



eCOMMONS

Loyola University Chicago
Loyola eCommons

Master's Theses

Theses and Dissertations

1959

A Partial Validation of the Manifest Hostility Scale

Thomas F. Grib
Loyola University Chicago

Follow this and additional works at: https://ecommons.luc.edu/luc_theses

 Part of the [Psychology Commons](#)

Recommended Citation

Grib, Thomas F., "A Partial Validation of the Manifest Hostility Scale" (1959). *Master's Theses*. 1585.
https://ecommons.luc.edu/luc_theses/1585

This Thesis is brought to you for free and open access by the Theses and Dissertations at Loyola eCommons. It has been accepted for inclusion in Master's Theses by an authorized administrator of Loyola eCommons. For more information, please contact ecommons@luc.edu.



This work is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 License](#).
Copyright © 1959 Thomas F. Grib

A PARTIAL VALIDATION OF THE MANIFEST HOSTILITY SCALE

By

Thomas F. Grib

A Thesis Submitted to the Faculty of the Graduate School
of Loyola University in Partial Fulfillment of
the Requirements for the Degree of
Master of Arts

February

1959

LIFE

Thomas F. Grib was born in Chicago, Illinois, August 25, 1933.

He graduated from De La Salle High School in June, 1951. He received the degree of Bachelor of Arts from Loyola University in June, 1955.

The author began his graduate studies at Loyola University in September, 1955. From 1956 until 1957 he was employed as a Graduate Assistant. During the academic year of 1957-58 he was engaged as a teaching Fellow by the Department of Psychology at Loyola.

At present he is employed as a research assistant for the Commonwealth Fund project at Loyola.

ACKNOWLEDGEMENTS

The author wishes to express his gratitude to Amos E. Reed, Superintendent, and George Lewis, Chief Psychologist at the Illinois State Training School for Boys, for granting the investigator permission to conduct this study at that institution.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION	1
Introduction--Significance of hostility and need for its measurement--Hypotheses.	
II. REVIEW OF RELATED LITERATURE	5
Studies directly referring to the Manifest Hostility Scale--Other measures of hostility--Relationship between hostility and delinquency.	
III. PROCEDURE	13
Description of subjects--Experimental designs for assessment of reliability and validity--Description of statistical techniques.	
IV. RESULTS AND CONCLUSIONS	23
V. SUMMARY	27
BIBLIOGRAPHY	30
APPENDIX I	33
APPENDIX II	35
APPENDIX III	38
APPENDIX IV	39
APPENDIX V	41

CHAPTER I

INTRODUCTION

The purpose of this thesis is to investigate the reliability and validity of the Manifest Hostility Scale as an objective measure of hostility. This scale, which will be referred to as the MHS in this study, has been used as a measure of hostility with prisoners, Veterans applying for treatment at a mental hygiene clinic, college students and delinquents. (31, 26) However, as yet there have been no reported independent validation studies of the scale.

Feelings of aggression and hostility are among the earliest and most common impulses of man in our state of culture. According to Dollard (8) and Mowrer (24), as well as most psychoanalytically oriented writers, aggression and hostility are natured by products of the frustrations inherent in the socialization process. As the child grows up, he must learn to relinquish earlier forms of behavior which have frequently been a source of satisfaction to him. These authors postulate that this sacrifice is likely to arouse anxiety and resentment in the child. Since the child not only receives his first affection, but also his first frustrations, from his parents, his anxiety and hostility are, at first, primarily focused on them. This conflict between love and hate, the need for and the rebellion against the parents during the educative process, constitutes one of the major problems in the social adjustment of every child.

In her study of hostility in young children, Korner found that the "expression of hostility in play and real life, although varying in degree, was universal in this group of presumably normal preschool children. (21, p. 166)

Karen Horney has pointed out the significance of hostility in neurosis as being the main source from which neurotic anxiety springs. In fact, she goes so far as to state that, "in the neuroses of our time hostile impulses are the main psychological force promoting anxiety." (19, p. 64)

She further notes that anxiety, when based on a feeling of being menaced, may easily provoke a reactive hostility in defense, which, if repressed, may create anxiety, and thus a cycle is established. "It does not matter whether anxiety or hostility has been the primary factor; the point that is highly important for the dynamics of a neurosis is that anxiety and hostility are inextricably interwoven." (19, p. 74)

Besides its significance for general personality theory, the concept of hostility and its objective measurement is especially important in its relationship to juvenile delinquency. As Bloch and Flynn state, "much of the waywardness of our youth, as we have seen, may be attributed to strong hostile impulses generated by unwholesome family patterns and the inability to identify oneself closely with others in affective, positive, primary relations." (5, p. 170)

A great number of researchers are in agreement that delinquent children, on the average, score significantly above control children on tests of emotions or neuroticism. Even when intelligence and economic status (both of which are below average in the typical delinquent groups) are equated,

delinquents have an excess of worries, depressions, hostility and aggression, and emotionally infantile characteristics.

Training schools for delinquents are frequently confronted with the seriously maladjusted boy who will not conform to the institution program, is overly aggressive, and who is influential in suggesting the same type of behavior to others. The large routine structure of institutional life frequently increases his feelings of hostility toward authority and may lead to aggressive outbursts on his part. Unfortunately, the detection and isolation of this type of boy takes place only after he has exerted his influence on those with whom he lives.

Therefore, if hostility is important for personality theory, and more specifically, in its relationship to delinquency, it would seem that an objective measure of hostility would be useful in these areas. It is felt that this thesis is meaningful in that it will be an indication of the validity of the MHS as an objective measure of manifest hostility.

In order to investigate the reliability and validity of the instrument the following hypotheses were formulated:

I. If the Manifest Hostility Scale is a reliable instrument, then there will be a high correlation between the scores obtained on a first testing and those obtained on a retest given after a period of four months.

II. If the Manifest Hostility Scale is a valid measure of overt hostility, then the scores obtained by a delinquent group will be significantly higher than those obtained by non-delinquents of comparable age, sex, race, intelligence and geographical area.

In the second hypothesis, which refers to the validity of the scale, we are making the assumption that delinquents, as a group, exhibit behavior that is overtly more hostile than do non-delinquents. This assumption is strongly supported by the majority of the studies done in this area. Therefore, assuming that delinquents, as a group, are characterized by overt hostile behavior, we should expect that they would score higher on the MHS than non-delinquents, if the scale is a valid measure of overt hostility.

CHAPTER II

REVIEW OF RELATED LITERATURE

The review of the psychological literature related to this thesis will be grouped under three main headings; 1) those studies directly referring to the MHS, 2) those dealing with other measures of hostility, and 3) those concerning the relationship between hostility and delinquency.

1) The MHS was constructed by Saul M. Siegel for use in a study of the personality correlates of authoritarianism and was used to measure manifest hostility. The test was developed by the same procedure as that utilized by Taylor (36) in the construction of the Manifest Anxiety Scale.

The MHS consists of fifty statements selected from the Minnesota Multiphasic Personality Inventory to which the subject answers "true" or "false" by placing a check mark in the appropriate space. That is, if he believes the statement applies to himself he enters a check in the "true" column opposite the item, if the statement does not apply to him he enters a check in the "false" column. An individual's "Hostility Score" is determined by summing up all items (except 5,7,8,27, and 40) which are answered "true", and items 5,7,8,27 and 40 if answered "false".

The scale was constructed in the following manner: The MMPI was scanned for items that might reflect hostility and 110 such items were selected. This list, plus four items devised by Siegel, was submitted to five judges

who were asked to select the items reflecting manifest hostility as defined in the following way: "Manifest hostility denotes feelings of resentment and enmity which show up in an individual's antagonistic attitudes. Reaction formation attitudes (e.g. overly submissive) will not be taken as reflecting manifest anxiety by this definition. Rather, the definition will include a conspicuous trend to utilize a projective mechanism, expressed by great suspiciousness, envy and extreme jealousy. It will also include a persistent reaction to frustration with irritability, temper tantrums, and destructive behavior and attitudes." (30, p. 55)

There was 80% or better agreement on 53 of the 114 items. Three of these items were eliminated because they were either overlapping or ambiguous to bring the final number of items used for the scale to fifty. Siegel (31) reports an odd-even reliability coefficient of the MHS, corrected for attenuation, of .84.

Since it is possible that intellectual differences may affect test responses, correlations of the MHS with intelligence test scores were computed by Siegel. The correlation between the MHS and ACE scores for sixty male college students was $-.19$, not statistically significant. (31)

In his study on the personality correlates of authoritarianism Siegel also used the Rorschach Content Test of Hostility as a measure of hostility. This technique, developed by Elizur, is based on an analysis of Rorschach free-association content, and several studies have reported its validity against external criteria (Gorlow, Zimet and Fine, and Sanders and Cleveland).

Siegel (31) reports rank order correlations of $.17$ and $.01$ between the Rorschach Content Test and the MHS, neither value being significant. His

explanation for the discrepant results obtained with the two hostility tests was that "it is possible that the tests measure different aspects of hostility. The MHS is an objective test apparently reflecting the degree to which the individual is willing to express hostility. The Rorschach Content Test of Hostility is a projective technique and thus may reflect hostility which the individual is not willing to express." (31, p. 370) He further states that, while the MHS has not as yet been independently verified, "the results obtained with it are consistent with expectations suggested by the literature, i.e., authoritarian groups obtained the highest hostility-score means." However, since there has been no independent confirmation of the validity of the MHS, and it only possesses face validity inherent in the nature of the items, any conclusions based on the MHS must be tentative.

2) At the present time most of the tests used to measure hostility have been of the projective type, primarily being scales derived from the Rorschach, the Thematic Apperception Test, and the Rosenzweig Picture-Frustration Test. However, all of these techniques seem to measure covert rather than manifest hostility.

The most widely used test of hostility is Elizur's Rorschach Content Test for Hostility. Elizur (9) with a scoring system for evaluating hostility as expressed in Rorschach content, compared the amount of projected hostility with measures of other kinds of hostility based on a questionnaire, a self-rating scale, and the judgments of observers watching the subjects' behavior in an interview situation. He reported significant correlations between all of the variables used.

Walker (37) constructed a more refined scale and reported significant correlations between Rorschach content scores and therapists' evaluations of hostility in their patients.

However, Gluck (10) felt that both Elizur and Walker failed to distinguish carefully between overt and covert hostility in their work, and that neither of their criteria seemed to bear directly on broader life situations. In order to investigate the problem of whether hostile behavior can be predicted from the amount of hostility found in the content of Rorschach protocols, Gluck constructed scales to measure overt and covert hostility. After correlating the scores between the Rorschach content scale and the subjects' behavior, he concluded that "simple assessment of the amount of hostility contained in the content of a Rorschach protocol does not provide an accurate index to the patients' proclivity or ability to behave in a hostile manner." (10, p. 478)

In another study Gluck (11) attempted to predict hostile behavior from the Thematic Apperception Test, but concluded that "none of the measures of projective hostility were significantly related to the measure of behavioral hostility." (11, p. 26)

Goldstein (13) found no significant relationship between the Elizur Rorschach Content Test of Hostility and the Hostility score derived from the Iowa Multiple-Choice Picture Interpretation Test.

3) Although widespread disagreement exists concerning the organic and environmental factors, there is considerable concurrence on the part of most investigators about the presence of emotionally disturbed states among

delinquents. While there is some variance in the precise diagnosis of these emotional states, all agree in their description of the delinquent as an "hostile individual." The Boston area study by the Gluecks (12) for example, revealed the delinquents scored significantly higher than the non-delinquents in such traits as assertiveness, defiance, resentfulness, and ambivalent attitudes toward authority. The study also showed greater evidence of sadism and impulsiveness in delinquents.

One of the leading categories of emotional disturbance among delinquents is the clearly marked anxiety pattern. A chronic latent factor accompanying anxiety states, as Horney points out, is the pent-up hostility the individual is unable to release. Anxiety-ridden individuals are hostile individuals - hostile to themselves as well as to others.

In practically all studies of the personality correlates of juvenile delinquency, the trait of hostility is the most significant factor differentiating the delinquent from the normal. In a study by Hollingshead that compared 150 delinquents with 105 non-delinquent siblings, the delinquents turned out to be of about the same intelligence, "but were more active and socially assertive and evidenced more symptoms of emotional instability." (18, p. 497)

In a more recent study Pressey and Kuhlen summarized the ways in which delinquents differed from non-delinquents as follows: "Delinquents were restlessly energetic; more impulsive; more aggressive and destructive; more extroverted and socially assertive; more defiant, hostile, suspicious and adventurous; and more ambivalent toward and resistive of authority." (28, p. 471)

Moreover, delinquents tend to "act out" their hostile feelings. That is, they seem to be characterized by manifest hostility, by feelings of resentment and aggression which show up in overt behavior, rather than controlling their hostility through mechanisms such as sublimation or reaction formation (i.e., appearing overly submissive).

Hewitt and Jenkins (17) examined 500 delinquents to discover whether they could find typical behavioral syndromes among them. This research disclosed three principal categories of maladjusted delinquent children, characterized by; 1) assaultive tendencies, bullying, defiance of authority, etc., 2) gang activities, aggressive stealing, truancy from school, etc., and 3) sensitiveness, jealousy, etc. The one common trait possessed by these three groups was their overt hostility, although it was expressed in different ways.

Redl and Wineman characterize the delinquent as an individual possessing low frustration tolerance: "They develop frustration panic, aggression and destructive outbursts in situations the more normal child would easily 'take in his stride.'" They further state that the common reaction to anxiety among delinquents is "ferocious attack and diffuse destruction" upon whatever and whomever is within immediate reach. (29, p. 83)

Slawson (33) compared the responses of delinquents with those of unselected New York City boys on the Woodworth Psychoneurotic Inventory, as modified by Matthews. Examination of the differences and Significance Quotients in each of the groups indicated the following general trends present in the delinquent group:

1. Strong tendencies toward morbid depressions.
2. Marked tendencies to run away from home.
3. Spasms of rage or morbid anger.
4. A dominating impulse to steal.
5. A pleasure in hurting someone or something.
6. Antisocial tendencies.

Social status and nationality factors did not materially affect findings, therefore making it the more probable that the association between emotional instability and juvenile delinquency is direct.

One of the best controlled and most extensive studies of juvenile delinquency was that performed by the Gluecks in 1950. They summarized their results of a comparison of the character and personality of 500 delinquents and 500 non-delinquents as follows:

Considering first those traits in which the delinquents as a group significantly exceed the non-delinquents, we have observed that they are to a much greater degree socially assertive, defiant, and ambivalent to authority; they are more resentful of others and far more hostile, suspicious, and destructive; the goals of their drives are to a much greater extent receptive (oral) and destructive-sadistic; they are more impulsive and vivacious, and decidedly more extroversive in their behavior trends. (12, p. 470)

In an attempt to discover what personality factors might be associated with anti-social behavior Bartlett and Harris (4) conducted a comprehensive testing program with 119 delinquents in the Indiana Boys School. As a check upon the results obtained, a parallel testing program was administered to 122 high school students in Greencastle, Indiana. The general home and social backgrounds of the two groups were found to be comparable, as well as their mental ability. The results of the study were summarized as follows:

Delinquents tend to reveal greater emotional instability, more difficulty in maintaining home and family relationships (due in part, no doubt, to the frequency of irregularities in home life, broken homes, etc.), greater difficulty in school adjustment (46 per cent were truants before committal), more frequent participation in socially undesirable leisure-time activities and a greater tendency to cheat on classroom tests, than is true of a comparable group of non-delinquents. (4, p. 656)

All these studies describe the delinquent as being hostile, both attitudinally as well as behaviorally. The characteristics ascribed him fit in well with Siegel's definition of manifest hostility, i.e., feelings of resentment and enmity, antagonistic attitudes, suspiciousness, envy and extreme jealousy, reacting to frustration with irritability, temper tantrums, and destructive behavior and attitudes. In other words, the delinquent is a manifestly hostile individual.

CHAPTER III

PROCEDURE

In order to investigate the reliability and validity of the MHS, the following two hypotheses were formulated:

- I. If the Manifest Hostility Scale is a reliable instrument, then there will be a high correlation between the scores obtained on a first testing and those obtained on a retest given after a period of four months.
- II. If the Manifest Hostility Scale is a valid measure of overt hostility, then the scores obtained by a delinquent group will be significantly higher than those obtained by a non-delinquent group of comparable age, sex, race, intelligence and geographical area.

Before proceeding further we should define the concept of delinquency as used in this study. Actually, any child who commits even a single minor act in violation of the law is technically a delinquent. For the purposes of the present study, however, delinquency refers to acts of a kind which, when committed by persons beyond the statutory juvenile court age, are punishable as crimes.

The delinquent group was composed of adjudicated delinquents committed to the Illinois Youth Commission and placed in the Illinois State Training School for Boys at St. Charles. Table I on the following page gives the reasons for commitment for the 48 cases used in the study.

The non-delinquent group was composed of Chicago residents who are students in Chicago high schools. The group designated as non-delinquent

was considered such on the basis of the following inquiry made of school officials possessing information about these subjects: "To your knowledge, are any of the individuals who have been tested guilty of incorrigibility, truancy, sex crimes, auto theft, burglary or any other misdemeanor or infraction that, if brought to the attention of civil authorities, would provide a basis for classifying the student as delinquent?" A positive reply eliminated a subject from further consideration.

TABLE I
OFFENSES OF DELINQUENT BOYS
LEADING TO COMMITMENT

OFFENSE	NO. COMMITTED
Auto theft	26
Burglary	10
Armed robbery	4
Larceny	3
Riding in stolen car	2
Assault	1
Purse snatching	1
Carrying concealed weapon	1
Total	48

Both groups were composed of white males who were residents of Chicago and between the ages of fifteen to sixteen, in order to control the variables of age, sex, race and geographical area.

In addition to the MHS, both groups were given the Revised Beta Examination in order to match the groups for intelligence. The Revised Beta was chosen as the measure of intellectual ability for this study because it is given routinely to all boys on admission to the Reception Center at St. Charles.

The Revised Beta Examination is a revision of the United States Army Group Examination Beta which was developed during World War I. It is intended to serve as a measure of general intellectual ability of persons who are relatively illiterate or who are non-English speaking. Since many of the boys committed to St. Charles are poor readers, this examination is used as the measure of intelligence and is included in the regular battery of tests administered prior to transfer to the Training School.

The authors of the Revised Beta, Kellogg and Morton (20), revised the content of the test in the early thirties and a revised manual was prepared in 1943. In spite of its age, the test is still used extensively, especially in mass industries which employ persons with foreign backgrounds who have little education, and in penal institutions where a group nonverbal test is necessary to supplement the more common group verbal tests.

Lindner and Gurvitz (22) made an extensive study of the Revised Beta Exam in 1946 which resulted in a restandardization of the test and the derivation of IQ's according to the method developed by Wechsler. For 192 unselected persons from the standardizing sample, a coefficient of correlation

of .92 was found between Beta IQ's and Wechsler IQ's. The correlation of Revised Beta Examination scores with Stanford-Binet (1916) mental ages is .78 for 521 cases referred for special testing in the New York City schools.

(20)

1) Determination of reliability: No test can have validity unless it measures accurately. The accuracy of measurement is expressed in the reliability coefficient which shows the extent to which errors of measurement influence scores on the test. The conventional methods of estimating the reliability of a psychological test are based upon correlating scores obtained by either 1) applying the same test twice to a given group, 2) administering two parallel forms of a test to a group, or 3) dividing a single test into equivalent halves. The correlation coefficient thus obtained indicates the extent of agreement between the two sets of observed scores, or the self-correlation of the test. (35)

Since no parallel form of the MHS has been developed and because the split-half method does not take into account day to day fluctuations in performance, we have used the test-retest method as the measure of reliability in this study. Furthermore, as Tate points out, "Strictly speaking, only the test-retest method can be said to measure the extent of agreement between repeated observations. Whether parallel forms or equivalent halves of a test measure the same thing is always debatable." (35, p. 335)

The reliability of the MHS was determined in the following way: The test was administered to 190 delinquent boys committed to the Illinois State Training School for Boys. Before actual transfer to the Training School all boys are admitted to the Reception Center where they are given a battery of

intelligence, educational and personality tests. The MHS was included in this battery and given during the regular testing session. After a period of four months the test was re-administered to 84 members of the above group still remaining at the Training School. A correlation coefficient, using the Pearson product-moment method, was obtained between the scores from the first test and the retest, and was used as a measure of reliability of the MHS. The formula is:

$$R_{xy} = \frac{\sum xy}{\sqrt{(\sum x^2)(\sum y^2)}} \quad (35, \text{ p. 238})$$

Where:

R_{xy} = correlation between variables x and y

$\sum x^2$ = sum of the squares of the deviations from the mean for variable x

$\sum y^2$ = sum of squares of the deviations from the mean for variable y

2) Determination of validity: The one indispensable characteristic of a test is validity, and, for most testing purposes, there is no substitute for empirical validity. Essentially such validity refers to the relation between test scores and a criterion, the latter being an independent and direct measure of that which the test is designed to predict. (3, 15)

The test scores in this study are the individuals' scores on the MHS and the criterion is delinquency (i.e., delinquent or non-delinquent status). Since delinquents have been shown to be significantly more hostile than non-delinquents (1, 4, 5, 11, 14, 16, 17, 18, 19, 28, 33, 34), delinquents as a

group should score significantly higher than non-delinquents on the MHS. This method, generally called the method of contrasted groups, has been used to validate personality tests concerned with the measurement of emotional or social adjustment. (3)

The two groups were matched for age, sex, race, intelligence and geographical area. In addition to the MHS, both groups were given the Revised Beta Examination in order to match the groups for intelligence. The Revised Beta was chosen as the measure of intelligence because it is given routinely to all boys on admission to the Reception Center at St. Charles. The following procedure was used in order to obtain a measure of the validity of the MHS:

From the original group of 190 delinquents who took the MHS those were eliminated who were not between the ages of fifteen years to sixteen years inclusive, who were not white residents of Chicago, and whose IQ was not between the scores of 80 to 120, inclusive. The resulting group was composed of 48 white Chicago residents, between the ages of fifteen to sixteen years whose IQ was between 80 and 120.

The MHS and Revised Beta was then administered to 106 boys from two Chicago high schools. From this group those were eliminated who were not white Chicago residents, between the ages of fifteen to sixteen years, inclusive, and whose IQ was not between the scores of 80 to 120. This resulted in a group of 84 non-delinquents. On the basis of the information secured from the files of the delinquent group at the Training School, a control group was selected from the above 84 Chicago high school students. An attempt was made to secure a comparable group of students on the basis of age, sex, IQ, race and geographical area.

After selection of the delinquent and non-delinquent groups, each group consisted of 48 white boys between the ages of fifteen to sixteen who lived in the Chicago area. The mean chronological age for both groups was 16.06 years, and the standard deviations were .62 for the delinquent group and .56 for the non-delinquent group. Information relating to the age of the subjects used is given in Table II on the following page.

In spite of some reports that the correlation between intelligence and hostility is zero, attempt was made to control the intellectual variable. Both groups were given the Revised Beta Examination and were matched according to the results obtained. The mean IQ's were 102.9 for the delinquents and 105.6 for the non-delinquents; the standard deviations were 8.96 for the delinquents and 7.91 for the non-delinquents. The Critical Ratio was 1.56 ($P = .20$), indicating that the difference between the two groups is not significant. Information relating to the intelligence of the subjects is given in Table III on the following page.

TABLE II
THE CHRONOLOGICAL AGE DISTRIBUTION OF THE 96
DELINQUENT AND NON-DELINQUENT SUBJECTS

AGE RANGE	DELINQUENTS	NON-DELINQUENTS
15-0 to 15-5	12	10
15-6 to 15-11	10	13
16-0 to 16-5	9	9
16-6 to 16-11	17	16
Total	48	48

TABLE III
THE IQ DISTRIBUTION OF THE 96 DELINQUENT
AND NON-DELINQUENT SUBJECTS

IQ	DELINQUENTS	NON-DELINQUENTS
80-89	2	3
90-110	34	33
111-120	12	12
Total	48	48

After the two groups, delinquent and non-delinquent, were matched, the difference between their scores on the MHS was tested for significance. Since the scores from neither group could be assumed to be normally distributed, the median test, which is a distribution-free technique, was used as the test of significance. This test, essentially a chi-square technique, is a procedure for testing whether two independent groups differ in central tendencies. To perform the median test, the median score for the combined group (i.e., the median for all scores in both samples) is determined. Then both sets of scores are dichotomized at that combined median. The data are then cast in a 2x2 table and the value of chi-square is computed using the formula:

$$\chi^2 = \frac{N(AD - BC)}{(A+B)(C+D)(A+C)(B+D)} \quad (23, \text{ p. } 224)$$

In a preliminary testing of over 50 boys with a wide range of intelligence, several items on the MHS were found to be too difficult for them to comprehend and required explanation by the examiner. In order to remedy this several of the items were altered in order to make them more easily understood, but in all cases care was taken to preserve the original meaning. The changes were minimal (see Appendices I and II) and consisted of either 1) substituting more familiar, easier to comprehend terms for less familiar, more difficult ones, or 2) by changing long, complex sentences into shorter sentences. In both cases the original meaning of the statement was retained. In all, nineteen items were so altered: 1, 4, 5, 7, 9, 10, 12, 17, 18, 20, 21, 26, 27, 32, 38, 41, 42, 43, and 50.

Examples of the first type of alteration are: In item 4, "I am often inclined to go out of my way to win a point with someone who has opposed me," the word "tend" was substituted for "am...inclined." In item 32, "In school my marks in deportment were quite regularly bad," the word "conduct" was substituted for "deportment."

An example of the second type of alteration is; changing item 9, "When someone does me a wrong I feel I should pay him back if I can, just for the principle of the thing," to read, "When someone does me a wrong I feel I should pay him back if I can, just to get even."

CHAPTER IV

RESULTS AND CONCLUSIONS

In Chapter One it was indicated that the present study sought to investigate the reliability and validity of the MHS. Two hypotheses were formulated for this purpose. In evaluating the data collected in this study, the two hypotheses shall be considered separately.

1) Reliability: The reliability of the MHS was determined by the test-retest method, using the scores obtained by the delinquents on the original testing and a retest given after a period of four months. Of the 190 delinquents originally tested, only 84 were available for retesting after four months. The mean and standard deviation of the scores obtained on the first testing were 22.12 and 7.72 respectively. The retest yielded a mean of 20.88 and a standard deviation of 7.02. A Pearson product-moment correlation was computed, resulting in a reliability coefficient of .81. This compares favorably with the odd-even reliability coefficient of .84 obtained by Siegel.

The American Psychological Association (2) has recommended that a coefficient obtained by the test-retest method be designated a coefficient of stability, since it is a measure of the extent to which scores on the particular test are stable over a period of time, and one obtained by the odd-even equivalent halves method be called a coefficient of internal stability. Since both coefficients are in the 80's, it can be concluded that the data

supports the first hypothesis; that is, that the MHS is a reliable instrument.

2) Validity: The validity of the MHS was investigated by determining whether delinquents and non-delinquents could be distinguished on the basis of their scores on the test. Since delinquents, as a group, have been shown to be significantly more overtly hostile than non-delinquents, they should obtain higher scores on the MHS, if it is a valid measure of manifest hostility.

The two groups, 48 delinquents and 48 non-delinquents, were matched as to age, sex, race, intelligence and geographical area. The mean hostility score for the delinquent group was 19.27 with a standard deviation of 6.98; the mean and standard deviation for the non-delinquents was 20.19 and 6.12, respectively (see Appendix IV, Tables I and II). The difference between the scores was not significant as indicated by the median test value of 0.66.

(See Appendix V)

Although the size of the groups employed was too small to determine whether they were normally distributed, the critical ratio (which assumes normality of the statistics chosen for comparison) was also computed. The use of the CR as a measure of significance was justified for the following reasons given by Tate:

Although normal sampling distribution theory rests upon population normality, there is a great deal of evidence in support of the view that considerable departure from normality does not materially affect the sampling distribution of the mean....Many experiments confirm the view that, when the size of sample is about 30 or more and the population at least about 10 times as large as the sample, the use of normal curve relationships in drawing

inferences about the population mean is justified, despite considerable departure from normality in the population....the usual tests of significance and estimation regarding population means appear to be, on experimental evidence, fairly trustworthy, even though the population departs quite considerably from normality. (35, p. 447-8)

The CR between the delinquent and non-delinquent scores is -0.69 , not statistically significant. Since the difference between the scores obtained by delinquents and non-delinquents, although not significant, is in the opposite direction of that hypothesized, the results of this study do not indicate the MHS to be a valid measure of manifest hostility.

There appear to be three factors of importance in discussing the results. First, in examining the content of the items on the MHS, it appears that many of them reflect covert rather than overt (manifest) hostility. Examples of these items are: Item 3, "It is safer to trust nobody;" item 24, "I know who is responsible for most of my troubles;" item 29, "I am sure I got a raw deal from life;" and so on. Less than half of the items refer directly to overt behavior. Thus, it appears that the MHS does not even possess the face validity that Siegel claims for it.

Secondly, it is suggested that, in addition to the amount of hostility which the MHS score reflects (whether it be overt or covert), such other factors as its direction and the amount of anxiety it (hostility) provokes, and the degree of control possessed by the person, will have to be considered before adequate prediction of overt behavior can be successfully attempted.

Third, and most important, is the fact that there may be no actual difference in the amount of manifest hostility possessed by each group. Although practically all of the previous studies that have compared delinquent and

non-delinquent groups conclude that delinquents are more hostile than non-delinquents, the two groups used in this study were not tested independently of the MHS to ascertain whether such a difference existed between them. In other words, besides the fact that one group was composed of known delinquents and the other of non-delinquents, there was no other outside criteria used to substantiate the assumption that the delinquents were, in fact, more hostile than the non-delinquents.

CHAPTER V

SUMMARY

This thesis proposed to investigate the reliability and validity of the Manifest Hostility Scale as an objective measure of overt hostility. The research hypotheses were:

- I. If the Manifest Hostility Scale is a reliable instrument, then there will be a high correlation between the scores obtained on a first testing and those obtained on a retest given after a period of four months.
- II. If the Manifest Hostility Scale is a valid measure of overt hostility, then the scores obtained by a delinquent group will be significantly higher than those obtained by non-delinquents of comparable age, sex, race, intelligence and geographical area.

The reliability of the MHS was determined in the following way: The test was administered to 190 delinquent boys committed to the Illinois State Training School for Boys. After a period of four months the test was re-administered to 84 members of the above group still remaining at the Training School. The mean and standard deviation of the scores from the first testing were 22.12 and 7.72 respectively. The retest yielded a mean of 20.88 and a standard deviation of 7.02. The test-retest reliability coefficient, computed by the Pearson product-moment correlation technique, was .81, which compares favorably with the odd-even reliability coefficient of .84 obtained by Siegel. It was concluded that the data support the first hypothesis; that is, that the MHS is a reliable instrument in the sense that the scores

on the test remain stable over a period of time.

The method of contrasted groups was employed in order to investigate the validity of the MHS. Since delinquents, as a group, have been shown to be significantly more overtly hostile than non-delinquents, it was hypothesized that, if the MHS is a valid measure of overt hostility, the delinquent group should score significantly higher on the test than non-delinquents.

The delinquent group was composed of 48 boys, judged delinquent by the courts of Illinois and committed to the Illinois State Training School for Boys, who were guilty of acts which, when committed by persons beyond the statutory juvenile court age, are punishable as crimes.

The non-delinquent group was composed of 48 Chicago high school students who, on the basis of an inquiry made of school officials possessing information about these subjects, were considered to be non-delinquent.

The two groups were matched as to age, sex, race, intelligence and geographical area.

Both groups were given the MHS and their scores were compared to see if there was a significant difference between them. The mean score on the MHS for the delinquent group was 19.27 with a standard deviation of 6.98; the mean and standard deviation for the non-delinquent group was 20.19 and 6.12, respectively. The difference between the scores was not significant as indicated by the median test value of -0.66 and by a critical ratio of -0.69.

Since the difference between the scores obtained by the two groups, although not significant, was in the opposite direction of that hypothesized, it was concluded that the results of this study do not indicate the MHS to be a valid measure of manifest hostility.

In discussing the results two factors were considered. First, it appears that the content of many of the items on the MHS reflect covert rather than overt hostility, which would not necessarily appear in overt behavior. Secondly, it was suggested that, in addition to the amount of hostility which the MHS score reflects (whether it be overt or covert), such other factors as its direction and the amount of anxiety it provokes, and the degree of control possessed by the person, will have to be considered before adequate prediction of overt behavior can be successfully attempted.

BIBLIOGRAPHY

1. Aichorn, August. Wayward Youth. New York: Meridian Books, 1955.
2. American Psychological Association, Committee on Test Standards.
"Technical Recommendations for Psychological Tests and Diagnostic
Techniques; Preliminary Proposals." American Psychologist, 1952,
7, 461-475.
3. Anastasi, Anne. Psychological Testing. New York: Macmillan Co., 19
4. Bartlett, Edward and Harris, Dale. "Personality Factors in Delinquency."
School and Society, 1936, 43, 653-656.
5. Bloch, , and Flynn, . Delinquency: The Juvenile Offender in
America Today. New York: Random House, 1956.
6. Blou, Peter. "Aggression in Young Children." Child Study, May, 1938,
228-230.
7. Cronbach, Lee J. Essentials of Psychological Testing. New York:
Harper and Brothers, 1949.
8. Dollard, J., Doob, L. W., Miller, N. E., Mowrer, O. H., and Sears, R. R.
Frustration and Aggression. London: H. Mildord, Oxford University
Press, 1939.
9. Elizur, A. "Content Analysis of the Rorschach with Regard to Anxiety and
Hostility." Journal of Projective Techniques, 1949, 13, 247-284.
10. Gluck, Martin R. "Rorschach Content and Hostile Behavior." Journal of
Consulting Psychology. 1955, 19, 475-478.
11. Gluck, Martin R. "The Relationship Between Hostility in the TAT and
Behavioral Hostility." Journal of Projective Techniques, 1955, 19,
21-26.
12. Glueck, Sheldon and Eleanor. Unravelling Juvenile Delinquency. New
York: The Commonwealth Fund, 1950.
13. Goodstein, Leonard. "Interrelationships Among Several Measures of
Anxiety." Journal of Consulting Psychology, 1954, 18, 35-39.

14. Gough, Harrison, and Peterson, Donald. "The Identification and Measurement of Predispositional Factors in Crime and Delinquency." Journal of Consulting Psychology, 1952, 16, 207-212.
15. Guilford, J. P. Psychometric Methods. New York: McGraw-Hill, 1936.
16. Hathaway, Starke, and Monachesi, E. D. Analyzing and Predicting Juvenile Delinquency with the MMPI. Minneapolis: University of Minnesota Press, 1953.
17. Hewitt, L. E., and Jenkins, R. L. Fundamental Patterns of Maladjustment. Springfield: 1947.
18. Hollingshead, A. B. "Age Relationships and Marriage." American Sociological Review, 1951, 16, 492-499.
19. Horney, Karen. The Neurotic Personality of Our Time. New York: W. W. Norton and Co., 1937.
20. Kellogg, C. E., and Morton, N. W. Revised Beta Examination Manual. N. Y. The Psychological Corporation, 1943.
21. Korner, Anneliese. Some Aspects of Hostility in Young Children. New York: Grune and Stratton, 1949.
22. Lindner, R., and Gurvitz, M. "Restandardization of the Revised Beta Examination to Yield the Wechsler Type of IQ." Journal of Applied Psychology, 1946.
23. McNemar, Quinn. Psychological Statistics. New York: John Wiley and Sons, 1955.
24. Mowrer, O. H. "Some Research Implications of the Frustration Concept as Related to Social and Educational Problems." Character and Personality, 1938, 7, 129-135.
25. Moses, L. E. "Non-Parametric Statistics for Psychological Research." Psychological Bulletin, 1952, 49, 122-143.
26. Najjar, Basil. A Validation Study of Three Nonverbal MAPS Test Signs as Indicators of Hostility Among Delinquent Boys. Unpublished Master's Thesis, 1958.
27. Novak, Dan. A Comparison of the Vocational Interests and Aptitudes of Delinquent and Non-Delinquent Adolescent Girls. Unpublished Doctor's Dissertation, 1956.
28. Pressey, S., and Kuhlen, R. Psychological Development Through the Life Span. Harper and Brothers, New York, 1957.

29. Redl, Fritz, and Wineman, David. Children Who Hate. Glencoe, Ill.: The Free Press, 1951.
30. Siegel, Saul M. Some Personality Correlates of Authoritarianism. Unpublished Doctor's Dissertation, 1955.
31. Siegel, Saul M. "The Relationship of Hostility to Authoritarianism." Journal of Abnormal and Social Psychology. 1956, 52, 368-372.
32. Siegel, Sidney. Nonparametric Statistics. New York: McGraw-Hill, 1956.
33. Slawson, John. "Psychoneurotic Responses of Delinquent Boys." Journal of Abnormal and Social Psychology, 1925, 20, 261-281.
34. Stagner, Ross. Psychology of Personality. New York: McGraw-Hill, 1948.
35. Tate, M. W. Statistics in Education. New York: Macmillan Co., 1955.
36. Taylor, J. A. "A Personality Scale of Manifest Anxiety." Journal of Abnormal and Social Psychology, 1953, 48, 285-290.
37. Walker, W. C. "A Comparison of Clinical Manifestations of Hostility with Rorschach and MAPS Test Performances." Journal of Projective Techniques, 1951, 15, 444-460.

APPENDIX I

MANIFEST HOSTILITY SCALE - ORIGINAL FORM

1. I have often found people jealous of my good ideas just because they had not thought of them first.
2. I don't blame anyone for trying to take everything he can get in this world.
3. It is safer to trust nobody.
4. I am often inclined to go out of my way to win a point with someone who has opposed me.
5. I have very few quarrels with members of my family.
6. I think nearly anyone would tell a lie to keep out of trouble.
7. I am easily downed in an argument.
8. I am not easily angered.
9. When someone does me a wrong I feel I should pay him back if I can, just for the principle of the thing.
10. I have at times stood in the way of people who were trying to do something, not because it amounted to much, but because of the principle of the thing.
11. Some of my family have habits that bother and annoy me a lot.
12. I have at times had to be rough with people who were rude or annoying.
13. It is all right to get around the law if you don't actually break it.
14. I like to poke fun at people.
15. Someone has it in for me.
16. I easily become impatient with people.
17. I do not blame a person for taking advantage of someone who lays himself open to it.
18. Most people are honest chiefly through fear of being caught.
19. I sometimes tease animals.
20. I have frequently worked under people who seem to have things arranged so that they get credit for good work but are able to pass off mistakes onto those under them.
21. Some people are so bossy that I feel like doing the opposite of what they request, even though I know they are right.
22. I like to play practical jokes on others.
23. I often become annoyed when someone tries to get ahead of me in line so I speak to him about it.
24. I know who is responsible for most of my troubles.
25. I sometimes have a strong urge to do something harmful or shocking.
26. In school I was sometimes sent to the principal for cutting up.
27. I am often sorry because I am so cross and grouchy.

28. I often feel irritable.
29. I am sure I got a raw deal from life.
30. At times I feel like smashing things.
31. I get angry sometimes.
32. In school my marks in deportment were quite regularly bad.
33. I think most people would lie to get ahead.
34. At times I feel I must injure either myself or someone else.
35. If people had not had it in for me I'd be much more successful.
36. I believe I am being followed.
37. I never have temper tantrums.
38. I believe I am being plotted against.
39. Someone has been trying to rob me.
40. I have no enemies who really want to harm me.
41. I do not try to cover up my poor opinion or pity of a person so that he won't know how I feel.
42. I am often said to be hotheaded.
43. I commonly wonder what hidden reason another person may have for doing something nice for me.
44. I get mad easily and then get over it soon.
45. At times I feel like picking a fist fight with someone.
46. I sometimes enjoy hurting people I love.
47. I can easily make other people afraid of me, and sometimes do for the fun of it.
48. Horses that don't pull should be beaten or kicked.
49. Most people make friends because friends can be useful to them.
50. There are certain people I dislike so much that I am inwardly pleased that they are catching it for something they have done.

APPENDIX II

MANIFEST HOSTILITY SCALE - ALTERED FORM

NAME _____	AGE _____	IQ _____	RACE _____	RELIGION _____
				TRUE FALSE
1. I often find people jealous of my good ideas because they didn't think of them first.				_____
2. I don't blame anyone for trying to take everything he can get in this world.				_____
3. It is safer to trust nobody.				_____
4. I often tend to go out of my way to win a point with someone who has opposed me.				_____
5. I have very few arguments with members of my family.				_____
6. I think nearly anyone would tell a lie to keep out of trouble.				_____
7. I am easily defeated in an argument.				_____
8. I am not easily angered.				_____
9. When someone does me a wrong I feel I should pay him back if I can, just to get even.				_____
10. I sometimes stand in the way of people doing things just for the heck of it.				_____
11. Some of my family have habits that bother and annoy me a lot.				_____
12. I sometimes had to be rough with people who were rude or annoying.				_____
13. It is all right to get around the law if you don't actually break it.				_____
14. I like to poke fun at people.				_____

	TRUE	FALSE
15. Someone has it in for me.	_____	_____
16. I easily become impatient with people.	_____	_____
17. I don't blame anyone for taking advantage of someone who asks for it.	_____	_____
18. Most people are honest because they are afraid of being caught.	_____	_____
19. I sometimes tease animals.	_____	_____
20. I have often found people taking credit for other's good works but are quick to pass off mistakes on them.	_____	_____
21. Some people are so bossy that I feel like doing just the opposite of what they ask, even though I know they're right.	_____	_____
22. I like to play practical jokes on others.	_____	_____
23. I often become annoyed when someone tries to get ahead of me in line so I speak to him about it.	_____	_____
24. I know who is responsible for most of my troubles.	_____	_____
25. I sometimes have a strong urge to do something harmful or shocking.	_____	_____
26. In school I was sometimes sent to the principal for messing up.	_____	_____
27. I am often sorry because I am so cross and angry.	_____	_____
28. I often feel irritable.	_____	_____
29. I am sure I got a raw deal from life.	_____	_____
30. At times I feel like smashing things.	_____	_____
31. I get angry sometimes.	_____	_____
32. In school my marks in conduct were quite regularly bad.	_____	_____
33. I think most people would lie to get ahead.	_____	_____

	TRUE	FALSE
34. At times I feel I must injure either myself or someone else.	_____	_____
35. If people had not had it in for me I'd be much more successful.	_____	_____
36. I believe I am being followed.	_____	_____
37. I never have temper tantrums.	_____	_____
38. I believe somebody is out to get me.	_____	_____
39. Someone has been trying to rob me.	_____	_____
40. I have no enemies who really want to harm me.	_____	_____
41. I try not to hide my poor opinion of a person so he'll know how I feel.	_____	_____
42. I am often accused of being a hothead.	_____	_____
43. I often wonder what hidden reason another person has for doing something nice for me.	_____	_____
44. I get mad easily and then get over it soon.	_____	_____
45. At times I feel like picking a fist fight with someone.	_____	_____
46. I sometimes enjoy hurting people I love.	_____	_____
47. I can easily make other people afraid of me, and sometimes do for the fun of it.	_____	_____
48. Horses that don't pull should be beaten or kicked.	_____	_____
49. Most people make friends because friends can be useful to them.	_____	_____
50. There are certain people I dislike so much that I am glad when they are catching it for something they have done.	_____	_____

APPENDIX III
MANIFEST HOSTILITY SCORES ON FIRST TEST AND RETEST FOR 84 DELINQUENTS

SUBJECT	MHS score: first test	MHS score: retest	SUBJECT	MHS score: first test	MHS score: retest
1	29	29	43	19	21
2	23	16	44	3	6
3	31	36	45	23	23
4	14	19	46	20	18
5	18	26	47	15	15
6	16	31	48	22	33
7	15	28	49	25	18
8	25	20	50	37	27
9	18	20	51	33	23
10	23	23	52	29	28
11	42	35	53	10	10
12	13	18	54	17	19
13	18	13	55	30	27
14	21	23	56	32	36
15	27	30	57	9	14
16	9	16	58	14	28
17	39	36	59	22	20
18	7	16	60	14	16
19	15	24	61	24	25
20	14	17	62	23	20
21	21	19	63	20	26
22	21	33	64	9	8
23	25	20	65	36	18
24	21	29	66	6	20
25	26	24	67	22	28
26	20	30	68	24	20
27	29	31	69	15	18
28	15	9	70	18	17
29	15	24	71	30	31
30	24	19	72	10	13
31	13	23	73	22	26
32	11	22	74	9	8
33	15	12	75	25	25
34	25	13	76	16	15
35	21	18	77	23	31
36	33	17	78	27	32
37	18	23	79	20	23
38	26	24	80	26	27
39	16	12	81	24	27
40	23	27	82	21	24
41	22	26	83	31	21
42	29	30	84	13	12
Means			22.12	20.88	
Standard Dev.			7.72	7.02	
			r = .81		

APPENDIX IV

TABLE I

STATISTICAL DATA FOR DELINQUENT GROUP

Subject	IQ	Age	MHS score	Subject	IQ	Age	MHS score
1	91	15.00	17	25	106	16.25	11
2	112	15.00	23	26	120	16.25	13
3	98	15.17	18	27	94	16.25	26
4	106	15.25	19	28	118	16.33	17
5	95	15.25	35	29	99	16.42	28
6	113	15.25	27	30	94	16.42	28
7	100	15.25	21	31	100	16.42	22
8	100	15.25	13	32	94	16.50	29
9	109	15.25	27	33	112	16.50	24
10	100	15.25	17	34	103	16.50	22
11	90	15.33	35	35	97	16.58	27
12	96	15.33	17	36	115	16.58	6
13	100	15.50	20	37	111	16.67	12
14	100	15.50	13	38	106	16.75	28
15	107	15.67	13	39	106	16.75	9
16	100	15.67	19	40	100	16.75	20
17	109	15.75	18	41	90	16.75	25
18	91	15.83	27	42	107	16.83	28
19	95	15.83	6	43	104	16.83	12
20	111	15.83	20	44	99	16.83	10
21	120	15.92	15	45	120	16.92	10
22	102	15.92	17	46	85	16.92	15
23	115	16.00	13	47	112	16.92	18
24	85	16.17	18	48	101	16.92	17
Means				102.88	16.06	19.27	
Standard Dev.				8.96	.62	6.98	

TABLE II
STATISTICAL DATA FOR NON-DELINQUENT GROUP

Subject	IQ	Age	MHS score	Subject	IQ	Age	MHS score
1	105	15.00	22	25	101	16.25	12
2	111	15.17	14	26	112	16.25	30
3	105	15.17	21	27	106	16.25	22
4	117	15.17	15	28	104	16.33	15
5	116	15.25	24	29	97	16.33	12
6	113	15.33	20	30	115	16.42	19
7	86	15.33	19	31	112	15.92	20
8	88	15.33	25	32	110	16.42	16
9	118	15.42	23	33	104	16.50	27
10	105	15.42	27	34	113	16.58	24
11	105	15.50	13	35	106	16.50	20
12	104	15.67	15	36	103	16.58	13
13	108	15.67	17	37	113	16.58	13
14	99	15.83	27	38	109	16.58	34
15	101	15.83	28	39	117	16.67	32
16	103	15.83	11	40	110	16.92	26
17	103	15.83	12	41	103	16.75	28
18	110	15.67	18	42	109	16.83	19
19	83	15.83	25	43	104	16.83	15
20	101	15.92	25	44	105	16.83	24
21	99	15.92	16	45	107	16.83	7
22	93	16.00	19	46	107	16.83	23
23	97	16.17	23	47	107	16.92	17
24	118	15.75	17	48	105	16.17	25
Means				105.56	16.06	20.19	
Standard Dev.				7.91	.56	6.12	

APPENDIX V

2x2 TABLE FOR MEDIAN TEST

	Above Median	Below Median	
Delinquents	21	27	48
Non-Delinquents	25	23	48
	46	50	96

APPROVAL SHEET

The thesis submitted by Thomas F. Grib has been read and approved by three members of the Department of Psychology.

The final copies have been examined by the director of the thesis, and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the thesis is now given final approval with reference to content, form, and mechanical accuracy.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

10-14-58
Date

Edmund P. Marx
Signature of Adviser