AN ANALYTICAL STUDY OF ELEMENTARY SCHOOL CLASSROOM BEHAVIOR

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CHAPTER I

INTRODUCTION

Classroom behavior through the school year follows no specified pattern; rather, it varies in accordance with the pressures and forces operating upon each individual, as well as upon the class as a whole. Never should it be said that a class once situated in the classroom, is free from these pressures. Pressures exist, and regardless of their varying magnitude, they do influence the behavior pattern of every child. Pupil relationships, news events, weather conditions, and personality adjustment are some of the pressures which operate upon every child whether he be in or out of the school environment; closing a classroom door does not automatically leave these pressures at the doorstep. There is little doubt that these pressures vary from individual to individual. Mort and Vincent repeatedly point out the factor of individual differences as being a vital issue in any school situation.[1] It is fictional to go along on the assumption that all sixth graders are alike; fantastic, to suppose that they should be studying, or are studying, in the same way. It is a simple task to see that pupils differ in height, weight, hair and eye color, yet the concept of individuality appears to go no further than these overt characteristics in many of our present day school systems. It is true, differences in understanding, facility of ideas, and a thousand other factors associated

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[1] P. R. Mort and W. S. Vincent, A Look at Our Schools.

with mind and emotions are much more difficult to observe and therefore the absoluteness of individual differences tends to fade because of its covert characteristics. This is a pitfall for many teachers. They are fully aware of differences of an overt nature, but covert differences tend to receive little recognition. Covert differences between pupils can be expressed through their pattern of behavior. A thorough understanding of these behavior patterns can be an initial step towards understanding individual differences. Pupils differ in background and past experience, in friendships and affections, possibly in the reactions to news events, and possibly in their irregularities of weather conditions. The behavior pattern of each pupil may be an indication of the degree to which these pressures are being felt. A behavior pattern may be an excellent indicator of the presence of a maladjustment in the personality structure; an understanding teacher should be aware of this possible relationship. One goal of a good guidance department should be an adequate understanding of pupil behavior. Guidance is becoming more and more a part of the teaching program, and behavior patterns can be the pulse by which a teacher may locate possible guidance needs. Through better understanding of individual patterns of behavior as well as group patterns of behavior there can be found an avenue through which a better understanding of the pupil can take place. Traxler points out that the first duty of those charged with teaching is to build a plan which will enable the teacher to know his pupils.[2] Currently there is a trend in guidance organizations toward bringing about a closer relationship between guidance and teaching.

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[2] Arthur E. Traxler, Techniques in Guidance, p. 49.

STATEMENT OF THE PROBLEM

The purpose of this study was to determine whether patterns of variation in behavior could be measured by the method of continuous direct observation of certain aspects of behavior. It was hoped that measurements obtained by this method could be analyzed scientifically to exhibit relationships between classroom behavior and such pressures as (1) inter-pupil relationship, (2) news events, (3) local weather conditions, (4) personality adjustment, and (5) teacher personality differences.

NEED FOR THE STUDY

There is a very definite need for any study which points out the very important factor of individual differences. Since behavior is a primary step in understanding individuality, we cannot overemphasize the need for study of methods which can be used in evaluating classroom behavior. When confronted with large classes and/or increasing pressures upon teaching schedules, teachers tend to lose sight of the factor of individual differences. Studies which underline this important factor and which are instrumental in developing its recognition and measurement are needed for the improvement of educational and guidance programs.

In the matter of discipline, conformity to the officially approved social behavior is often considered the acme of social virtue. Very few teachers seem to be able to master the technique of guidance. They either give children so much freedom that the children become difficult to control, or they swing to the other extreme of domination and regimentation. Teachers sometimes believe that the fundamental requirements which they should stress are obedience and courtesy, frequently overemphasizing the need for obedience and control and underemphasizing the curriculum they are

supposed to teach.[3] This study evaluates behavior patterns which tend to exist under an authoritarian type of teacher and the type of behavior patterns which appear to exist under a teacher who places less emphasis upon external discipline.

This study points out that a single force such as weather conditions or weather variations does not affect every pupil in the same way. The study attempts to bring together in convenient form material concerning classroom behavior in order that a better understanding of behavior may result. It is intended to be read with profit by those connected not only with elementary school teaching but by those connected with all levels of teaching. Psychologists recognize that speculation plays a legitimate part in scientific thought, that the distinction between observation and speculation is not absolute, and that the two are really complimentary. Perhaps because of the recency of the separation of psychology from philosophy, perhaps because of an acute sense of need for observed facts, many psychologists regard speculation with suspicion and distaste.[4] Many fear the possibility of drawing out theories without basing them upon fact, or of drawing conclusions without establishing their significance statistically. This is a logical fear but it is one which is often overemphasized. This study attempts to neutralize speculation by statistical treatment of its results.

The major task of the writer was to present the results of classroom behavior observations with brief, but complete, analytical evaluations of the factors, with only secondary stress placed upon statistical phraseology.

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[3] E. H. Wilds, The Foundations of Modern Education, p. 570.

[4] Edna Heidbreder, Seven Psychologies, p. 14.

The writer considered including a detailed reference manual for teachers. This was to be used as a guide for suggested procedures in alleviating unsatisfactory behavior patterns found in his pupils, but external limitations compel the writer to rest satisfied with a less pretentious, but he hopes equally potent, evaluation of a problem which should bring about the desired end which is a better understanding of classroom behavior patterns.

The writer contends that the pressures evaluated herein are those which are found most frequently within the confines of a classroom. Interrelationships between these pressures probably do exist but a more detailed analysis of these relationships is not included in this study.

The interested teacher should find in this study, not only a better understanding of classroom behavior, but also answers to questions which he has frequently asked himself concerning the behavior of his class, or the behavior of individual members.

OBSERVATION OF BEHAVIOR AS SCIENTIFIC PROCEDURE

Before concluding the introductory chapter something must be said concerning the method of collecting data for this study, observation. Direct observation of behavior has only recently come to be looked upon as a scientific procedure; in fact, a great many scientists would even at the present time express serious misgivings as to the possibility of anything "objective" coming from such a method. Regardless of questions about its scientific nature, the fact remains that there are many aspects of behavior which can be studied in no other way, and one has to choose between bearing the criticism of those who emphasize the formalities of science, and foregoing the study of many behavior characteristics which may be of large practical importance. It would seem reasonable that the first requirement of a research technique is that it be adapted to the kind of field

conditions with which it must deal. Other criteria of science are important, but secondary.[5] The tendency in this study has been to limit the behavior characteristics to specific and limited characteristics which could be readily identified. The results of such observation tend to become measurements of a single behavior characteristic and can be studied as such.

By limiting the scope of the data to be gathered and by careful definition of the behavior characteristic to be observed, much of the possible variation in data based upon and due to the personal element, can be eliminated. Data tabulated through observation can be reliable data.

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[5] Carter V. Good, et al, The Methodology of Educational Research, p. 391.

CHAPTER II

PROCEDURE

A sixth grade class of an elementary school in New York State was observed every school day during the 1950-1951 school year. This class of 28 pupils was observed during the 35-minute period beginning 1:35 p.m. A tabulation sheet[1] containing all raw data for each observed daily session was filed after the completion of each session; no interpretation was carried out during the observational phase of this study. The tabulation sheet contained spaces in which each parcel of information was tabulated, such as the incidence of each behavior characteristic for each pupil. The writer, who was the observer for every class session, sat in the rear of the classroom at all times, although never sitting in the same general area on any two consecutive school days. In order to provide for an adjustment period during which the pupils would be able to adjust to the presence of a "stranger" in their classroom, the first 30 days were not considered in the final results of this study. This 30-day adjustment period provided not only for the factor of adjustment on the part of the pupils, but also as a practice session for the observer who gathered the raw data as though they were to be used. The writer is confident that his presence as an observer was quickly accepted by the pupils. This acceptance was facilitated by the fact that the observer was present at the very beginning of school during which time an adjustment process is a natural procedure for

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[1] See Appendix C for a blank copy of the tabulation sheet.

the pupils. A good situation of rapport existed between the observer and the two teachers who were in charge of the class. Both of these teachers were contacted before actual classwork began and both teachers were, in time, convinced that their methods of teaching, their methods of discipline, or their methods of administration were in no way connected with this study. The 30-day adjustment period served the purpose of adjusting the teacher to the presence of an observer. Both teachers were under the impression that the study was for the purposes of a child study report having for its goal a general picture of the elementary school classroom.

THE BEHAVIOR PATTERN USED FOR THE STUDY

The behavior pattern used in this study was made up of nine units, or characteristics, as they will be called throughout this study. The behavior pattern made up of these nine characteristics is one which the writer has used, in part or whole, in two separate studies mentioned here briefly as study A,[2] and as study B.[3] Study A made use of a pattern of behavior similar in many respects to the pattern used in this study. When setting up the behavior pattern for this study, some of the study A characteristics were discarded since their actual application in that study indicated that some overlapping with other characteristics was possible. For study B, four of the eleven characteristics in study A were used. A critical evaluation of study B results indicated that each of these four characteristics were sensitive indicators of behavior fluctuations; more than four characteristics may have been more desirable. Study A indicated that eleven

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[2] Chester R. Bilinski, "Emotionality and Reading." Unpublished Master's Report, The University of Missouri, Columbia, Missouri, 1950.

[3] Bilinski, "A Sixth Grade Class." Unpublished Master's Thesis, Oklahoma Agricultural and Mechanical College, Stillwater, Oklahoma, 1949.

characteristics were too many, while on the other hand, study B indicated a need for more characteristics. On the basis of the valuable experience and comparative evaluations derived from the use of these two behavior patterns, the writer had a foundation upon which to construct the behavior pattern for this study. In the selection of the characteristics for this study, the following points were used as a guide:

1. That the sum total of the characteristics form a general overt pattern of behavior as found to exist in a classroom.

2. That each category be final in its own area and category of behavior and not be dependent upon the interpretation of the observer.

3. That each characteristic be a complete entity rather than have overlapping tendencies with other characteristics.

These three points were the determining factors in structuring the behavior pattern. The pattern of behavior as structured here makes up a fairly complete picture of overt classroom behavior.

THE BEHAVIOR PATTERN CHARACTERISTICS

The characteristics structuring the behavior pattern for this study are nine in number. Every one of these characteristics has been used in study A or study B, or both. Symbols will be used for each of the nine characteristics in order to allow for the limited amount of space provided in the charts that will follow:

1. Volunteering, the symbol for which is VOL, is an easily observed characteristic in which the pupil has, or has not, raised his hand. The manner in which he flourishes the hand is immaterial, but the fact that the hand has been raised is the action which is tabulated. The pupils volunteered information by raising their hands only. Speaking without raising

the hand and thereby obtaining permission was discouraged by the teachers. A difficulty arises when many pupils have raised their hands in unison and then lowered them before tabulation can be completed. This difficulty in tabulation is neutralized by the fact that those who are inclined to raise their hands frequently will receive high VOL scores, those who are inclined to raise their hands infrequently will have low scores in VOL. The total amount of handraising for any one class session may not equal the total amount of tabulated handraising but differences between pupils in their tendency to VOL can be determined statistically. High scores in VOL are, of course, indicative of frequent handraising, the reason why the hand has been raised each time is not being considered here.

2. Fidgeting, FID, takes place in every classroom, and can be a sensitive indicator of feelings of unrest and discomfort. Fidgeting (FID) is defined as that common form of behavior whereby the pupil is constantly moving about in his seat in quick movements; a bouncing around effect in the seat. The FID characteristic can be indicative of general unrest and discomfort, as well as an indication of the presence of nervous habits, anxiety feelings, and/or organic discomforts. Excesses in FID will frequently be accompanied by similar excesses in other characteristics, thereby forming a pattern of behavior. Excesses suggest the presence of abnormal behavior[4] nevertheless a definite lack of incidence in a characteristic may also be an abnormal behavior tendency.

3. Getting up in the seat (GUP), is a characteristic in which the pupil merely rises in his seat but does not leave the chair. This includes

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[4] Abnormal behavior in this instance refers to that behavior which deviates widely from the mean of the class.

such variations as sitting on the heel of the shoe and/or sitting above the cradle of the seat. This behavior characteristic occurs more frequently when a permissive attitude prevails in the classroom, and the pupils are permitted to move about as they please (this is also true of the next characteristic to be discussed). High scores in GUP can be a supporting indication of attention-getting behavior. In addition, high scores could support suggestions of general restlessness, unrest, and discomfort. The physiological factor of poor eyesight should be considered also, because of the fact that pupils suffering from eyestrain will tend to stand up in order to have a better view of the blackboard.

4. Getting up in the seat and walking away (GUW), is a characteristic which will generally be more frequent in permissive types of classroom and where restrictions on inter-pupil communication are negligible. In general, high GUW scores could support indications of restless activity. GUW can also be a supporting indication, of attention-getting behavior.

5. Fingers being placed in mouth, eyes, ears, nose (FIN), is self explanatory. Characteristic FIN can be one of the more sensitive indicators of variation in classroom behavior, this contention is verified by the practical application of this characteristic in study A and study B. Although FIN pertains to the behavior characteristic of putting the fingers in the mouth, eyes, and ears, at least three-fourths of all tabulations for this characteristic pertain to nailbiting. Of the remaining one-fourth, the major portion refers to instances of finger sucking. Characteristic FIN can be a major indicator of insecurity feelings and/or anxiety feelings.

6. Fussing (FUS), includes such behavior as looking for a pencil or paper at the last minute, an inability to get started on a prescribed task, and a general inability to move smoothly and efficiently through the tasks

presented to them. Scores in FUS can be indicators of the degree of organizational ability and could be a supporting indicator of the degree of interest, insecurity-security levels, as well as feelings of inferiority.

7. Inattention (INA), is a behavior characteristic where some question may be raised as to interpretation, and rightly so. In order to negate the possibility of not being completely objective in the observation of INA, the observer permitted the situation to be a deciding factor. For example, a pupil who obviously was not directing his attention to the lecture, would receive a tabulation check as being inattentive. On the other hand, when there might be a doubt that a pupil was or was not INA then no tabulation mark would be recorded. H. C. Morrison has devised an observation procedure which uses record blanks also, for ascertaining the amount of attention during a class period.[5] His study does not use INA as only part of an entire behavior pattern but rather as the central issue in the entire study. He used a method of tabulation and testing which could not be applied in this study without running the risk of having the pupils become aware that they were being "studied." Daydreaming of an obvious nature as well as absorption in factors other than the classroom situation are regarded as incidence of inattention. High INA scores can be an indication of the degree of interest in school work, the challenge or unchallenging qualities of the classwork, and in some cases, indications of withdrawal tendencies. The INA score might be a sensitive indicator of behavior trends and could be one of the first of the behavior characteristics to indicate that a trend is taking place.

8. Scratching (SCR), is a behavior characteristic having a physiological basis and in all probability scores in this SCR might be relatively

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[5] Henry C. Morrison, The Practice of Teaching in the Secondary School, pp. 121-40.

constant. SCR is self-explanatory and there is no need for a definition of the term. This characteristic may support indications of organic disturbances as well as being a channel through which excessive activity of a nervous nature can be released.

9. Headholding (HHO), is a common classroom behavior characteristic which is expressed simply by holding up the head with either hand in a propped up position. Instances in which the pupil rests his head on his arms or on the desk are also considered HHO conditions. High HHO scores might be major indicators of fatigue and possible supporting evidence of boredom, there is also the possibility that high scores might indicate the existence of inferiority feelings, timidity, over-challenge or non-challenging class work. It is true, HHO can be a habit, but the possibility that these scores might vary in accordance to the pressures applied upon the pupil, must be considered.

In short, the characteristics making up the behavior pattern used in this study are the following:

Characteristic	Symbol
1. Volunteering	VOL
2. Fidgeting	FID
3. Getting up in seat	GUP
4. Getting up and walking from seat	GUW
5. Fingers in mouth, etc.	FIN
6. Fussing	FUS
7. Inattention	INA
8. Scratching	SCR
9. Headholding	HHO

OBSERVATION OF THE BEHAVIOR PATTERN AND ITS INTERPRETATION

Observation of the behavior of the class and the tabulation of the characteristics was not a difficult process. The experience gained in

observation and tabulation of classroom behavior for studies A and B, permitted the observational phase of this study to be conducted quickly and efficiently.

The observation of each behavior characteristic was important since each characteristic is a part of a behavior syndrome or pattern, nevertheless, no isolated characteristic of behavior is in itself sufficient for indicating any behavior consistency or inconsistency. Forms of unsatisfactory behavior such as that caused by insecurity feelings, feelings of not belonging, anxiety feelings, lack of interest, and withdrawal tendencies can only be interpreted as existent when an analysis of an entire behavior pattern is made. Interpretation of behavior patterns is dependent upon the method of observation and as pointed out by Shaffer, the fundamental principles of effective observation are to record behavior fully while it is being observed, and later to analyze the results.[6] At the risk of repetition, it is pointed out that no interpretations were made in this study until after the observational phase of the study had been completed. An example of a similar observational technique applied to a personality study was carried out by Olson[7] on the occurrence of nervous habits in normal children. He observed babies for five and ten minute intervals on successive days. Olson observed the incidence of such behavior as sucking the thumb, biting the fingers, twisting the hair, and rolling the head. He determined that these habits, as he calls them, are quite consistent in a given child and that the reports of the observer showed a high degree of uniformity. It is possible that the pressures outlined in this study,

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[6] L. F. Shaffer, The Psychology of Adjustment, p. 306.

[7] W. C. Olson, "The Measurement of Nervous Habits in Normal Children," University of Minnesota Institute of Child Welfare Monographs, (Vol. 3, 1929).

will also indicate that consistent behavior is possible under prescribed conditions. This consistent behavior could be used as a criterion of normal behavior for the pupil observed. On the other hand, this consistency in behavior can be disturbed by variations in other pressures and as a result, may provoke unexpected or fluctuating patterns of behavior.

Careful analysis of the behavior pattern as a whole, could give indications of whether nervous tendencies exist. The typical symptom of ordinary nervousness is a tendency to make useless and diffused motor responses possibly indicated through high scores in FID, FUS, SCR, and with supporting indications such as high scores in FIM. Casual observation of the behavior patterns of the so-called "nervous" pupil indicates that he cannot sit still, but twists, squirms, moves and fidgets, even when he appears to be in a comfortable position and free from external annoyances. It is possible that this type of behavior pattern can have psychological significance in that the pattern could be the result of a nonadjustive reaction to unsolved problems which among other things, could be of an inter-pupil nature. Nervous behavior is tense behavior and a careful examination of individual behavior patterns generally indicates that the nervous pupil is somewhat synonymous with a ball of wire 'all wound up and trying to unwind itself.'

The behavior patterns evaluated in this study may frequently be subtle in direction, and subtle in making itself known. It is often true that the annoyingly active child is quickly discovered while the withdrawing pupil is considered a model of perfect deportment. The possibility cannot be overlooked, that some teachers, possibly of the authoritarian type, actually promote withdrawal tendencies in their pupils. As brought out by the Wickman study, the teacher will frequently underestimate the seriousness and extent

of withdrawing forms of behavior.[8] Interpretation of behavior patterns may indicate that the pupil who withdraws from his peers tends to follow a less active pattern of behavior, this study should throw some light on this possibility. A withdrawing pupil may have high IMA scores, he might take part in academic work only when called upon and therefore would have a low VOL score, and he may have a high HHO score.

Patterns in behavior which might indicate attention getting trends may have high GUP and GUW scores, as well as a high VOL score. Attention getting behavior is often an indication of inter-pupil difficulties and a need for an examination of these difficulties through sociometric methods would be desirable. Attention getting behavior becomes abnormal only when it is becoming, or is, excessive. In relation to VOL scores, high scores may be common for certain types of pupils and could be indicative of attention getting trends. This study proposes to evaluate the possibility that those pupils rating at the lower extremes of their class popularity scale, tend to have behavior patterns indicating attention getting trends. This is a logical hypothesis since the unpopular pupil may make his bid for greater acceptance through the only means he knows of, or has at his disposal. For the most part, the pupil will get the attention he is looking for from the teacher who, as a result of his behavior, will reprimand him. Cameron maintains that an excessive need to hold the center of the stage, to impress others, and to gain their support, is always a difficult process and that this difficulty is expressed almost solely through the pattern of behavior.[9]

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[8] For further material on this subject see the Wickman study, Children's Behavior and Teacher's Attitudes. Commonwealth Fund, 1928. In addition, an abbreviated version of this study may be found in Psychology of Adjustment by L. F. Shaffer, pp. 174-75.

[9] Norman Cameron, The Psychology of Behavior Disorders, p. 96.

Daydreaming is another characteristic of behavior which is subtle and frequently not noticed by the teacher. High scores in INA might be indicative of this activity. As pointed out by Shaffer, daydreaming is an escape from reality and is not to be considered abnormal until the INA score becomes excessively high.[10] High INA scores may support suspicions that there may be a lack of challenge or over-challenge of classwork. Characteristic INA is a variable one since daydreaming in one individual may serve only as a temporary refuge, for another, a substitute for action, for others a chronic form of indicating resentment and/or gratifying wishes and ambitions.

ACTIVE AND INACTIVE BEHAVIOR PATTERNS

Behavior patterns may vary in the amount of energy and activity which makes them up and it is likely that differences in the degree of inactivity or activity, can be recognized. Active and inactive patterns of patterns of behavior can be structured through arranging the behavior characteristics in the following general groupings:[11]

1. Active (Overt) (High scores in the following characteristics with corresponding low scores in the inactive characteristics listed in 2.)

a.	Volunteering	VOL	d.	Getting up and walking from seat	GUW
b.	Fidgeting	FID	e.	Fussing	FUS
c.	Getting up in seat	GUP	f.	Scratching	SCR

2. Inactive (Overt) (High scores in the following characteristics with corresponding low scores in the active characteristics listed in 1.)

a.	Fingers in mouth, etc.	FIN
b.	Inattention	INA
c.	Headholding	HHO

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[10] L. F. Shaffer, Psychology of Adjustment, p. 101.

[11] These groupings have been drawn up by the writer who is a certified School Psychologist.

Active and inactive behavior is closely allied to the element of energy and the possibility exists that an active pattern of behavior, as outlined above, may support indications of nervousness, anxiety feelings, and in some cases, agressive tendencies. On the other hand, an inactive pattern might indicate certain tendencies to withdraw. The active pattern is one which generally will go hand in hand with greater expenditure of energy thereby suggesting a possible condition of unrest, discomfort, and an increase in anxiety feelings. An inactive pattern therefore, suggests less expenditure of energy, an indication of, or supporting the contention that, conditions of withdrawal, timidity, feelings of rejection, and fatigue, may be present.

In both, active and inactive types of behavior, the degree of activity is based upon the scores of the individual behavior characteristics concerned. These scores are the deciding factor since it is possible for two individuals to have identical scores in their entire behavior pattern, but markedly different scores in their inactive and active patterns.

DESIRABLE AND UNDESIRABLE PATTERNS OF BEHAVIOR

The desirability or undesirability of the behavior pattern has been based upon that type of behavior which is believed to be desirable for a learning atmosphere, not upon the type of disciplinary pattern desired by teachers.[12]

1. Desirable pattern

   a. Volunteering. . . . .slightly above mean score
   b. FD . . . . . .at mean score
   c. GUP and GUW . . . . .slightly above mean score

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[12] As derived after consultation with four superintendents, 13 principals, 22 teachers, and one certified school psychologist.

1. Desirable pattern (Continued)

   d. FIN, FUS, INA . . . . .below mean score
   e. HHO . . . . . .mean score

2. Undesirable pattern

   a. VOL . . . . . .below mean score
   b. FID . . . . . .above mean score
   c. GUP and GUW . . . . .slightly below mean score
   d. FIN, FUS, and INA . .above mean score
   e. HHO . . . . . .very low score[13]

The undesirability of a behavior pattern as well as the desirability of the pattern of behavior has been based upon its implications for learning, not to desirability of prescribed disciplinary behavior. The desirable pattern for learning may be one which does not emphasize control and restriction of communicative behavior. After an observation of classroom behavior, the frequency with which the characteristics have occurred may be taken as an index of the extent to which certain habits and behavior patterns have become established. Behavior patterns which are desirable are a form of desired growth and as pointed out by Good, Barr, and Scates, groups which exhibit significant acts with greater or less frequency show more or less evidence of having grown in the desired direction.[14]

TREATMENT OF DATA

The data reported in this study, Tables I through XVIII, are the means on a per student basis per classroom session. Thus a score of 1.48 for VOL means that each student in the classification volunteered 1.48 times per

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[13] HHO is very low because the pupil with an undesirable pattern will spend his time in activity in those characteristics making up the total pattern, he therefore does not have the time for HHO.

[14] C. V. Good, A. S. Barr, and D. E. Scates, The Methodology of Educational Research, p. 395.

class period. In some of the comparisons considered, stratification on certain factors was possible in which case randomized Block[15] analysis was made, otherwise a completely randomized design[16] analysis was appropriate. The analysis of variance (A.O.V.) was used in analyzing comparisons. The data for the analysis were the means per student for each of the class periods that applied to the particular comparison and conditions involved. These data are not included in this report.

Tables I, VII, XII, XVI, and XVII were treated as randomized blocks. Tables II, III, IV, V, VI, VIII, IX, XIII, XV, and XVIII were analyzed as completely randomized experiments. When applicable the method of orthoganal comparisons was applied to the above mentioned tables.

Tables X, XI, and XIV were not treated beyond the derived means. In some of these cases further statistical treatment was not advisable, while in others the comparisons that were desirable were made in other tables.

Each table that was evaluated statistically had to be evaluated characteristic by characteristic. The A.O.V. for each characteristic includes only the degrees of freedom (df) and the mean squares (M.S.). Wherever statistical significance is indicated, the level of confidence is designated by a single asterisk (*) for the 5 per cent level and by a double asterisk (**) for the one per cent level.

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[15] George W. Snedecor, Statistical Methods, pp. 253-316, 331, 354.

[16] Ibid., p. 412-421.

CHAPTER III

INTER-PUPIL RELATIONSHIP AS MEASURED THROUGH SOCIOMETRY

This phase of the study, referred to simply as inter-pupil relationship, is based upon the concept that groups, such as a class, are sociological wholes. The unity of these sociological wholes can be defined operationally in the same way as a unity of any other dynamic whole, namely, by the interdependence of its parts. A classroom is frequently well structured from a sociometric point of view but to the casual observer and even to the teacher, there appears to be no overt indication of this structuring. This structure will rarely, if ever, be as highly integrated as found to exist in Whytes' study of the Norton gang in Chicago,[1] but it does exist.

Many of the most powerful motives of boys and girls in the classroom relate to their roles in the classroom 'society.' Their success or failure in carrying out the roles they essayed gave rise to very pleasant or unpleasant emotions which are transferred to the pattern of behavior.

An analysis of pupil relationship within the class by the sociometric method was undertaken in reference to its relationship with:

1. The class behavior pattern.
2. Inter-group behavior within the class society.
3. Individual behavior patterns.

Sociometric information was acquired through the use of three

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[1] W. F. Whyte, Street Corner Society.

sociometric tests which were given to each pupil at equally spaced intervals of time through the school year.[2]

1. Test 1, given one month after classes had begun.
2. Test 2, given at the midpoint of the school year.
3. Test 3, given one month prior to the completion of the school year.

An interpretation of the data received through the use of these three tests permitted the construction of three sociograms. Sociograms are in a sense the fundamental basis upon which sociometric data can be structured. They carry three major values:

1. They permit the interpretation of the influences of cliques upon the behavior of the pupils.
2. The 'picture' that a sociogram presents is capable of permitting the observer to view pupil interaction, on paper.
3. Such records make it possible to follow growth in pupil-relationships, over an extended period of time.

The sociometric tests were simple in construction and were given to each pupil by the teacher and not by the observer.[3] Each test made use of a positive[4] and a negative[5] question in order to ascertain clearly rejected and accepted pupil standings.

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[2] See Appendix A for sample copy of sociometric test blank.

[3] At no time were tests given by the observer

[4] A positive question indirectly requests the names of accepted pupils.

[5] A negative question indirectly requests the names of rejected pupils.

Sociometric test #1

1. Write the names of three pupils in this class with whom you would like to work on a committee.

2. Write the names of three pupils in this class with whom you would not like to work on a committee.

Sociometric test #2

1. Write down the names of three pupils in this class whom you would want on your team if you were playing some game.

2. Write down the names of three pupils in this class whom you would not want on your team if you were playing some game.

Sociometric test #3

1. If you were having a party and there were room for only three more to be invited. . . .what three in this class would you invite?

2. If you were having a party and there were room in your house for only 25 (there are 28 in your class). . . . what three in this class would you leave out?

No difficulties were encountered in the application of these tests. Every test question contained the phrase "in this class" since experience had uncovered the tendency for some pupils occasionally to use names of their friends in other classes or of individuals attending other schools in the city. This restriction does not impair the study in view of the fact that pupil-relationships in this class only, was considered.

On the basis of the results of these tests the pupils were ranked from one to 28,[6] the upper quartile being designated as having the most popular pupils, the lower quartile as having the least popular or rejected pupils. Those pupils who were in neither the upper or lower quartile were assumed to be of average popularity.

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[6] See Appendix B for individual pupil rankings.

BEHAVIOR PATTERNS OF POPULAR AND REJECTED PUPILS

Without using the above-mentioned quartile system, the concept of whether a pupil is rejected or accepted may be derived by adhering only to the ratings of other pupils. The popular pupils, in this case, would be those who:

1. Are mentioned by the largest number of classmates as their first and second choices in the situations (sociometric tests) used.
2. Are not listed as being disliked, or are listed as being disliked in only a few instances.

Those pupils who are rejected can also be designated as falling into two categories:

1. Those who are actively disliked.
2. Those who are almost completely disregarded--Often referred to as the isolate.[7]

The general philosophy of the boys and the girls with respect to their choice of who is rejected and who is accepted, may vary. It is possible that the girls differ from the boys in their use of a frame of reference from which they take their concept of what constitutes a rejected, and what constitutes an accepted, peer. This philosophy or frame of reference is not being considered in this study.

An examination of behavior patterns in respect to the popularity or unpopularity of the pupils was made. This was done by grouping all the boys who are in the top quartile of the class and all girls who are also in

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[7] For more complete material on sociometric methods see Who Shall Survive by J. L. Moreno. A New Approach to the Problem of Human Interrelations, (Washington: Nervous & Mental Disease Monographs Series, 1934), No. 58.

the top quartile. In this manner Table I was constructed which permitted a comparison to be made of the trends in behavior patterns of popularity groupings within the class.

An examination of Table I suggests that certain trends exist, for example, the rejected or unpopular pupils tend towards excesses in some of the behavior characteristics and also appear to maintain poor contact with the rest of the class.[8] The rejected pupil seems to maintain patterns of behavior which tend to be undesirable for learning. Characteristics GUP and GUW appear to be slightly above normal and high scores in INA are rather frequent, even in individual cases. Much of the behavior of the rejected pupil may not be entirely due to poor inter-pupil relations, but also to inner attitudes created by the pupil; these may frequently be reinforced by the pupils' awareness of his unsatisfactory status in the class.[9]

From Table I the following comparisons were made:

Volunteering (VOL)

	Least Popular Boys	Most Popular Boys	Least Popular Girls	Most Popular Girls
Means	1.48	1.73	2.04	1.86

Analysis of Variance (A.O.V.)

Comparisons	df	MS
(1) Popularity type	3	1.3193
(2) Class Sessions	31	4.9734**
Error:	93	0.5859

The analysis of variance technique gave a non-significant F-value. Thus available evidence is not sufficient to indicate other than random

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[8] For an excellent discussion of rejected pupils see M. L. Northways' "Outsiders." A study of the personality patterns of children least acceptible to their age-mates. Sociometry, 7:10-25, 1944.

[9] More detailed material may be found in "Sociometric Control Studies of Grouping and Regrouping" by J. L. Moreno and H. H. Jennings. Sociometry Monographs, No. 7, 1949.

TABLE I

MEAN PATTERN OF BEHAVIOR OF POPULAR AND UNPOPULAR BOYS, GIRLS, AND PUPILS FOR THE SCHOOL YEAR 1950-51

	BOYS		GIRLS		PUPILS	
	Least Pop.	Most Pop.	Least Pop.	Most Pop.	Least Pop.	Most Pop.
VOL	1.48	1.73	2.04	1.86	1.74	1.59
FID	2.14	1.63	.85	.92	1.84	1.13
GUP	.20	.17	.09	.05	.18	.12
GUW	.52	.50	.48	.50	.56	.49
FIN	2.84	2.30	2.33	2.19	2.76	2.19
FUS	.16	.15	.78	.45	.18	.33
INA	.99	.24	.12	.13	.79	.19
SCR	.27	.28	.23	.16	.39	.23
HHO	2.40	3.53	1.49	2.58	1.95	3.16

Note: Interpretation may be done in this manner: The least popular boys volunteered (VOL) 1.48 times per class session. The most popular pupils fidgeted (FID) 1.13 times per class session.

differences among the means. There is more variation between days than between popularity types.

Fidgeting (FID)

	Least Popular Boys	Most Popular Boys	Least Popular Girls	Most Popular Girls
Means	2.14	1.63	0.85	0.92

Analysis of Variance (A.O.V.)

Comparisons	df	MS
(1) Popularity type	3	10.0018**
(2) Least popular vs Most popular	1	0.0357
(3) Least popular boy vs least popular girl	1	21.7972**
(4) Most popular boy vs most popular girl	1	8.1725**
Error:	93	0.5120

These comparisons indicate that the differences in fidgeting are reflected more in differences between the sexes rather than differences in popularity. It is interesting to note that the least popular boys fidget nearly three times as much as the least popular girls, while the most popular boys fidget twice as much as the most popular girls. The comparison between popularity level within sex is obviously too similar to be statistically significant.

Getting up in seat (GUP)

	Least Popular Boys	Most Popular Boys	Least Popular Girls	Most Popular Girls
Means	0.20	0.17	0.09	0.05

Analysis of Variance (A.O.V.)

Comparisons	df	MS
(1) Popularity type	3	0.1077*
(2) Least popular vs most popular	1	0.0544
(3) Least popular boys vs least popular girls	1	0.0805
(4) Most popular boys vs most popular girls	1	0.1882**
(5) Class Sessions	31	0.1620**
Error:	93	0.0362

The conclusion to be drawn from this analysis is that the differences in GUP are sex differences but the greatest source of differences is found to be in the comparison of most popular boys vs most popular girls, however the same tendency exists in the comparison of the least popular boy vs least popular girl.

(GUW)

	Least Popular Boys	Most Popular Boys	Least Popular Girls	Most Popular Girls
Means	0.52	0.50	0.48	0.50

Analysis of Variance (A.O.V.)

Comparisons	df	MS
(1) Popularity types	3	0.2864
(2) Class sessions	31	1.5632**
Error:	93	0.1073

An examination of the GUW comparisons between popularity and sex indicated non-significance although significance was found between class sessions.

(FIN)

	Least Popular Boys	Most Popular Boys	Least Popular Girls	Most Popular Girls
Means	2.84	2.30	2.33	2.19

Analysis of Variance (A.O.V.)

Comparisons	df	MS
(1) Popularity types	3	2.3811
(2) Class Sessions	31	3.5582**
Error:	93	1.0418

The FIN comparisons between popularity groups are not significant however again FIN varies significantly from class session to class session.

(FUS)

	Least Popular Boys	Most Popular Boys	Least Popular Girls	Most Popular Girls
Means	0.16	0.15	0.78	0.45

Analysis of Variance (A.O.V.)

Comparisons	df	MS
(1) Popularity types	3	5.1922**
(2) Least popular vs most popular	1	4.0115**
(3) Least popular boys vs least popular girls	1	10.7666**
(4) Most popular boys vs most popular girls	1	0.7987
(5) Class Sessions	31	0.2958
Error:	93	0.3059

The FUS comparison between least popular and most popular pupils is highly significant. It is interesting to note that although the comparison is highly significant most of the difference is attributible to the difference between least popular girls and the most popular girls. The data indicate that there is a sex difference but that most of this difference lies in the comparison of least popular boys and least popular girls. Note that FUS does not vary sufficiently from day to day to test statistically significant.

(INA)

	Least Popular Boys	Most Popular Boys	Least Popular Girls	Most Popular Girls
Means	0.99	0.24	0.12	0.13

Analysis of Variance (A.O.V.)

Comparisons	df	MS
(1) Popularity types	3	3.9099**
(2) Least popular vs most popular	1	3.4322**
(3) Least popular boys vs least popular girls	1	8.2441**
(4) Most popular boys vs most popular girls	1	.0535
(5) Class Sessions	31	0.4036
Error:	93	0.2268

The comparisons indicate a real difference which is reflected in the

fact that the least popular boys were the least attentive in the ratio of 4 to 1 with same sex and 8 to 1 with other sex. Apparently INA is not associated with popularity as far as girls are concerned. It appears that whatever the situation among these comparisons on a given day it is consistent from day to day.

(SCR)

	Least Popular Boys	Most Popular Boys	Least Popular Girls	Most Popular Girls
Means	0.27	0.28	0.23	0.16

Analysis of Variance (A.O.V.)

Comparisons	df	MS
(1) Popularity types	3	0.0395
(2) Class Sessions	31	0.1656
Error:	93	0.1141

The tendency indicated for sex differences is not statistically significant, none of the comparisons were found to be significant.

(HHO)

	Least Popular Boys	Most Popular Boys	Least Popular Girls	Most Popular Girls
Means	2.40	3.53	1.49	2.58

Analysis of Variance (A.O.V.)

Comparisons	df	MS
(1) Popularity types	3	19.0740**
(2) Least popular vs most popular	1	38.0628**
(3) Least popular boys vs least popular girls	1	10.8076**
(4) Most popular boys vs most popular girls	1	8.3520**
(5) Class Sessions	31	4.1754**
Error:	93	1.3669

The tendency for HHO to be associated with popularity is statistically real, even within the same sex. The less popular a pupil is, the less he indulges in HHO.

CHAPTER IV

NEWS EVENTS

Ruth Strang once stated that news events have a detrimental effect upon elementary school children.[1] The possibility exists that the behavior pattern might be capable of indicating any pupil reaction to news events. For this study only news events of the banner headline variety were recorded since they could be found in most newspapers and on most radio news programs.

To test the pupils as to whether they had read about certain news events would have promoted a discussion about the news, or at least brought it more to their attention. This would have been undesirable since the objective in this phase of the study is to determine whether news events influence pupil behavior under the usual school conditions.

The school year of 1950-1951 was rich in banner headline type of news events. A daily record was kept of nine events.

1. Military setbacks in Korea
2. Allied advances in Korea
3. Mobilization of 18 year olds
4. Railroad strike in the town where this study was made
5. New York Police scandals[2]

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[1] SPA Newsletter Vol. 4, No. 2, Columbia University Press.

[2] This study was conducted in a New York City suburb.

6. Kefauver investigations in New York City[3]

7. New York City basketball scandal

8. Nevada A-Bomb test

9. MacArthur Dismissal

Each of these news events was critically examined and items #3, #5, and #8 were dropped after the discovery that they covered a period of time which: (1) was an extended school vacation; (2) was a weekend; (3) was of one day duration.

The remaining news events were grouped into news events of a local nature and news events of a national nature; periods of no news events were used as the criterion.

Before an evaluation of the significance of the data is carried out, a few comments concerning the range of the news events should be made. In order to avoid prolonging a news event beyond its banner headline value, the following criteria were used in determining when a news event begins and when it ends:

1. The beginning point of a news event is that point at which the news first "breaks."

2. The ending point is that point at which the news event began to lose its banner headline value even though the item will still be heralded on the first page.

The above method of determining the beginning and ending of a news event was required in order to negate any possibility of carrying a news event on the records beyond its 'shocking' powers. The period of time covered by each event was not always an uninterrupted period in all the news events. In some cases the news event was a cumulative number of days during which time the event occurred spasmodically. For example, Korean

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[3] Pupils were permitted to leave school early and view proceedings on their television.

reversals occurred from time to time with Allied advances frequently sandwiched between these reversals.

The period of time used in the evaluation of these news events is as follows:

National News	Actual Class Session Days	
1. MacArthur dismissal	7 days	
2. Korean reversals	24 days	
3. Korean advances	17 days	
Local News		
4. Basketball scandal	5 days	
5. Kefauver investigation	8 days	
6. Railroad strike	4 days	
		65 days
7. Behavior when no news		89 days

The grouping of these news events permitted a comparative evaluation as outlined in Table II.

An examination of Table II-A indicates that all three types of news have no effect on VOL, FID, and FIN, but do have an association with the other six behavior characteristics.

GHP and GHW increased during periods of national news, while local news periods had effects statistically comparable to no news. HHO decreased during periods of national news relative to local news and no news periods.

The increase in incidence of FHS, INA, and SCR during periods of national news relative to the other periods was statistically significant.

TABLE II

MEAN BEHAVIOR PATTERN OF PUPILS DURING LOCAL NEWS EVENTS, NATIONAL NEWS EVENTS, AND PERIODS OF NO NEWS EVENTS. SCHOOL YEAR 1950-51

	TYPE OF NEWS EVENT		
	Local News	National News	No News
VOL	1.96	1.87	1.36
FID	1.43	1.44	1.63
GUP	.09	.74	.12
GUW	.38	.95	.56
FIN	2.81	2.33	2.48
FUS	.26	.91	.28
INA	.39	.81	.38
SCR	.47	.81	.27
HHO	3.37	2.40	2.59

Note: For example, during local news periods each pupil in the class volunteered 1.96 times per class session. In comparison, during class sessions when no news event was taking place these same pupils volunteered 1.36 times per class session.

TABLE II-A

SUMMARY OF THE ANALYSIS OF VARIANCE FOR TABLE II

COMPARISON	df	MS								
		VOL	FID	GUP	GUW	FIN	FUS	INA	SCR	HHO
Types of news	2	1.6900	0.2179	2.1198**	1.1368*	0.6156	2.1608**	0.9304**	1.4124**	2.6778*
Local vs national news	1	--	--	2.3139**	1.7670*	--	2.3150**	0.9017**	0.6552**	5.1980**
News vs no news	1	--	--	1.9256**	0.5066	--	2.0066**	0.9590**	2.1696**	0.1576
Error	43	1.0300	0.5493	0.0183	0.2719	0.7407	0.0205	0.0511	0.0563	0.7305

CHAPTER V

WEATHER

Weather conditions were tabulated daily for each of the observed class sessions. Weather data was taken from the Official United States Weather recordings. All data pertaining to weather came from these records with but one exception, that being barometric pressure. At the suggestion of E. J. Christie, Chief Meteorologist, New York Weather Bureau, all barometric readings were obtained from a local barometer, since New York City readings would vary slightly from local readings.

A number of variations of weather were tabulated with each daily observation of behavior. These variations of weather were:

Type 1 The condition of the weather.

(a) Uncertain, uncertain weather of which there were 22 such days. This type of weather is best explained as that in which there are fluctuations in the weather or which are in effect, uncertain.

(b) Cloudy, of which there were 10 such days. Weather of this type was quite rare since a cloudy condition invariably has an accompanying windy or rain condition.

(c) Clear, of which there were 23 such days used in the analysis. Actually there were more than 23 days, but in order to maintain a wide sample over the entire school year it was necessary to distribute the choosing of the clear days over as wide a period as possible. This was done

in order to prevent sampling of behavior patterns during a cluster of clear days over specific periods of time.

(d) Cloudy and rain, of which there were 21 such days analyzed. There were slightly more than 21 days of this type of weather, but as explained in (c), the procedure followed here was designed also to eliminate clusters of the same type of weather.

(e) Clear and windy, of which there were 23 such days analyzed; here too, there were actually more than this number over the period of a school year.

(f) Cloudy and windy, of which there were 12 such days. Cloudy and windy conditions were limited in number; therefore, this condition may be an unreliable statistical element in comparative evaluations of weather.

Type 2 Humidity conditions.

(a) Readings of daily humidity were tabulated on each of the daily observation sheets. These readings were based on that which existed at the time the class was in progress or very shortly before.

Type 3 Temperature.

(a) The temperature of the classroom just prior to the entry of the class was recorded. Classroom temperature during the winter months is regulated by thermostat instruments at a desired temperature of 72°; the temperature is not always maintained at this point.

(b) The temperature outside the classroom, that is the outdoor temperature, was recorded daily. This recording was also made just prior to the beginning of the class session and possibly no more than 30 seconds before the indoor temperature is recorded.

Type 4 Barometric pressure.

(a) A recording was made of the barometric pressure with regard to falling, rising, or steady pressure.

Clarence Mills[1] maintains that changes in pressures are one of the strongest determiners of everyday behavior. Henry H. Clayton[2] states that few people realize the extent of pressure changes in the United States. Whether these pressure changes are determiners of everyday behavior is to be tested in this study through the method of observation.

BEHAVIOR PATTERNS DURING VARIATIONS IN WEATHER

The behavior patterns which occurred only during each of the described weather conditions were tabulated and Table III was formed. Table III-A is a statistical evaluation of the Table III means.

The summary of the analysis of variance (Table III) tables indicate that the comparisons of weather conditions are not found to be significant for any of the nine characteristics. The means for any given characteristics in Table III are consistently the same for all types of weather conditions listed.

BEHAVIOR PATTERNS DURING FLUCTUATIONS IN HUMIDITY

An examination of Type 2 weather conditions (humidity) was made. This was done by extracting from the entire school year the behavior patterns of daily sessions which occurred during the 25 school days when humidity readings were highest; the same thing was done with the 25 lowest readings for the school year. In this manner it was possible to segregate two patterns of behavior, one which occurs during periods of high humidity readings, the other which occurs during periods of lowest humidity readings.

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[1] Clarence A. Mills, Living With The Weather.

[2] Henry H. Clayton, Solar Relations to Weather and Life.

TABLE III

MEAN PATTERN OF BEHAVIOR DURING TYPES OF WEATHER CONDITIONS. SCHOOL YEAR 1950-51

	TYPE OF WEATHER					
	Uncertain Weather	Cloudy	Clear	Cloudy & Rain	Clear &Wind	Cloudy & Wind
VOL	1.59	2.17	1.88	1.68	1.84	1.54
FID	1.65	1.39	1.21	1.47	1.50	1.59
GUP	.09	.18	.13	.18	.13	.16
GUW	.42	.50	.49	.73	.71	.59
FIN	2.28	2.80	2.56	2.95	2.49	2.90
FUS	.25	.39	.31	.38	.39	.37
INA	.37	.31	.26	.34	.33	.40
SCR	.24	.33	.32	.30	.27	.21
HHO	2.62	2.93	2.46	2.84	2.90	2.72

Note: For example, under uncertain weather each pupil volunteered (VOL) 1.59 times per class session. During sessions held on cloudy days these same pupils volunteered 2.17 times per session.

TABLE III-A

SUMMARY OF THE ANALYSIS OF VARIANCE FOR TABLE III

COMPARISON	df	MS								
		VOL	FID	GUP	GUW	FIN	FUS	INA	SCR	HHO
Weather types	5	0.7590	0.4410	0.0160	0.2690	1.3040	0.0547	0.0520	0.0300	0.7970
Error	105	1.3070	0.4500	0.0310	0.3300	0.9110	0.0445	0.0650	0.0340	1.2500

Table IV presents a comparative picture of the means for each of these two groups; Table IV-A presents a summary of the analysis of variance tables of the means in Table IV.

An examination of the statistical treatment indicates that only HHO is found to be significant (at 5% level). Once again there is a consistency of the means as found in previous tables. Characteristic HHO indicates an association between it and humidity; there are more instances of HHO during high humidity conditions than during low humidity conditions.

BEHAVIOR PATTERNS DURING DIFFERENCES BETWEEN INDOOR AND OUTDOOR TEMPERATURE READINGS

An evaluation of the behavior patterns which occurred during type 3 weather conditions was made. The 25 readings of least difference between the temperature in the classroom and the temperature outside the school was determined and the behavior patterns for each of these particular days were grouped. The same process was applied to the 25 readings of greatest difference between classroom temperature and the temperature outside the school. In this manner two separate patterns were extracted from the school year. One behavior pattern as found to exist during greatest temperature difference, the other behavior pattern as found to exist during least temperature difference. These two patterns formed Table V and comparisons between the patterns were made possible. Table V-A is a summary of the analysis of variance for Table V.

An examination of the comparisons indicates findings of significance for several of the behavior characteristics. During conditions of greatest difference between indoor-outdoor temperature there is more VOL and a great deal more FIN and HHO.

TABLE IV

MEAN PATTERN OF BEHAVIOR DURING VARIATIONS IN HUMIDITY. SCHOOL YEAR 1950-51

	HUMIDITY	
	Highest Rdgs. Range: 83-97	Lowest Rdgs. Range: 35-47
VOL	1.28	1.85
FID	1.66	1.27
GUP	.11	.13
GUW	.64	.70
FIN	2.58	2.49
FUS	.34	.27
INA	.37	.29
SCR	.28	.22
HHO	2.90	2.37

Note: For example, during class sessions held when humidity was high, each pupil volunteered 1.28 times per class session. When humidity was low, these same pupils volunteered 1.85 times per class session.

TABLE IV-A

SUMMARY OF THE ANALYSIS OF VARIANCE FOR TABLE IV

COMPARISONS	df	MS								
		VOL	FID	GUP	GUF	FIN	FUS	INA	SCR	HHO
Humidity types	1	0.7008	0.8269	0.0061	0.1564	0.2002	0.0357	0.0300	0.0320	4.4408*
Error	46	1.4920	0.4430	0.0240	0.4710	0.8980	0.0300	0.0590	0.0350	0.9660

TABLE V

INDOOR-OUTDOOR TEMPERATURE DIFFERENCES AND MEAN PATTERNS OF BEHAVIOR DURING THESE PERIODS. SCHOOL YEAR 1950-51

	TEMPERATURE DIFFERENCE	
	Least Difference Range: 0-8	Greatest Difference Range: 40-63
VOL	1.47	2.16
FID	1.58	1.41
GUP	.16	.16
GUW	.66	.57
FIN	1.88	2.98
FUS	.39	.40
INA	.35	.26
SCR	.35	.25
HHO	2.10	3.16

Note: During the 25 readings of least difference between the temperature inside and the temperature outside, each pupil volunteered 1.47 times per class session.

TABLE V-A

SUMMARY OF THE ANALYSIS OF VARIANCE FOR TABLE V

COMPARISONS	df	MS								
		VOL	FID	CUP	GUW	FIN	FUS	INA	SCR	HHO
Temperature differences	1	7.8963*	0.8712	0.0018	0.1636	15.4569**	0.0026	0.1557	0.0925	14.7968**
Error	48	1.1660	0.8846	0.0379	0.2457	0.5745	0.0517	0.0578	0.0311	1.1618

PATTERNS OF BEHAVIOR DURING BAROMETRIC VARIATIONS

An examination of behavior patterns occurring during Type 4 weather conditions, was made. The behavior patterns during those 25 class sessions when the barometer was rising were segregated and grouped, the same was done with the 25 class sessions when barometer was falling and also for the 25 class sessions when barometric pressure was steady. In this manner, three patterns of behavior were derived: (1) behavior during rising barometer, (2) behavior during falling barometer, and (3) behavior during steady barometer. These groups were set up in tabular form to facilitate a comparative evaluation, in this manner Table VI has been developed.

An examination of Table VI-A indicates that the means in Table VI have non-significant F-values.

TABLE VI

MEAN PATTERNS OF BEHAVIOR DURING VARIATIONS IN BAROMETRIC PRESSURE. SCHOOL YEAR 1950-51

	BAROMETER		
	Rise	Steady	Fall
VOL	1.73	2.23	1.81
FID	1.46	1.49	1.47
GUP	.14	.14	.13
GUW	.60	.66	.50
FIN	2.64	2.40	2.63
FUS	.40	.34	.39
INA	.30	.24	.39
SGR	.26	.32	.28
HHO	2.84	2.50	2.93

Note: For example, during class sessions held when the barometer was rising, each pupil volunteered 1.73 times per class session.

TABLE VI-A

SUMMARY OF THE ANALYSIS OF VARIANCE FOR TABLE VI

COMPARISONS	df	MS								
		VOL	FID	GUP	GUW	FIN	FUS	INA	SCR	HHO
Barometric variance	2	2.4388	0.0026	0.0030	0.2073	1.0342	0.0024	0.1763	0.0324	1.9346
Error	72	1.5960	0.6214	0.0278	0.3388	0.8205	0.5530	0.0650	0.0387	1.3793

CHAPTER VI

PERSONALITY ADJUSTMENT

In this phase of the study, the pressure of personality adjustment and its possible relationship to classroom behavior is evaluated. Personality is a subject covering a wide field which takes in various aspects of psychological and sociological aspects of the pupil. In this chapter, no attempt will be made to try to cover all aspects of personality but rather the behavior pattern's relationship to personality adjustment in the classroom.

Ruth Strang[1] refers to personality as being a significant instrument by which behavior can be evaluated:

> Behavior is a reflection of personality. Everything a pupil says or does throws light on the kind of person he is. The observer's responsibility is to catch significant behavior, record it accurately, and later interpret it in relation to the situation in which occurred and other information about the person observed. Today observation is being used more and more effectively in the classroom and, as a result, teachers are becoming more sensitive to their pupils' development.

Personality could be a force or pressure which acts upon the pupil within his class. In a sense, behavior might be considered as being a reflection of the personality of the pupil. An understanding that there may be a connection between personality and behavior is important. Implicit in an analysis of the factors producing behavior difficulties and warped attitudes in school children is the assumption that a better school system

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[1] Ruth Strang, Counseling Technics in College and Secondary School, p. 36.

could at least prevent some personality defects.[2] Krout[3] points out the probable connection between behavior and personality, he goes on to state:

> There is no such thing as meaningless behavior. Scratching one's head, tugging at the ear, thumb sucking, puffing up one's cheeks, blinking, queer bodily postures, aimless movements of arms and legs, are examples of this type of reaction.

Stagner[4] states that the organism is a psychophysiological unit, and happenings at the level of gesture and expressive movement may be expected to reflect inner patterns of perception and feelings. He goes further by pointing out that movement is a symbol.

To determine the extent to which a connective link can be observed between personality and classroom behavior, the California Test of Personality was administered to each pupil in the class by the teacher. These tests were scored, interpreted, and an evaluation made of the individual behavior patterns of each pupil. On the basis of these scores each pupil was ranked. The 8 pupils ranking highest in their class in personality adjustment were evaluated in terms of their patterns of behavior, the same thing was done with the 8 pupils with the lowest ranking in the class. In this manner two patterns of behavior were structured, one pattern concerned the behavior of the best adjusted pupils, the other pattern concerned the behavior of the least adjusted pupils in the class. A comparative evaluation was now possible. Table VII has been set up in order that a comparative evaluation could be made quickly. The data were analyzed as a randomized block with class sessions as blocks.

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[2] Ross Stagner, Psychology of Personality, p. 409.

[3] M. H. Krout, "Autistic Gestures," Psychological Monograms, 46, No. 208:225-236, 1936.

[4] Ross Stagner, Psychology of Adjustment, p. 239.

TABLE VII

MEAN PATTERN OF BEHAVIOR OF PUPILS LEAST AND MOST ADJUSTED IN PERSONALITY TEST SCORES (CALIFORNIA). SCHOOL YEAR 1950-51

	PERSONALITY SCORES*	
	Most Adjusted	Least Adjusted
VOL	1.87	1.69
FID	1.03	2.25
GUP	.08	.14
GUW	.49	.58
FIN	2.56	2.55
FUS	.40	.26
INA	.13	.54
SCR	.25	.41
HHO	2.29	2.68

* Those pupils ranking in the highest quartile of the class results of the California Test of Personality are considered well adjusted, those ranking in the lowest quartile are considered poorly adjusted.

A statistical treatment of the means in Table VII as indicated in Table VII-A shows that some of the comparisons are found to be significant. The best adjusted pupils volunteer more often, fidget less often, CUP less often, are more attentive, SCR less often, and WWO less often than the poorly adjusted pupils.

TABLE VII-A

SUMMARY OF THE ANALYSIS OF VARIANCE FOR TABLE VII

COMPARISON	df	MS								
		VOL	FID	GUP	GUW	FIN	FUS	INA	SCR	HHO
Personality types	1	4.7770**	27.2970**	0.1793**	0.0153	0.1500	0.2419	1.6968*	1.1872**	3.3276*
Error	29	0.3105	0.5897	0.0192	0.0777	0.6060	0.0837	0.2247	0.0897	0.5743

CHAPTER VII

INTERRELATIONSHIP OF PUPIL RELATIONSHIP, PERSONALITY ADJUSTMENT, WEATHER, AND NEWS EVENTS

The previous chapters have presented each of these pressures in isolation. Some consideration should be given to the possibility that these pressures do not operate in isolation but that each contributes its own degree of influence. This chapter is an exploration into the interrelationships which may exist.

PUPIL RELATIONSHIP AND PERSONALITY ADJUSTMENT

Those pupils having a rejected status and those having an accepted status, as determined by sociometric testing, were examined as two separate groupings. As a comparative element, those pupils who were well adjusted, and those pupils who were poorly adjusted were included in the examination. This permitted an evaluation of pupils with popularity or rejection status against pupils with adjusted or poorly adjusted ratings.

No statistical treatments were made because each of the groupings making up the table have been, or will be, treated in other tables and there is no need for repetition of statistical procedures.

PUPIL RELATIONSHIPS AND VARIATIONS IN WEATHER

A comparison between the behavior patterns of least popular pupils and the behavior patterns of most popular pupils during certain variations in

weather was made. These two groupings, most popular and least popular pupils, were evaluated to determine whether there was a tendency of one group or the other to vary its behavior pattern significantly different with respect to conditions of uncertain weather and/or conditions of barometric fall.

In this manner Table VIII was set up and comparative evaluations could be made. Table VIII-A is a summary of the analysis of variance for Table VIII.

An evaluation of Tables VIII and VIII-A indicates that pupils who are the least popular in their class FID more often during uncertain weather conditions than during barometric fall. There are fewer instances of FUS during uncertain weather conditions while characteristic INA follows a trend indicated in earlier evaluations whereby the least popular pupils are more inattentive than most popular pupils.

PERSONALITY ADJUSTMENT AND VARIATIONS IN WEATHER

In order to determine whether poorly adjusted pupils react in a different manner to weather conditions from the well adjusted pupils, the behavior patterns of the two groupings were compared. The weather conditions which are used in this particular evaluation are uncertain weather and barometric fall.

Table IX has been set up for comparative purposes and the statistical treatment of the means was made. Table IX-A is a summary of the analysis of the variance for Table IX.

An examination of Table IX-A indicates that with respect to FID there seems to be more instances of this form of behavior during uncertain weather conditions. Furthermore, under both conditions of weather, the poorly

TABLE VIII

MEANS FOR PATTERNS OF BEHAVIOR OF LEAST POPULAR AND MOST POPULAR PUPILS DURING UNCERTAIN WEATHER CONDITIONS AND FOR BAROMETRIC FALL IN PRESSURE

	POPULARITY TYPE			
	DURING UNCERTAIN WEATHER		DURING BAROMETRIC FALL	
	Least Pop. Pupils	Most Pop. Pupils	Least Pop. Pupils	Most Pop. Pupils
VOL	1.53	1.41	1.93	1.60
FID	1.95	1.29	1.62	1.23
GUP	.15	.04	.16	.14
GUW	.53	.29	.58	.53
FIN	2.13	1.87	2.50	2.40
FUS	.21	.22	.58	.34
INA	.81	.16	.77	.23
SCR	.27	.17	.26	.30
HHO	1.87	3.13	2.39	2.32

Note: For example, during uncertain weather conditions the least popular pupils tend to volunteer 1.53 times per class session. During fall in pressure these same pupils volunteer (VOL) 1.93 times per session.

TABLE VIII-A

SUMMARY OF THE ANALYSIS OF VARIANCE FOR TABLE VIII

COMPARISONS	df	MS								
		VOL	FID	GUP	GUW	FIN	FUS	INA	SCR	HHO
Popularity type	3	1.8082	4.4649**	0.0862	0.4320	2.2084	0.3811**	2.0044**	0.0654	7.8298*
Uncertain weather vs Barometric fall	1	--	5.3609*	--	--	--	0.6072*	0.0158	--	2.4622
Least vs most popular pupils under uncertain weather conditions	1	--	6.5372**	--	--	--	0.1705	4.1359**	--	14.5590*
Least vs most popular pupils under fall in barometer	1	--	1.4986	--	--	--	0.3656	1.8615*	--	6.4681
Error	84	1.5517	0.8916	0.0396	0.4192	1.2371	0.0935	0.3195	0.0679	2.5492

TABLE IX

MEAN PATTERNS OF BEHAVIOR OF POORLY ADJUSTED AND WELL ADJUSTED PUPILS DURING UNCERTAIN WEATHER CONDITIONS AND DURING BAROMETRIC FALL

	UNCERTAIN WEATHER		FALL IN PRESSURE	
	Well Adj. Pupils	Poorly Adj. Pupils	Well Adj. Pupils	Poorly Adj. Pupils
VOL	1.57	1.44	1.96	1.88
FID	1.24	2.60	1.18	2.05
GUP	.05	.14	.09	.13
GUW	.33	.49	.49	.47
FIN	2.50	2.20	3.39	3.00
FUS	.39	.19	.47	.32
INA	.09	.69	.14	.63
SCR	.17	.42	.27	.43
HHO	2.33	2.28	2.58	2.98

TABLE IX-A

SUMMARY OF THE ANALYSIS OF VARIANCE FOR TABLE IX

COMPARISONS	df	MS								
		VOL	FID	CUP	GUR	FIN	FUS	INA	SCR	HHO
Personality types	3	2.5752	20.5187**	0.0375	0.3067	7.6361**	0.3651**	2.0350**	0.4816**	5.2536
Uncertain weather vs barometer fall	1	--	20.3328**	--	--	21.3901**	0.0942	0.2032	0.0089	--
Poorly adjusted vs well adjusted pupils during uncertain weather conditions	1	--	21.9115**	--	--	0.2642	0.4260*	4.5121**	0.7805**	--
Poorly adjusted vs well adjusted pupils during barometer fall	1	--	19.3119**	--	--	0.7541	0.5750*	1.3898*	0.6554**	--
Error	84	1.6474	0.7424	0.0234	0.2997	1.7149	0.0885	0.3329	0.0833	2.4749

adjusted pupils fidget more frequently than well adjusted pupils. On the other hand, well adjusted pupils FIN more often than poorly adjusted pupils and there appears to be an increase in the amount of FIN during fall in pressure regardless of adjustment status. A very similar trend exists for characteristic FUS. Well adjusted pupils FUS more often and there is an increase in FUS during barometric fall. Characteristic INA indicates differences within the same weather condition but no differences between weather conditions. The same trend is indicated by characteristic SCR, those least adjusted SCR more often.

ABSENTEEISM

A factor which must be examined in this study is the one of absenteeism. An investigation was made to determine whether the factor of absenteeism was causing selective factors to distort the trends in behavior patterns. This would be possible if absenteeism followed a consistent pattern whereby poorly adjusted pupils were absent from school during news events, during weather variations, or during situations to be examined in the next chapter. If this tendency were found to be true then evaluations of the behavior patterns would be evaluations of a selected group; this would distort results.

The absenteeism for the entire year was checked on the tabulation sheets with each daily observation. In this manner an evaluation was made of absenteeism trends. Before an investigation of absenteeism trends could be made, an evaluation of absenteeism, or attendance in general, was made, and Table X was set up.

Table XI was next set up in order that an evaluation of trends, if any, could be made. This table is complete in that a number of conditions were considered which might indicate tendencies toward selection in pupil attendance.

TABLE X

ATTENDANCE DURING VARIOUS PERIODS OR CONDITIONS

Condition or Period	No. Pupils	Condition or Period	No. Pupils
News Event			
MacArthur Dismissal	23.00	Weather (Continued)	
Basketball Scandal	24.60	Least dif. indoor-outdoor temperature	25.68
Kefauver Investigation	21.37	Most dif. indoor-outdoor temperature	24.48
Railroad Strike	21.75		
Korean Reversals	24.04	Prior to Holiday	25.40
Korean Advances	24.35	Teacher Type	
War Talk	23.25	Teacher A	25.78
		Teacher B	23.09
Weather			
Highest humidity	24.12	Months	
Lowest humidity	26.21	October	27.93
Barometric fall	24.80	November	27.21
" " steady	25.16	December	24.36
" " rise	25.00	January	25.71
Uncertain weather	24.86	February	23.65
Cloudy	24.80	March	23.30
Clear	25.87	April	23.47
Cloudy & Rain	24.28	May	23.42
Clear & Windy	24.91		
Cloudy & Wind	24.91		

Note: Total possible attendance is 28.00 pupils. Attendance for entire year was 26.91 per class session.

TABLE XI

ATTENDANCE OF POORLY ADJUSTED, WELL ADJUSTED, POPULAR, AND UNPOPULAR PUPILS. BASED ON A MEAN SCHOOL WEEK

CONDITION	DAY OF WEEK					COMMENTS
	Mon.	Tues.	Wed.	Thurs.	Fri.	
All Pupils	24.25	24.27	26.43	24.62	26.00	28 pupils
All girls	12.60	14.38	12.96	12.88	11.28	13 girls
All boys	12.14	12.42	12.18	12.60	12.33	15 boys
Teacher A	25.60	25.55	26.42	24.62	26.78	
Teacher B	22.00	21.37	22.88	25.00	24.43	
Months						
October	27.50	27.25	27.88	27.89	27.88	
November	27.00	26.75	26.22	27.57	27.92	
December	22.00	22.00	16.66	27.91	27.89	
January	25.50	25.50	26.40	24.50	26.50	Highest possible
February	25.55	25.33	25.00	17.33	26.00	attendance is
March	23.33	20.00	20.33	22.33	24.66	28.00
April	21.80	22.75	24.00	25.25	24.45	
May	20.45	20.00	24.45	25.45	25.00	
Personality						
Best adj. pupils	6.45	6.46	6.71	6.32	7.14	Highest possible
Poorly adj. pupils	6.63	6.77	6.60	6.76	6.66	attendance is 8.00
Popularity						
Least pop. pupils	4.96	4.88	4.67	5.04	4.66	
Most pop. pupils	4.51	4.73	4.92	4.76	5.23	
Least pop. boys	5.07	5.11	4.82	5.04	4.76	Highest possible
Most pop. boys	4.63	4.50	4.89	4.96	4.94	attendance is 6.00
Least pop. girls	5.03	5.23	5.10	5.28	5.19	
Most pop. girls	4.92	5.03	5.17	5.04	5.38	

Note: Highest possible attendance varies with each group, the reader should observe the comments in the column at far right before making any interpretations.

CHAPTER VIII

PATTERNS IN CLASSROOM BEHAVIOR

Before entering into a discussion of the findings in the previous chapters, some consideration should be given to an evaluation of classroom patterns as a whole. The patterns of behavior as found to exist over a period of one school year were examined.

Some of the questions which might be answered by an examination of this kind are:

1. What differences, if any, existed in the patterns of behavior of boys only and for girls only?

2. What trends in the pattern of behavior existed during the school year? During each month of the year? During a typical school week?

3. Were there differences in behavior patterns with respect to the same class when they were being instructed by two different teachers?

4. Were there changes in behavior patterns when the individuals of the class, or the class as a whole, had been reprimanded?

5. Was there any change in the pattern of behavior with the approach of an extended holiday session?

These questions, as well as related questions, must be examined for it is possible that if there are significant influences operating upon the behavior patterns by these respective conditions, then they must be taken into consideration in an evaluation of behavior patterns as a whole.

PATTERNS OF BEHAVIOR FOR BOYS AND GIRLS

The behavior patterns of the boys only and the behavior patterns of the girls only, were evaluated and arranged in tabular form which permitted

the structure of Table XII. Table XII-A was set up as a summary of the analysis of variance for Table XII.

Throughout a majority of the results derived in this study, there has been an indication of sex differences, regardless of the condition under which these differences have been examined. An examination of both Tables XII and XII-A indicates that for most of the behavior characteristics used in this study there are sex differences. Girls VOL more often than boys; boys FID more than twice as often as girls; boys GUP more than twice as much as girls; girls FUC almost three times as much as boys; boys are INA four times more often than girls; boys SCR more often than girls; and boys HHO more often than girls.

PATTERNS OF BEHAVIOR DURING EACH MONTH AND PATTERNS OF BEHAVIOR UNDER DIFFERENT TYPES OF TEACHERS

The patterns of behavior during each month were examined and evaluated for statistical significance. A certain aspect to be considered here is the fact that each school month is subjected to a number of variables. The probability that any set of variables will operate in the same manner and degree for more than one month is unlikely. Such variables as seasonal changes, growth in pupil relationships, weather variations, and the impact of news events, will vary from month to month, possibly from week to week.

At the same time that a statistical evaluation of differences from month to month is being made, it is possible to make an evaluation of teacher influence on behavior. Two teachers instructed this class. They are designated here as Teacher A and Teacher B. Each of these teachers was appraised by a school psychologist. In his opinion, Teacher A appeared to be a calm, confident instructor who at no time lost her temper before the class. Teacher A maintained good control of her class. The school

TABLE XII

MEANS OF PATTERNS OF BEHAVIOR OF GIRLS AND BOYS

	Boys	Girls
VOL	1.61	1.87
FID	2.05	.93
GUP	.17	.07
GUW	.54	.52
FIN	2.52	2.41
FUS	.18	.60
INA	.54	.14
SCR	.34	.20
HHO	3.06	2.01

TABLE XII-A

SUMMARY OF THE ANALYSIS OF VARIANCE FOR TABLE XII

COMPARISONS	df	MS								
		VOL	FID	CUP	GUM	FIN	FUS	INA	SCR	MHO
Between sexes	1	3.2703**	27.8596**	0.3265**	0.1313	0.0015	7.2767*	2.8397**	0.6941**	17.4421**
Class sessions	59	3.0894	1.6685	0.0743	0.6827	1.4821	0.1629	0.2875	0.0678	2.1283
Error	59	0.3571	0.3328	0.0322	0.0978	0.4538	0.0824	0.1751	0.0295	0.8859

psychologist appraised Teacher B as an excitable, high strung, rigid, and nervous individual who lost her temper frequently before the class. Teacher B had difficulty maintaining control of the class. Further appraisal tended to indicate that Teacher A permitted freedom of movement within the class. Teacher B maintained a disciplinary atmosphere which tended to restrict movement.[1]

Table XIII, means of monthly behavior patterns, and Table XIV, means for patterns of pupil behavior under Teacher A and Teacher B, are available for comparative analysis.

An examination of the means in Tables XIII and XIV and of the summary of the analysis of variance as found in Table XIV-A indicates that there are several consistent trends to be found. With relation to variations from month to month, there is difference in the incidence of each of the behavior characteristics. This may be due to changes in weather, growth in adjustment to school, increase in maladjustment to school conditions, and the varying challenge or non-challenge of classwork. Furthermore, this variation may be due to a "warming-up" period to school work, a shift in outdoor to indoor activities, holiday periods, weather conditions, mounting ennui, and the like.[2] Under Teacher A there is more VOL, less FID, more GUP, more GUW, less FIN, less INA, and more SCR.

BEHAVIOR PATTERNS DURING REPRIMANDED CONDITIONS

Throughout the observational phase of this study a careful record was kept of those observed sessions during which the individuals in the class

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[1] This appraisal was supported by statements from the other teachers in the school and by statements from the school employees.

[2] Anne Anastasi and John P. Foley, Differential Psychology, p. 256.

TABLE XIII

MEAN PATTERNS OF BEHAVIOR BY MONTHS

	MONTHS								Entire Year
	Teacher A					Teacher B			
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	
VOL	2.06	1.74	2.12	2.03	2.25	1.59	.87	1.15	1.73
FID	.73	1.28	1.51	1.19	1.23	1.47	2.76	2.56	1.56
GUP	.16	.19	.08	.17	.18	.05	.11	.06	.14
GUW	.43	.73	.39	.86	.75	.18	.45	.37	.55
FIN	1.81	2.93	3.28	2.52	2.75	2.62	2.25	1.53	2.49
FUS	.24	.35	.35	.50	.41	.17	.29	.55	.36
INA	.18	.22	.26	.19	.24	.50	.68	.70	.35
SCR	.35	.25	.23	.33	.35	.22	.22	.23	.27
HHO	1.42	2.68	2.93	2.77	3.27	3.48	2.71	2.29	2.71

Note: For example, each pupil volunteered 2.06 times per class session during the month of October and under Teacher A. These same pupils volunteered .87 times per class session during the month of April under Teacher B.

TABLE XIV

MEANS FOR PATTERNS OF BEHAVIOR OF PUPILS UNDER TEACHER A AND TEACHER B

	Classroom Behavior Under Teacher A	Teacher B
VOL	2.02	1.10
FID	1.13	2.39
GUP	.16	.08
GUW	.65	.35
FIN	2.63	2.18
FUS	.37	.34
INA	.21	.65
SCR	.30	.21
HHC	2.67	2.79

Note: For example, under Teacher A, pupils volunteered 2.82 times per class session. Under Teacher B, these same pupils volunteered 1.10 times per session.

TABLE XIV-A

SUMMARY OF THE ANALYSIS OF VARIANCE FOR TABLES XIII AND XIV

COMPARISONS	df	MS								
		VOL	FID	GUP	GUW	FIN	FUS	INA	SCR	HHO
Months	7	4.0933**	8.0023**	0.0384	0.8997*	4.3188**	0.2389**	0.7764**	0.0646*	6.0404**
Teacher A vs Teacher B	1	21.2701**	37.5825**	0.1265*	2.7122**	6.2798**	0.0680	5.0825**	0.2564**	1.5973
Months within Teacher A	4	0.7247	1.0703*	0.0234	0.7582*	4.1953**	0.1081*	0.0172	0.0419	7.5920**
Months within Teacher B	2	2.2423	7.0762**	0.0242	0.2765	3.5853**	0.5861**	0.1416*	0.0142	5.1581**
Error	119	1.2354	0.3218	0.0302	0.2766	0.6619	0.0387	0.0352	0.0308	0.8169

were reprimanded and/or when the entire class was reprimanded. A reprimand was considered to be any severe or formal reproof directed at the entire class, individual, or individuals, in a loud, authoritative, or angry voice, or any combination of these. An evaluation was made of the behavior patterns of the entire class during reprimanded sessions only. For comparative purposes, all the observed sessions during which the class was not reprimanded, was evaluated. In this manner two separate patterns of behavior have been formed, one during which the class had been reprimanded at least once, and one during which the class had not been reprimanded at all; these data were tabulated to form Table XV.

An examination of the results as disclosed by Tables XV and XV-A indicates that behavior patterns appear to change after a class has been reprimanded. When a class is reprimanded VOL decreases by more than twice the incidence of VOL during non-reprimanded class sessions and fidgeting increases twofold.

A further evaluation was made of individual behavior patterns of those pupils who had been reprimanded individually at least once. Two patterns of behavior were set up, one pattern consisted of that which existed for reprimanded pupils who had been reprimanded individually, the other pattern was that of these same pupils during sessions when they were not reprimanded; in this manner a comparative evaluation was possible for setting up Table XVI. Table XVI-A, which follows, is a summary of the analysis of variance for Table XVI.

An examination of Tables XVI and XVI-A indicates that apparently those individuals who are reprimanded do not vary their behavior pattern markedly from the pattern of behavior which they follow consistently. Further interpretation would suggest that those pupils making up the group studied

TABLE XV

MEANS FOR PATTERNS OF BEHAVIOR OF A REPRIMANDED CLASS

	Pattern of Behavior when class has not been reprimanded	Pattern of Behavior when class has been reprimanded
VOL	1.88	.83
FID	1.38	2.65
GUP	.16	.05
GUW	.59	.30
FIN	2.55	2.15
FUS	.36	.35
INA	.30	.65
SCR	.28	.23
HHO	2.72	2.67

TABLE XV-A

SUMMARY OF THE ANALYSIS OF VARIANCE FOR TABLE XV

COMPARISONS	df	MS								
		VOL	FID	GUP	GUW	FIN	FUS	INA	SCR	HHO
Type of session	1	4.0504*	5.2898**	0.0025	0.0396	0.0077	0.0527	0.0156	0.0174	1.0417
Error	42	0.7018	0.5872	0.0125	0.2925	0.7107	0.0514	0.0686	0.0129	0.8327

TABLE XVI

MEAN PATTERNS OF BEHAVIOR FOR INDIVIDUAL PUPILS WHO HAVE BEEN REPRIMANDED

	Pattern of behavior for an individual when not reprimanded	Pattern of behavior for an individual when reprimanded
VOL	1.66	1.02
FID	1.70	3.97
GUP	.15	.01
GUW	.52	.05
FIN	2.41	2.55
FUS	.24	.03
INA	.38	1.52
SCR	.31	.03
HHO	2.74	2.17

Note: This Table illustrates behavior patterns of the same pupils under reprimanded and non-reprimanded conditions. For example, pupils when reprimanded tended to volunteer 1.02 times per class session. These same pupils VOL 1.66 times per session when they were not reprimanded.

TABLE XVI-A

SUMMARY OF THE ANALYSIS OF VARIANCE FOR TABLE XVI

COMPARISONS	df	MS								
		VOL	FID	GUP	GUW	FIN	FUS	INA	SCR	HHO
Treatment	1	1.7724	2.8462	0.0152	1.1155	0.2789	0.2280	2.6677	0.0109	12.0890*
Class sessions	19	1.3812	3.2562	0.1293	0.2318	5.4606	0.3535	2.1309	0.6130	2.2718
Error	19	1.2685	1.5624	0.1100	0.3785	2.3164	0.2014	0.9505	0.3688	2.4288

with respect to individual reprimanding are a select group for the most part who are used to being reprimanded and therefore do not change their behavior very much even when reprimanded.

MEAN WEEK BEHAVIOR PATTERN

In order to discover whether there were any trends in the behavior patterns through a school week, a statistical mean week was drawn up. A mean week was computed by finding the behavior for 16 school weeks. Each of these weeks was a complete week and was selected because it was not broken by a teachers' meeting, a school holiday, or an extended holiday.

An examination of the results in Tables XVII and XVII-A indicates that characteristic HHO is the only one which was found to be statistically significant; there is a gradual increase of HHO from Monday to Friday.

BEHAVIOR PATTERNS PRIOR TO A HOLIDAY

The pattern of behavior for the entire class just prior to an extended holiday was examined. A similar examination was made of behavior patterns occurring immediately after a holiday. For comparative purposes, a Tuesday, Wednesday, and Thursday pattern of behavior was set up. This consisted of a combined behavior pattern made up of these three days; these three days were chosen carefully in order that they neither preceded nor followed a holiday, nor were they broken up by a holiday. In further comparison, Fridays were included in Table XVIII. In this manner, the statistical evaluation which used a completely randomized experiment, was composed of four groupings: post holiday, pre-holiday, TWT (which was neither pre- nor post-holiday), and Fridays. The randomized experiment used unequal groupings and applied orthogonal comparisons where applicable.

TABLE XVII

PATTERN OF BEHAVIOR FOR A MEAN WEEK

	DAYS OF WEEK				
	Mon.	Tues.	Wed.	Thurs.	Fri.
VOL	1.41	2.09	1.92	1.82	1.62
FID	1.58	1.76	1.56	1.53	1.52
GUP	.13	.21	.16	.10	.05
GUW	.63	.58	.55	.57	.43
FIN	2.54	2.65	2.55	2.45	2.35
FUS	.36	.40	.37	.37	.31
INA	.36	.35	.34	.40	.29
SCR	.29	.29	.28	.27	.19
HHO	2.49	2.64	2.52	2.82	2.85

Note: For example, on Mondays only, for the entire school year, each pupil volunteered 1.41 times per class session. For all Tuesdays in the school year, these same pupils volunteered 2.09 times per class session.

TABLE XVII-A

SUMMARY OF THE ANALYSIS OF VARIANCE FOR TABLE XVII

COMPARISONS	df	MS								
		VOL	FID	GUP	GUW	FIN	FUS	INA	SCR	HHO
Days of week	4	2.1258	0.1233	0.0603	0.2026	0.0871	0.0558	0.0453	0.0346	2.1717*
Weeks	15	2.0081	1.5955	0.0300	0.4262	1.5140	0.0961	0.2023	0.0261	1.8540
Error	60	1.4431	0.1919	0.0261	0.2723	0.5953	0.0310	0.0301	0.0335	0.6239

An examination of Tables XVIII and XVIII-A indicates that characteristic GUP is most frequent during post-holiday periods and least during pre-holiday periods. There is more GUP during the middle of the week than during Fridays. There are more instances of FIN during pre- or post-holiday periods than during regular non pre- or post-holiday periods. There are less instances of SCR during Friday periods than during middle-of-the-week periods.

TABLE XVIII

MEANS OF PATTERN OF BEHAVIOR PRIOR TO A HOLIDAY

	Post Holiday	Pre-Holiday	TWT	Fridays
VOL	1.65	1.75	2.03	1.62
FID	1.54	1.69	1.39	1.52
GUP	.30	.02	.17	.05
GUW	.44	.43	.55	.43
FIN	3.12	3.48	2.50	2.35
FUS	.32	.24	.31	.31
INA	.28	.26	.33	.29
SCR	.32	.19	.27	.19
HHO	2.28	3.44	2.82	2.85

Note: For example, during the final class sessions immediately prior to an extended holiday, each pupil volunteered 1.75 times per session. During class sessions immediately after a holiday each pupil VOL 1.65 times per session.

TABLE XVIII-A

SUMMARY OF THE ANALYSIS OF VARIANCE FOR TABLE XVIII

COMPARISONS	df	MS								
		VOL	FID	CUP	GUW	FIN	FUS	INA	SCR	HHO
Conditions	3	0.6735	0.1272	0.1130**	0.0767	2.2253*	0.0132	0.0171	0.0641*	1.2789
Post and pre-holiday vs TNT and Fridays	1	--	--	0.0177	--	6.1277**	--	--	0.0152	--
Post holiday vs pre-holiday	1	--	--	0.1960**	--	0.3240	--	--	0.0397	--
TNT vs Fridays	1	--	--	0.1253**	--	0.2241	--	--	0.1374*	--
Error	45	0.9649	0.5545	0.0208	0.1890	0.7185	0.0324	0.0617	0.0196	0.9243

CHAPTER IX

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The findings in this study were many and varied; some were highly significant statistically and others were significant. There were findings for which no statistical significance could be found and therefore these findings can only be regarded as possible trends which may or may not be indicative of actual patterns that may exist.

FINDINGS AND CONCLUSIONS

The findings have been set up in a semi-tabular form and a plus (+) and minus (-) designation is used to show direction of trends.

POPULARITY (Comparisons)	VOL	FID	GUP	GUM	FIN	FUS	INA	SCR	HHO
Most popular pupils vs least popular. . . .		-					-		+
Least popular boys vs least popular girls . . .		+				-	+		+
Most popular boys vs most popular girls		+	+						+

An analysis of the first comparison would indicate that most popular pupils fidget less (-) than lest popular pupils; they are less (-) inattentive than least popular pupils, and they HHO more (+) than least popular pupils. The plus and minus is derived by subtracting the second mean from the first mean.

NEWS EVENTS	VOL	FID	GUP	GUW	FIN	FUS	INA	SCR	HHO
Local vs national news			-	-		-	-	-	+
News vs no news			+			+	+	+	

An analysis of these results indicates that there is an increase in the amount of GUP, GUW, FUS, INA, and SCR activity during national news periods, more so than during local news events. An increase in amount of HHO during periods of local news events supports a trend in this characteristic which has been observed frequently throughout the study. News events appear to be associated with increase in GUP, FUS, INA, and SCR, more so than periods of no news.

WEATHER	VOL	FID	GUP	GUW	FIN	FUS	INA	SCR	HHO
Weather types.									
High humidity vs low humidity									-
Least vs most difference between indoor and outdoor temperature. .					-				-
Barometer rise, fall or steady.									

Although tabulated means indicate that possible trends in behavior were evident during varying types of weather conditions, this possibility could not be verified statistically. Although there have been suggestions to the effect that barometric pressure is strongly associated with behavior changes, such could not be verified in this study. An evaluation of the trends suggests that behavior changes seem to occur most when there is any pressure change, regardless of whether the change is a fall or rise. This is only a suggested trend as indicated by the data but cannot be interpreted as being statistically significant.

PERSONALITY ADJUSTMENT*	VOL	FID	GUP	GUW	FIN	FUS	INA	SCR	HHO
Most adjusted pupils vs least adjusted . . .	+	-	-				-	-	-

(*As determined by the California Test of Personality)

Best adjusted pupils volunteer more, fidget less, GUP less, INA less, SCR less, and HHO less than the least adjusted pupils.

MISCELLANEOUS	VOL	FID	GUP	GUW	FIN	FUS	INA	SCR	HHO
During uncertain weather: Least popular pupils vs most popular		+					+		-
During barometric fall: Least popular pupils vs most popular							+		
During uncertain weather: Well adjusted pupils vs poorly adjusted pupils.		-				+	-	-	
During barometric fall: Well adjusted pupils vs poorly adjusted pupils.		-				+	-	-	
Boys vs girls.	-	+	+			-	+	+	+
Teacher A vs Teacher B .	+	-	+	+	+		-	+	
Reprimanded vs non-reprimanded class . . .	-	+							
Reprimanded vs non-reprimanded status of the same pupil.									-
Days of Week									+
Post and pre-holiday vs TWT and Friday . . .					+				
Post-holiday vs pre-holiday			+						
TWT vs Fridays			+					+	

Regardless of weather conditions, least popular pupils and most popular pupils tend to follow the same general behavior patterns suggesting therefore

that popularity status in a classroom is a strong indication of the trend of behavior. There is an indication that the association of weather with behavior patterns is more easily observable when using select groupings of pupils, such as most or least popular pupils and least or best adjusted pupils. Differences between sexes have been found throughout the study: boys VOL less, FID more, GUP more, FUS less, are more INA, SCR more, and HHO more than the girls; these trends have been rather consistent from one evaluation to another whenever the sexes were involved. Teacher A maintained a classroom situation in which there was more VOL, less FID, more GUP, more GUW, more FIN, less INA, and more SCR than was found to exist for the same class under teacher B. Reprimanded class sessions caused VOL to decrease and FID to increase. Individuals who are reprimanded will generally HHO more often after being subjected to the reprimand.

In conclusion, a number of facts should be pointed out in connection with this study. The findings are good indications that an understanding of behavior patterns in a class is possible, and that this understanding of behavior is a better understanding of the pupils. If nothing else, a review of this study should give every teacher the feeling and realization that almost anything has the possibility of influencing the pupils of the class. Some of these influences are reflected through the pupil behavior patterns. A teacher should never allow himself to drift into the complacent feeling that a class of 28 pupils is merely a classroom, but rather that the class is a grouping of 28 individuals each of whom has individual problems and individual methods of expressing those problems. On the basis of his own values, aspirations, problems of adjustment, developmental tasks, and concepts based upon earlier experiences, a pupil comes to school with plans, goals, active motives, and the ever present awareness that he himself can

about something. Even under the most ideal conditions, pupils cannot be processed in a standardized manner with any assurance that they will respond in the same way. It is reasonable to assume that maladjustments are being expressed through behavior patterns, the patterns also express the general atmosphere within the class. Only too frequently this atmosphere is used as a measuring device of the capability of the teacher who soon learns that a quiet and restricted type of behavior pattern looks good. A certain amount of disorder is normal and healthful, a hard working group is never quiet, for some moving about and communication with other pupils and with the teacher is essential. General restlessness, fidgeting, and often inattention, may be an indication that the teacher is insisting upon maintaining strict discipline.

Classroom behavior should be considered by the teacher as his first link with the feelings of the pupil. Variations in pupil behavior patterns are to be expected and therefore should be understood to be often something of a temporary nature rather than something to criticize. Continued deviations in behavior which are persistent are indications of a need for personal attention.

RECOMMENDATIONS

Although certain groupings can be found to exist within a classroom, intended grouping should be avoided, since it may give the teacher an impression that differentiated handling of his pupils is no longer necessary, in this manner standardized procedures tend to crystalize. No clear advantage has been shown for grouping.[1]

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[1] A detailed consideration of this problem is to be found in "The Grouping of Pupils," 35th Yearbook, National Society for the Study of Education. Public School Publishing Company, Bloomington, Illinois, 1936.

The teacher should be familiar with behavior patterns; often the pupil can express emotional difficulties through behavior only. A better understanding of classroom behavior demands a closer tieup between the guidance department and the teacher.

The teacher should be impressed with the fact that the atmosphere he permits in his classroom will frequently affect the behavior within his class.

BIBLIOGRAPHY

Books

Anastasi, A., and J. P. Foley. Differential Psychology. New York: The Macmillan Company, 1949.

Barr, A. S. Characteristic Differences in the Teaching Performance of Good and Poor Teachers of the Social Studies. Bloomington, Illinois: Public School Publishing Company, 1929.

Breckinridge, Marian, and E. L. Vincent. Child Development. Cincinnati: Saunders Company, 1949.

Bruce, William, and Frank Freeman. Development and Learning. New York: Henry Holt & Company, 1942.

Buhler, C. The Social Behavior of Children. Danvers, Massachusetts: Clark University Press, 1933.

Burnham, W. H. The Wholesome Personality. New York: D. Appleton Company, 1932.

Cameron, Norman. The Psychology of Behavior Disorders. New York: Houghton-Mifflin Company, 1947.

Clayton, Henry H. Solar Relations to Weather and Life. New York: Harper Brothers, 1944.

Cole, Luella. Psychology of Adolescence. New York: Rhinehart Company, 1948.

Cole, Lawrence, and William Bruce. Educational Psychology. New York: World Book Company, 1950.

Driscoll, G. How to Study the Behavior of Children. New York: Teachers College, Columbia University, 1941.

Gates, A. T., et al. Educational Psychology. New York: The Macmillan Company, 1949.

Good, C. V., A. S. Barr, and D. E. Scates. The Methodology of Educational Research. New York: Appleton-Century-Crofts, 1941.

Heidbreder, Edna. Seven Psychologies. New York: D. Appleton-Century Company, 1933.

Hurlock, Elizabeth B. Adolescent Development. New York: McGraw-Hill Book Company, 1949.

Jersild, A. T. Child Psychology. New York: Prentice-Hall, 1947.

Lewin, Kurt. Resolving Social Conflicts. New York: Harper Brothers, 1943.

_____. Group Decision and Social Change. New York: Henry Holt and Company, 1947.

Mills, Clarence. Climate Makes the Man. New York: Harper Brothers, 1942.

_____. Living with the Weather. New York: The Caxton Press, 1934.

Mort, P. R., and W. S. Vincent. A Look at Our Schools. New York: Ronald Press Company, 1946.

Moreno, J. L. Who Shall Survive? Nervous and Mental Disease Publishing Company, 1934.

Morrison, Henry C. The Practice of Teaching in the Secondary School. Chicago: University of Chicago Press, 1931.

Neill, A. S. The Problem Teacher. International Universities Press, 1944.

Olson, W. C., et al. Behavior Rating Schedules. Yonkers, New York: World Book Company, 1939.

Pressey, S. L., and F. R. Robinson. Psychology and the New Education. New York: Harper Brothers, 1944.

Rugg, H. Foundations for American Education. Yonkers, New York: World Book Company, 1947.

Sargent, S. S. Social Psychology. New York: Ronald Press, 1950.

Sheriff, Muzafer. An Outline of Social Psychology. New York: Harper Brothers, 1948.

Shaffer, L. F. The Psychology of Adjustment. New York: Houghton-Mifflin Company, 1936.

Snedecor, George W. Statistical Methods. Ames, Iowa: The Iowa State College Press, 1950.

Stagner, Ross. Psychology of Personality. New York: McGraw-Hill Book Company, 1948.

Steckle, L. C. Problems of Human Adjustment. New York: Harper Brothers, 1949.

Sorenson, H. Psychology in Education. New York: McGraw-Hill Book Company, 1940.

Strang, Ruth. Counseling Technics in College and Secondary Schools. New York: Harper Brothers, 1949.

Symonds, P. M. Diagnosing Personality and Conduct. New York: The Century Company, 1931.

Thorpe, L. P. Child Psychology and Development. New York: Ronald Press Company, 1946.

Trecker, Harleigh B. Group Process in Administration. New York: Women's Press, 1950.

Traxler, Arthur E. Techniques in Guidance. New York: Harper Brothers, 1945.

Waples, D., and W. W. Charters. The Commonwealth Teacher Training Study. Chicago: University of Chicago Press, 1929.

Whyte, W. F. Street Corner Society. Chicago: University of Chicago Press, 1943.

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

Wilds, E. Harrison. The Foundations of Modern Education. New York: Rinehart and Company, 1950.

Articles

Anderson, H. H. "Domination and Integration in the Social Behavior of Young Children in an Experimental Play Situation," Genetic Psychology Monograph, No. 3:341-408, 1937.

Brown, E. W. "Method for the Study of Personality in Young Children," Monographs of the Society for Research in Child Development, IV No. 30, 1941.

Berke, J., and Vivian Wilson. "Weather and You," Colliers, June 23, 1951.

Criswell, J. H. "A Sociometric Study of Race Cleavage in the Classroom," Archives of Psychology, No. 235, 1939.

Chittenden, G. R. "An Experimental Study in Measuring and Modifying Assertive Behavior in Young Children," Monographs of Society for Research in Child Development, 1932.

Dolger, L., and J. Ginandes. "Children's Attitudes Toward Discipline," Journal of Experimental Education, 1941.

Fite, M. D. "Aggressive Behavior in Young Children and Children's Attitudes Toward Aggression," Genetic Psychology Monographs, Vol. 22, 1940.

Green, E. H. "Friendships and Quarrels Among School Children," Child Development, Vol. 4:237-252, 1933.

Hattwick, B. W. "The Influence of Nursery School Attendance Upon the Behavior and Personality of the Preschool Child," Journal of Experimental Education, Vol. 5:180-190, 1936.

Jennings, Helen Hall. "Sociometry in Group Relations," Sociometry, 1948.

Jennings, H. H., and J. L. Moreno. "Sociometric Control Studies of Grouping and Regrouping," Sociometry Monographs, No. 7, 1947.

Jersild, A. T., and F. B. Holmes. "Characteristics of Teachers Who Are Liked Best and Disliked Most," Journal of Experimental Education, Vol. 9:139-151, 1940.

Jersild, A. T. and A. Meigs, "Direct Observation as a Research Method," Review of Educational Research, Vol. 9:472-482, 1939.

Johnson, M. W. "Verbal Influences on Children's Behavior," University of Michigan Monographs in Education, Vol. 1, 1939.

Krout, M. H. "Autistic Gestures," Psychology Monograph, 46, No. 208:225-36, 1935.

Lippitt, R. "An Experimental Study of the Effect of Democratic and Authoritarian Group Atmospheres," University of Iowa Studies in Child Welfare, Vol, XVI, No. 3, 1940.

_____. K. Dewin, and R. K. White. "Patterns and Aggressive Behavior in Experimentally Created Social Climates," Journal of Social Psychology, Vol. 10:271-299, 1939.

McKinnon, K. "Consistency and Change in Personality and Behavior Manifestations. . . .as Observed in a Group of 16 Children During a Five Year Period," Child Development Monographs, Vol. 18, Columbia University, 1941.

Northway, M. L. "Outsiders," Sociometry, Vol. 7:10-25, 1944.

Olson, W. C. "The Measurement of Nervous Habits in Normal Children," University of Minnesota Institute of Child Welfare Monographs, Vol. 3, 1929.

Peck, L. "A Study of the Adjustment Difficulties of a Group of Woman Teachers," Mental Hygiene, Vol. 23:12-25, 1939.

Raths, L. "Identifying the Social Acceptance of Children," Educational Research Bulletin, Vol. 22:72-74, 1943.

Sargent, S. S. "Reaction to Frustration. . . .A Critique and Hypothesis," Psychological Review, Vol. 55, No. 2, 1948.

Unpublished Material

Bilinski, Chester R. "Emotionality and Reading," Unpublished Master's Report, The University of Missouri, Columbia, Missouri, 1950.

_____. "A Sixth Grade Class." Unpublished Master's Thesis, Oklahoma Agricultural and Mechanical College, Stillwater, Oklahoma, 1949.

Publications of Learned Organizations

"Helping Teachers Understand Children," American Council on Education. Prepared by the Staff of the Division on Child Development and Teacher Personnel, 1945.

"The Grouping of Pupils," The 35th Yearbook of the National Council for the Study of Education. Bloomington, Illinois: Public School Publishing Company, 1936.

"American Education and Internal Tensions," Educational Policies Commission. Washington, D. C., 1949.

"How to Construct a Sociogram," Horace-Mann-Lincoln Institute of School Experimentation. Bureau of Publications, Teachers College, Columbia University, 1943.

APPENDIX A

Your Name.....

1. Write the names of 3 pupils in this class with whom you <u>would like</u> to work on a committee.

a) .....

b) .....

c) .....

2. Write the names of 3 pupils in this class with whom you <u>would not like</u> to work on a committee.

a) .....

b) .....

c) .....

COPY OF: SOCIOMETRIC TEST #1

Your Name.....

1. Write the names of three pupils in this class whom you would want on your team if you were playing some game.

a) .....

b) .....

c) .....

2. Write the names of 3 pupils in this class whom you would not want on your team if you were playing some game.

a) .....

b) .....

c) .....

COPY OF: SOCIOMETRIC TEST #2

Your Name.....

1. If you were having a party and there were room for only three more to be invited.....what three in this class would you invite ?

a) .....

b) .....

c) .....

2. If you were having a party and there were room in your house for only 25 (there are 28 in your class) ..... what three in this class would you leave out ?

a) .....

b) .....

c) .....

COPY OF: SOCIOMETRIC TEST #3

APPENDIX B

INDIVIDUAL PUPIL PERSONALITY AND POPULARITY RANK

PUPIL #	SEX	PERSONALITY Adjustment Rank Range: 1-16*	POPULARITY As ranked by members of the same sex Range: 1-12 (Girls) 1-15 (Boys)	POPULARITY As ranked by the entire class Range: 1-28
1	Boy	13.5	6	10
2	Girl	1.5	2	3
3	Girl	7.5	11	21
4	Boy	6.0	11	23
5	Girl	2.5	8	18
6	Girl	7.0	9	19
7	Girl	4.0	3	5
8	Girl	11.0	12	22
9	(left school)			
10	Boy	5.0	5	11
11	Boy	2.0	3	9
12	Girl	11.5	4	6
13	Boy	12.0	14	25
14	Girl	2.5	1	2
15	Boy	11.5	2	4
16	Girl	8.0	10	20
17	Girl	10.0	5	8
18	Boy	16.0	13	26
19	Girl	2.5	7	12
20	Boy	12.0	8	14
21	Boy	15.0	7	13
22	Boy	3.0	4	7
23	Boy	13.0	12	24
24	Boy	9.0	15	27
25	Boy	14.0	9	16
26	Girl	13.5	6	15
27	Boy	7.5	10	17
28	Boy	11.5	1	1

* A rank of 16 is the lowest possible rank, the highest possible rank is 1.

APPENDIX C

INDIVIDUAL PUPIL SOCIOMETRIC TEST RESULTS

PUPIL #	SEX	ACCEPTED									REJECTED								
		Test #1			Test #2			Test #3			Test #1			Test #2			Test #3		
		1st*	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
1	Boy	1	0	0	1	0	0	2	0	0	0	2	2	2	0	0	1	6	3
2	Girl	0	1	2	5	3	0	1	1	3	0	0	0	0	0	0	0	0	0
3	Girl	0	0	1	0	0	0	0	1	1	0	0	1	2	0	0	2	0	0
4	Boy	1	0	0	0	0	0	1	0	0	0	2	1	3	1	5	2	3	3
5	Girl	0	1	1	0	0	0	1	0	1	0	1	1	0	1	0	0	2	1
6	Girl	0	1	0	0	0	0	0	0	0	0	1	1	0	1	0	1	0	0
7	Girl	4	1	1	0	4	2	2	1	2	0	1	1	1	0	0	0	1	0
8	Girl	0	0	0	0	0	0	0	0	0	1	3	1	1	1	0	0	0	0
9	(left school)																		
10	Boy	2	2	2	1	1	0	0	0	1	0	0	0	0	0	1	0	0	0
11	Boy	2	2	2	1	2	1	1	1	3	0	0	0	0	0	1	0	0	0
12	Girl	3	2	2	2	1	2	0	5	0	0	1	0	0	0	0	0	0	0
13	Boy	0	0	0	1	0	2	0	1	1	7	3	4	2	3	3	1	1	4
14	Girl	1	2	6	2	4	3	4	2	2	0	0	0	0	0	0	0	0	0
15	Boy	2	0	1	2	3	1	3	2	0	0	1	0	0	1	0	0	0	0
16	Girl	1	2	1	0	0	0	0	0	0	1	1	0	0	2	0	2	3	0
17	Girl	2	0	0	1	0	4	1	1	2	1	0	0	0	0	0	0	0	0
18	Boy	0	2	4	0	1	1	1	0	1	1	3	2	5	5	2	4	4	5
19	Girl	1	1	0	1	0	0	1	2	0	1	1	1	1	0	0	0	0	1
20	Boy	0	0	1	1	1	2	1	3	0	0	0	0	0	1	1	0	0	0
21	Boy	0	2	0	1	2	0	1	2	0	0	0	1	0	0	1	0	0	0
22	Boy	1	3	1	2	0	4	2	3	3	2	0	1	0	1	0	1	0	2
23	Boy	0	0	0	0	0	0	0	0	0	0	3	5	0	4	2	2	3	3
24	Boy	0	0	0	0	0	1	0	0	0	10	2	3	9	4	3	14	2	4
25	Boy	1	1	1	0	2	1	1	1	3	0	2	0	1	2	1	1	2	0
26	Boy	1	0	0	1	0	0	0	0	1	0	1	1	0	1	0	0	0	0
27	Girl	0	1	0	1	0	0	1	0	1	1	0	0	1	0	1	0	1	0
28	Boy	5	2	0	3	4	1	4	1	1	0	0	0	0	0	0	0	0	0

* Under Test #1 this is the first choice. In other words pupil #1 received 1 first choice for acceptance in sociometric test #1 and no second or third choices. The same is true for Test #2. In Test #3 pupil #1 received two first place votes. For rejection he received 2 second choice and 2 third choice votes.

APPENDIX D

Date: **Day:** **Bar. Pres:** **Heat:**

Weather: Clear Cloudy Rain Foggy Cold Windy

Classwk:

1) V	2) V	3) V	4) V	5) V	6) V
F	F	F	F	F	F
GU	GU	GU	GU	GU	GU
GUW	GUW	GUW	GUW	GUW	GUW
F_1	F_1	F_1	F_1	F_1	F_1
FU	FU	FU	FU	FU	FU
I	I	I	I	I	I
SCR	SCR	SCR	SCR	SCR	SCR
HH	HH	HH	HH	HH	HH
2) V	2) V	2) V	2) V	2) V	2) V
F	F	F	F	F	F
GU	GU	GU	GU	GU	GU
GUW	GUW	GUW	GUW	GUW	GUW
F_1	F_1	F_1	F_1	F_1	F_1
FU	FU	FU	FU	FU	FU
I	I	I	I	I	I
SCR	SCR	SCR	SCR	SCR	SCR
HH	HH	HH	HH	HH	HH
3) V	3) V	3) V	3) V	3) V	3) V
F	F	F	F	F	F
GU	GU	GU	GU	GU	GU
GUW	GUW	GUW	GUW	GUW	GUW
F_1	F_1	F_1	F_1	F_1	F_1
FU	FU	FU	FU	FU	FU
I	I	I	I	I	I
SCR	SCR	SCR	SCR	SCR	SCR
HH	HH	HH	HH	HH	HH
4) V	4) V	4) V	4) V	4) V	4) V
F	F	F	F	F	F
GU	GU	GU	GU	GU	GU
GUW	GUW	GUW	GUW	GUW	GUW
F_1	F_1	F_1	F_1	F_1	F_1
FU	FU	FU	FU	FU	FU
I	I	I	I	I	I
SCR	SCR	SCR	SCR	SCR	SCR
HH	HH	HH	HH	HH	HH
5) V	5) V	5) V	5) V	5) V	5) V
F	F	F	F	F	F
GU	GU	GU	GU	GU	GU
GUW	GUW	GUW	GUW	GUW	GUW
F_1	F_1	F_1	F_1	F_1	F_1
FU	FU	FU	FU	FU	FU
I	I	I	I	I	I
SCR	SCR	SCR	SCR	SCR	SCR
HH	HH	HH	HH	HH	HH

THESIS TITLE: AN ANALYTICAL STUDY OF ELEMENTARY SCHOOL CLASSROOM BEHAVIOR

NAME OF AUTHOR: CHESTER R. BILINSKI

THESIS ADVISER: GUY A LACKEY

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