases of data analysis: (1) interpretation of responses to the final inquiry, (2) determination of the significance of certain coefficients of correlation, and (3) determination of the significance of certain correlation ratios.

Interpretation of responses to the final inquiry.--

In order that the personal data responses might be viewed in their totality, means and standard deviations were computed for each of the personal data inventory items. A formula devised by Peters and Van Voorhis,² which involves the determination of means from guessed means, was

¹Formulas for the computation of Pearson r , eta, means, standard deviations, epsilon, and chi-square, which were employed in the analysis of data, may be found on the "Hollerith Machine Computation Sheet," in the Appendix.

²Charles C. Peters and Walter R. Van Voorhis, Statistical Procedures and Their Mathematical Bases, p. 47. New York: McGraw-Hill Book Company, Inc., 1940.

utilized for this operation. Another formula, suggested by the same authors,¹ was utilized for the computation of standard deviations. Both of these formulas were selected because of the fact that they can be easily adapted to Hollerith machine computation.

Personality inventory responses were also carefully analyzed. Means and standard deviations, computed in the manner just described, were obtained for all trait scores. The significance of the differences between the means of these scores and the norms established for the Guilford-Martin inventories was tested by the critical ratio on t. A formula suggested by Garrett² was employed for this procedure.

The annoyance evaluation responses were interpreted in terms of scale values. Scale values are merely the mean proportion of times that a certain behavior was evaluated as more annoying than the behavior with which it was paired. A method of obtaining these values suggested by Guilford³ was utilized in this operation. Standard deviations of each of the scale values were computed in the same manner as for the personal data responses.

¹Ibid., p. 72, formula 28a.

²Garrett, op. cit., p. 198, formula 29.

³Guilford, op. cit., pp. 225-35.

Determination of the significance of certain coefficients of correlation.--The product moment method of correlation was used to determine the linear relationship between each of the thirteen Guilford-Martin trait scores and each of the annoyance evaluation scale values and personal data responses. A method devised by Dwyer,¹ which involves the computation of moments with cumulative totals, was chosen for this phase of the data analysis. The Dwyer method was especially adaptable to the present investigation because it assumes that computation can be done by Hollerith machines. Dwyer explained the theoretical aspects of his method by stating:

It is possible to apply the cumulative technique in getting product moments involving two variables. . . . When Hollerith machines are used, it is only necessary to sort the cards for x and to wire the machine to give cumulations on variables x , y , z , etc. If the machine is adjusted to take totals with each change in x , the tape records simultaneously the values of $C(\underline{x_x})$, $C(\underline{y_y})$, $C(\underline{z_z})$, etc. With a summary punch it is possible to form successive cumulations easily.²

In the adaptation of the Dwyer procedure to the present investigation, the following values were obtained by means of Hollerith machine computation:

¹Paul S. Dwyer, "The Computation of Moments With the Use of Cumulative Totals," The Annals of Mathematical Statistics, IX (December, 1938), 288-304.

²Ibid., p. 301.

1. Σx = Cumulation of the deviations of the personality trait scores from their mean.

2. Σy = Cumulation of the deviations of the annoyance evaluation scale values and the personal data responses.

3. Σxy = Cumulation of the product of these two deviations.

4. Σx^2 = Cumulation of the squares of the deviations of the personality trait scores from their mean.

5. Σy^2 = Cumulation of the squares of the deviations of the annoyance evaluation scale values and the personal data responses from their mean.

6. $\Sigma f (N)$ = Number of cases.

After these values had been computed, they were substituted in a formula for the calculation of coefficients of correlation which was suggested by Dwyer.¹

The reliability of each coefficient of correlation thus obtained was tested against the null hypothesis, which implies that no true difference exists between two variables. Garrett² proposed a method of testing the significance of an r which allows one to interpolate the level of significance directly from a table.³ In the application of this method to the present investigation, the first step was to

¹Loc. cit.

²Henry E. Garrett, Statistics in Psychology and Education, pp. 299-302. New York: Longmans, Green and Co., 1947.

³Ibid., p. 299.

determine the number of degrees of freedom. Since the quantity ($N-2$) represents this number, and since N was 181 for the present investigation, the number of degrees of freedom was found to be 179. By means of the Garrett procedure, the .05 and .01 significance levels were determined to be .147 and .192, respectively. This means that only five times in one hundred trials would an r as large as $\pm .147$ appear by accidents of sampling if the population r were actually .00; and only once in one hundred trials would an r of $\pm .192$ appear if the population r were .00.

Determination of the significance of correlation ratios.--It was suspected that the relationship between the Guilford-Martin trait scores and the annoyance values and personal data responses might be non-linear. In order to determine the linearity of regression for each of these relationships, correlation ratios were computed.

Since a correlation ratio (eta) equals the standard deviation of the means of the columns or rows divided by the standard deviation of the entire distribution, it can be computed by merely extending the Pearson product-moment calculations. A formula, proposed by Peters and Van Voorhis,¹ was utilized for the computation of eta in all those

¹Peters and Van Voorhis, op. cit., p. 317.

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¹Peters and Van Voorhis, op. cit., p. 317.

cases where a curvilinear relationship was suspected. It should be pointed out that since the curvilinear relationship was expected to occur only in the personality score variables, it was not necessary to compute eta in terms of annoyance and personal data scores.

As was indicated above, the chi-square test was used to determine the linearity of regression. This test was chosen because it represents a method of evaluating experimentally determined results against an expected hypothesis. Peters and Van Voorhis¹ explained that it had formerly been customary to test the significance of the departure of eta from r by means of the Blakeman test. However, these authors hold that the inadequacy of the Blakeman test is now recognized and that the chi-square test is more pertinent. They presented a formula² for the computation of chi-square which was used for the present investigation and the results were interpreted in terms of significance levels with the aid of the Elderton table.³

¹Ibid., pp. 318-19.

²Ibid., p. 319, formula 176.

³Ibid., p. 498, table XLVIII.

Peters and Van Voorhis have pointed out that, "Unfortunately eta is affected by the number of items in the several classes as well as by the inherent extent of correlation."¹ In order to rectify this discrepancy, these authors suggested that epsilon, a correlation ratio without bias, be computed. Epsilon was used in the present investigation to test eta against the null hypothesis. For this purpose, epsilon was first determined by the "correction for bias formula."² By means of the Griffin table³ it was then possible to determine the significance of this number at the .01 and .05 levels. This procedure allowed one to conclude whether or not the null hypothesis had been refuted, and whether or not epsilon was significant.

SUMMARY

Means and standard deviations were computed for each of the personal data inventory and personality inventory items. The significance of the differences between the mean of the personality scores and their norms was tested by the critical ratio on t. Scale values and standard

¹Ibid., p. 319.

²Ibid., p. 323.

³Ibid., pp. 494-97.

deviations were determined for each of the annoyance evaluation responses. The method of cumulative totals was employed for the computation of product-moment correlations between each of the personality trait scores and each of the annoyance evaluation scale values and the personal data responses. The reliability of each coefficient of correlation thus obtained was tested against the null hypothesis. Since curvilinear relationships were suspected to exist, correlation ratios were calculated and the chi-square test of linearity of regression was applied. Epsilon was computed in order to obtain a correlation ratio without bias.

CHAPTER VII

FINDINGS OF THE PRESENT STUDY

This chapter will be concerned with the presentation and interpretation of the data obtained from the final inquiry. The discussion will be concerned with the analysis of the responses to the inquiry, and with the determination of the significance of certain correlations between these responses.

ANALYSIS OF RESPONSES TO FINAL INQUIRY

Personal data responses.--Tables IV to XIII are concerned with responses to the personal data inventory. The mean age of the respondents, as indicated in Table IV, was 43.60 years. It should be noted that only eight of the subjects were twenty-four years of age or less, and that only three had reached the age of sixty. The age span from thirty-five to fifty-four years included 131 of the 181 respondents.

Table V is concerned with the marital status of the respondents. The categories "married" and "single" included over 90 percent of the subjects.

In Table VI, data are presented concerning the number of children of the respondents. Less than one-third of the

TABLE IV
AGES OF RESPONDENTS (N=181)

Age	Frequency
24 years or under .	8
25-29 years	19
30-34 years	7
35-39 years	24
40-44 years	35
45-49 years	28
50-54 years	44
55-59 years	13
60 years or over .	3

Mean = 43.60

Standard Deviation = 9.90

TABLE V
MARITAL STATUS OF RESPONDENTS

Status	Frequency	Percent
Single	69	38
Married	95	53
Divorced	13	7
Separated	0	0
Widowed	4	2
Total	181	100

TABLE VI
NUMBER OF CHILDREN OF RESPONDENTS

Number of Children	Frequency	Percent
Not married	69	38
None	62	34
One	24	13
Two	19	11
Three	5	3
More than three	2	1
Total	181	100

TABLE VII
TYPES OF HIGHER EDUCATIONAL INSTITUTIONS
ATTENDED BY RESPONDENTS

Type of Institution	Frequency	Percent
University	26	14
Teachers' college	136	75
Other colleges	18	10
Other types of institutions	1	1
Total	181	100

subjects had children, and only 15 percent had more than one child.

According to the data presented in Table VII, it may be concluded that 75 percent of the teachers had attended teachers' colleges. The educational attainment of the subjects, discussed in Table VIII, was in general below the master's degree. More than one-third of the respondents had started work toward that degree, however. It should be emphasized that 30 percent of the teachers had no degrees.

Tables IX to XII are concerned with teaching loads and teaching experience. Table IX indicates that the teaching assignments of the subjects were almost evenly divided between the first six grades. However, a few of the teachers were assigned to lower or upper platoons within these grades. According to the evidence presented in Tables X and XI, it may be concluded that a majority of the teachers taught thirty to thirty-nine pupils for six hours per day. Table XII presents data concerning the extent of teaching experience. Since the mean was eighteen years, it would seem reasonable to conclude that the subjects were relatively experienced. Further evidence of this is provided by the fact that while only three of the subjects were in their first year of teaching, fifty-nine had taught over twenty-five years.

TABLE VIII
EDUCATIONAL ATTAINMENT OF RESPONDENTS

Educational Attainment	Frequency	Percent
One year of higher education . . .	2	1
Two years of higher education . .	6	3
Three years of higher education .	16	9
Over three years of higher ed- ucation, no degree	30	17
B. A. or B. S. degree, no graduate work	47	26
Started work toward M. A. degree .	70	39
Have M. A. degree, no further work	6	3
Started work toward doctorate . .	4	2
Have doctorate	0	0
Total	181	100

TABLE IX
GRADES TAUGHT BY RESPONDENTS

Grade	Frequency	Percent
One	30	16
Two	26	14
Three	21	12
Four	25	14
Five	23	13
Six	23	13
Lower platoon (grades 1-3)	10	5
Upper platoon (grades 4-6)	23	13
Total	181	100

TABLE X
MEAN DAILY TEACHING LOAD OF RESPONDENTS

Teaching Load	Frequency	Percent
Five hours	31	17
Six hours	102	56
Seven or more hours	48	27
Total	181	100

TABLE XI
MEAN HOURLY PUPIL LOAD OF RESPONDENTS

Pupil Load	Frequency	Percent
Less than 20 pupils	10	5
20-29 pupils	19	10
30-39 pupils	113	63
40-49 pupils	21	12
50 pupils or more .	18	10
Total	181	100

TABLE XII

YEARS TEACHING EXPERIENCE OF RESPONDENTS (N = 181)

Years Experience	Frequency
Less than 1 year	3
1-4 years	18
5-9 years	19
10-14 years	15
15-19 years	29
20-25 years	38
Over 25 years	59

Mean = 18.50

Standard Deviation = 8.85

TABLE XIII

COLLEGE SEMESTER HOURS CREDIT EARNED
IN FIVE AREAS OF INSTRUCTION

Area of Instruction	Semester Hours							Mean
	0-4	5-9	10-14	15-19	20-24	25-29	Over 29	
History and principles of education	65	66	23	12	15	0	0	7.75
Educational psychology and statistics	104	50	20	5	2	0	0	5.12
Methods and practice teaching	26	69	36	32	18	0	0	10.54
Child growth and development, child and genetic psychology	77	37	47	19	0	1	0	7.33
Other psychology courses	14	36	50	29	19	11	22	15.43

The reader will find evidence in Table XIII concerning the amount of college credit obtained by the respondents in five areas of instruction. The amount of work completed in educational psychology and statistics was considerably less than that in the other areas. Credit in psychology courses would appear to be quite extensive, but it should be kept in mind that this area of instruction includes all courses in psychology except genetic psychology. Information is lacking in this table as to how much work had been done in guidance, but only a few of the teachers had had any instruction in this area.

Personality inventory responses.--Tables XIV to XXVII present the results of scores obtained by the respondents on the thirteen scales of the Guilford-Martin Inventories. As was indicated in Chapter VI, the significance of the differences between the means of these scores and the norms established for the Guilford-Martin Inventories was tested by the critical ratio on t . The results of these significance tests are presented in Table XIV. From this table it appears that the respondents scored significantly above the norm for the cycloid disposition, objectivity, agreeableness, and cooperativeness traits, thus indicating a tendency toward good mental health. The subjects had

TABLE XIV

SIGNIFICANCE OF THE DIFFERENCES BETWEEN MEANS OF SCORES
OBTAINED BY RESPONDENTS ON THE GUILFORD-MARTIN SCALES
AND NORMS ESTABLISHED FOR THOSE SCALES

Guilford-Martin Scale	Mean	Norm	<u>t</u>
Social introversion- extraversion . . .	20.97	22.50	1.34
Thinking introver- sion-extraversion	34.02	40.00	5.92*
Depression	17.54	28.50	9.79*
Cycloid disposition	21.22	26.50	4.03*
Rhathymia	35.12	34.00	.97
General activity . .	9.87	12.50	5.26*
Ascendance-submission	15.30	20.50	6.76*
Masculinity-feminin- ity	12.92	18.50	9.30*
Inferiority feelings	33.93	34.00	.08
Nervous tenseness .	26.52	25.50	1.04
Objectivity	51.35	45.00	4.57*
Agreeableness	40.39	34.00	6.20*
Cooperativeness . .	67.75	59.00	4.81*

*Significant at .01 level.

scores significantly below the norm for the thinking introversion-extraversion and depression traits, but it must be remembered that low scores for these traits are more indicative of good mental health than are high scores. The respondents were also below the norm for the general activity, ascendance-submission, and masculinity-femininity trait, Guilford and Martin have pointed out that about 92 percent of the females in the norm group scored below the mean; thus since 13 percent of the respondents scored above the mean for this trait (see Table XXII), the results of this t test should be somewhat discounted. Since the t values for the social introversion-extraversion, rathymia, inferiority feelings, and nervous tenseness traits were not even significant at the .05 level, the differences between our respondents' means and the norms for these traits might be interpreted as the result of chance.

Table XV is concerned with social introversion-extraversion scores. A low raw score on this trait is supposed to indicate sociability and good mental health. A high raw score (above 40) indicates shyness. It would appear that the scores of the respondents were distributed fairly symmetrically throughout this range.

Scores for the thinking introversion-extraversion factor are presented in Table XVI. A low raw score for this

TABLE XV

DISTRIBUTION OF SCORES OBTAINED BY 181 ELEMENTARY SCHOOL TEACHERS ON THE SOCIAL INTROVERSION-EXTRAVERSION SCALE OF THE GUILFORD INVENTORY OF FACTORS STDGR

Raw Score Interval	Frequency
45-49	4
40-44	4
35-39	9
30-34	24
25-29	14
20-24	26
15-19	52
10-14	39
5-9	9
0-4	0

TABLE XVI

DISTRIBUTION OF SCORES OBTAINED BY 181 ELEMENTARY SCHOOL TEACHERS ON THE THINKING INTROVERSION-EXTRAVERSION SCALE OF THE GUILFORD INVENTORY OF FACTORS STDGR

Raw Score Interval	Frequency
55-59	1
50-54	9
45-49	16
40-44	24
35-39	39
30-34	36
25-29	29
20-24	16
15-19	10
10-14	1

trait indicates a lack of introspectiveness, and a high raw score (above 54) indicates an inclination to meditative thinking. A score in the middle range (32-37) would be most desirable for mental health.

The depression trait is the subject of Table XVII. A low raw score on this trait is indicative of good emotional adjustment and freedom from depression. A person scoring high on this trait (above 46) is likely to be chronically depressed.

In Table XVIII, the reader will find a frequency chart for the cycloid disposition scores. A low raw score for this trait suggests stable emotional reactions and moods, and freedom from cycloid tendencies. A high raw score (above 53) indicates the presence of cycloid tendencies.

Table XIX presents rathymia scores for the subjects of the present study. A high score (above 64) for this trait indicates a "happy-go-lucky" disposition; a low score indicates an inhibited disposition. Both extremes may represent psychological maladjustments, and a score in the middle range (38-43) is most desirable for mental health.

The general activity scores are presented in Table XX. A high score (above 22) would suggest a tendency to engage in vigorous overt action; a low score indicates a tendency to inertness and a disinclination for motor

TABLE XVII

DISTRIBUTION OF SCORES OBTAINED BY 181 ELEMENTARY SCHOOL
TEACHERS ON THE DEPRESSION SCALE OF THE GUILFORD
INVENTORY OF FACTORS STDGR

Raw Score Interval	Frequency
50-54	2
45-49	2
40-44	6
35-39	8
30-34	8
25-29	15
20-24	25
15-19	30
10-14	35
5-9	37
0-4	13

TABLE XVIII

DISTRIBUTION OF SCORES OBTAINED BY 181 ELEMENTARY SCHOOL
TEACHERS ON THE CYCLOID DISPOSITION SCALE OF THE
GUILFORD INVENTORY OF FACTORS STDGR

Raw Score Interval	Frequency
55-59	1
50-54	4
45-49	2
40-44	8
35-39	11
30-34	11
25-29	23
20-24	33
15-19	33
10-14	31
5-9	22
0-4	2

TABLE XIX

DISTRIBUTION OF SCORES OBTAINED BY 181 ELEMENTARY SCHOOL
TEACHERS ON THE RHATHYMIA SCALE OF THE GUILFORD
INVENTORY OF FACTORS STDOR

Raw Score Interval	Frequency
70-74	1
65-69	1
60-64	0
55-59	3
50-54	10
45-49	20
40-44	28
35-39	33
30-34	37
25-29	16
20-24	17
15-19	9
10-14	6

TABLE XX

DISTRIBUTION OF SCORES OBTAINED BY 181 ELEMENTARY SCHOOL
TEACHERS ON THE GENERAL ACTIVITY SCALE OF THE
GUILFORD-MARTIN INVENTORY OF FACTORS GAMIN

Raw Score Interval	Frequency
22-23	1
20-21	4
18-19	5
16-17	15
14-15	20
12-13	18
10-11	20
8-9	37
6-7	28
4-5	25
2-3	6
0-1	2

activity. Thus a score in the middle range (12-13) would be most indicative of good adjustment.

Results for the ascendance-submission factor are included in Table XXI. High scores (above 33) for this trait imply social leadership; low scores suggest social passiveness.

Masculinity-femininity is the subject of Table XXII. A high score (above 28) on this trait indicates masculinity. A low score for this factor indicates femininity.

Table XXIII is concerned with inferiority feelings. A score above 45 for this trait is supposed to indicate self-confidence; a low score indicates lack of confidence.

Nervous tenseness is the subject of Table XXIV. A score of 38 or above indicates a tendency to be calm and relaxed; a low score is indicative of extreme nervousness.

Table XXV is concerned with the objectivity trait of the Guilford-Martin Personnel Inventory. Scores above 68 for this factor suggest a tendency to view one's self and surroundings objectively. Conversely, low scores indicate a tendency to be subjective and hypersensitive.

The agreeableness trait is dealt with in Table XXVI. A high score for this factor (above 53) indicates a lack of quarrelsomeness and a lack of domineering qualities. Low scores for this trait suggest a tendency toward a beligerent, domineering attitude.

TABLE XXI

DISTRIBUTION OF SCORES OBTAINED BY 181 ELEMENTARY SCHOOL TEACHERS ON THE ASCENDANCE-SUBMISSION SCALE OF THE GUILFORD-MARTIN INVENTORY OF FACTORS GAMIN

Raw Score Interval	Frequency
30-31	1
28-29	3
26-27	3
24-25	5
22-23	16
20-21	24
18-19	22
16-17	19
14-15	18
12-13	17
10-11	17
8-9	12
6-7	13
4-5	8
2-3	2
0-1	1

TABLE XXII

DISTRIBUTION OF SCORES OBTAINED BY 181 ELEMENTARY SCHOOL TEACHERS ON THE MASCULINITY-FEMININITY SCALE OF THE GUILFORD-MARTIN INVENTORY OF FACTORS GAMIN

Raw Score Interval	Frequency
26-27	3
24-25	2
22-23	3
20-21	9
18-19	14
16-17	20
14-15	31
12-13	24
10-11	24
8-9	25
6-7	18
4-5	5
2-3	3

TABLE XXIII

DISTRIBUTION OF SCORES OBTAINED BY 181 ELEMENTARY SCHOOL
TEACHERS ON THE INFERIORITY FEELINGS SCALE OF THE
GUILFORD-MARTIN INVENTORY OF FACTORS GAMIN

Raw Score Interval	Frequency
46-47	8
44-45	5
42-43	13
40-41	18
38-39	28
36-37	19
34-35	14
32-33	16
30-31	13
28-29	13
26-27	9
24-25	6
22-23	1
20-21	6
18-19	4
16-17	5
14-15	1
12-13	1
10-11	1

TABLE XXIV

DISTRIBUTION OF SCORES OBTAINED BY 181 ELEMENTARY SCHOOL
TEACHERS ON THE NERVOUS TENSENESS SCALE OF THE
GUILFORD-MARTIN INVENTORY OF FACTORS GAMIN

Raw Score Interval	Frequency
42-43	3
40-41	4
38-39	11
36-37	12
34-35	12
32-33	13
30-31	18
28-29	17
26-27	11
24-25	14
22-23	12
20-21	11
18-19	15
16-17	10
14-15	10
12-13	3
10-11	0
8-9	2
6-7	2
4-5	1

TABLE XXV

DISTRIBUTION OF SCORES OBTAINED BY 181 ELEMENTARY SCHOOL
TEACHERS ON THE OBJECTIVITY SCALE OF THE GUILFORD-
MARTIN PERSONNEL INVENTORY

Raw Score Interval	Frequency
70-74	7
65-69	18
60-64	33
55-59	26
50-54	23
45-49	25
40-44	18
35-39	8
30-34	10
25-29	6
20-24	5
15-19	2

TABLE XXVI

DISTRIBUTION OF SCORES OBTAINED BY 181 ELEMENTARY SCHOOL
TEACHERS ON THE AGREEABLENESS SCALE OF THE
GUILFORD-MARTIN PERSONNEL INVENTORY

Raw Score Interval	Frequency
60-64	2
55-59	15
50-54	20
45-49	24
40-44	38
35-39	33
30-34	21
25-29	18
20-24	7
15-19	1
10-14	2

The reader will find a distribution of cooperative-ness trait scores in Table XXVII. Scores above 89 for this factor indicate willingness to accept things and people as they are and a generally tolerant attitude. Low scores indicate an overcriticalness of people and things and an intolerant attitude.

Annoyance evaluation scores.--In Table XXVIII, the reader will find a list of scale values and standard deviations for the annoyance evaluation responses submitted by the respondents. The scale values are simply percentages; they were obtained by determining the percentage of times a certain behavior was evaluated as more annoying than the behavior with which it was paired. It should be pointed out that the scale values are quite evenly spread from high to low. The scale values for the key items are also distributed evenly throughout the entire range. The reader should note that the score variations, indicated by the standard deviations, remained rather constant throughout every item of the distribution.

CORRELATION OF FINAL INQUIRY VARIABLES

Correlation of Guilford-Martin scores with pupil behavior scale values.--Product-moment coefficients of correlation were determined between each of the thirteen Guilford-Martin trait scores and each of the thirty-five

TABLE XXVII

DISTRIBUTION OF SCORES OBTAINED BY 181 ELEMENTARY SCHOOL
TEACHERS ON THE COOPERATIVENESS SCALE OF THE
GUILFORD-MARTIN PERSONNEL INVENTORY

Raw Score Interval	Frequency
95-99	8
90-94	13
85-89	13
80-84	12
75-79	13
70-74	24
65-69	27
60-64	18
55-59	16
50-54	11
45-49	6
40-44	10
35-39	3
30-34	5
25-29	0
20-24	1
15-19	1

TABLE XXVIII

SCALE VALUES^a AND STANDARD DEVIATIONS OF ANNOYANCE EVALUATION RESPONSES SUBMITTED BY 181 ELEMENTARY SCHOOL TEACHERS FOR THIRTY-FIVE ITEMS OF PUPIL BEHAVIOR

Pupil Behavior Item ^b	Scale Value	Standard Deviation
^c Lies when being questioned about misconduct	69.3	10.7
Is a tattletale	67.2	19.9
Picks on younger children	65.4	22.0
Disturbs other pupils during study periods	63.2	17.8
Defaces library books	62.0	20.8
Bullies other pupils on the playground	61.9	23.0
Crowds ahead of others in line	58.2	18.7
Demands attention from the teacher even when she is busy	56.7	23.2
Teases other children	56.3	24.5
Copies another pupil's answers	56.0	21.6
^c Doesn't pay attention to class discussion	54.7	17.2
Shows off when visitors enter the classroom	54.6	23.0
Is impolite to other pupils	54.1	23.2
Interrupts during class discussions	51.4	23.3
Gets out of line during fire drills	50.7	29.0
Fails to obey a safety patrol boy	49.2	27.8
Is tardy frequently	48.2	21.7
Makes noises during study periods	48.0	20.2
Has body odor	46.9	27.2
Makes a disturbance when the teacher leaves the classroom	44.5	25.0
^c Won't start work without being prompted	44.0	18.2
Neglects to do his assignment	40.8	19.8
Never gets things done on time	39.9	20.4
Hands in papers that aren't neat	39.8	19.6

^aPercentage of times a behavior was evaluated to be more annoying than the behavior with which it was paired.

^bBehavior items are listed in the order of their annoyance rank.

^cKey behavior item.

TABLE XXVIII (Continued)

Pupil Behavior Item	Scale Value	Standard Deviation
Blows bubble gum in the classroom	39.0	27.0
Picks his nose	38.6	27.1
^c Coughs without covering his face	38.1	22.7
Has dirty face and hands	35.4	22.6
Reads comic books during study periods	34.3	23.9
Chews gum in the classroom	29.7	26.6
Wastes paper while doing assignment	26.6	19.5
Forgets to bring school supplies to class	26.3	17.7
Slouches down in his seat	17.7	9.5
Wears dirty clothes	16.8	8.7
^c Has a cluttered desk	10.8	4.6

^cKey behavior item.

annoyance evaluation scale values. The resulting correlation coefficients are presented in Table XXIX. As was indicated in the previous chapter, the values $\pm .147$ and $\pm .192$ were used as the .05 and .01 significance levels. Each coefficient which meets either of these levels is identified in Table XXIX. In interpreting the data thus presented, the reader should keep in mind that high raw scores for the Guilford-Martin Traits "S" (social introversion-extra-version), "D" (depression), and "C" (cycloid disposition) are least desirable for good mental health; on the other hand, high raw scores are indicative of good mental health for all

TABLE XXIX

PRODUCT-MOMENT COEFFICIENTS OF CORRELATION BETWEEN GUILFORD-MARTIN SCORES AND THE SCALE VALUES
ASSIGNED TO THIRTY-FIVE ITEMS OF PUPIL BEHAVIOR (N = 181)

Pupil Behavior Item		Guilford-Martin Traits ^a												
No.	Description	S	T	D	C	R	G	A	M	I	N	O	Co	Ag
1	Lies when being questioned about misconduct	-16 ^b	06	-15 ^b	-19 ^c	05	10	16 ^b	-03	19 ^c	17 ^b	18 ^b	07	28 ^c
2	Has a cluttered desk	16 ^b	11	20 ^c	19 ^c	-10	-08	-15 ^b	-05	-25 ^c	-08	-12	-11	-19 ^c
3	Coughs without covering his face	-20 ^c	-18 ^b	-16 ^b	-19 ^c	06	-04	18 ^b	07	14 ^b	18 ^b	11	04	-07
4	Won't start working without being prompted	-08	-09	-02	01	10	09	-01	01	02	03	05	01	10
5	Doesn't pay attention to class discussion	17 ^b	11	22 ^c	25 ^c	-11	-17 ^b	-25 ^c	-20 ^c	-19 ^c	-28 ^c	-07	-15 ^b	03
6	Crowds ahead of others in line	-30 ^c	-13	-32 ^c	-31 ^c	15 ^b	13	19 ^c	26 ^c	27 ^c	20 ^c	28 ^c	12	17 ^b
7	Reads comic books during study periods	09	19 ^c	16 ^b	19 ^c	02	00	01	-04	-04	08	01	01 ^d	12
8	Demands attention from the teacher even when she is busy	15 ^b	08	12	16 ^b	-15 ^b	-15 ^b	-21 ^c	-08	-12	-26 ^c	-20 ^c	-26 ^c	-15 ^b
9	Chews gum in the classroom . .	17 ^b	19 ^c	22 ^c	24 ^c	-16 ^b	-19 ^c	-13	-26 ^c	-20 ^c	-14	-22 ^c	-24 ^c	-31 ^c
10	Hands in papers that aren't neat	18 ^b	-13	13	11	-18 ^b	-31 ^c	-24 ^c	-25 ^c	-16 ^b	-07	-09	-15 ^b	-17 ^b

^aKey: S-Social introversion-extraversion, T-Thinking introversion-extraversion, D-Depression, C-Cycloid disposition, R-Rhythmic, G-General activity, A-Ascendence-submission, M-Masculinity-femininity, I-Inferiority feelings, N-Nervousness, O-Objectivity, Co-Cooperativeness, Ag-Agreeableness.

^bSignificant at .05 level.

^cSignificant at .01 level.

^dPossible curvilinear relationship (See

TABLE XXIX (Continued)

Pupil Behavior Item		Guilford-Martin Trait												
No.	Description	S	T	D	C	R	G	A	I	H	O	Co	AE	
11	Gets out of line during fire drills	-10	-11	-22 ^c	-27 ^c	12	11	15 ^b	24 ^c	14	28 ^c	17 ^b	16 ^b	
12	Teases other children	06	14	01 ^c	-16 ^b	01	05	-01	00	-03	02	03	04	
13	Is tardy frequently	-25 ^c	-15 ^b	-20 ^c	-16 ^b	06 ^d	13	20 ^c	27 ^c	22 ^c	18 ^b	19 ^c	20 ^c	
14	Has dirty face and hands	-01	04	02	00	-05	-05	-04	-01	-07	-13	-04	-09	
15	Wastes paper while doing assignment	05 ^d	-02	02	01	06	-03	-02	-01	10	04	01	-04	
16	Wears dirty clothes	11	15 ^b	22 ^c	19 ^c	-15 ^b	-18 ^b	-12	-21 ^c	-18 ^b	-29 ^c	-20 ^c	-31 ^c	
17	Neglects to do his assignment	07	-07 ^d	00	-03	-08	-11	-10	-01	04	06	11	07	
18	Fails to obey a safety patrol boy	-16 ^b	-15 ^b	-29 ^c	-33 ^c	18 ^b	19 ^c	28 ^c	31 ^c	26 ^c	42 ^c	33 ^c	32 ^c	
19	Copies another pupil's answers	03	06	02	04	01	01	-01	-01	03	03	08	08	
20	Picks his nose	20 ^c	24 ^c	31 ^c	28 ^c	02 ^d	-15 ^b	-16 ^b	-28 ^c	-29 ^c	-35 ^c	-29 ^c	-39 ^c	
21	Disturbs other pupils during study periods	-11	-23 ^c	-22 ^c	-18 ^b	15 ^b	15 ^b	08	19 ^c	16 ^b	23 ^c	24 ^c	29 ^c	
22	Makes a disturbance when the teacher leaves the classroom	18 ^b	-15 ^b	22 ^c	23 ^c	-15 ^b	02 ^d	-18 ^b	-21 ^c	-24 ^c	-23 ^c	-22 ^c	-19 ^c	
23	Is impolite to other pupils	-22 ^c	-15 ^b	-28 ^c	-23 ^c	12	-02	20 ^c	21 ^c	23 ^c	26 ^c	27 ^c	26 ^c	

^b Significant at .05 level.^c Significant at .01 level.^d Possible curvilinear relationship (See Table XXXI)

TABLE XXIX (Continued)

Pupil Behavior Item		Guilford-Martin Trait												
No.	Description	S	T	D	C	R	G	A	H	I	N	O	Co	AG
24	Has body odor	-03	-06	-03	-03	-04	00	-02	-13	02	04	08	-06	-12
25	Interrupts during class discussions	-01	-05	-01	01	06	-06	-02	00	-01	-07	05	03	03
26	Forgets to bring school supplies to class	06	03	05	09	10	12	07	07	-03	-10	03	-02	-01
27	Makes noises during study periods	08	-09	01	02	-04	00	10	-08	-03	-10	08	-06	-10
28	Is a tattler-tale	-23 ^c	-15 ^b	-24 ^c	-18 ^b	22 ^c	-05	21 ^c	10	15 ^b	17 ^b	12	-06	-01
29	Blows bubble gum in the classroom	29 ^c	25 ^c	35 ^c	33 ^c	-15 ^b	-16 ^b	-26 ^c	-29 ^c	-28 ^c	-29 ^c	-32 ^c	-24 ^c	-34 ^c
30	Defaces library books	-15 ^b	-15 ^b	-22 ^c	-23 ^c	16 ^b	16 ^b	15 ^b	16 ^b	19 ^c	24 ^c	31 ^c	19 ^c	21 ^c
31	Slouches down in his seat	08	09	17 ^b	15 ^b	-18 ^b	-17 ^b	-15 ^b	-11	-18 ^b	-19 ^c	-26 ^c	-21 ^c	-33 ^c
32	Shows off when visitors enter the classroom	24 ^c	15 ^b	20 ^c	16 ^b	-17 ^b	-16 ^b	-18 ^b	-22 ^c	-17 ^b	-21 ^c	-30 ^c	-18 ^b	-23 ^c
33	Picks on younger children	-17 ^b	-15 ^b	-33 ^c	-32 ^c	15 ^b	-03	22 ^c	34 ^c	29 ^c	32 ^c	39 ^c	33 ^c	34 ^c
34	Never gets things done on time	23 ^c	02 ^d	25 ^c	24 ^c	-19 ^c	-15 ^b	-31 ^c	-21 ^c	-22 ^c	-23 ^c	-12	-21 ^c	-15 ^b
35	Bullies other pupils on the playground	-13	-15 ^b	-21 ^c	-21 ^c	15 ^b	12	11	24 ^c	02 ^d	23 ^c	25 ^c	26 ^c	22 ^c

^bSignificant at .05 level.

^cSignificant at .01 level.

^dPossible curvilinear relationship (See Table XXXI).

but three of the remaining traits.¹ Thus negative coefficients for traits "S" (social introversion-extraversion), "D" (depression), and "C" (cycloid disposition) would in effect be positive, and, conversely, positive coefficients should be interpreted as being negative.

In the case of behavior items 4 (Won't start working without being prompted), 7 (Reads comic books during study periods), 12 (Teases other children), 14 (Has dirty face and hands), 15 (Wastes paper while doing assignment), 17 (Neglects to do his assignment), 19 (Copies another pupil's answers), 24 (Has body odor), 25 (Interrupts during class discussions), 26 (Forgets to bring school supplies to class), and 27 (Makes noises during study periods), no significant linear relationship with personality trait scores was consistently discovered. However, many of the coefficients for these behavior items were near the .05 level of significance.

In general, the trend of relationship for those behavior items in which significant correlations were obtained remained consistent throughout each of the Guilford-Martin traits. In other words, when a particular item of pupil behavior was significantly related to one trait, there was also likely to be a similar relationship between that

¹For traits "T" (thinking introversion-extraversion), "R" (rhythymia), and "G" (general activity), raw scores in the middle range are most desirable for good mental health.

behavior item and the remaining traits. Such results might be subject to question, in view of the fact that the inter-correlation between the Guilford-Martin trait scores is expected to be low. However, it should be pointed out that the correlations presented in Table XXIX vary considerably from a numerical standpoint, even though they are part of a noticeable trend.

The reader should notice that significant negative relationships exist between certain behavior items and most or all of the Guilford-Martin traits. This type of relationship is to be noted for behavior items 2 (Has a cluttered desk), 5 (Doesn't pay attention to class discussion), 8 (Demands attention from the teacher even when she is busy), 9 (Chews gum in the classroom), 10 (Hands in papers that aren't neat), 16 (Wears dirty clothes), 20 (Picks his nose), 22 (Makes a disturbance when the teacher leaves the classroom), 29 (Blows bubble gum in the classroom), 31 (Slouches down in his seat), 32 (Shows off when visitors enter the classroom), and 34 (Never gets things done on time). It would thus appear that there is a significant negative relationship between high annoyance scale values for each of these behavior items and good mental health scores.

Significant positive relationships exist between certain other behavior items and most or all of the Guil-

ford-Martin traits. Such a relationship is to be found for behavior items 1 (Lies when being questioned about misconduct), 3 (Coughs without covering his face), 6 (Crowds ahead of others in line), 11 (Gets out of line during fire drills), 13 (Is tardy frequently), 18 (Fails to obey a safety patrol boy), 21 (Disturbs other pupils during study periods), 23 (Is impolite to other pupils), 28 (Is a tattletale), 30 (Defaces library books), 33 (Picks on younger children), and 35 (Bullies other pupils on the playground). Thus it may be concluded that there is a significant positive relationship between high annoyance scale values for these behavior items and good mental health scores.

It should be pointed out that the coefficients of correlation listed in Table XXIX are uniformly low. However, out of the 455 correlations, eighty-four are significant at the .05 level, and 163 are significant at the .01 level. It may therefore be stated that the null hypothesis was partially or wholly refuted in over half of these cases.

As was previously indicated, all correlations were tested for linearity of regression. Those cases where curvilinear relationships possibly exist are indicated in Table XXIX. These correlations will be discussed in connection with Table XXXI.

Correlation of Guilford-Martin scores with personal data responses.--The general discussion concerning corre-

lations, just presented, is applicable for the most part in the case of the correlations between Guilford-Martin scores and personal data inventory responses. The latter correlations are presented in Table XXX. These data indicate that there is little or no significance in terms of relationship between the Guilford-Martin scores and personal data items 1 (Age), 3 (Number of children), 5 (Teaching load), 8 (When undergraduate work was completed), 9 (Grade taught), 10 (Pupil load), 12 (Courses in history and principles of education), 14 (Courses in methods), and 15 (Courses in child psychology). Some of these correlations are significant, but no general trend is noticeable.

Varying degrees of significant negative relationships are to be found in the case of personal data items 2 (Marital status), and 11 (Years teaching experience). In the case of item 2, it would appear that there is a negative relationship between being divorced or widowed and having good mental health scores. The data for item 11 would seem to indicate that there is a negative relationship between having much teaching experience and having good mental health scores.

A significant positive linear relationship is to be found between most or all of the Guilford-Martin traits and the following personal data items: 4 (Educational

TABLE XXX

PRODUCT-MOMENT COEFFICIENTS OF CORRELATION BETWEEN GUILFORD-MARTIN SCORES AND PERSONAL DATA INVENTORY RESPONSES (N = 181)

Personal Data Item		Guilford-Martin Trait ^a												
No.	Description	S	T	D	C	R	G	A	M	I	N	O	Co	AG
1	Age	10	13	06	02	-18 ^b	-04	-05	-06	01	-04	00	03	-01
2	Marital status	12	-09	-06	-01	-22 ^c	-18 ^b	-12	-09	07	08	07	08	-05
3	Number of children	-04	27 ^c	16 ^b	19 ^c	02	28 ^c	13	09	05	17 ^b	-11	07	-05
4	Educational status	-26 ^c	-32 ^c	-36 ^c	-35 ^c	19 ^c	17 ^b	26 ^c	21 ^c	28 ^c	25 ^c	31 ^c	27 ^c	36 ^c
5	Teaching load	-09	-04	00	02	06	08	18 ^b	10	04	02	-02	02	-05
6	Higher educational institution attended	-21 ^c	-18 ^b	-27 ^c	-25 ^c	19 ^c	11	25 ^c	28 ^c	24 ^c	28 ^c	30 ^c	28 ^c	31 ^c
7	Last credit obtained	-08	-18 ^b	-16 ^b	-18 ^b	05	04	05	09	13	10	20 ^c	17 ^b	20 ^c
8	When undergraduate work was completed	00	-12	-12	-14	-10	-08 ^d	02	08	03	05	13	16 ^b	18 ^b
9	Grade taught	-18 ^b	06	-07	-01	15 ^b	09	17 ^b	21 ^c	12	07	04	01	-11
10	Pupil load	-11	07	07	11	13 ^d	07	08	11	00	-10	00	07	-05
11	Years teaching experience	24 ^c	18 ^b	17 ^b	15 ^b	-30 ^c	-15 ^b	-21 ^c	-21 ^c	-16 ^b	-12	-15 ^b	-12	-16 ^b
12	Courses in history and principles of education	-04	00	-01	01	11	09	-02	-01	-01	-08	03	-04	09
13	Courses in educational psychology and statistics	-19 ^c	-16 ^b	-20 ^c	-24 ^c	11	04	23 ^c	20 ^c	23 ^c	22 ^c	19 ^c	21 ^c	22 ^c
14	Courses in methods	02	-06	-05	-05	-14	-11	-11	01	-04	03	04	08	04
15	Courses in child psychology	04	11	-01	-02	-04	-02	00	05	02	05	00	02	09
16	Other psychology courses	-20 ^c	-15 ^b	-15 ^b	-17 ^b	01	08	19 ^c	13	10	12	12	16 ^b	19 ^c

^aKey: S-Social introversion-extraversion, T-Thinking introversion-extraversion, D-Depression, C-Cycloid disposition, R-Rhythymia, G-General activity, A-Ascendence-submission, I-Masculinity-femininity, I-Inferiority feelings, N-Nervousness, O-Objectivity, Co-Cooperativeness, AG-Agreeableness.

^bSignificant at .05 level. ^cSignificant at .01 level. ^dpossible curvilinear relationship (See Table XXXI)

status), 6 (Higher educational institution attended), 7 (Last credit obtained), 13 (Courses in educational psychology and statistics), and 16 (Other psychology courses). This indicates that there is a positive relationship between good mental health scores and the following categories of personal data: (1) high educational achievement, (2) attending a teachers' college, (3) not having taken courses for credit during the past twenty years, (4) completion of much work in educational psychology and statistics, and (5) completion of much work in psychology.

As was the case for the pupil behavior correlations, the personal data correlations were quite low. However, out of the 208 correlations, twenty-nine were significant at the .05 level and forty-four were significant at the .01 level. This would indicate that the null hypothesis was partially or wholly refuted in over one-third of the cases.

Correlation ratios.--In Chapter VI, it was indicated that all variables were tested in order to determine whether or not their relationship was linear. The correlation ratio was computed for each of the 663 correlations and the chi-square test was used to determine whether or not the regression was linear. Since only eleven cases of possible non-linearity were detected, it was not deemed necessary to present the complete results of this test. In Table XXXI, the reader will find evidence concerning these eleven pairs

TABLE XXXI

DETERMINATION OF THE DEGREE OF REGRESSION AND THE STATISTICAL SIGNIFICANCE FOR CERTAIN FINAL INQUIRY VARIABLES (N = 181)

Variables ^a	r^b	η^c	χ^2d	z^2e
Trait S and behavior item 15 . . . . .	.05	.26	12.01 ^f	.035
Trait T and behavior item 17	-.07	.22	8.12 ^f	.027
Trait T and behavior item 34 . . . . .	.02	.23	10.01 ^f	.032
Trait D and behavior item 12 . . . . .	.01	.25	11.48 ^f	.030
Trait R and behavior item 13 . . . . .	.06	.28	14.56 ^f	.049 ^h
Trait R and behavior item 20 . . . . .	.02	.27	13.08 ^f	.038 ^h
Trait G and behavior item 22 . . . . .	.02	.26	12.35 ^f	.035
Trait I and behavior item 35 . . . . .	.02	.29	15.83 ^g	.053 ^h
Trait Co and behavior item 7 . . . . .	.01	.25	11.48 ^f	.030
Trait R and "pupil load" . . . . .	.13	.30	13.45 ^f	.056 ^h
Trait G and "when undergraduate work was completed"	-.08	.40	33.06 ^g	.127 ⁱ

^aKey: Trait S - social introversion-extraversion, Trait T - thinking introversion-extraversion, Trait D - depression, Trait R - rathymia, Trait G - general activity, Trait I - inferiority feelings, Trait Co - cooperativeness.

Behavior items: 15 - wastes paper while doing assignment, 17 - neglects to do his assignment, 34 - never gets things done on time, 12 - teases other children, 13 - is tardy frequently, 20 - picks his nose, 22 - makes a disturbance when the teacher leaves the classroom, 35 - bullies other pupils on the playground, 7 - reads comic books during study periods.

^b r - correlation coefficient.

^c η - correlation ratio.

^d χ^2 - goodness of fit.

^e z^2 - correlation ratio without bias.

^fDifference from rectilinearity significant at .05 level.

^gDifference from rectilinearity significant at .01 level.

^hCorrelation ratio significant at .05 level.

ⁱCorrelation ratio significant at .01 level.

of variables. In only one case is the difference from rectilinearity significant at the .01 level. Thus it would appear that there is little evidence to indicate an extensive trend toward non-linearity for the eleven pairs of variables.

The last column of Table XXXI is concerned with epsilon, a correlation ratio without bias. According to these data, only four of the correlation ratios were significant at the .05 level, and one was significant at the .01 level.

SUMMARY

A detailed analysis was made for all responses to the final inquiry. The following information was obtained concerning the respondents: (1) their mean age was 43.60, (2) over 90 percent were "married" or "single," (3) only one-third had children, (4) nearly all had attended a teachers' college, (5) their educational attainment was generally below the master's degree, (6) their teaching assignments were nearly evenly divided between the first six grades, (7) a majority taught thirty to thirty-nine pupils for six hours a day, (8) their mean years of experience was eighteen, and (9) they had obtained varying numbers of college semester credit hours in five areas of instruction. Significant differences were discovered between

the means of scores obtained by the respondents on nine Guilford-Martin scales and norms established for those scales. Scale values for the annoyance evaluations were evenly spread from high to low, and annoyance score variations remained rather consistent throughout every item of the distribution. A consistent pattern of significant positive and negative linear relationships was found between the Guilford-Martin scores and certain pupil behavior and personal data items. In general, there was little evidence of non-linearity of regression.

CHAPTER VIII

FINAL CONSIDERATIONS

This chapter will include a summary of the present investigation and reflections concerning the entire study.

SUMMARY OF THE INVESTIGATION

This investigation is an attempt to examine two hypotheses, namely: (1) that there is a significant relationship between the personality traits of teachers, as measured by the Guilford-Martin Personality Inventories, and the teachers' annoyance evaluations of objectionable pupil behavior; and (2) that there is a significant relationship between the personality traits of teachers, as measured by the Guilford-Martin Personality Inventories, and such factors as the teachers' age, marital and family status, training, teaching and pupil loads, and years of experience. A review of literature pertinent to the study revealed that no similar investigation had been conducted. A total of 179 items of objectionable pupil behavior, obtained from eleven previous studies, was utilized in the construction of a preliminary questionnaire. This preliminary instru-

ment was designed to measure both item occurrence and item annoyance, and it was administered to a selected group of seventy-two Flint, Michigan, elementary school teachers. Thirty-five pupil behavior items were thus obtained for use in a final annoyance evaluation instrument.

The final inquiry consisted of a personal data inventory, the Guilford-Martin Inventories, and a paired comparisons measure of pupil annoyance. A total of 181 Flint, Michigan, elementary school teachers completed this inquiry, and the responses thus obtained were machine-scored, codified, and recorded on punched cards.

A frequency distribution was prepared for each item of the final inquiry. The method of cumulative totals was employed for the computation of correlation coefficients and correlation ratios between each of the personality trait scores and each of the annoyance and personal data scores. Each coefficient of correlation was tested for significance against the null hypothesis, and the chi-square test of linearity of regression was applied in all cases. Epsilon was computed in those instances where non-linearity was discovered, in order that the significance of the correlation ratios might be determined.

Data obtained from the final inquiry may be summarized as follows:

1. A majority of the respondents were in the age span from thirty-five to fifty-four years, the mean age being 43.60 (Table IV).

2. The majority of the respondents were married (Table V), but less than one-third had children (Table VI).

3. Seventy-five percent of the subjects had attended teachers' colleges (Table VII), and their level of educational attainment was in general below the master's degree (Table VIII).

4. The teaching assignments of the respondents were almost evenly divided between the first six grades (Table IX); a majority taught thirty to thirty-nine pupils for six hours a day (Table X and Table XI); and the mean for teaching experience was eighteen years (Table XII).

5. The amount of course work completed by the respondents in educational psychology and statistics was considerably less than in other areas of instruction; more courses had been completed in psychology than in any other area (Table XIII).

6. The respondents obtained significantly better mental health scores than the norm for the cycloid disposition, objectivity, agreeableness, cooperativeness, thinking introversion-extraversion, and depression traits of the Guilford-Martin Inventories; they obtained significantly poorer mental health scores than the norm for the gen-

eral activity and ascendance-submission traits; the masculinity-femininity scores were rather inconclusive because all respondents were women; and the scores for the remaining traits did not differ significantly from the norm (Table XIV).

7. The annoyance scale values for the thirty-five items of pupil behavior were quite evenly spread from high to low, and scale variations remained rather constant throughout every item of the annoyance evaluation instrument (Table XXVIII).

8. No significant linear relationship was discovered between eleven pupil behavior items (won't start working without being prompted, reads comic books during study periods, teases other children, has dirty face and hands, wastes paper while doing assignment, neglects to do his assignment, copies another pupil's answers, has body odor, interrupts during class discussions, forgets to bring school supplies to class, and makes noises during study periods) and the Guilford-Martin traits (Table XXIX).

9. A significant negative linear relationship was discovered between each of twelve pupil behavior items (has a cluttered desk, doesn't pay attention to class discussion, demands attention from the teacher even when she is busy, chews gum in the classroom, hands in papers that aren't neat, wears dirty clothes, picks his nose,

makes a disturbance when the teacher leaves the classroom, blows bubble gum in the classroom, slouches down in his seat, shows off when visitors enter the classroom, and never gets things done on time) and the Guilford-Martin traits (Table XXIX).

10. Significant positive linear relationships were discovered between twelve pupil behavior items (lies when being questioned about misconduct, coughs without covering his face, crowds ahead of others in line, gets out of line during fire drills, is tardy frequently, fails to obey a safety patrol boy, disturbs other pupils during study periods, is impolite to other pupils, is a tattletale, defaces library books, picks on younger children, and bullies other pupils on the playground) and the Guilford-Martin traits (Table XXIX).

11. There was little or no significance between nine personal data items (age, number of children, teaching load, when undergraduate work was completed, grade taught, pupil load, courses in history and principles of education, courses in methods, and courses in child psychology) and the Guilford-Martin traits (Table XXX).

12. Varying degrees of significant negative linear relationships were discovered between two personal data items (marital status and years teaching experience) and the Guilford-Martin traits (Table XXX).

13. A significant positive linear relationship existed between each of five personal data items (educational status, higher educational institution attended, last credit obtained, courses in educational psychology and statistics, and other psychology courses) and the Guilford-Martin traits (Table XXX).

14. Only eleven cases of non-linearity were discovered among the 663 pairs of variables. These were: (1) social introversion-extraversion and wastes paper while doing assignment, (2) thinking introversion-extraversion and neglects to do his assignment, (3) thinking introversion-extraversion and never gets things done on time, (4) depression and teases other children, (5) rhythmia and is tardy frequently, (6) rhythmia and picks his nose, (7) general activity and makes a disturbance when the teacher leaves the classroom, (8) inferiority feelings and bullies other pupils on the playground, (9) cooperativeness and reads comic books during study periods, (10) rhythmia and pupil load, and (11) general activity and when undergraduate work was completed.

REFLECTIONS CONCERNING THE INVESTIGATION

Significant linear relationships were found to exist between the Guilford-Martin traits and certain pupil behavior and personal data items; thus the two working

hypotheses were partially supported. However, there was but little evidence to indicate an extensive trend toward non-linearity.

The causes of the linear relationships were not determinable from the data, nor were they part of the present problem. It would therefore seem pertinent to suggest that further research might profitably be concerned with the causes of such relationships.

It might also be suggested that a correlation could be made between personal data inventory responses and scale values obtained from a refined annoyance evaluation instrument. Such an operation should provide valuable information, but it was deemed to be beyond the scope and purpose of this study.

The findings of the present investigation should be of assistance to guidance workers, administrators and supervisors, and to teachers themselves. In order to speculate as to the value of this study for such persons, let us assume that the faculty members of "School A" have full knowledge of the above findings. Further, let us assume that "Pupil L" has been reported to the school principal by "Teacher Y" because he had displayed certain behavior disorders. The school counselor might be called into the case by the principal in order to make a routine counseling contact with the pupil. Upon surveying the facts of the

case it might be found that "Pupil L" had been having no difficulties with other teachers. In light of the findings of the present investigation, the counselor might discover a fundamental difference in the personality traits of "Teacher Y" as opposed to the other teachers involved. He might further speculate that there was a significant relationship between the personality traits of "Teacher Y" and her annoyance caused by the behavior of "Pupil L." All of these circumstances could conceivably result in a better understanding concerning the actions of "Pupil L" and remedial steps could be taken in light of this new orientation.

It has not been intended that all problems pertaining to pupil-teacher relationships would be solved as a result of this study; however, it is hoped that first steps have been taken toward their solution, by identifying certain pupil behaviors which are annoying to teachers on the one hand, and relating them to personality factors of the teachers concerned on the other.

APPENDIX I
Preliminary Questionnaire

IF YOU HAVE COMPLETED THIS OPINIONNAIRE PLEASE RETURN IT TO
J. CLARK, 1435 UNIVERSITY TERRACE, ANN ARBOR, MICHIGAN.

MY OPINIONS CONCERNING PUPIL BEHAVIOR

You have been selected to express your opinion concerning pupil behavior because of your extensive experience and training in the field of child growth and development. The author of this study will be very grateful for such an opinion. When the study is completed, you will be furnished with a summary of the findings.

Directions for Completing the Opinionnaire

1. Here is a list of pupil behavior items. You are asked to answer the following two questions concerning each item:
 - a. (FREQUENCY JUDGMENT) How often have you encountered this behavior among your pupils during the present school year?
 - b. (ITEM EVALUATION) Does this behavior annoy you?
2. In making the FREQUENCY JUDGMENTS, encircle the number which indicates how often you have encountered the behavior item during the present school year. Use this scale:
 - 0 - Never
 - 1 - Very Infrequently
 - 2 - Frequently
 - 3 - Very Frequently
 - 4 - Most of the time
3. FREQUENCY JUDGMENTS should not be based upon the behavior of isolated individuals. For example, you might find that the behavior, "tells imaginative tales," is exhibited by a particular pupil all of the time but that this behavior occurs very infrequently in the group as a whole. In this case, you should record a FREQUENCY JUDGMENT of "1." In other words, your FREQUENCY JUDGMENTS should be based upon the behavior of your class as a whole, not upon isolated individual cases.
4. In making the ITEM EVALUATIONS, encircle "YES" if a behavior is likely to annoy you in any degree. Encircle "NO" if a behavior is never annoying to you. Encircle "?" if you are doubtful as to whether or not the behavior is likely to annoy you or if you do not clearly understand the item.
5. For the purposes of this opinionnaire, pupil behavior is considered to include any behavior exhibited in the school, i. e. in the classroom, on the playground, in the halls, etc.
6. At the end of the opinionnaire space is provided for you to add and evaluate any other behavior items which you believe should be included in a list of this sort.

7. Regardless of what your ITT EVALUATION may be ("YES," "NO," or "?"), be sure to complete all FREQUENCY JUDGMENTS.

3. Please do not discuss the opinionnaire with others before you have completed it. Do not sign your name--your responses will remain strictly anonymous.

Evaluations and Judgments

BEHAVIOR ITEM	FREQUENCY JUDGMENT How often have you encountered this behavior among your pupils during the present school year?					ITT EVALUATION Does this behavior annoy you?		
	Never	Very Infrequently	Frequently	Very Frequently	Most of the time	YES	NO	?
Withdraws from a group	0	1	2	3	4	YES	NO	?
Exaggerates injury from another pupil	0	1	2	3	4	YES	NO	?
Learns very slowly	0	1	2	3	4	YES	NO	?
Is impolite to other pupils	0	1	2	3	4	YES	NO	?
Wears dirty clothes	0	1	2	3	4	YES	NO	?
Drinks slowly	0	1	2	3	4	YES	NO	?
Attempts to show off his physical strength	0	1	2	3	4	YES	NO	?
Peeps in desks of other pupils	0	1	2	3	4	YES	NO	?
Passes notes in the classroom	0	1	2	3	4	YES	NO	?
Shuffles in the halls	0	1	2	3	4	YES	NO	?
(Boy) acts like a sissy	0	1	2	3	4	YES	NO	?
Cries easily	0	1	2	3	4	YES	NO	?
Has body odor	0	1	2	3	4	YES	NO	?
Is always too dressed up to do physical work	0	1	2	3	4	YES	NO	?
Steals another pupil's lunch	0	1	2	3	4	YES	NO	?
Smokes on school premises	0	1	2	3	4	YES	NO	?
Talks aloud to self	0	1	2	3	4	YES	NO	?
Throws erasers in the classroom	0	1	2	3	4	YES	NO	?
Uses profane language	0	1	2	3	4	YES	NO	?
Talks without permission during study periods	0	1	2	3	4	YES	NO	?
Wastes paper while doing assignment	0	1	2	3	4	YES	NO	?

BEHAVIOR ITEM	FREQUENCY					JUDGMENT			ITEM EVALUATION		
	0	1	2	3	4	YES	NO	?	YES	NO	?
Sucks his thumb	0	1	2	3	4	YES	NO	?			
Disturbs other pupils during study periods	0	1	2	3	4	YES	NO	?			
Gives silly answers to serious questions	0	1	2	3	4	YES	NO	?			
Shows off when visitors enter the classroom	0	1	2	3	4	YES	NO	?			
Shows excessive interest in opposite sex	0	1	2	3	4	YES	NO	?			
Breaks school windows	0	1	2	3	4	YES	NO	?			
Avoids physical contact games	0	1	2	3	4	YES	NO	?			
Acts shy among others	0	1	2	3	4	YES	NO	?			
Plays marbles for keeps	0	1	2	3	4	YES	NO	?			
Forges signatures	0	1	2	3	4	YES	NO	?			
Fights on the playground	0	1	2	3	4	YES	NO	?			
Makes a disturbance when the teacher leaves the classroom	0	1	2	3	4	YES	NO	?			
Won't cooperate with a group	0	1	2	3	4	YES	NO	?			
Slouches down in his seat	0	1	2	3	4	YES	NO	?			
Masturbates	0	1	2	3	4	YES	NO	?			
Bites finger nails	0	1	2	3	4	YES	NO	?			
Trips another pupil	0	1	2	3	4	YES	NO	?			
Whistles in the classroom	0	1	2	3	4	YES	NO	?			
Attracts attention of a group	0	1	2	3	4	YES	NO	?			
Makes excuses for his misconduct	0	1	2	3	4	YES	NO	?			
Copies another pupil's answers	0	1	2	3	4	YES	NO	?			
Blows bubble gum in the classroom	0	1	2	3	4	YES	NO	?			
Plays practical jokes on the teacher	0	1	2	3	4	YES	NO	?			
Makes noises during study periods	0	1	2	3	4	YES	NO	?			
Writes on the lavatory walls	0	1	2	3	4	YES	NO	?			
Shoots spit balls in the classroom	0	1	2	3	4	YES	NO	?			
(Girl) acts like a tomboy	0	1	2	3	4	YES	NO	?			
Objects to physical work	0	1	2	3	4	YES	NO	?			
Interrupts during class discussions	0	1	2	3	4	YES	NO	?			
Hurts animals	0	1	2	3	4	YES	NO	?			
Pulls another pupil's hair	0	1	2	3	4	YES	NO	?			
Ridicules clothes of another pupil	0	1	2	3	4	YES	NO	?			
Refuses to answer questions	0	1	2	3	4	YES	NO	?			
Chews gum in the classroom	0	1	2	3	4	YES	NO	?			
Is a tattle-tale	0	1	2	3	4	YES	NO	?			
Always wants to be the leader	0	1	2	3	4	YES	NO	?			
Doesn't pay attention to class discussion	0	1	2	3	4	YES	NO	?			
Picks on younger children	0	1	2	3	4	YES	NO	?			
Sulks after being punished	0	1	2	3	4	YES	NO	?			
Stammers	0	1	2	3	4	YES	NO	?			
Refuses to admit mistakes	0	1	2	3	4	YES	NO	?			

BEHAVIOR ITEM	FREQUENCY JUDGMENT					ITEM EVALUATION		
is self-conscious while in a group	0	1	2	3	4	YES	NO	?
buffs answer to question	0	1	2	3	4	YES	NO	?
bullies other pupils on the playground	0	1	2	3	4	YES	NO	?
forgets to bring school supplies to class	0	1	2	3	4	YES	NO	?
defaces library books	0	1	2	3	4	YES	NO	?
trips school	0	1	2	3	4	YES	NO	?
whispers during study periods	0	1	2	3	4	YES	NO	?
laughs unnecessarily during class discussions	0	1	2	3	4	YES	NO	?
wants to know his examination mark before other pupils are given theirs	0	1	2	3	4	YES	NO	?
won't start working without being prompted	0	1	2	3	4	YES	NO	?
shows sexual interest in persons of his own sex	0	1	2	3	4	YES	NO	?
never understands a joke	0	1	2	3	4	YES	NO	?
pretends he doesn't hear the teacher	0	1	2	3	4	YES	NO	?
causes a disturbance during assembly programs	0	1	2	3	4	YES	NO	?
leaves papers that aren't neat on his desk	0	1	2	3	4	YES	NO	?
won't speak to persons he dislikes	0	1	2	3	4	YES	NO	?
does the opposite of what the teacher tells him	0	1	2	3	4	YES	NO	?
won't be depended on to do an important job	0	1	2	3	4	YES	NO	?
shuffles his feet while walking	0	1	2	3	4	YES	NO	?
acts like a baby	0	1	2	3	4	YES	NO	?
expresses worry about school work	0	1	2	3	4	YES	NO	?
crowds ahead of others in line	0	1	2	3	4	YES	NO	?
protests length of assignment	0	1	2	3	4	YES	NO	?
gets mad when his team loses	0	1	2	3	4	YES	NO	?
says he won't study because he doesn't like the subject	0	1	2	3	4	YES	NO	?
uses an apple polisher	0	1	2	3	4	YES	NO	?
writes smutty notes	0	1	2	3	4	YES	NO	?
reclines in his seat	0	1	2	3	4	YES	NO	?
has a cluttered desk	0	1	2	3	4	YES	NO	?
hesitates when being questioned about misconduct	0	1	2	3	4	YES	NO	?
keeps pencils in his mouth	0	1	2	3	4	YES	NO	?
loitering around school after hours	0	1	2	3	4	YES	NO	?
complains to the teacher when he is given a low mark	0	1	2	3	4	YES	NO	?
scribbles initials on his desk	0	1	2	3	4	YES	NO	?
often dreams frequently	0	1	2	3	4	YES	NO	?
has a dirty face and hands	0	1	2	3	4	YES	NO	?
threatens to hurt other pupils	0	1	2	3	4	YES	NO	?

BEHAVIOR ITEM	FREQUENCY	JUDGMENT	ITEM EVALUATION
starts arguments about minor points	0 1 2 3 4	YES NO ?	
never wants to go to the playground	0 1 2 3 4	YES NO ?	
thumps his nose at others	0 1 2 3 4	YES NO ?	
is overconfident about his ability to do an assignment	0 1 2 3 4	YES NO ?	
spends so much time checking his work that he can't finish his assignment	0 1 2 3 4	YES NO ?	
ushes pupils into their seats	0 1 2 3 4	YES NO ?	
laughs without covering his face	0 1 2 3 4	YES NO ?	
draws belittling pictures of others	0 1 2 3 4	YES NO ?	
fails to obey a safety patrol boy	0 1 2 3 4	YES NO ?	
gets out of line during fire drills	0 1 2 3 4	YES NO ?	
wicks his nose	0 1 2 3 4	YES NO ?	
reads comic books during study periods	0 1 2 3 4	YES NO ?	
(boy) pulls up girls' skirts	0 1 2 3 4	YES NO ?	
wants to get a drink right after he has had one	0 1 2 3 4	YES NO ?	
doesn't hang up his clothes	0 1 2 3 4	YES NO ?	
always plays with his own clique	0 1 2 3 4	YES NO ?	
brags about his achievements	0 1 2 3 4	YES NO ?	
demand attention from the teacher even when she is busy	0 1 2 3 4	YES NO ?	
pinches other pupils	0 1 2 3 4	YES NO ?	
refuses the teacher to carry out her proposed punishment	0 1 2 3 4	YES NO ?	
invents false stories about the conduct of other pupils	0 1 2 3 4	YES NO ?	
throws dirt into the classroom	0 1 2 3 4	YES NO ?	
neglects to do his assignment	0 1 2 3 4	YES NO ?	
lays cards on school premises	0 1 2 3 4	YES NO ?	
gossips about other pupils	0 1 2 3 4	YES NO ?	
never gets things done on time	0 1 2 3 4	YES NO ?	
is tardy frequently	0 1 2 3 4	YES NO ?	
teases other children	0 1 2 3 4	YES NO ?	
tells imaginative tales	0 1 2 3 4	YES NO ?	
pulls his pants	0 1 2 3 4	YES NO ?	
is easily distracted from one problem to another	0 1 2 3 4	YES NO ?	
ADDITIONAL BEHAVIOR ITEMS			
_____	0 1 2 3 4	YES NO ?	
_____	0 1 2 3 4	YES NO ?	
_____	0 1 2 3 4	YES NO ?	
_____	0 1 2 3 4	YES NO ?	
_____	0 1 2 3 4	YES NO ?	
_____	0 1 2 3 4	YES NO ?	
_____	0 1 2 3 4	YES NO ?	
_____	0 1 2 3 4	YES NO ?	

(Go back to this sheet to list more items.)

IF YOU HAVE COMPLETED THIS QUESTIONNAIRE PLEASE RETURN IT TO CLERK J. CLARK, 1435 UNIVERSITY TERRACE, ANN ARBOR, MICHIGAN.

APPENDIX II

Grouping of Behavior Items

GROUPING OF BEHAVIOR ITEMS FOR FINAL ANNOYANCE INSTRUMENT
IN ACCORDANCE WITH THE UHRBROCK AND
RICHARDSON METHOD

Behavior Item	Item Number	Group
Lies when being questioned about misconduct	1	Key
Has a cluttered desk	2	Key
Coughs without covering his face .	3	Key
Won't start working without being prompted	4	Key
Doesn't pay attention to class discussion	5	Key
Crowds ahead of others in line . .	6	A
Reads comic books during study periods	7	A
Demands attention from the teacher even when she is busy	8	A
Chews gum in the classroom	9	A
Hands in papers that aren't neat .	10	A
Gets out of line during fire drills	11	A
Teases other children	12	A
Is tardy frequently	13	A
Has dirty face and hands	14	A
Wastes paper while doing assignment	15	A
Wears dirty clothes	16	B
Neglects to do his assignment . .	17	B
Fails to obey a safety patrol boy	18	B
Copies another pupil's answers . .	19	B
Picks his nose	20	B
Disturbs other pupils during study periods	21	B
Makes a disturbance when the teacher leaves the classroom	22	B
Is impolite to other pupils	23	B
Has body odor	24	B
Interrupts during class discussions	25	B
Forgets to bring school supplies to class	26	C
Makes noises during study periods	27	C
Is a tattle-tale	28	C
Blows bubble gum in the classroom	29	C
Defaces library books	30	C
Slouches down in his seat	31	C
Shows off when visitors enter the classroom	32	C
Picks on younger children	33	C
Never gets things done on time . .	34	C
Bullies other pupils on the playground	35	C

APPENDIX III

Final Survey Material:

Personal Data Inventory
Survey of Teacher Opinion
Envelope sticker, Teacher
Identification sheet
Guilford-Martin Temperament
Profile Chart

PERSONAL DATA INVENTORY

1. Age at last birthday:
 24 years or under
 25-29 years
 30-34 years
 35-39 years
 40-44 years
 45-49 years
 50-54 years
 55-59 years
 60 years or over
2. Sex:
 female
 male
3. Marriage status:
 divorced
 married
 separated
 single
4. Number of children:
 no children
 one child
 two children
 three children
 more than three children
5. If you have one or more children, list age(s) at last birthday: _____
6. Educational status (check highest attainment):
 have no degree
 have BA or BS degree, have done NO graduate work
 have started work toward MA degree
 have MA degree, have done NO further graduate work
 have started work toward doctorate
 have doctorate
7. What is your average teaching load per day?
 four hours or less
 five hours
 six hours
 seven or more hours
8. Name and location of higher educational institution attended most: _____
9. If you have NO degree, how many years of higher education have you had? (Do not answer if you have a degree)
 1 year
 2 years
 3 years
 over 3 years
10. LAST took courses for credit beyond undergraduate work (Do not answer if you have not completed undergraduate work):
 have not taken more courses
 am now taking courses
 1-4 years ago
 5-9 years ago
 10-14 years ago
 15-19 years ago
 20-30 years ago
 over 30 years ago
11. Completed undergraduate work:
 not completed
 0-4 years ago
 5-9 years ago
 10-14 years ago
 15-19 years ago
 20-30 years ago
 over 30 years ago
12. What grade do you now mainly teach?
 grade one
 grade two
 grade three
 grade four
 grade five
 grade six
13. What is your average pupil load per hour?
 less than 20 pupils
 20-29 pupils
 30-39 pupils
 40-49 pupils
 50 pupils or more

4. Years of teaching experience:
- first year
 - 1-4 years
 - 5-9 years
 - 10-14 years
 - 15-19 years
 - 20-25 years
 - over 25 years

15. What are your future vocational plans?
- not do educational work
 - teach at present grade level
 - be an administrator or supervisor
 - other plans (state briefly): _____

6. In the chart below, check the approximate number of college semester hours credit you have in EACH area of instruction listed.

AREA OF INSTRUCTION	NUMBER OF COLLEGE SEMESTER HOURS					
	None	1-4	5-9	10-14	15-19	Over 19
EDUCATION COURSES						
History and principles of education						
Educational administration and supervision						
Educational psychology and statistics						
Guidance						
Methods and practice teaching						
Child growth and development						
Other education courses, not listed above						
PSYCHOLOGY COURSES						
General theory of psychology						
Mental hygiene and abnormal psychology						
Testing and quantitative methods						
Child and genetic psychology						
Social psychology, sociology						
Other psychology courses, not listed above						

A SURVEY OF TEACHER OPINION CONCERNING PUPIL BEHAVIOR

Elmer J. Clark

You have been selected because of your extensive training and experience in the field of teacher-pupil relationships to contribute to a survey of teacher opinion concerning pupil behavior. The author of this study expresses his gratitude for your cooperation. You will be furnished with a summary of the survey upon its completion.

General Directions

1. This survey is divided into three parts. Part I deals with personal data, Part II consists of the Guilford-Martin Inventories, and Part III is an annoyance evaluation instrument. IT IS IMPORTANT THAT YOU COMPLETE ALL THREE PARTS OF THE SURVEY.
2. Please do not discuss the survey with others before you have completed it.
3. Do not sign your name to the survey material--your responses will remain strictly anonymous. However, for statistical purposes you have been assigned a code number. In order that the author might contact you in the future, you are asked to hand in a TEACHER IDENTIFICATION SHEET containing your code number, name, address, and school. A representative of your group will keep this information and will not allow other persons to have access to it.

PART I. PERSONAL DATA

Directions

Unless otherwise directed, check the appropriate response to each of the items on the accompanying PERSONAL DATA INVENTORY. In answering item 1, for example, if your age at last birthday was 26 you should place a check (x) inside the parentheses before the response, "25-29 years."

PART II. GUILFORD-MARTIN INVENTORIES

Directions

1. Complete the three Guilford-Martin Inventories as directed.
2. Record your results on the answer sheets which are provided for each inventory, please do not write on the inventories themselves.
3. It is important that you USE THE PENCIL PROVIDED and that you NOT FOLD THE ANSWER SHEETS.
4. UNLESS ALL ITEMS ARE ANSWERED, YOUR RESPONSES WILL BE OF NO VALUE TO THE AUTHOR.

PART III. ANNOYANCE EVALUATION INSTRUMENT

Directions

1. Here are several pairs of pupil behavior items. You are asked to evaluate each pair of items and to indicate which member of the pair is more likely to annoy you.
2. Record your annoyance evaluations on the answer sheet marked "Annoyance Evaluations." When you have decided which member of each pair is more likely to annoy you, blacken the corresponding space on the answer sheet with the pencil provided. In evaluating the first pair of behaviors, for example, place a mark below "T" if you decide that "Lies when being questioned about misconduct" is more likely to annoy you than "Has a cluttered desk." Likewise, place a mark below "F" if you decide that "Has a cluttered desk" is more likely to annoy you than "Lies when being questioned about misconduct." MAKE ONE AND ONLY ONE MARK FOR EACH ITEM.
3. For the purposes of this instrument, pupil behavior is considered to include any behavior exhibited in the school, i. e. in the classroom, on the playground, in the halls, etc.
4. An annoying behavior is considered to be a behavior which irritates or disturbs a person in any way.
5. BE SURE TO ANSWER ALL ITEMS.

Evaluations

- | | |
|---|---|
| 1. T. Lies when being questioned about misconduct | 7. T. Picks his nose |
| F. Has a cluttered desk | F. Fails to obey a safety patrol boy |
| 2. T. Bullies other pupils on the playground | 8. T. Copies another pupil's answers |
| F. Coughs without covering his face | F. Lies when being questioned about misconduct |
| 3. T. Never gets things done on time | 9. T. Has a cluttered desk |
| F. Won't start working without being prompted | F. Coughs without covering his face |
| 4. T. Picks on younger children | 10. T. Won't start working without being prompted |
| F. Doesn't pay attention to class discussion | F. Bullies other pupils on the playground |
| 5. T. Makes a disturbance when the teacher leaves the classroom | 11. T. Doesn't pay attention to class discussion |
| F. Wears dirty clothes | F. Never gets things done on time |
| 6. T. Disturbs other pupils during study periods | 12. T. Wears dirty clothes |
| F. Neglects to do his assignment | F. Is inmolite to other pupils |

3. T. Neglects to do his assignment
F. Makes a disturbance when the teacher leaves the classroom
4. T. Fails to obey a safety patrol boy
F. Disturbs other pupils during study period
5. T. Copies another pupil's answers
F. Picks his nose
6. T. Coughs without covering his face
F. Lies when being questioned about misconduct
7. T. Won't start working without being prompted
F. Has a cluttered desk
8. T. Bullies other pupils on the playground
F. Doesn't pay attention to class discussion
9. T. Has body odor
F. Wears dirty clothes
10. T. Is impolite to other pupils
F. Neglects to do his assignment
11. T. Makes a disturbance when the teacher leaves the classroom
F. Fails to obey a safety patrol boy
12. T. Disturbs other pupils during study periods
F. Copies another pupil's answers
13. T. Lies when being questioned about misconduct
F. Picks his nose
14. T. Coughs without covering his face
F. Won't start working without being prompted
15. T. Doesn't pay attention to class discussion
F. Has a cluttered desk
16. T. Wears dirty clothes
F. Interrupts during class discussions
17. T. Neglects to do his assignment
F. Has body odor
18. T. Fails to obey a safety patrol boy
F. Is impolite to other pupils
19. T. Copies another pupil's answers
F. Makes a disturbance when the teacher leaves the classroom
20. T. Picks his nose
F. Disturbs other pupils during study periods
21. T. Won't start working without being prompted
F. Lies when being questioned about misconduct
22. T. Doesn't pay attention to class discussion
F. Coughs without covering his face
23. T. Has a cluttered desk
F. Crowds ahead of others in line
24. T. Interrupts during class discussions
F. Neglects to do his assignment
25. T. Has body odor
F. Fails to obey a safety patrol boy
26. T. Is impolite to other pupils
F. Copies another pupil's answers

- 7 T Makes a disturbance when the teacher leaves the classroom
F Picks his nose
- 8 T Lies when being questioned about misconduct
F Disturbs other pupils during study periods
- 9 T Won't start working without being prompted
F Doesn't pay attention to class discussion
- 0 T Crowds ahead of others in line
F Coughs without covering his face
- 1 T Reads comic books during study periods
F Has a cluttered desk
- 2 T Fails to obey a safety patrol boy
F Interrupts during class discussions
- 3 T Copies another pupil's answers
F Has body odor
- 4 T Picks his nose
F Is impolite to other pupils
- 5 T Disturbs other pupils during study periods
F Makes a disturbance when the teacher leaves the classroom
- 6 T Doesn't pay attention to class discussion
F Lies when being questioned about misconduct
- 7 T Crowds ahead of others in line
F Won't start working without being prompted
- 8 T Coughs without covering his face
F Reads comic books during study periods
- 9 T Has a cluttered desk
F Demands attention from the teacher even when she is busy
- 50 T Interrupts during class discussions
F Copies another pupil's answers
- 51 T Has body odor
F Picks his nose
- 52 T Is impolite to other pupils
F Disturbs other pupils during study periods
- 53 T Lies when being questioned about misconduct
F Makes a disturbance when the teacher leaves the classroom
- 54 T Doesn't pay attention to class discussion
F Crowds ahead of others in line
- 55 T Won't start working without being prompted
F Reads comic books during study periods
- 56 T Demands attention from the teacher even when she is busy
F Coughs without covering his face
- 57 T Chews gum in the classroom
F Has a cluttered desk
- 58 T Picks his nose
F Interrupts during class discussions
- 59 T Disturbs other pupils during study periods
F Has body odor
- 60 T Makes a disturbance when the teacher leaves the classroom
F Is impolite to other pupils
- 61 T Crowds ahead of others in line
F Lies when being questioned about misconduct
- 62 T Reads comic books during study periods
F Doesn't pay attention to class discussion

- 3 T Won't start working without being prompted
F Demands attention from the teacher even when she is busy
- 4 T Coughs without covering his face
F Chews gum in the classroom
- 5 T Has a cluttered desk
F Hands in papers that aren't neat
- 6 T Interrupts during class discussions
F Disturbs other pupils during study periods
- 7 T Has body odor
F Makes a disturbance when the teacher leaves the classroom
- 8 T Lies when being questioned about misconduct
F Is impolite to other pupils
- 9 T Reads comic books during study periods
F Crowds ahead of others in line
- 0 T Doesn't pay attention to class discussion
F Demands attention from the teacher even when she is busy
- 1 T Chews gum in the classroom
F Won't start working without being prompted
- 2 T Coughs without covering his face
F Hands in papers that aren't neat
- 3 T Gets out of line during fire drills
F Has a cluttered desk
- 4 T Makes a disturbance when the teacher leaves the classroom
F Interrupts during class discussions
- 5 T Is impolite to other pupils
F Has body odor
- 6 T Reads comic books during study periods
F Lies when being questioned about misconduct
- 7 T Crowds ahead of others in line
F Demands attention from the teacher even when she is busy
- 8 T Chews gum in the classroom
F Doesn't pay attention to class discussion
- 9 T Won't start working without being prompted
F Hands in papers that aren't neat
- 0 T Gets out of line during fire drills
F Coughs without covering his face
- 1 T Has a cluttered desk
F Teases other children
- 2 T Interrupts during class discussions
F Is impolite to other pupils
- 3 T Lies when being questioned about misconduct
F Has body odor
- 4 T Demands attention from the teacher even when she is busy
F Reads comic books during study periods
- 5 T Chews gum in the classroom
F Crowds ahead of others in line
- 6 T Doesn't pay attention to class discussion
F Hands in papers that aren't neat
- 7 T Gets out of line during fire drills
F Won't start working without being prompted
- 8 T Coughs without covering his face
F Teases other children

- 89 T Is tardy frequently
F Has a cluttered desk
- 90 T Has body odor
F Interrupts during class discussions
- 91 T Demands attention from the teacher even when she is busy
F Lies when being questioned about misconduct
- 92 T Reads comic books during study periods
F Chews gum in the classroom
- 93 T Hands in papers that aren't neat
F Crowds ahead of others in line
- 94 T Gets out of line during fire drills
F Doesn't pay attention to class discussion
- 95 T Won't start working without being prompted
F Teases other children
- 96 T Is tardy frequently
F Coughs without covering his face
- 97 T Has a cluttered desk
F Has dirty face and hands
- 98 T Lies when being questioned about misconduct
F Interrupts during class discussions
- 99 T Demands attention from the teacher even when she is busy
F Chews gum in the classroom
- 100 T Hands in papers that aren't neat
F Reads comic books during study periods
- 101 T Crowds ahead of others in line
F Gets out of line during fire drills
- 102 T Doesn't pay attention to class discussion
F Teases other children
- 103 T Is tardy frequently
F Won't start working without being prompted
- 104 T Has dirty face and hands
F Coughs without covering his face
- 105 T Wastes paper while doing assignment
F Has a cluttered desk
- 106 T Chews gum in the classroom
F Lies when being questioned about misconduct
- 107 T Demands attention from the teacher even when she is busy
F Hands in papers that aren't neat
- 108 T Gets out of line during fire drills
F Reads comic books during study periods
- 109 T Teases other children
F Crowds ahead of others in line
- 110 T Is tardy frequently
F Doesn't pay attention to class discussion
- 111 T Won't start working without being prompted
F Has dirty face and hands
- 112 T Coughs without covering his face
F Wastes paper while doing assignment
- 113 T Has a cluttered desk
F Wears dirty clothes
- 114 T Lies when being questioned about misconduct
F Forgets to bring school supplies to class
- 115 T Hands in papers that aren't neat
F Chews gum in the classroom

- 116 T Gets out of line during fire drills
F Demands attention from the teacher even when she is busy
- 117 T Reads comic books during study periods
F Teases other children
- 118 T Crowds ahead of others in line
F Is tardy frequently
- 119 T Doesn't pay attention to class discussion
F Has dirty face and hands
- 120 T Wastes paper while doing assignment
F Won't start working without being prompted
- 121 T Wears dirty clothes
F Coughs without covering his face
- 122 T Neglects to do his assignment
F Has a cluttered desk
- 123 T Forgets to bring school supplies to class
F Makes noises during study periods
- 124 T Hands in papers that aren't neat
F Lies when being questioned about misconduct
- 125 T Chews gum in the classroom
F Gets out of line during fire drills
- 126 T Teases other children
F Demands attention from the teacher even when she is busy
- 127 T Is tardy frequently
F Reads comic books during study periods
- 128 T Has dirty face and hands
F Crowds ahead of others in line
- 129 T Wastes paper while doing assignment
F Doesn't pay attention to class discussion
- 130 T Won't start working without being prompted
F Wears dirty clothes
- 131 T Coughs without covering his face
F Neglects to do his assignment
- 132 T Has a cluttered desk
F Fails to obey a safety patrol boy
- 133 T Is a tattletale
F Forgets to bring school supplies to class
- 134 T Makes noises during study periods
F Lies when being questioned about misconduct
- 135 T Hands in papers that aren't neat
F Gets out of line during fire drills
- 136 T Chews gum in the classroom
F Teases other children
- 137 T Demands attention from the teacher even when she is busy
F Is tardy frequently
- 138 T Reads comic books during study periods
F Has dirty face and hands
- 139 T Crowds ahead of others in line
F Wastes paper while doing assignment
- 140 T Doesn't pay attention to class discussion
F Wears dirty clothes
- 141 T Neglects to do his assignment
F Won't start working without being prompted

- 42 T Fails to obey a safety patrol boy
F Coughs without covering his face
- 43 T Has a cluttered desk
F Copies another pupil's answers
- 44 T Forgets to bring school supplies to class
F Blows bubble gum in the classroom
- 45 T Is a tattletale
F Makes noises during study periods
- 46 T Lies when being questioned about misconduct
F Gets out of line during fire drills
- 47 T Teases other children
F Hands in papers that aren't neat
- 48 T Is tardy frequently
F Chews gum in the classroom
- 49 T Has dirty face and hands
F Demands attention from the teacher even when she is busy
- 50 T Wastes paper while doing assignment
F Reads comic books during study periods
- 51 T Neglects to do his assignment
F Doesn't pay attention to class discussion
- 152 T Fails to obey a safety patrol boy
F Won't start working without being prompted
- 153 T Coughs without covering his face
F Copies another pupil's answers
- 154 T Picks his nose
F Has a cluttered desk
- 155 T Defaces library books
F Forgets to bring school supplies to class
- 156 T Makes noises during study periods
F Blows bubble gum in the classroom
- 157 T Is a tattletale
F Lies when being questioned about misconduct
- 158 T Gets out of line during fire drills
F Teases other children
- 159 T Hands in papers that aren't neat
F Is tardy frequently
- 160 T Chews gum in the classroom
F Has dirty face and hands
- 161 T Demands attention from the teacher even when she is busy
F Wastes paper while doing assignment
- 162 T Doesn't pay attention to class discussion
F Fails to obey a safety patrol boy
- 163 T Won't start working without being prompted
F Copies another pupil's answers
- 164 T Coughs without covering his face
F Picks his nose
- 165 T Has a cluttered desk
F Disturbs other pupils during study periods
- 166 T Slouches down in his seat
F Forgets to bring school supplies to class
- 167 T Makes noises during study periods
F Defaces library books

- 68 T Blows bubble gum in the class-room
F Is a tattletale
- 69 T Lies when being questioned about misconduct
F Teases other children
- 70 T Is tardy frequently
F Gets out of line during fire drills
- 71 T Has dirty face and hands
F Hands in papers that aren't neat
- 72 T Wastes paper while doing assignment
F Chews gum in the classroom
- 73 T Copies another pupil's answers
F Doesn't pay attention to class discussion
- 74 T Picks his nose
F Won't start working without being prompted
- 75 T Disturbs other pupils during study periods
F Coughs without covering his face
- 76 T Makes a disturbance when the teacher leaves the classroom
F Has a cluttered desk
- 77 T Forgets to bring school supplies to class
F Shows off when visitors enter the classroom
- 78 T Makes noises during study periods
F Slouches down in his seat
- 79 T Defaces library books
F Is a tattletale
- 80 T Blows bubble gum in the class-room
F Lies when being questioned about misconduct
- 181 T Teases other children
F Is tardy frequently
- 182 T Has dirty face and hands
F Gets out of line during fire drills
- 183 T Hands in papers that aren't neat
F Wastes paper while doing assignment
- 184 T Doesn't pay attention to class discussion
F Picks his nose
- 185 T Won't start working without being prompted
F Disturbs other pupils during study periods
- 186 T Coughs without covering his face
F Makes a disturbance when the teacher leaves the classroom
- 187 T Has a cluttered desk
F Is impolite to other pupils
- 188 T Picks on younger children
F Forgets to bring school supplies to class
- 189 T Shows off when visitors enter the classroom
F Makes noises during study periods
- 190 T Slouches down in his seat
F Is a tattletale
- 191 T Blows bubble gum in the classroom
F Defaces library books
- 192 T Lies when being questioned about misconduct
F Is tardy frequently
- 193 T Has dirty face and hands
F Teases other children
- 194 T Wastes paper while doing assignment
F Gets out of line during fire drills

- 95 T Disturbs other pupils during study periods
F Doesn't pay attention to class discussion
- 96 T Makes a disturbance when the teacher leaves the classroom
F Won't start working without being prompted
- 97 T Is impolite to other pupils
F Coughs without covering his face
- 98 T Has body odor
F Has a cluttered desk
- 99 T Forgets to bring school supplies to class
F Never gets things done on time
- 200 T Makes noises during study periods
F Picks on younger children
- 201 T Is a tattletale
F Shows off when visitors enter the classroom
- 202 T Blows bubble gum in the classroom
F Slouches down in his seat
- 203 T Defaces library books
F Lies when being questioned about misconduct
- 204 T Is tardy frequently
F Has dirty face and hands
- 205 T Teases other children
F Wastes paper while doing assignment
- 206 T Doesn't pay attention to class discussion
F Makes a disturbance when the teacher leaves the classroom
- 207 T Won't start working without being prompted
F Is impolite to other pupils
- 208 T Coughs without covering his face
F Has body odor
- 209 T Has a cluttered desk
F Interrupts during class discussions
- 210 T Bullies other pupils on the playground
F Forgets to bring school supplies to class
- 211 T Never gets things done on time
F Makes noises during study periods
- 212 T Picks on younger children
F Is a tattletale
- 213 T Shows off when visitors enter the classroom
F Blows bubble gum in the classroom
- 214 T Slouches down in his seat
F Defaces library books
- 215 T Lies when being questioned about misconduct
F Has dirty face and hands
- 216 T Is tardy frequently
F Wastes paper while doing assignment
- 217 T Is impolite to other pupils
F Doesn't pay attention to class discussion
- 218 T Has body odor
F Won't start working without being prompted
- 219 T Interrupts during class discussions
F Coughs without covering his face
- 220 T Forgets to bring school supplies to class
F Has a cluttered desk
- 221 T Makes noises during study periods
F Bullies other pupils on the playground

- 222 T Is a tattletale
F Never gets things done on time
- 223 T Blows bubble gum in the classroom
F Picks on younger children
- 224 T Defaces library books
F Shows off when visitors enter the classroom
- 225 T Slouches down in his seat
F Lies when being questioned about misconduct
- 226 T Wastes paper while doing assignment
F Has dirty face and hands
- 227 T Doesn't pay attention to class discussion
F Has body odor
- 228 T Won't start working without being prompted
F Interrupts during class discussion
- 229 T Coughs without covering his face
F Forgets to bring school supplies to class
- 230 T Has a cluttered desk
F Makes noises during study periods
- 231 T Bullies other pupils on the playground
F Is a tattletale
- 232 T Never gets things done on time
F Blows bubble gum in the classroom
- 233 T Picks on younger children
F Defaces library books
- 234 T Shows off when visitors enter the classroom
F Slouches down in his seat
- 235 T Lies when being questioned about misconduct
F Wastes paper while doing assignment
- 236 T Interrupts during class discussions
F Doesn't pay attention to class discussion
- 237 T Forgets to bring school supplies to class
F Won't start working without being prompted
- 238 T Makes noises during study periods
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- 239 T Is a tattletale
F Has a cluttered desk
- 240 T Blows bubble gum in the classroom
F Bullies other pupils on the playground
- 241 T Defaces library books
F Never gets things done on time
- 242 T Slouches down in his seat
F Picks on younger children
- 243 T Shows off when visitors enter the classroom
F Lies when being questioned about misconduct
- 244 T Doesn't pay attention to class discussion
F Forgets to bring school supplies to class
- 245 T Won't start working without being prompted
F Makes noises during study periods
- 246 T Coughs without covering his face
F Is a tattletale

- 47 T Has a cluttered desk
F Blows bubble gum in the classroom
- 48 T Bullies other pupils on the playground
F Defaces library books
- 49 T Never gets things done on time
F Slouches down in his seat
- 50 T Picks on younger children
F Shows off when visitors enter the classroom
- 51 T Lies when being questioned about misconduct
F Wears dirty clothes
- 52 T Makes noises during study periods
F Doesn't pay attention to class discussion
- 53 T Is a tattle-tale
F Won't start working without being prompted
- 54 T Blows bubble gum in the classroom
F Coughs without covering his face
- 55 T Defaces library books
F Has a cluttered desk
- 56 T Slouches down in his seat
F Bullies other pupils on the playground
- 257 T Shows off when visitors enter the classroom
F Never gets things done on time
- 58 T Picks on younger children
F Lies when being questioned about misconduct
- 59 T Wears dirty clothes
F Neglects to do his assignment
- 60 T Doesn't pay attention to class discussion
F Is a tattle-tale
- 261 T Won't start working without being prompted
F Blows bubble gum in the classroom
- 262 T Coughs without covering his face
F Defaces library books
- 263 T Has a cluttered desk
F Slouches down in his seat
- 264 T Bullies other pupils on the playground
F Shows off when visitors enter the classroom
- 265 T Never gets things done on time
F Picks on younger children
- 266 T Lies when being questioned about misconduct
F Neglects to do his assignment
- 267 T Fails to obey a safety patrol boy
F Wears dirty clothes
- 268 T Blows bubble gum in the classroom
F Doesn't pay attention to class discussion
- 269 T Defaces library books
F Won't start working without being prompted
- 270 T Slouches down in his seat
F Coughs without covering his face
- 271 T Shows off when visitors enter the classroom
F Has a cluttered desk
- 272 T Picks on younger children
F Bullies other pupils on the playground
- 273 T Never gets things done on time
F Lies when being questioned about misconduct

- 74 T Neglects to do his assignment
F Fails to obey a safety patrol boy
- 75 T Wears dirty clothes
F Copies another pupil's answers
- 76 T Defaces library books
F Doesn't pay attention to class discussion
- 77 T Slouches down in his seat
F Won't start working without being prompted
- 78 T Shows off when visitors enter the classroom
F Coughs without covering his face
- 79 T Picks on younger children
F Has a cluttered desk
- 80 T Bullies other pupils on the playground
F Never gets things done on time
- 81 T Lies when being questioned about misconduct
F Fails to obey a safety patrol boy
- 82 T Copies another pupil's answers
F Neglects to do his assignment
- 83 T Wears dirty clothes
F Picks his nose
- 84 T Doesn't pay attention to class discussion
F Slouches down in his seat
- 285 T Won't start working without being prompted
F Shows off when visitors enter the classroom
- 286 T Coughs without covering his face
F Picks on younger children
- 287 T Has a cluttered desk
F Never gets things done on time
- 288 T Bullies other pupils on the playground
F Lies when being questioned about misconduct
- 289 T Fails to obey a safety patrol boy
F Copies another pupil's answer
- 290 T Picks his nose
F Neglects to do his assignment
- 291 T Disturbs other pupils during study periods
F Wears dirty clothes
- 292 T Shows off when visitors enter the classroom
F Doesn't pay attention to class discussion
- 293 T Picks on younger children
F Won't start working without being prompted
- 294 T Never gets things done on time
F Coughs without covering his face
- 295 T Bullies other pupils on the playground
F Has a cluttered desk

ENVELOPE STICKER

Code Number _____

BEFORE YOU HAND IN THIS ENVELOPE, PLEASE CHECK:

- 1. Have you completed ALL answers on the four answer sheets and on the Personal Data Inventory?
- 2. Have you returned the following materials?
 - a. Completed Personal Data Inventory.
 - b. The Guilford-Martin Personnel Inventory, with completed answer sheet (150 answers).
 - c. The Guilford-Martin Inventory of Factors GAMIN, with completed answer sheet (186 answers).
 - d. An Inventory of Factors STDCR, with completed answer sheet (175 answers).
 - e. Completed answer sheet for Annoyance Evaluation Instrument (295 answers).
 - f. Pencil for marking answer sheets.

TEACHER IDENTIFICATION SHEET

Code Number _____

Name _____

Address _____
(Street and Number) (City) (State)

School _____

THE GUILFORD-MARTIN TEMPERAMENT PROFILE CHART

How to Use the Chart

For each trait indicated by the letter at the top of the column, find the class interval below in which the raw score for that particular trait falls and encircle in colored pencil or in ink the pair of scores representing that class interval. When all the traits are designated on the profile in this way, a line should be drawn connecting the circles for each neighboring pair of circles.

The C-scores (scaled scores) are indicated at the extreme left and right of the chart in an 11-point scale, 0 representing the lowest 1% of the 500 cases used in deriving these norms, 1 the next 3%, 2 the next 7%, 3 the next 12%, 4 the next 17%, 5 (middle C-score) 20% of the cases, 6 the next 17%, 7 the next 12%, 8 the next 7%, 9 the next 3%, and 10 the highest 1% of the cases. Because the distribution of scores for trait M is bimodal, C-score 4 on the chart for trait M represents 20% of the cases, C-score 5, 14%, and C-score 6, 20%.

Interpretation of the Scores on the 13 Temperament Traits

From Guilford's Inventory of Factors **STDCR**

- S** — Social Introversion-Extraversion.—A high C-score indicates sociability, a tendency to seek social contacts and to enjoy the company of others. A low C-score indicates shyness, a tendency to withdraw from social situations and to be seclusive. A high C-score is more desirable for mental health than is a low C-score. A very low C-score on S indicates a need for guidance directed toward increased social participation.
- T** — Thinking Introversion-Extraversion.—A high C-score indicates a lack of introspectiveness and an extrovertive orientation of the thinking processes. A low C-score indicates an inclination to meditative thinking, philosophizing, analyzing one's self and others, and an introspective disposition. The middle range of C-score is more desirable for mental health than either extreme on trait T. Each extreme, however, may have its value for certain types of occupation.
- D** — Depression.—A high C-score indicates freedom from depression, a cheerful, optimistic disposition. A low C-score indicates a chronically depressed mood including feelings of unworthiness and guilt. The higher the C-score on trait D, the better is likely to be the emotional adjustment of the individual.
- C** — Cycloid Disposition.—A high C-score indicates stable emotional reactions and moods, and freedom from cycloid tendencies. A low C-score means the presence of cycloid tendencies as shown in strong emotional reactions, fluctuations in mood, and a disposition toward flightiness and instability. The higher the C-score on trait C, the better will be the emotional adjustment of the individual, except that scores that are too high may indicate a colorless, inert individual.
- R** — Rhythymia.—A high C-score indicates a happy-go-lucky or carefree disposition, liveliness, and impulsiveness. A low C-score indicates an inhibited disposition and an overcontrol of the impulses. Both extremes of C-scores may represent psychological maladjustments and a C-score in the middle range is desirable for mental health.

From the Guilford-Martin Inventory of Factors **GAMIN**

- G** — General Activity.—A high C-score indicates a tendency to engage in vigorous overt action. A low C-score indicates a tendency to inertness and a disinclination for motor activity. An extremely high C-score on trait G may represent a manic tendency while an extremely low C-score may be an indication of a hypothyroid condition or other causes of inactivity. Thus, for good mental health a C-score on G in the middle range is usually most desirable.
- A** — Ascendance-Submission.—A high C-score indicates social leadership and a low C-score social passiveness. The C-score of a person on trait A must be interpreted in the light of his other characteristics of temperament as shown on the profile chart, and no general rule can be set forth as to what C-scores on trait A are most desirable for mental health. However, there is emphasis in our culture on the general desirability of a high C-score on trait A. Females tend to have distinctly lower C-scores on A than do males.
- M** — Masculinity-Femininity.—A high C-score on this trait indicates masculinity of emotional and temperamental make-up and a low C-score indicates femininity. The C-scores of the majority of males are above 5 and the majority of females have C-scores below 5. Males whose C-scores are very low are sometimes found either to lack their full quota of male hormones or to have an oversupply of female hormones.
- I** — Inferiority Feelings.—A high C-score indicates self-confidence and a lack of inferiority feelings. A low C-score indicates a lack of confidence, under-evaluation of one's self, and feelings of inadequacy and inferiority. The higher the C-score on trait I, the better for mental health, with the exception of extremely high cases in which clinical investigation may reveal a superiority compensation for hidden inferiority feelings. Many psychoneurotics have very low C-scores on trait I.
- N** — Nervousness.—A high C-score indicates a tendency to be calm, unruffled, and relaxed; a low C-score indicates jumpiness, jitteriness, and a tendency to be easily distracted, irritated, and annoyed. The higher the C-score on trait N, the better for mental health unless there are clinical indications that an overly sluggish and torpid condition is the basis for an extremely high C-score. Extremely low C-scores in some cases may involve a lack of calcium in the blood. In many cases, a mental conflict may be the basis for the emotional tension expressed in jitteriness and irritability.

From the Guilford-Martin Personnel Inventory **I**

- O** — Objectivity.—A high C-score on this trait indicates a tendency to view one's self and surroundings objectively and dispassionately. A low C-score indicates a tendency to take everything personally and subjectively and to be hypersensitive. The higher the C-score on trait O, the better for mental health. Pathological cases may develop paranoid ideas of reference and delusions of persecution.
- Co** — Cooperativeness.—A high C-score indicates a willingness to accept things and people as they are and a generally tolerant attitude. A low C-score indicates an overcriticalness of people and things and an intolerant attitude. The higher the C-score on trait Co, the better for mental health unless the C-score on G or clinical signs indicate a torpid and sluggish condition to be the basis of the lack of criticalness. Overcriticalness is often a compensation for hidden feelings of inadequacy. Pathological cases may exhibit a paranoid projection of their conflicts and impulses.
- Ag** — Agreeableness.—A high C-score indicates an agreeable lack of quarrelsomeness and a lack of domineering qualities. A low C-score indicates a belligerent, domineering attitude and an overreadiness to fight over trifles. Very low scores on trait Ag indicate an extreme craving for superiority as an end in itself developed as a compensation for some chronic frustration and in pathological cases may lead to paranoid delusions of grandeur. It is possible that a sadistic component may occur in some of the pathological cases. Further investigation should be made of the psychological structure of extremely low C-scores on traits O, Co, and Ag, as the paranoid area of temperament which they cover is predisposing toward troublemaking behavior in industry, marriage, and other social situations.

C-Scores

C-Score	S	T	D	C	R	G	A	M	I	N	O	Ag	Co	C-Score
10	0	0	0	0	70+	24	35+	30+	48+	41+	71+	56+	97+	10
9	1	11	2	6	69	23	34	29	47	40	70	55	96	9
	3	14	5	9	64	22	33	28	45	38	68	53	89	
8	4	15	6	10	63	21	32	27	44	37	67	52	88	8
	6	19	9	13	58	20	30	26	43	35	62	47	81	
7	7	20	10	14	57	19	29	25	42	34	61	46	80	7
	11	25	13	18	51	17	26	24	40	32	55	42	72	
6	12	26	14	19	50	16	25	23	39	31	54	41	71	6
	17	31	18	24	44	14	23	20	36	28	49	37	65	
5	18	32	19	25	43	13	22	19	35	27	48	36	64	5
	23	37	25	31	38	12	19	18	33	24	42	32	54	
4	24	38	26	32	37	11	18	17	32	23	41	31	53	4
	28	42	31	38	30	9	15	13	28	20	36	27	45	
3	29	43	32	39	29	8	14	12	27	19	35	26	44	3
	33	47	38	46	23	7	12	11	22	16	28	22	35	
2	34	48	39	47	22	6	11	10	21	15	27	21	34	2
	39	53	45	52	16	5	8	8	15	11	20	17	27	
1	40	54	46	53	15	4	7	7	14	10	19	16	26	1
	46	61	53	58	10	3	5	6	11	7	13	12	20	
0	47+	62+	54+	59+	9	2	4	5	10	6	12	11	19	0

C-Score

S

T

D

C

R

G

A

M

I

N

O

Ag

Co

C-Score

APPENDIX IV

Final Contact Letters:

Letter to Selected Teachers
Letter to Teachers Holding
Code Number
Letter to Principals

1435 University Terrace
Ann Arbor, Michigan
May 10, 1948

To Selected Teachers of the Flint Public Schools:

Thank you for volunteering to take part in the survey of teacher opinion concerning pupil behavior. I realize that you are especially busy at this time of year. However, the study should provide valuable information concerning the working conditions of teachers.

If you have not already completed the survey, I should like to emphasize that you should answer all items in all the inventories. Since your responses will be machine scored, it is especially important that you follow the directions accompanying the inventories.

When you have completed the survey, please hand your envelope to the person who has been designated to collect it. Your envelope is due on or before May ___.

Thank you again for assisting in this project.

Sincerely yours,

Elmer J. Clark
Elmer J. Clark

1435 University Terrace
Ann Arbor, Michigan
May 19, 1948

To the Teacher Holding Code Number _____:

I have not yet received your "Survey of Teacher Opinion" envelope. Since I must submit the answer sheets for machine scoring within a few days, would you please mail your envelope to me at the address above? DO NOT MAIL THE THIRTEEN-PAGE DOCUMENT ENTITLED, "A SURVEY OF TEACHER OPINION CONCERNING PUPIL BEHAVIOR." Send only the material listed on the outside of the envelope.

You will find twelve cents (\$.12) postage enclosed. Thank you for your cooperation in this project.

Sincerely yours,

Elmer J. Clark

Enclosure.

1435 University Terrace
Ann Arbor, Michigan
June 5, 1948

Miss _____
Principal, _____ School
Flint, Michigan

Dear Miss _____ :

I should like to thank you for assisting me in obtaining information concerning the reaction of _____ School teachers to pupil behavior. Your teachers completed the survey promptly and they were very cooperative. The data thus obtained should be of much value to me.

You and your teachers will receive a summary of my findings next fall.

You will find a copy of my dissertation on file at the University of Michigan after the study has been completed, if you would be interested in it.

Thank you again for your cooperation.

Sincerely yours,

Elmer J. Clark

APPENDIX V

Hollerith Machine Computation Sheet

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