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## A Study of the Relationship Between the Personalities of Juvenile Delinquents Committed for Burglary, Auto Theft, Robbery in the State of California, 1953

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A STUDY OF THE RELATIONSHIP BETWEEN THE PERSONALITIES OF  
JUVENILE DELINQUENTS COMMITTED FOR BURGLARY,  
AUTO THEFT, ROBBERY IN THE STATE  
OF CALIFORNIA, 1953

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A Thesis  
Presented to  
The Faculty of the Graduate College  
University of Omaha

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In partial Fulfillment  
of the Requirements for the Degree  
Master of Arts

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BY  
John Wesley Adams  
March 1957

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## CHAPTER I

### THE PROBLEM AND DEFINITION OF TERMS USED

#### Need for the Study

The need for more knowledge and better understanding of the adolescent personality patterns (traits) that lead to juvenile delinquency becomes more and more apparent with the tremendous growth in population and the alarming upswing in juvenile delinquency in the State of California.

Attempts to meet this problem which have been taken by the State include the appropriation of larger sums of money, the establishment of the California Youth Authority, the construction of new facilities and the enlargement of present facilities. State authorities, lay and professional people, churches, fraternal and service organizations and community agencies have banded together to cope with it.<sup>1</sup>

Although the need for better finances and facilities to combat juvenile delinquency has been recognized and in part met, the question arises among students of juvenile delinquency as to how this problem can best be combated. Hathaway and Monachesi<sup>2</sup> have pointed out that, "many aspects

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<sup>1</sup>California Youth Authority Quarterly Journal, (October, 1953), 1.

<sup>2</sup>Stark R. Hathaway and Elio D. Monachesi, Analyzing and Predicting Juvenile Delinquency with the M.M.P.I. (Minneapolis: University of Minnesota Press, 1953), p. 3.

of the mental hygiene movement rest upon the assumption that the therapeutic work with individual children will decrease the likelihood of their later delinquency or mental illness." This preventive approach to the problem would be effective if the signs pointing to delinquency could be identified at an early stage in the development of the individual and if methods of treatment could be applied which would reduce the possibility of the occurrence of delinquent behavior.

#### Definition of the Problem

There are two independent problems here. The first problem involves the early identification of the potential delinquent while the second has to do with the validation of the therapeutic techniques. It is the first problem with which this study deals. There have been several studies relevant to this problem. Capwell<sup>3</sup> has presented evidence that there are detectable personality differences between juvenile delinquents and non-delinquents. Schnessler and Cressey<sup>4</sup> in a review of 113 studies conclude that the results of studies attempting to differentiate criminals from non-criminals on the basis of personality tests have been consistently negative, and Sutherland<sup>5</sup> concurs with Schnessler and Cressey.<sup>6</sup>

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<sup>3</sup>Capwell, Dora F., Personality Patterns of Adolescent Girls II Delinquents and Non-delinquents, J. Appl. Psychology, 1945, 29, 289-97.



However, several more recent studies<sup>7</sup> seem to bear out Capwell's findings rather conclusively. It is on the basis of these later studies that further research is justified.

#### Importance of the Study

Importance of the Studyable 1, page 54, three offenses, burglary, theft, (auto) and robbery account for 57.2% of all the delinquents. These three are the most important offenses from the standpoint that they occur more often among the juvenile delinquents in the State of California, and have been selected for study.

A series of previous studies<sup>8</sup> which have used the Minnesota Multiphasic Personality Inventory have suggested that personality differences do exist between delinquents as compared to non-delinquents, especially in the  $P_d$  and  $P_a$  scales. The author feels that there may be personality consistencies associated with offense groups which will permit one group to be distinguished from another and it is hypothesized that the M.M.P.I. will differentiate between juvenile burglars, auto thieves and robbers.

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<sup>4</sup>Hathaway, loc. cit.

<sup>5</sup>Sutherland, E. H. Critique of Sheldon's Varieties of Delinquent Youth, American Social Rev., 1951, 10-B, 16.

<sup>6</sup>Schnessler, loc. cit.

<sup>7</sup>Stark R. Hathaway and others, The Relationship between the M.M.P.I. Profiles and Later Careers of Juvenile Delinquent

When an attempt is made to make some practical use of data now widely considered related to a social behavior as, for example, in selecting groups of delinquency-prone children for especially appropriate group therapy, the problem is encountered of applying simple scaled variables to every subject. It is most desirable that instruments are developed permitting simple routine testing, yielding objective scores, and having sufficient reliability and validity so that wide-scale, low cost estimates of the likelihood and type of trouble for each child would be practical.

#### Definition of Juvenile Delinquent

The term juvenile delinquent has been applied in this study to those juveniles who have been apprehended and committed for the commission of a crime. All of the subjects in this study were committed by the Juvenile Court or Superior Court on the basis of concrete evidence.

#### Definition of Personality

There are many definitions of personality. One of the best of these is that presented by Cameron<sup>9</sup>, for he

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Girls (Minneapolis; University of Minnesota Press, 1953); Rathaway, loc. cit.; Dora Capwell and others, Juvenile Delinquency and the M.M.P.I. and James H. Ashbaugh, Personality Patterns of Juvenile Delinquents in an Area of Small Population (Study from Doctor's thesis, Oregon State College)

<sup>8</sup>Ibid.

defines the personality as, "the dynamic organization of interlocking behavior systems that each of us develop through learning processes, as he grows from a biological newborn to a bio-social adult in an environment of other individuals and culture products."

#### Definition of M.M.P.I.

The abbreviation M.M.P.I. is used herein to identify the Minnesota Multiphasic Personality Inventory.

#### SUMMARY

With the tremendous growth in population and the alarming upswing in juvenile delinquency in the State of California two problems become apparent. The first involves the early identification of the potential delinquent while the second has to do with the validation of the therapeutic techniques. It is the first problem with which this study deals.

There have been several previous relevant studies on personality differences between juvenile delinquents and non-delinquents. The first of these was done by Dora F. Capwell<sup>10</sup> which suggested that there are detectable personality differences between juvenile delinquents and non-delinquents. Several more recent studies by Hathaway<sup>11</sup>, Monachesi, Bell

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<sup>9</sup> Cameron, Norman, The Psychology of Behavior Disorders. Boston: Houghton Mifflin Company, 1947, p. 16.

<sup>10</sup> Capwell, loc. cit.

<sup>11</sup> Hathaway, loc. cit.

and Ashbaugh seem to bear out Capwell's findings rather conclusively.

In a review of 113 studies by Schnessler and Cressey<sup>12</sup> and a study done by Sutherland<sup>13</sup> they conclude that the results of studies attempting to differentiate criminals from non-criminals on the basis of personality tests have been consistently negative.

On the basis of the conclusiveness of the studies that show a positive relationship, it is felt that further research is justified to either prove or refute our hypothesis.

The author feels that there may be personality consistencies associated with offense groups which will permit one group to be distinguished from another and it is hypothesized that the Minnesota Multiphasic Personality Inventory will differentiate between juvenile burglars, auto thieves, and robbers, the offenses which comprise 57.2% of all commitments July, 1952, - June 30, 1953, in the state of California.

Should it be possible to make this early identification of potential juvenile delinquents, the necessary therapeutic measures could be taken at an early age when there is much greater possibility of their being effective.

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<sup>12</sup>Schnessler, loc. cit.      <sup>13</sup>Sutherland, loc. cit.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### General

A number of studies have been done on the personalities of juvenile delinquents as compared to non-delinquent juveniles. A brief summary of each of these studies that are closely related to this study are as follows:

#### Literature on the Personalities of Juvenile Delinquents When Compared to Non-delinquents

The first of these studies was done in 1945 by Capwell<sup>1</sup> to determine the differences of personality between a group of delinquent girls and a group of non-delinquent girls as measured by a series of personality tests. Capwell<sup>2</sup> reported that most of the scales reliably differentiated the two groups. Except for scale L and scale 3 (H<sub>y</sub>) in the second test, the delinquent girls had reliably larger mean T scores on clinical scales. These differences suggested that the delinquents were more maladjusted. This was especially more apparent in scales 4 (P<sub>d</sub>) and 6 (P<sub>a</sub>).

Although this study suggested very strongly that personality aberrations frequently are associated with delinquency,

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<sup>1</sup>Capwell, Dora F. Personality Patterns of Adolescent Girls II Delinquents and Non-delinquents, J. Appl. Psychology., 1945, 29, 289-97

<sup>2</sup>Ibid.

it was not strong enough proof to justify its use diagnostically. In a study done by Boynton and Walsworth<sup>3</sup> using six different tests not including the M.M.P.I., it was concluded that tests in the main do not provide reliable evidence of sufficient validity to justify putting a great deal of faith in them in individual and group diagnosis. However, it was felt by Monachesi<sup>4</sup> that the Capwell<sup>5</sup> results were basis enough to warrant further study to find out if the M.M.P.I. would continue to discern between delinquent and non-delinquent boys and girls.

Monachesi's<sup>6</sup> studies confirmed the findings of Capwell<sup>7</sup> on girls and extended them to boys. Delinquent and non-delinquent boys and girls show a significant differentiation from one another on several of the M.M.P.I. scales. The greatest differentiation occurs with scale 4 ( $P_d$ ) and scale 6 ( $P_a$ ), and also to a smaller degree, in several of the other scales. In Capwell's<sup>8</sup> studies the mean scores for her non-delinquent girls showed distinct elevations on scales 4 ( $P_d$ ), 6 ( $P_a$ ), 7 ( $P_t$ ), 8 ( $S_c$ ) and 9 ( $M_a$ ). There is no

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<sup>3</sup>P. L. Boynton and B. M. Walsworth, Emotionality Test Scores of Delinquent and Non-delinquent Girls. J. Abn. Soc. Psychol., 1948, 38, 87-92.

<sup>4</sup>Monachesi, Elio D. The Personality Patterns of Juvenile Delinquents as indicated by the M.M.P.I. J. Crim. Law & Criminal., 1948, 42, 487-500.

<sup>5</sup>Capwell, Dora F. Personality Patterns of Adolescent Girls I. J. Appl. Psychology., 1948, 29, 289-328.

certain explanation as to why the present samples of non-delinquent girls varied so much above the general norms. The high means for scale 4 ( $P_d$ ) were the most significant findings, indicating that among delinquents there are a large number having patterns on the M.M.P.I. like those of the clinically identified amoral, asocial psychopathic who were used in the derivation of the psychopathic scale of the M.M.P.I. As indicated by scale 6, ( $P_a$ ), delinquent girls more than delinquent boys have a tendency to be sensitive and feel that they are controlled. Monachesi's<sup>9</sup> study provided further proof of what the Capwell<sup>10</sup> study suggested and extended these findings to boys. These studies were done in areas of large populations. Ashbaugh<sup>11</sup> then approached this problem by using subjects from rural and sparsely populated areas. Using the M.M.P.I., reliable differences between the two groups were found on six scales. The delinquent groups scoring reliably higher on scales 3 ( $H_y$ ), 4 ( $P_d$ ), 6 ( $P_a$ ), 7 ( $P_t$ ) and 8 ( $M_a$ ). Also, between groups of boys alone, a very reliable difference is indicated on scales 4 ( $P_d$ ) and 6 ( $P_a$ ). This study definitely indicates both on the M.M.P.I. and the Heston Inventory that conspicuous differences do exist

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<sup>6</sup>Monachesi, loc. cit.

<sup>7</sup>Capwell, loc. cit. <sup>8</sup>Ibid.

<sup>9</sup>Monachesi, loc. cit.

<sup>10</sup>Capwell, loc. cit.

<sup>11</sup>James H. Ashbaugh, "Personality Patterns of Juvenile Delinquents in an Area of Small Population" (Study from Doctor's thesis, Oregon State College).

between the two groups. Heston believes that low scores on the Personal Relations scale are partially indicative of "paranoid" trends. This agrees with the results of the M.M.P.I. It is felt by the author that these two tools could be used as a prognostic tool in locating juveniles' possible personality difficulties.

Due to the fact that the Capwell<sup>12</sup> records and profiles are still available it made it possible for Hathaway, Hastings Capwell and Bell<sup>13</sup> to extend Capwell's<sup>14</sup> findings by a longitudinal follow-up to test whether the profiles of the public and reform school girls might relate to their later careers. The P<sub>d</sub> and M<sub>a</sub> scales of the M.M.P.I. in combination, and P<sub>d</sub> alone as a dominant feature of a profile configuration were indicative of relatively bad follow-up histories. The best indication of a good behavior was a profile with no codable high points. Pooled diagnostic judgements about the future social adjustment of the reform school girls are based upon the M.M.P.I. profile and appear significantly more correct than chance and are accurate enough to be useful. Such judgements must be made by experienced clinicians.

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<sup>12</sup>Capwell, loc. cit.

<sup>13</sup>Stark R. Hathaway and others, Analyzing and Predicting Juvenile Delinquency with the M.M.P.I. (Minneapolis: The University of Minnesota Press, 1953) pp. 70-86.

<sup>14</sup>Capwell, loc. cit.



Hathaway and Monachesi<sup>15</sup> in their study approached the problem by testing youngsters below the age where delinquency rates begin to climb rapidly, followed by repeated surveys to relate the earlier measures with later careers. They found that those whose results indicated high scores were not successful in later careers.

It is believed that the validity of various scales of the M.M.P.I. based upon adult clinical cases carries over to the present subjects; however, complete reliability of this must wait for follow-up data. On the assumption that this validity exists, several group trends appeared in the scores.

The girls were much more socially introverted (scale 0) and sensitive (scale 6) than boys. There was a definite relative masculinity of interest among the girls (scale 5). The boys were more schizoid (scale 8) and had a greater tendency to be overactive (scale 9) and rebellious (scale 4).

In contrast to ninth graders, college girls showed still greater tendency toward social sensitivity (scale 6) and a little more neuroticism (scales 2 and 3) than did ninth graders. College boys in contrast to ninth graders were more feminine (scale 5) and less schizoid (scale 8). Several

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<sup>15</sup>Stark R. Hathaway and Elio D. Monachesi, Analyzing and Predicting Juvenile Delinquency with the M.M.P.I. (Minneapolis: The University of Minnesota Press, 1953), pp. 87-108.

large average differences appeared when contrasted with general population adults. The ninth graders were more like compulsive (scale 7), schizophrenic (scale 8), and hypomanic (scale 9) patients than were adults.

These trends were supplemented by a tendency for the aggressive or rebellious patterns to dominate the profiles of the ninth graders' scales (4 and 9) in profile patterns. This comparison also indicated that the neurotic scales (1, 2 and 3) assumed more prominence in the profiles of adults. The study suggested an over-all better adjustment among adults because of a smaller number of moderately elevated profiles.

On a two year follow-up by Hathaway and Monachesi<sup>16</sup> scale 2 (D) and a combination of scales 2 (D) and 6 (P<sub>a</sub>) were found to be inhibitors with a negative influence on the probability of delinquency. They also found that scale 4 (P<sub>d</sub>) is clearly able to combine with 5 (M<sub>f</sub>) to produce a high rate of delinquency. The trend is not as certain for girls as it is for boys. Scale 4 (P<sub>d</sub>) has been stressed above as the one scale most likely to be indicative of delinquency. Another general line of behavior disturbance is broadly characterized as psychosis, which in an adult person is a general term for a severe mental illness. Scales 6 (P<sub>a</sub>), 8 (S<sub>c</sub>) and 9 (M<sub>a</sub>)

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<sup>16</sup>op. cit., pp. 109-135.

are the best indicator of the commonest juvenile psychosis, schizophrenia and hypermanic. It may be that pre-psychotic and general deviate schizoid youngsters are prone to asocial or amoral acts. If so, the scales should show a tendency to elevate among delinquent youths.

On the basis of 113 studies in the last 25 years by Schnessler and Cressey<sup>17</sup>, they came to the conclusion that, "the doubtful validity of many of the obtained differences, as well as a lack of consistency in the combined results, makes it impossible to conclude from these data that criminality and personality elements are associated."

Sutherland<sup>18</sup> had voiced the conclusion that there was no apparent relationship between personality patterns and crime. Gough<sup>19</sup> states that "the value of a theory or concept resides in the range and scope of the facts it is capable of subsuming, and in the extent, number, and accuracy of the hypothesis it implies. The particular analogies employed, the vocabulary utilized, and the palatability of the constructs themselves are all of second importance when set against this first criterion."

After reviewing the previous studies that have been done in this field, there can be very little doubt that ju-

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<sup>17</sup>loc. cit.

<sup>18</sup>Sutherland, E. H., Critique of Sheldon's Varieties of Delinquent Youth. American Social Rev., 1951, 10-B, 16.

venile delinquents display some of the patterns of symptoms seen in adult mentally ill patients. Apparent also is that others among the personality adjustment patterns of adults are observed less frequently than would be likely by chance among adolescent delinquents.

This, of course, is based upon the belief that M.M.P.I. patterns are valid indicators of the main syndromes of adult maladjustment.

The final conclusion is that the M.M.P.I. appears to contain useful categories into which a good percentage of delinquent adolescents will fall. This yields actuarial data that can be used to predict relatively high and relatively low delinquency rates.

The most important outcome of these studies was the positive relationship that was found to exist between recognized scale meanings and delinquency. The M.M.P.I. scales 4 ( $P_d$ ) and 9 ( $M_a$ ) were found to play an important role in the actuarial data predicting the development of asocial behavior.

The results lead the earlier investigators to the conclusion that, "the asocial, amoral psychopath and the hypomanic

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<sup>19</sup>Gough, H. G., Simulated Patterns in the M.M.P.I. Jr. Abnormal Soc. Psychology., 1947, 42, 215-225.

among the adult maladjustment patterns are those chiefly represented among adolescents. As inhibitor to delinquency probability, the neurotic adult patterns appear most definite. Depression, introversion and femininity of interest patterns predicate possible relationships with the introvertive, self-critical, generally inhibited adult."<sup>20</sup>

#### SUMMARY

Dora F. Capwell<sup>21</sup> was first in 1945 to do a study to determine the differences of personality between a group of delinquent girls and non-delinquent girls as measured by a series of personality tests. She reported that most of the scales reliably differentiated the two groups.

Subsequent studies have been done by Boynton and Walsworth<sup>22</sup>, Schnessler and Cressey<sup>23</sup> and Sutherland<sup>24</sup>, all of whom arrived at the negative conclusion that tests in the main do not provide reliable evidence of sufficient validity to justify putting a great deal of faith in them in individual and group diagnosis.

Monachesi together with Hathaway, Capwell and Bell<sup>25</sup> used the M.M.P.I. and confirmed Capwell's<sup>26</sup> findings on girls and expanded them to boys in areas of large population.

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<sup>20</sup>Stark R. Hathaway and Elio D. Monachesi, Analyzing and Predicting Juvenile Delinquency with the M.M.P.I., (Minneapolis: The University of Minnesota Press, 1953), p. 136.

<sup>21</sup>Capwell, loc. cit.

Ashbaugh<sup>25</sup> concurred in a study done in sparsely populated and rural areas. Hathaway and Monachesi<sup>26</sup> tested youngsters below the age where delinquency rates begin to climb rapidly following it by repeated surveys to relate the earlier measures with later careers. They found that those whose results indicated high scores were not successful in later careers.

After reviewing the previous studies and based on the belief that M.M.P.I. patterns are valid indicators of the main syndromes of adult maladjustment there can be little doubt that juvenile delinquents display some of the patterns of symptoms seen in adult mentally ill patients. Apparent also is that others among the personality adjustment patterns of adults are observed less frequently than would be likely by chance among adolescent delinquents.

The final conclusion is that the M.M.P.I. appears to contain useful categories into which a good percentage of delinquent adolescents will fall. This actuarial data can be used to predict relatively high and low delinquency rates.

The most important outcome of these studies was the positive relationship that was found to exist between recognized scale meanings and delinquency.

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<sup>22</sup>Boynton, loc. cit.

<sup>23</sup>Schnessler, loc. cit.

<sup>24</sup>Sutherland, loc. cit.

<sup>25</sup>Monachesi, loc. cit.

<sup>26</sup>Capwell, loc. cit.

<sup>27</sup>Ashbaugh, loc. cit.

<sup>28</sup>Hathaway, loc. cit.

## CHAPTER III

### THE MATERIALS USED AND GROUP STUDIED

#### Preliminary Considerations

All of the California Youth Authority's numbers were taken from the files of those cadets who had been administered the M.M.P.I. in the Diagnostic Clinic at the Preston School for Boys at Ione, California, since 1951. The M.M.P.I. is administered only to those boys whose score showed a reading level of grade 6.5 and above on the California Achievement Test. The cards of these subjects were then broken down and separated into offense groups.

It was found through a study done by the statistical department of the California Youth Authority in 1953<sup>1</sup>, that of the nine offense groups, three main groups comprised 57.2% of all commitments to the California Youth Authority during 1953<sup>2</sup>. The largest group was the Burglary group composing 26.2%, the Auto Theft group made up of 19.3% and the Robbery group made up of 11.7% of all juvenile delinquents. The three largest groups were selected for this study.

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<sup>1</sup>Parole Violations, A Report Prepared by the California Youth Authority., 1955, 1.

<sup>2</sup>California Youth Authority Quarterly Journal (October, 1953), 1.

### The Validity and Reliability

According to Ross<sup>3</sup>, in any satisfactory measuring instrument three qualities are indispensable. These are validity, reliability, and usability. It is with the first two of these that we are concerned. The general normative data was derived from a sample of about 700 individuals representing a cross section of the Minnesota population as obtained from visitors to the University Hospitals. The sampling is fairly adequate for the ages 16-55<sup>4</sup>. The scales were developed by contrasting the normal groups with carefully studied clinical cases of which over 800 were from the neuropsychiatric division of the University Hospitals. The chief criteria of excellence has to be the valid prediction of clinical cases against the neuropsychiatric staff diagnosis, rather than statistical measures of reliability and validity.

The reliability coefficients of scales so far developed range between .71 and .83. These correlations were obtained by testing and retesting a group of 40 normals at intervals of a week or less up to several years.

A high score on a scale has been found to predict positively the corresponding final clinical diagnosis or esti-

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<sup>3</sup>Ross, C. C. Measurement in Today's Schools. New York: Prentice Hall, Inc., II, 1949.

<sup>4</sup>Stark R. Hathaway and J. C. McKinley, Minnesota Multiphasic Personality Inventory Manual (New York: The Psychological Corporation, 1951), P. 18-21.



mate in more than 60% of new psychiatric admissions thus indicating high clinical validity and reliability rather than statistical measures of validity and reliability.

### The Subjects

The subjects of this study consist of male adolescent subjects committed to the California Youth Authority from all parts of the State of California for Burglary, Auto Theft and Robbery for the period. When the breakdown was completed the Burglary group was found to number 117 subjects, the Auto Theft group 100 subjects and the Robbery group 75 subjects.

Of the original subjects 29 were eliminated from the Burglary group, 28 from Auto Theft and 16 from Robbery because their reading levels were less than grade 6.5 or because of a high lie or validity score. This left 88 subjects in the Burglary group, 72 in the Auto Theft and 59 in Robbery.

### Materials Used

The M.M.P.I. is a self-administered inventory, which appears in the Individual Card Form and the Group (booklet) Form. In this study the Group (booklet) Form was used. The questions in this form apply to the testee's general attitude and behavior. The testee answers by filling in the true or false slot on an answer sheet or if he cannot say he leaves

it blank. These items are scored on the answer sheet and placed on a profile sheet where these raw scores are converted to T scores by means of tables in the manual.

The M.M.P.I. has four validity scales and purports to measure in nine areas (clinical scales)<sup>5</sup>.

### THE VALIDITY SCALES

#### The Question Score (?)

The Question score is a validating score consisting simply of the total number of items put in the Cannot Say category; the size of this score affects the significance of the other scores. Large Question scores invalidate all others. A "borderline" Question score probably means that the subject's actual score, if he had not used the Cannot Say category at all, would deviate farther from the average than his observed score indicates. In its own right the Question score is an indicator of personality factors, but no specific clinical material on it has been analyzed. High scores have often been observed to occur in psychasthenic and retarded depression patients.

#### The Lie Score (L)

The L score is also validating score that affords a measure of the degree to which the subject may be attempting to falsify his scores by always choosing the response that places him in the most acceptable light socially. A high L score does not entirely invalidate the other scores but indicates that the true values are probably higher than those actually obtained. In many cases the L score may be of interest in its own right as a measure of a special personality trend.

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<sup>5</sup>Ibid.

### The Validity Score (F)

The F score is not a personality scale but serves as a check on the validity of the whole record. If the F score is high, the other scales are likely to be invalid either because of the subject was careless or unable to comprehend the items, or because someone made extensive errors in entering the items on the record sheet. A low F score is a reliable indication that the subject's responses were rational and relatively pertinent.

### The K Score (K)

The K score is used essentially as a correction factor to sharpen the discriminatory power of the clinical variables measured by the Inventory. As such, it acts as a suppressor variable.

If it is to be given any concrete non-statistical meaning, the K score is thought of as a measure of test-taking attitude, and is related to the L and F attitudes but is somewhat more subtle and probably taps a slightly different set of distorting factors. A high K score represents defensiveness against psychological weakness. A low K score tends to indicate that a person is, if anything, overly candid and open to self-criticism and the admission of symptoms even though they may be minimal in strength. A low score can also result from a deliberate attempt to obtain bad scores or to make a bad impression.

### The Hypochondriasis Scale (H<sub>s</sub>)

The H<sub>s</sub> scale is a measure of amount of abnormal concern about bodily functions. It is an improved revision of the original hypochondriasis scale H-C<sub>h</sub>. Persons with high H scores are unduly worried over their health. They frequently complain of pains and disorders which are difficult to identify and for which no clear organic basis can be found. It is characteristic of the hypochondriac that he is immature in his approach to adult problems tending to fail to respond with adequate insight.

Hypochondriacal complaints differ from hysterical complaints of bodily malfunction in that the hypochondriac is often more vague in describing his complaints and in that he does not show such clear

evidence of having got out of an unacceptable situation by virtue of his symptoms as does the hysteric. The hypochondriac more frequently has a long history of exaggeration of physical complaints and of seeking sympathy.

With psychological treatment a high score may often be improved, but the basic personality is unlikely to change radically. Common organic sickness does not raise a person's score appreciably, for the scale detects a difference between the organically sick person and the hypochondriac.

### The Depression Scale (D)

The D scale measures the depth of the clinically recognized symptom or symptom complex, depression. The depression may be the chief disability of the subject or it may accompany, or be a result of other personality problems. A high D score indicates poor morale of the emotional type with a feeling of uselessness and inability to assume a normal optimism with regard to the future. In certain cases the depression may be well hidden from casual observation. This is the so-called "smiling depression". The depressive under-current is revealed in such cases by the subject's specific discourse and his outlook on the future. Often such persons insist that their attitude is the only realistic one, since death is inevitable and time passes. Though this may be true, the average person is--possibly erroneously--not so deeply concerned with the grim realities of life. A high score further suggests a characteristic personality background in that the person who reacts to stress with depression is characterized by lack of self-confidence, tendency to worry, narrowness of interests, and introversion. This scale, together with the H<sub>s</sub> and H<sub>y</sub> scales, will identify the greater proportion of those persons not under medical care who are commonly called neurotic, as well as individuals so abnormal as to need psychiatric attention.

Some high-scoring persons will change rather rapidly in response to improved environment or to pep talks and psychotherapy, but such individuals will be likely to remain subject to other attacks. The greater number, on the other hand, will not respond readily to treatment, but their scores will slowly tend to approach the normal level with the mere passage of time.

### The Hysteria Scale (H<sub>y</sub>)

The H<sub>y</sub> scale (preliminary) measures the degree to which the subject is like patients who have developed conversion-type hysteria symptoms. Such symptoms may be general systemic complaints or more specific complaints such as paralyses, contractures (writer's cramp), gastric or intestinal complaints, or cardiac symptoms. Subjects with high H<sub>y</sub> scores are also especially liable to episodic attacks of weakness, fainting, or even epileptiform convulsions. Definite symptoms may never appear in a person with a high score, but under stress he is likely to become overtly hysterical and solve problems confronting him by the development of symptoms. We have found that this preliminary scale fails to identify a small number of very uncomplicated conversion hysterias which may be quite obvious clinically and with a single or very few conversion symptoms.

The hysterical cases are more immature psychologically than any other group. Although their symptoms can often be "miraculously" alleviated by some conversion of faith or by appropriate therapy, there is always the likelihood that the problem will reappear if the stress continues or recurs. As in the case of hypochondriasis, the subject with a high H<sub>y</sub> score may have real physical pathology, either as a primary result of concurrent disease, such as diabetes or cancer, or as a secondary result of the long-time presence of the psychological symptoms. For instance, constant fears are a frequent background for the development of demonstrable ulcers of the stomach. This interrelationship is particularly important to the physician who undertakes therapy for the individual.

### The Psychopathic Deviate Scale (Pd)

The Pd scale measures the similarity of the subject to a group of persons whose main difficulty lies in their absence of deep emotional response, their inability to profit from experience, and their disregard of social mores. Although sometimes dangerous to themselves or others, these persons are commonly likable and intelligent. Except by the use of an objective instrument of this sort, their trend toward the abnormal is frequently not detected until they are

in serious trouble. They may often go on behaving like perfectly normal people for several years between one outbreak and another. Their most frequent digressions from the social mores are lying, stealing, alcohol or drug addiction, and sexual immorality. They may have short periods of true psychopathic excitement or depression following the discovery of a series of their asocial or antisocial deeds. They differ from some criminal types in their inability to profit from experience and in that they seem to commit asocial acts with little thought of possible gain to themselves or of avoiding discovery.

No therapy is especially effective in improving persons with high Pd scores, but time and careful intelligent guidance may lead to an adequate adaptation. Institutionalization of the more severe cases is probably no more than a means of protecting society and the offender. Some active professional persons have high Pd scores, but their breaks, in any, are either disregarded by others or effectively concealed.

#### The Interest Scale (M<sub>f</sub>)

This scale (preliminary) measures the tendency toward masculinity or femininity of interest pattern; separate T tables are provided for the two sexes. In either case a high score indicates a deviation of the basic interest pattern in the direction of the opposite sex. The items were originally selected by a comparison of the two sexes. Some were inspired by Terman and Miles, and others are original.

Every item finally chosen for this scale indicated a trend in the direction of femininity on the part of male sexual inverts. Males with very high M<sub>f</sub> scores have frequently been found to be either overt or repressed sexual inverts. However, homosexual abnormality must not be assumed on the basis of a high score without confirmatory evidence. Among females high scores cannot yet be safely assumed to have similar clinical significance, and the interpretation must be limited to measurement of the general trait.

The M<sub>f</sub> score is often important in vocational choice. Generally speaking, it is well to match a subject vocationally with work that is appropriate to his M<sub>f</sub> level.

### The Paranoia Scale (Pa)

The preliminary Pa scale was derived by contrasting normal persons with a group of clinic patients who were characterized by suspiciousness, over-sensitivity, and delusions of persecution, with or without expansive egotism. The diagnoses were usually paranoia, paranoid state, or paranoid schizophrenia. Here again, however, we have observed a few very paranoid persons who have successfully avoided betraying themselves in the items of this scale.

Persons with an excess amount of paranoid suspiciousness are common and in many situations are not especially handicapped. It is difficult and dangerous to institutionalize or otherwise protect society from the borderline paranoid because he appears so normal when he is on guard and he is so quick to become litigious or otherwise to take action vengefully against anyone who attempts to control him. It should be needless to add that persons receiving very high scores on this scale must be handled with special appreciation of these implications. Although valid scores of 80 and above on this scale are nearly always significant of disabling abnormality, the range from 70 to 80 must also be checked by clinical judgment.

### The Psychasthenia Scale (Pt)

The Pt scale measures the similarity of the subject to psychiatric patients who are troubled by phobias or compulsive behavior. The compulsive behavior may be either explicit, as expressed by excessive hand washing, vacillation, or other ineffectual activity, or implicit, as in the inability to escape useless thinking or obsessive ideas. The phobias include all types of unreasonable fear of things or situations as well as overreaction to more reasonable stimuli.

Many persons show phobias or compulsive behavior without being greatly incapacitated. Such minor phobias as fear of snakes or spiders and such compulsions as being forced to count objects seen in arrays or always to return and check a locked door are rarely disabling. Frequently a psychasthenic tendency may be manifested merely in a mild depression, excessive worry, lack of confidence, or inability to concentrate.

$P_t$  is correlated to a negligible degree with the other scales, except for the preliminary  $S_c$  scale. There is an understandable tendency for depression to accompany abnormally high scores. The basic personality pattern of the psychasthenic individual is relatively difficult to change, but insight and relief from general stress may lead to good adjustment. As in the  $P_a$  scale the valid T scores above 80 are likely to represent disabling abnormality, but the range of 70 to 80 should be checked by clinical judgment since with a favorable environment or with other compensatory factors the subject may not be markedly handicapped.

### The Schizophrenia Scale ( $S_c$ )

The  $S_c$  (preliminary) scale measures the similarity of the subject's responses to those patients who are characterized by bizarre and unusual thoughts or behavior. There is a splitting of the subjective life of the schizophrenic person from reality so that the observer cannot follow rationally the shifts in mood or behavior.

The  $S_c$  scale distinguishes about 60 per cent of observed cases diagnosed as schizophrenia. It does not identify some paranoid types of schizophrenia, which, however, usually score high on  $P_a$ , and certain other cases which are characterized by relatively pure schizoid behavior. It is probable that one or two additional scales will be necessary to identify the latter cases, but this is not surprising in the light of the frequently expressed psychiatric opinion that schizophrenia is not a clinical entity but a group of rather heterogeneous conditions.

Most profiles with a high  $S_c$  score will show several other high points, and further clinical sorting will need to be carried out by subjective study of the case. Exceptional to other scale intercorrelations, the correlation of  $S_c$  with  $P_t$  for normal cases is .84. Both experience and the fact that this correlation drops to .75 on abnormal cases lead us to feel that at least for the present, there is value in using both scales. Clinical experience shows that about twice as many cases diagnosed as schizophrenia obtain above borderline  $S_c$  scores as obtain such scores on  $P_t$ . An appreciable number of clinic cases not diagnosed as schizophrenia score high on the scale.



These cases are nearly always characterized by complicated symptomatic patterns. The clinician should be very hesitant to apply the diagnostic term schizophrenia because of its bad implications.

### The Hypomania Scale (M<sub>a</sub>)

The M<sub>a</sub> scale measures the personality factor characteristic of persons with marked overproductivity in thought and action. The word hypomania refers to a lesser state of mania. Although the real manic patient is the lay person's prototype for the "insane", the hypomaniac person seems just slightly off normal. Some of the scale items are mere accentuations of normal responses. A principal difficulty in the development of the scale was the differentiation of clinically hypomaniac patients from normal persons who are merely ambitious, vigorous, and full of plans.

The hypomaniac patient has usually gotten into trouble because of undertaking too many things. He is active and enthusiastic. Contrary to common expectations he may also be somewhat depressed at times. His activities may interfere with other people through his attempts to reform social practice, his enthusiastic stirring up of projects in which he then may lose interest, or his disregard of social conventions. In the latter connection he may get into trouble with the law. A fair percentage of patients diagnosed psychopathic personality (see P<sub>d</sub>) are better called hypomaniac.

This scale clearly identifies about 60 per cent of diagnosed cases and yields a score in the 60-70 range for the remainder. For scores around 70 the problem of normality hinges more upon the direction of the overactivity rather than upon the absolute score. Even extreme cases tend to get better with time, but the condition tends to reappear periodically<sup>6</sup>.

### Description of the Test

No limits were placed upon the values L and K among profiles accepted for this study. The reader should be aware

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<sup>6</sup>Ibid., pp. 19-31

that all the data of this paper are based upon profiles in which the K score has been used as a correction factor. The use of the K correction<sup>7</sup> causes some loss of group differentiating power, but this does not mean that K corrected scores lose individual validity.

The M.M.P.I. profiles were then secured for the individuals selected for this study and broken down according to commitment groups. Each one of the three groups were then totaled for each of the nine different M.M.P.I. scales studied, and the group mean was computed for each of the three groups. This was done so that a comparison could be made of all of the traits of the three groups to find if there were any statistically significant differences between the commitment groups. The results of all three groups were then added together and the mean computed of each of the nine trait scales to check on the trait characteristics of the juvenile delinquents as a whole.

#### SUMMARY

Using the files of the cadets who had been administered the M.M.P.I. in the Diagnostic Clinic at the Preston School for Boys at Ione, California, since 1951 and who had a score which showed a reading level of grade 6.5 and above

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<sup>7</sup>Monachesi, R. R. The K Correction as used in the Selection of the Psychopathic Deviate. Journal of Criminal Law & Criminology, 1948-1950, 48:50.

on the California Achievement Test, the cards of these subjects were then broken down and separated into offense groups. A study done by the statistical department of the California Youth Authority in 1953 found that of the nine offense groups, three main groups comprised 57.2% of all commitments to the California Youth Authority in 1953. The largest group was the Burglary group composing 26.2%, the Auto Theft made up of 19.3% and the Robbery group made up of 11.7%. These three largest groups were selected as a basis for this study. The subjects of this study consist of male adolescents committed to the California Youth Authority from all parts of the State of California for these three offenses for this period.

The Minnesota Multiphasic Personality Inventory is a self-administered inventory which appears in the Individual Card Form and the Group (booklet) Form. In this study the Group (booklet) Form was used. This test has four validity scales and purports to measure in nine areas (clinical scales). For an analysis of these the reader is referred to their respective sections in this chapter.

No limits were placed upon the values of L and K among profiles accepted for this study. All the data of this paper are based upon profiles in which the K score has been used as a correction factor.

The M.M.P.I. profiles were secured for the individuals selected for this study, broken down into delinquent groups and each of the three groups were totaled for each of the nine different M.M.P.I. scales studied and the group mean was computed for each of the three groups. This was done so a comparison could be made of all the traits of the three groups to find if there were any statistically significant differences between the commitment groups. The results of all three groups were added together and the mean computed of each of the nine trait scales to check on the trait characteristics of the juvenile delinquents as a whole.

## CHAPTER IV

### TECHNIQUE AND RESULTS

#### Statistical Procedure

The data for this study consisted of a sample drawn from each of three delinquent groups with the scores for nine M.M.P.I. scales as recorded for each individual. A summary of this data is shown in Table II. The problem was to see if the differences as found between the mean scores for each sample for each scale was significant or could it have been attributed to sampling error. The statistical technique selected for this test is referred to as the analysis of variance.<sup>1</sup>

This technique requires first the formulation of the null hypothesis concerning the mean scores for each of the delinquent groups. For this problem it would state that the mean scores for the populations from which these three samples were drawn were the same, or  $\mu_B = \mu_R = \mu_{A.T.} = \mu_{Total}$  where  $\mu_B$  is the mean score for the burglary group,  $\mu_R$  the mean score for the robbery group, and  $\mu_{A.T.}$  the mean score for the auto theft group. A second statement would be that the population from which these samples were drawn was really the same for any particular M.M.P.I. scale and that any difference found by the three samples was due to chance alone.

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<sup>1</sup>Helen M. Walker and Joseph Lev, Statistical Inference, (New York: Henry Holt and Company, 1953), p. 348

<sup>2</sup>Ibid., p. 193

Secondly, it must be assumed that all three samples were drawn at random from normal populations with the same variances but not necessarily the same means. Because of the nature of the test and the use of standard scores in place of the raw data it can be assumed that the populations were normally distributed. However, it was necessary to apply a test as to the homogeneity of the variances. The procedure followed here is known as the Bartlett test for homogeneity of variance<sup>2</sup>. This test, like the analysis of variance, is designed to see if the differences between the sample variances could have been attributed to sampling errors or are of significance. If the variances are found to be significantly different then the assumption of homogeneity can not be made. The results of this test are summarized in Table III on page 56.

If the null hypothesis concerning the means is true and the assumptions of normal population with equal variance is justified, then each of the observations within the three groups may be regarded as random observations from a single normal population with mean  $\mu$  and variance  $\sigma^2$ . The means of the three samples would then be random observations from a normal population of sample means with mean  $\mu$  and variance  $\frac{\sigma^2}{n} = \frac{\sigma^2}{n}$ .

The unknown  $\sigma^2$  can be estimated from the variation among the three sample means. It can also be estimated from

To evaluate the findings of  $F$  for a given scale it is necessary to establish a critical region. Because of the risk of making a Type I error (rejecting the null hypothesis when it is true) it was decided to employ a one percent criterion, or to have 99 percent confidence in the test. For a value of  $F$  with 2 degrees of freedom in the numerator and 216 in the denominator we find a value of 4.71. That is, for the difference between the means to be significant the  $F$  value for the rates of the mean square among groups to the mean square within groups should be greater than 4.71 and in such a case the null hypothesis that the means for the populations are the same is rejected. If, however, the value for  $F <$  then it can not be concluded that the null hypothesis is in error and judgement must be withheld. Column 7 of Table IV shows the results of such a comparison.

Once it has been established that the differences are significant then it is desirable to find the cause of this conclusion. To accomplish this, "Students Ratio" is applied. In this test a simple  $T$  test, of the difference between two means is employed with the aid of the following equation:<sup>4</sup>

$$T = \frac{\bar{x}_1 - \bar{x}_2}{s \sqrt{n}}$$

As before, we are comparing the observed differences between the sample means with the expected difference that could be

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<sup>4</sup>Ibid., p. 355

the variation among observations within groups. The ratio of these two estimates of  $\sigma^2$  provide the statistic by means of which the hypothesis can be tested.

The estimate of  $\sigma^2$  from the variation among means is computed by means of the following equation<sup>3</sup>:

$$S_1^2 = \left[ \sum_{k=1}^K \frac{(\sum x)^2}{n_k} - \frac{(\sum \sum x_i)^2}{N} \right]$$

where  $n_k$  divided by  $K-1$  represents the number of observations in group  $n_k$ ,  $N$  the total observations for all groups, and  $K-1$  the degrees of freedom between groups.

To compute, the variation within groups can best be computed by:

$$S_2^2 = \frac{\sum \sum x^2 - \sum \frac{(\sum x)^2}{N}}{\sum (n_k - 1) \text{ or } (N - K)}$$

where  $\sum (n_k - 1)$  represents the total degree of freedom within the groups.

The numerator of these equations are referred to as the sum of squares and appear in Column 2 of Table IV whereas the denominators, which represent the degrees of freedom are found in Column 3 of the same table.

The independent estimates of variance may be compared using the  $F$  ratio which is  $\frac{S_1^2}{S_2^2}$ . The results of this computation can be found in Column 5 of Table IV.

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<sup>3</sup>Ibid.



copied by chance alone. The one percent criterion is again applied and the results are summarized on Table V.

It should be observed at this time that the "Students Ratio" test for the difference between sample means is valid when an orthogonal comparison is made. Which is not the case here; however, this does not seriously invalidate the results.

### RESULTS

Results of Bartlett's test indicate that the assumption of equal variance cannot be made for either  $P_d$  or  $S_c$  scale. That is, the difference in variance as found for each of the samples was too large to expect because of sampling errors at one percent level of significance. No significant differences were found between the group means on these scales; therefore, it was not necessary to make corrections for heterogeneity of variance.

The results of Bartlett's test also lend themselves to the interpolation. The fact that the burglary group has greater variability on the  $P_d$  scale might suggest either that this scale is not as reliable for this group or the group is much more heterogenous due to environmental influences. This could also hold true for the  $S_c$  scale.

Differences between variances can be as significant as means differences, i.e. on the basis of the  $P_d$  scale it

could be hypothesized that because of heterogeneity in this trait they would require more individual therapy than the other groups.

The analysis of variance was then used to test the significance of the differences between group means, of the remaining scales, and told us if it was worthwhile to test the pairs of differences at all. If the "F" test does not prove significant we will know at once that all observed differences between pairs of means could be due to chance alone. If this were the case it would be improper to apply the "t" test to individual differences. The Analysis of Variance demonstrated that the difference between the averages for two of the scales, D and M<sub>a</sub> is significant at the one percent level.

#### Comparison of Individual Pairs of Means

The differences between individual pairs of means were then tested for these two scales by the use of t and the results of these tests indicate that this criterion was met for groups 1 (Burglary) and 3 (Auto Theft). In groups 1 and 2, there is a difference of -4.0, which is reliable above the one percent level of confidence in the individual trait 2 (D) as shown in column 4. Groups 1 and 3 show a difference of -5.8 which is reliable above the one percent level of confidence on individual trait 2 (D) as shown in Column 5;

a difference of 4.9, which is reliable above the one percent level of confidence on individual trait 9 ( $M_9$ ) as shown in column 5. On the basis of the above results as shown in Table IV it was found that the differences between Burglary and Robbery and Burglary and Auto Theft are significant. It was also found, as shown in Table IV, that the differences between Robbery and Auto Theft are not significant. Hence, on the two M.M.P.I. scales selected for study the mean performance of the Robbery and Auto Theft groups is found not to differ beyond what we would be led to expect by chance, but the Burglary group was significantly higher in mean performance on the D scale and significantly lower on the  $M_9$  scale than the other two groups.

The results indicated that the differences between means of the burglary group are significantly different from the means of the auto theft and robbery groups when compared on the D and  $M_9$  scales of the M.M.P.I. The pattern of the means observed shows a tendency for the burglary group to be high on the D and high on the  $M_9$  scale. This group is easily identified when compared to the burglary group, but is similar to the robbery group pattern. It is discernable, however, because of a much higher score on the  $M_9$  scale. It is also easily identified when compared with the norm of 50. We would therefore expect a prospective auto thief to score low

on the D and high on the  $M_a$  scale. The pattern of the robbery group does not vary enough from either the auto theft group or norm to be easily recognized and it is therefore impossible to easily identify this group or a potential juvenile robber.

These patterns appear to have significance for the prognosis of juvenile delinquents that fall into them. Of all three groups, the burglary group as a whole appears to be the most maladjusted and the least likely to succeed. This group obtained mean scores in scales 2 (D) and 9 ( $M_a$ ) that are reliably higher than groups 1 and 3 and the norm of 50, the most outstanding difference being on scale 2 (D).

As indicated by scale 9 ( $M_a$ ), it appears that this group operates on the lowest energy level, speaking in terms of socially acceptable living. Of the three groups it would appear that the burglary group is perhaps the one in which their delinquent behavior is of a more permanent nature, having taken longer for the makeup of the personality to have developed. Thus, one would hypothesize from this that the prognosis for this particular group would be less favorable than the other two groups. The significance of these results are further born out by the results (Table VI) of a study conducted by the California Youth Authority in 1955 on recidivism. In 1952, 296 juvenile delinquents committed to the

California Youth Authority for burglary were placed on parole. On December 31, 1954, 58 or 71.6 percent of the parolees classified as burglars had been removed from parole for parole violation. The results of this study also indicate a poor prognosis, diagnostically speaking, for future success.

Of the three study groups, the robbery group would appear to have the best prognosis. Being low on both scales, burglars exhibit to a less degree any of these abnormal personality characteristics than either of the other two groups. It can be assumed from the results of the robbery group that this group as a whole should be able to adjust more readily, as the psychic damage would appear to be less severe when compared to the other two groups. On Table VI we find that this group has been more successful on parole than the other two study groups. In the robbery groups, 101 juvenile delinquents were paroled. Of this group, 58 or 57 percent were taken off of parole for parole violations. This group, it would appear, was the most successful on parole. These findings bear out our findings that the robbery group as a whole has fewer abnormal personality characteristics and as a result their prognosis, diagnostically speaking, is better than the other two groups.

The prognosis for the auto theft group would appear to be good. Of the three groups, the auto theft group appears

to be the one that is more immature, but one with fairly good prognosis for a good social adjustment, with the provision that ample opportunity for growing up is made available and their high energy level is channeled in the right directions. In scales 2 (D) and 9 ( $M_a$ ) this group was reliably above the norm of 50 (Table II) but when compared with groups 1 and 2, this group was highest in scale 9 ( $M_a$ ) only. This is the most outstanding differentiator for this group. It is indicated by this high  $M_a$  score that this group operates on a high energy level with a strong need for some type of expression or activity, which in this case is coming out in the pattern of stealing cars. It would be interesting to know in connection with this, and we might hypothesize that a considerable number of this group was probably committed for depriving the owner of the car temporarily rather than permanently. This particular pattern is known as "joy riding".

The results of the study conducted by the CYA in 1953 (Table VI) found that of the 311 juvenile delinquents classified as auto thieves who were released on parole, 200 or 71 percent of these were unsuccessful and returned from parole. It can therefore be assumed from these results that auto thieves are a poor risk and are unable to adjust and channel their high energy level in the right direction.

### Summary

The data for this study consisted of the scale scores made by each individual in three different commitment groups, burglary, auto theft, and robbery, on nine M.M.P.I. scales. It was necessary to apply the Bartlett test for homogeneity of variance. This criterion was met for the D scale and the  $M_2$  scale. It was evaluated by employing a simple analysis of variance technique, the results of which are summarized in Table IV.

The significance of the difference between group means was assessed by applying an "F" test which indicates (given certain assumptions) whether the group means on the measure under study are the same. In order to avoid a Type 1 error a one per cent criterion was employed. This criterion was met for the D scale, and the  $M_2$  scale. The differences between individual pairs of means were then tested for these two scales by the use of  $t$  and the results of these tests are indicated for all nine scales on Table V. Once again to avoid a Type 1 error, the one percent criterion was imposed. The results of these tests indicate that this criterion was met for groups 1, burglary and 3, auto theft.

For the summarization of the results the reader is referred back to this section of the chapter and Tables IV and V. The significance of the results of this study appear

to be substantiated by Table VI which shows the results of a study on recidivism conducted by the California Youth Authority in 1955.



## CHAPTER V

### SUMMARY AND CONCLUSIONS

#### SUMMARY

As has been discussed in earlier chapters, due to the tremendous growth in population in California and consequently an alarming uprising in juvenile delinquency, we are faced with two problems. The first involves the early identification of the potential delinquent while the second deals with the validation of the therapeutic techniques. It is with this first problem that this study deals.

In studies done by Schnessler, Cressy<sup>1</sup>, and Sutherland<sup>2</sup>, they conclude that the results of studies attempting to differentiate criminals from non-criminals on the basis of personality tests have been consistently negative. Later studies were done by Capwell, Hathaway, Monachesi, Bell<sup>3</sup>, and Ashbaugh<sup>4</sup> in an attempt to differentiate between juvenile delinquents and non-delinquents by the use of the Minnesota Multiphasic Personality Inventory. The results of these studies suggest that personality differences do exist between delinquents as compared to non-delinquents, especially in the P<sub>d</sub> and P<sub>e</sub> scales. It is on the basis of these later studies that it was felt that further research was justified.

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<sup>1</sup>Schnessler, loc. cit.

<sup>3</sup>Capwell, loc. cit.

<sup>2</sup>Sutherland, loc. cit.

<sup>4</sup>Ashbaugh, loc. cit.

The author feels that there may be personality consistencies associated with offense groups which will permit one group to be distinguished from another and it is hypothesized that the M.M.P.I. will differentiate between juvenile burglars, auto thieves, and robbers.

It was found that three main groups, burglary, auto theft, and robbery comprised 57.2 percent of all commitments to the California Youth Authority in 1953. These three groups were selected for this study. The subjects of this study consist of male adolescent subjects committed to the California Youth Authority from all parts of the State of California for Burglary, auto theft, and robbery for the period.

The measuring instrument used in this study is the M.M.P.I., which has four validity scales and purports to measure in nine areas (clinical scales). While it has no proven statistical validity and reliability it has a high clinical validity and reliability.

The M.M.P.I. profiles were secured for the individuals selected for this study, broken down into commitment groups and each of the three (3) groups were totaled for each of the nine different M.M.P.I. scales studied and the group mean was computed for each of the three groups. This was done so a comparison could be made of all the traits of the three groups to find if there were any statistically significant differences between the commitment groups.

Before any of this data could be evaluated, "Bartlett's Test" was applied to check for homogeneity of variance. As indicated on Table 3, the  $P_d$  and  $S_c$  were discarded for lack of homogeneity of variance and cannot be considered further in this study.

As indicated in Table 4 the data on the remaining (6) six scales that showed homogeneity was evaluated by employing a simple analysis of variance technique. The significance of the difference between group means was assessed by applying an  $F$  test which indicates whether the group means on the measure under study are the same. To avoid a type one error a one percent criterion was imposed and met for the  $D$ , and  $M_a$  scales, the  $t$  test was then used to test the differences between individual pairs of means on these two scales. Once again to avoid a type one error, the one percent criterion was imposed. This criterion was met for, the burglary and auto theft groups.

The results indicated that the difference between means of the burglar group are significantly different from the means of auto theft and robbery groups when compared in the  $D$ , and  $M_a$  scales of the M.M.P.I. The pattern of the means observed shows a tendency for the burglary group are significantly different from the means of auto theft and robbery groups when compared in the  $D$  and  $M_a$  scales of the M.M.P.I.

nosis for a good social adjustment, with the provision that ample opportunity for growing up is made available and their high energy level is channeled in the right directions. This group was reliably above the normal of 50 in scales 2 (D), and 9 (M<sub>a</sub>) (Table II), but when compared with groups 1 and 2, this group was highest in scale 9 (M<sub>a</sub>) only. This high M<sub>a</sub> score suggests that this group operates on a high energy level with a strong need for some type of expression or activity, which is, in this case, coming out in the pattern of stealing cars.

Of the juvenile delinquents paroled in 1953, 71% of these parolees were unsuccessful and were returned from parole. It can therefore be assumed from these results that auto thieves are poor risks and are unable to adjust and channel their high energy level in the right direction.

### CONCLUSIONS

In reviewing the study, the results suggest that juvenile robbers, burglars, and auto thieves display some of the patterns of symptoms seen in adult mentally ill patients. It can therefore be assumed that the M.M.P.I. appears to contain categories into which a good percentage of the delinquent adolescents will fall. This gives us actuarial data that can be used to develop hypothesis about individuals who may turn out to be juvenile robbers, burglars and auto thieves. How-

ever, it should be noted that definite characteristics are measured by the M.M.P.I. that would link them to known patterns of illness, were not found among a proportion of the delinquent adolescents.

The pattern of the means observed shows a tendency for the burglary group to be high on the D and low on the  $M_a$  scale while the reverse is true for the robbery and auto theft group. The pattern for the auto theft group is low on the D and high on the  $M_a$  scale. This group is easily identified when compared to the burglary group, but is similar to the robbery group pattern. It is discernable, however, because of a much higher score in the  $M_a$  scale. It is also easily identified when compared with the normal of 50.

The burglary group as a whole appears to be the most maladjusted and the least likely to succeed with the means scores in scale 2 (D) and 9 ( $M_a$ ) that are reliably higher than groups one and three and the normal of 50, the most outstanding differences being in scale 2 (D). The burglary group appear to be the most inadequate in interpersonal relationship and self-concept. The burglary group is perhaps the one in which the delinquent behavior is of a more permanent nature, having taken longer for the make-up of the personality to have developed. One would then hypothesize that the prognosis for this group would be less favorable than the other two groups. As shown by the results of (Table VI) of the parolees classified as burglars in 1952, 71.6% had been removed from parole by 1954 for parole violation. The results of Bartlett's test also lend themselves to the interpretations. The fact

that the burglary group has greater variability on the  $P_d$  and  $S_c$  scales might suggest either that this scale is not as reliable for this group or the group is much more heterogeneous due to emotional influences. On the basis of the  $P_d$  and  $S_c$  scales it could be hypothesized that because of heterogeneity on this trait they would require more individual therapy than the other groups.

The robbery group appears to have the best prognosis of the three groups. Being low on both scales, burglars exhibit to a lesser degree any of these abnormal personality characteristics than either of the other two groups. It would appear that this group should be able to adjust more readily as the damage would appear to be less severe when compared to the other two groups. As shown in Table VI of the juvenile delinquents paroled in 1952, 57% were taken off of parole by 1954 for parole violations. This group it would appear was also the most successful in parole. These findings on parolees appear to bear out our findings that the robbery group as a whole has few abnormal personality characteristics and as a result their prognosis, diagnostically speaking, is better than the other two groups.

The prognosis for the auto theft group would appear to be good. Of the three groups, the auto theft appears to be the one that is more immature, but with a fairly good prog-

## CHAPTER VI

## SUGGESTION FOR FUTURE STUDY

From the structure and results of the study, several suggestions for future studies became apparent:

1. Additional studies to bear out these results or disprove them.
2. Studies comparable to this using females as subjects.



## BIBLIOGRAPHY

- Ashbaugh, James H. "Personality Patterns of Juvenile Delinquents in an Area of Small Population." Unpublished Doctor's thesis, Oregon State College.
- Boynton, P. L. and others. Emotionality Test Scores of Delinquent and Non-delinquent Girls, J. Abn. Soc. Psychol., 38: 86-92 (1948)
- California Youth Authority Quarterly Journal (October, 1953), p. 1.
- Parole Violations, Report Prepared by the California Youth Authority, (1953), p. 1.
- Cameron, Norman. The Psychology of Behavior Disorders. Boston: Houghton Mifflin Company, 1947.
- Capwell, Dora F. Personality Patterns of Adolescent Girls II. Delinquents and Non-delinquents J. Applied Psychology, 29: 289-328 (1945)
- \_\_\_\_\_, and others. Juvenile Delinquents and the M.M.P.I. Minneapolis: University of Minnesota Press, 1953.
- Gough, H. G. Simulated Patterns in the M.M.P.I. Jr. Abnormal Social Psychology, 548: 215-225 (1947)
- Hathaway, Stark R. and McKinley, J. C. Minnesota Multiphasic Personality Inventory Manual New York: The Psychological Corp., Revised 1951, pp. 18-21
- \_\_\_\_\_, and Elio D. Monachesi (ed.) Analyzing and Predicting Juvenile Delinquency with the M.M.P.I. Minneapolis: University of Minnesota Press, 1953.
- \_\_\_\_\_, Hastings, Donald W., Capwell, Dora F., Bell, Dorothy M. The Relationship between M.M.P.I. Profiles and Later Careers of Juvenile Delinquent Girls. Minneapolis: University of Minnesota Press, 1953.
- Monachesi, Elio D. The Personality Patterns of Juvenile Delinquents as Indicated by the M.M.P.I. J. Crim. Law & Criminol., 42: 487-500 (1948)
- \_\_\_\_\_. The K Correction as used in the selection of the Psychopathic Deviate Journal of Criminal Law & Criminology, 48: 50 (1948-50)

Walker, Helen M. and Joseph Lev. Statistical Inference.  
New York: Henry Holt and Company, 1953.

Sutherland, E. H. Critique of Sheldon's Varieties of Delin-  
quent Youth. American Social Rev., 10-B:16 (1951)

\*Ross, C. C. Measurement in Today's Schools. New York:  
Prentice Hall, Inc., II, 1949.

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## APPENDIX

TABLE I

The records of the California Youth Authority upon which this study is based indicate that 85.6% of all youths committed to the California Youth Authority during 1953 were due to nine main offenses, as follows:

NUMBER AND PER CENT OF YOUTHS COMMITTED TO THE  
CALIFORNIA YOUTH AUTHORITY FOR SELECTED  
OFFENSES - JULY, 1952 - JUNE 30, 1953

	<u>NO.</u>	<u>%</u>
1. Burglary	2,065	26.2
2. Theft (auto)	1,523	19.3
3. Robbery	922	11.7
4. Theft (except auto)	914	11.6
5. Assault	337	4.3
6. Forgery	265	3.4
7. Narcotics and Drug Laws	263	3.3
8. Rape	226	2.9
9. Sex Offenses	226	<u>2.9</u>
		85.6%

Over a period of time very little change has been noted in the percentage of boys committed for these offenses except for narcotics and drug violators, which have increased from 0.4% of all commitments during the three fiscal years ending June, 1954, to 3.3% for the 1955 fiscal year.

TABLE II

SAMPLE SIZE, MEAN SCORE, AND VARIANCE AS FOUND FOR  
EACH COMMITMENT GROUP FOR EACH M.M.P.I. SCALE

Scale	BURGLARY				ROBBERY				AUTO THEFT				TOTAL			
	Number	Mean	Variance		Number	Mean	Variance		Number	Mean	Variance		Number	Mean	Variance	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)					
Hs	88	55.27	88.28	59	51.61	90.57	72	54.38	111.58	219	53.75					
D	88	61.19	145.33	59	57.15	88.15	72	55.38	107.19	219	57.90					
Hy	88	59.36	72.16	59	57.20	40.36	72	57.43	62.01	219	57.99					
Pd	88	70.50	293.24	59	68.73	79.03	72	71.63	101.82	219	70.28					
Me	88	54.55	63.70	59	52.64	86.56	72	53.96	81.08	219	53.71					
Pa	88	59.57	114.06	59	56.83	194.14	72	57.42	70.97	219	57.94					
Pt	88	61.70	119.84	59	58.10	171.34	72	60.15	111.08	219	59.98					
Sc	88	62.18	152.56	59	57.68	62.99	72	60.86	142.32	219	60.24					
Ma	88	57.22	115.18	59	57.47	88.28	72	62.07	123.47	219	58.92					

TABLE III

RESULTS OF THE USE OF THE BARTLETT TEST\*

Scale	$B^1$	C	$B = \frac{B^1}{C}$	$\chi^2_{.99}$	Significant
(1)	(2)	(3)	(4)	(5)	(6)
(1) $H_s$	1.3217	1.0064	1.3133	9.2	No
(2) D	4.5842	1.0064	4.5550	9.2	No
(3) $H_y$	5.6579	1.0064	5.6219	9.2	No
(4) $P_d$	36.9544	1.0064	36.7194	9.2	Yes
(5) $N_f$	2.4624	1.0064	2.4467	9.2	No
(6) $P_a$	40.6556	1.0064	40.3970	9.2	No
(7) $P_t$	3.6211	1.0064	3.5981	9.2	No
(8) $S_c$	13.5204	1.0064	13.4344	9.2	Yes
(9) $M_a$	1.9466	1.0064	1.9342	9.2	No

\*Walker, loc. cit., p 193.



TABLE IV

ANALYSIS OF VARIANCE ON 201 DELINQUENT  
BOYS' SCORES ON VARIOUS SCALES

Scale	Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	F. <sub>gg</sub>	Signifi- cance
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
H <sub>s</sub>	Among	489.7	2	244.86	2.87	4.71	No
	Within	18402.2	216	85.20			
	Total	18891.9	218				
D	A	1427.8	2	713.91	6.001	4.71	Yes
	W	25695.1	216	118.96			
	T	27122.9	218				
H <sub>y</sub>	A	219.9	2	109.96	1.79	4.71	No
	W	13220.4	216	61.21			
	T	13440.3	218				
Pd	A	273.9	2	136.96	.10	4.71	No
	W	321229.3	216	1487.18			
	T	321503.2	218				
N <sub>f</sub>	A	129.3	2	64.66	.84	4.71	No
	W	16581.1	216	76.77			
	T	16710.4					
P <sub>a</sub>	A	319.0	2	159.50	1.74	4.71	No
	W	19796.0	216	91.65			
	T	20115.0	218				
P <sub>t</sub>	A	277.8	2	138.91	1.32	4.71	No
	W	22714.4	216	105.16			
	T	22992.2	218				
S <sub>c</sub>	A	728.0	2		2.08	4.71	No
	W	27372.4	216	264.01			
	T	28100.4	218	126.73			
M <sub>a</sub>	A	58832.5	2	29416.25	250.00	4.71	Yes
	W	24249.1	216	112.57			
	T	83081.9	218				

TABLE V

MEAN T<sup>m</sup> SCORES ON THE M.M.P.I. SCALES FOR  
THREE GROUPS OF DELINQUENT BOYS

Column:	(1)	(2)	(3)	(4)	Difference Between Means	
					Group #1	Group #2
					Group #1 minus Group #2	Group #1 minus Group #3
Scales:	Delinq. Grp. #1 (Burglary)	Delinq. Grp. #2 (Robbery)	Delinq. Grp. #3 (Auto Theft)			
	N = 88	N = 59	N = 72			
1 Hst.5X	55.3	51.7	54.4	3.6	.9	2.7
2 D	61.2	57.2	55.4	-4.0**	-5.8**	-1.8
3 Hy	59.4	57.2	57.4	2.2	2.0	.2
4 Pd / .4k	70.5	68.7	71.6	1.8	.9	2.9
5 Mf	54.6	52.6	54.0	2.0	1.3	1.4
6 Pa	59.6	56.8	57.4	2.8	2.2	.6
7 Pt / 1k	61.7	58.1	60.2	3.6	1.5	1.2
8 Sc / 1k	62.2	57.7	60.9	4.5	1.3	3.2
9 Ma / .2k	57.2	57.5	62.1	.3	4.9**	-4.6**

\*\* Signifies a difference reliable above the 1% level of confidence

TABLE VI

OFFENSE AND NUMBER OF PAROLE VIOLATORS AND NON-VIOLATORS  
CALIFORNIA YOUTH AUTHORITY  
1953

OFFENSE	TOTAL	NON-VIOLATORS	VIOLATORS	
			NO.	PERCENT
1. BURGLARY	296	84	212	71.6
2. ROBBERY	101	43	58	57.4
3. AUTO THEFT	311	111	200	64.3