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A CONFIGURATIONAL APPROACH TO PREDICT SUCCESS OR FAILURE ON JUVENILE PAROLE

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Stanley Kim, B. A., M. S. W.

The Ohio State University
1965

Approved by

[Signature]
Adviser
School of Social Work
VITA

August 21, 1922
Born - Honolulu, Hawaii

1949 ....... A.B., University of Hawaii, Honolulu, Hawaii

1950-1955 ... Probation Counsellor, Juvenile Court, Honolulu, Hawaii

1957 ....... M.S.W., The Ohio State University School of Social Work

1960-1961 ... Instructor, The Ohio State University School of Social Work, Columbus, Ohio

1962-1963 ... Chief Social Worker, Ohio State Juvenile Diagnostic Center, Columbus, Ohio

1963-1965 ... Assistant Professor, University of Wisconsin - Milwaukee, School of Social Work, Milwaukee, Wisconsin

Also Lecturer, Peace Corps Training Program in the Community Development Area

1965 ....... Assistant Professor, University of Michigan School of Social Work, Ann Arbor, Michigan

FIELDS OF STUDY

Major Fields: Research and Community Organization

Studies in Social Organization. Professor John F. Cuber

Studies in Welfare Administration. Professor Farrand H. Livingston

Studies in Group Work. Professor Wilbur C. Batchelor

Studies in Casework. Professor Leontyne Young
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CHAPTER I

Introduction

Problem and relevant background information

The size, importance, and urgency of the juvenile delinquency problem is clearly evidenced by overwhelming human suffering and by the waste of what could be productive lives. Society is showing increasing concern for the problem of delinquency but still seems to be lagging in its understanding, acceptance, and support of the modern approaches to the problem of delinquency.

Society needs to consciously reconcile conflicting philosophies regarding the purpose of the correctional services. The kind of staff and program in correctional services will vary greatly, depending on whether punishment or rehabilitation is thought to be the major objective in treatment of the offenders.

Current juvenile delinquency statistics

The Children's Bureau reports that about 601,000 juvenile delinquency cases (excluding traffic offenses) were handled by juvenile courts in the United States in 1963. Since the same child may have been referred more than once during the year the estimated number of different children involved was 518,000. These children comprise
nearly 2 per cent of all children aged ten through seventeen nationally. The 1963 delinquency cases showed an 8 per cent increase over 1962, while the child population aged ten through seventeen increased only 4 per cent. Again, the persistent upward trend of delinquency noted every year beginning with 1949, except for 1961, continues. Similarly, as in most previous years in the past decade, the increase in delinquency cases exceeded the increase in child population.¹ The Census Bureau estimates that at the end of 1964, more than 40,000,000 of the nation's 194,000,000 population was under ten years of age. These millions of youngsters will be in the delinquency-prone age bracket even before most of today's teen-agers reach adulthood. Even if the juvenile delinquency rate does not increase, the enormous rise in our child population will mean an increase in absolute number of juvenile delinquents.

Value of property stolen in 1963

The F. B. I. Uniform Crime Reports indicate that in 1963 the cost in property value stolen by juvenile and adult offenders was $475,000,000.²


Estimated costs by public institutions for juvenile delinquents in 1963

The public institutions for juvenile delinquents spent an estimated $125,000,000 during fiscal year 1963. The average annual per capita operating expenditure for child care was $2,760 and the cost for the average stay (9.5 months) in the institutions was $2,185. Illustrating this point of high per capita cost for a treatment program, Mr. Sanger Powers, the State Director of Corrections in Wisconsin, reports that the 1963 average annual per capita cost of care in juvenile institutions was $4,536.

Overcrowdedness in training schools for juvenile delinquents

The addition of facilities is not keeping pace with the increased number of commitments. One of the immediate effects of this continued annual increase in delinquency is the increasing pressure of intake upon the limited capacities of our training schools for juvenile delinquents. About 38,500 children were living in training schools for delinquents on June 30, 1963. In 1963, six out of ten institutions for delinquent children had an occupancy rate of more than


4 Milwaukee Journal, November 8, 1964, p. 1. An interesting contrast is noted that the same article reports that the annual per capita cost of probation and parole amounted to $264.
90 per cent of their capacity, while more than three out of ten institutions were housing more children than their stated capacity. These overcrowded institutions are subject to the resulting adverse effects and pressures on both children and institutional staff. Yet, for those institutions reporting on the years 1956, 1958, 1962, and 1963, an occupancy in excess of their rated capacity increased from 35 to 55 by 1962, and remained the same for 1963. Table 1 shows the percentage of overcrowdedness by type of institutions and years.5

**TABLE 1**

PER CENT OF INSTITUTIONS HAVING AN OCCUPANCY RATE OF MORE THAN 100 PER CENT BY TYPE OF INSTITUTION, 1956, 1958, 1962 AND 1963

<table>
<thead>
<tr>
<th>Type of Institution</th>
<th>Per Cent Overcrowded*</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>1956</td>
</tr>
<tr>
<td>All institutions</td>
<td>27.8</td>
</tr>
<tr>
<td>State institutions</td>
<td>32.3</td>
</tr>
<tr>
<td>Local institutions</td>
<td>0.0</td>
</tr>
<tr>
<td>Forestry camps</td>
<td>21.4</td>
</tr>
</tbody>
</table>

*For those institutions reporting all years

---

Returnee rate, by capacity of institution, 1963

Twenty-six per cent of the children committed to the training schools during 1963 had been admitted previously. Significantly, institutions with populations of less than 150 children continue to have the lowest returnee rate. This rate tends to increase as the child population of the institution increases. About 44 per cent of the public training schools had capacities of more than 150. The median returnee rates of the various size institutions are shown in table 2.

TABLE 2

<table>
<thead>
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<th>Capacity of Institution</th>
<th>Returnee Rate (Median)</th>
</tr>
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<tr>
<td>Less than 150 children</td>
<td>17.1</td>
</tr>
<tr>
<td>150-299 children</td>
<td>28.6</td>
</tr>
<tr>
<td>300 or more children</td>
<td>34.4</td>
</tr>
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Gant, op. cit., p. 5
These data may have significant importance in evaluating the recommended standard of limiting the capacity of an institution to 150 children. While the data show that generally the larger institutions have a higher rate of return, other factors besides size of institution may affect these rates. The seeming association between the size of the institution and the returnee rate certainly demands further study as a possible guide to improve the corrective impact of our juvenile correctional institutions.

Urgency of the problem and lag in social attitudes

In the interim period the urgency of the problem is reflected in the pressure of a high rate of intake, overcrowded facilities and a continued high return of the larger training schools. Additionally, our lag in social attitudes and sufficient knowledge base to understand and treat delinquents more effectively have contributed toward the failure to develop effective delinquency prevention programs, adequate probation services, and sufficient number of specialized residential and outpatient treatment resources for the delinquent children.

---

Institutions Serving Delinquent Children: Guides and Goals, Children's Bureau Publication No. 360, p. 33
Current ways states are dealing with the high rate of commitment

In the light of this situation, the administrative staff of most of the state training schools are confronted with the problem of reviewing and reorganizing their programs and developing new techniques to process a larger number of boys in a given period of time with limited institutional staff members, facilities, and funds.

The states are dealing with this problem in various ways, such as overcrowding existing facilities, reducing period of institutionalization, expansion of facilities, establishment of residential diagnostic centers, early release programs and by executive order to establish commitment quotas for the counties; Ohio and Wisconsin have uniquely experimented with the latter two approaches.

The state of Ohio, pressured by the increasing intake, attempted to establish a quota system by executive order in August, 1961, for its counties in order to restrict the number of commitments to the state training schools. The quota system was declared invalid by the State Supreme Court in December, 1961. In Wisconsin, in order to deal with the increasing population pressure (increased new admissions from 433 in 1959 to 977 in 1964 -- a rise of 125 per cent), the state officials initiated the Early
Release and Intensive Supervision* program (ERIS) at the Wisconsin State Boys School at Wales. Under ERIS, boys are screened when they report at the Wisconsin State Boys School Reception Center. Those considered to be good risks are released directly to parole agents and sent home. Each agent supervises only fifteen boys, so he can work closely with the boy, his family, and community agencies. Additionally, the state officials have progressively reduced the mean length of stay for each boy to about four months.

Process of the selection of boys for parole

Currently the process of the selection of boys for parole generally is done by an individual or committee of staff members, on the basis of clinical judgments. This is based, to a large extent, on their individual judgments, drawing largely upon their long experience with many cases, which is brought to bear on a single case. This method of selection tends to lend itself to a wide variation of practice and injection of personal biases in the selection of prospective parolees. The variation is great from one institution parole committee to another and even among the staff members within one institution.

*Hereafter referred to as ERIS.
**Purpose of the study**

The proposed research is intended to develop a simple and reliable juvenile parole prediction instrument which will make available to the staff members an instrument to determine which children show the greatest probabilities of success or failure on parole. This prediction instrument will enable the institution staff to classify the population into groupings according to the boy's readiness and risk for parole and therefore will provide one of the means of controlling the total institutional population by maximizing the efficient use of the institution. The predictive configurations can help the staff to determine the importance of various factors and hopefully establish sound standards and criteria for parole selection.

**Definition of basic terms**

a. **Parole.** The release of an offender from a penal or correctional institution, after he has served a portion of his sentence, under the continued custody of the State and under conditions that permit his return to the institution in the event of a parole violation.

b. **Lancaster Boys' Industrial School.** Ohio State Training School for juvenile offenders committed to the state by juvenile courts. (The name of the school was changed to
"Fairfield School for Boys" by executive order of the Ohio Youth Commission on November 24, 1964.) Hereafter the school will be referred to as Fairfield School for Boys in the study.

c. **Predictive Configurations.** The method of prediction-by-classification approach is designed to predict a criterion from a set of qualitative and quantitative predictors. This approach permits great flexibility of a wide variety of data. The construction of a prediction instrument requires a sample to be divided into sub-samples according to factors related to the predicted outcome. This facilitates the possibility that each case included in a sub-sample has an equal chance of achieving a given outcome. Each distinct sub-sample is highly associated with the criterion and considered as a separate unit for statistical analysis. The probability values needed to predict are tabulated for each sub-sample rather than for the total sample, and are defined by a unique configuration of factors. Depending upon the unique configuration of predictive factors in a sub-sample, a factor may differentiate among individuals in relation to the criterion in one sub-sample and not in another. The individual is assigned to a predictive configuration only if he is characterized in a significant manner by factors defining the configuration. This approach does not assume
that a single dimension can be measured with all other conditions held constant.\(^8\)

For example, Figure 1 shows the probability values of a configuration predicting success or failure on parole for boys released from the Fairfield School for Boys. The criterion for this study is defined in terms of success or failure on parole. The critical probability value to be used in identifying predictive configurations is .80. The critical value is defined as an acceptable cutting point. The selection of critical values may be influenced by the number of categories in the criterion and the proportion of the total sample in each category. In the illustrative problem, the sample includes 300 boys released on parole from the Fairfield School for Boys. In this sample, the probability of succeeding on parole one year or more is .57, the probability of failing is .43. Any configuration of predictors associated with a probability of succeeding greater than .80 or a probability of failing greater than .80 is to be included in the prediction instrument. Figure 1 shows that **Self Control** is selected as the initial predictive factor. The sample of 300 boys sorted on the **Self Control** factor distributed to 127 in the **Good or Moderate Self Control** category, and 173 in the **Poor Self Control** category.

---

FIGURE 1
Predictive Configuration

**Self-Control**
- N = 300
- Good or Moderate
- Poor
- N = 127
- N = 173
- 92 - 35
- 80 - 93
- .72 .28
- .46 .54

**Family Life During First Five Years of Boy's Life**
- Stable or Int.
- Unstable
- N = 52
- N = 75
- 42 - 10
- 50 - 25
- .80 .20
- .67 .33

**Family Size**
- Small or Medium
- Large
- N = 28
- N = 47
- 22 - 6
- 28 - 19
- .79 .21
- .60 .40

**Institutional Cottage Adjustment**
- Good or Fair
- Poor
- N = 31
- N = 16
- 26 - 5
- 2 - 14
- .84 .16
- .13 .87

Words underlined — Identified predictive factors

--------------- Success probability predictive values

--------------- Failure probability predictive values
The ideal distribution would have the cases in the **Good or Moderate Self Control** category all be parole success in outcome or 1.00, and all cases in the **Poor Self Control** or 1.00. The 127 boys in the **Good or Moderate Self Control** category are sorted into 92 success and 35 failure cases. By calculating the percentage figures of the 92 success and 35 failure cases from the N of 127 cases, the actual success and failure predictive probability value is determined. In this instance, the actual probability for all cases on the **Good or Moderate Self Control** category is .72, which indicates that 35 of the 127 cases failed to be parole success cases as predicted. The .72 probability value is not acceptable because it does not attain the .80 critical value. The probability values of a given factor are listed to the left for success and to the right for failure. Similarly, the arrows in Figure 1 point to the left for success predictions and to the right for failure predictions.

Since the **Good or Moderate Self Control** category indicates a probability of .72, there is need to develop that configuration further. It is necessary to add and subdivide a new factor. Each subdivided factor should distinguish between the parole success and parole failure outcomes. The factors used in subdividing the sample are selected so that the probability of a given outcome occurring exceeds the critical value for each sub-sample.
Figure 1 indicates that the Early Family Life - Stable and Unstable categories were added and the probability values listed. Since the Stable or Intermediate Early Family Life category indicates a probability of .80, there is no need to develop that configuration further. Since the Unstable Early Family Life category indicates a probability of .60, it is necessary to add and subdivide a new factor. This, in time, may develop new predictive configurations. The simple statistical computations of sorting and dividing is repeated for each new factor that is added to the configuration.

The specific initial predictive configuration may lend itself to one or many factors being added. The additions, in turn, may produce a great number of possible configurations. Each category must be subdivided to determine the probability values. Factors are added until either the remaining cases become extremely small or the further division of a sub-sample does not result in significant changes in the probability values. At this stage, the remaining cases are considered non-predictable and placed in a residual class. Regardless of the number of factors added to the configuration, the predicted outcome is either success or failure for all individuals in each sub-sample. Additionally, there can be only one outcome predicted for each individual in the sample with the exception of those in the residual class.
Hypothesis

That a prediction scale developed by the method of predictive configurations will determine the prospective juvenile parolee's probability of success or failure on parole with validity and reliability.

Setting in which the study takes place

The Fairfield School for Boys, which was established in 1857, is one of the oldest and largest state juvenile institutions of its kind in the nation. The institution, which serves the 88 counties in Ohio, is located on 1700 acres of land in a rural area and is considered an open institution, unfenced. The physical plant is made up of fifteen two-story cottage units, an Annex for special problem boys, three schools, two churches, one administrative building, gymnasium and swimming pool, dining hall, and numerous other farm, industrial, and service buildings.

The usual population at the Fairfield School for Boys during the past several years has fluctuated between 800 and 1100 boys, in contrast to its rated capacity of 600 boys. Based on an average population of about 900 boys and an overall staff of 338 employees (administrative, treatment, educational, operational, and maintenance), during the fiscal year 1964-65, the institution child-employee ratio was about 3.0. That is, there were three children in the
institution for every full-time employee. (This compares with
the child-employee ratio of about 2.3 on June 30, 1963, for
all institutions serving delinquent children.)

Similar to most training schools, the Fairfield School
for Boys staff is short on professional treatment staff. On
October 17, 1965, the Treatment Staff consisted of eight social
workers (one social worker with an M.S.W. degree), thirty-two
teachers, one psychologist, one half-time physician, one den-
tist, and one part-time psychiatrist. Consequently, the
school's program is similar to most programs provided by other
State Training Schools for boys and may be considered more
custodially oriented than treatment oriented.

Significance of the study

Unlike the prediction methods employed by E. W. Burgess,
S. and E. Glueck and other major prediction studies in
parole, the proposed study is unique in utilizing the confi-
gurational approach to parole prediction, which is a varia-
tion of the prediction-by-classification approach.

The development of a juvenile parole prediction instru-
ment may be useful to a parole board or institutional
officials in informing them what the experience has been in
the release of particular types of offenders. The predictive
configurations indicate relative risks for classification

\[9\text{Gant, op. cit., p. 17.}\]
groups; they never definitively determine that a given parolee is certain to succeed or fail. These configurations may be helpful to the institution to classify the population into groupings according to the boy's readiness and risk for parole. Additionally, it can help the staff to evaluate the importance of various factors which influence the parolee's success or failure. In essence, the predictive configurations hopefully will assist the parole staff members to systematize and objectify their experiences with numerous parole cases, in order to consider a single case.
CHAPTER II

Review of Literature

Original inquiries

The initial predictive efforts in parole occurred about forty years ago. Until recently, a large majority of the predictive studies dealt with the adult parolees. Throughout the years, two basic methods of prediction tables based on the experience or actuarial tables have been developed by E. W. Burgess and E. and S. Glueck.

Burgess experience table approach to prediction. Burgess, during the 1920's, applying a plan similar to Hornell Hart's, constructed an experience table comprised on twenty-one predictive factors. He analyzed the records of 3,000 parolees drawn equally from three Illinois prisons. The Burgess method scored each parolee on the twenty-one factors, giving equal weight to all factors. These twenty-one items were concerned with the following areas: nature of offense, individual or group offense, parental status, rural or urban, type of community, months on parole, age at time of parole,

psychiatric prognosis, and personality type. By assigning one point to each item that had a violation rate lower than the overall rate, a parole success probability score was computed for each parolee.  

**Glueck's prediction instruments.** At about the same time in the late 1920's, E. and S. Glueck were doing similar work on predicting post-parole violations by means of an experience table. Their first tables consisted of post-parole adjustment rates for a group of 500 parolees discharged from the Massachusetts Reformatory in 1921 and 1922. The tables were very similar in form and significance to the table prepared by Burgess. The Gluecks differed from Burgess by scoring the parolees on a variable set of six to thirteen items. They assigned a value to each item according to the item's capacity to determine success or failure on parole.  

During the period following World War II, the Gluecks developed another prediction table for delinquency comprised of five predictive items with weighted failure scores for each sub-category. The five predictive items were developed by evaluating the early child-parent relations and the formative character structure which emerged from these relations. These items concern the boy's life at home, how he is supervised and

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disciplined, and the cohesiveness of the family unit. 13

Glueck's 5-item delinquency prediction scale validated. 14

In 1954, the New York City Youth Board employed the five factor Glueck scale on 301 six-year-old boys in order to predict who will be juvenile delinquents during a ten year period. The questions were submitted to the parents of the 301 boys in a neighborhood with a high record of delinquency. The New York City Youth Board ten year follow-up study reported that delinquency was predicted for thirty-three boys and the prediction was 85 per cent accurate. The assessment of 243 boys predicted not to be delinquents was 95 per cent accurate. Of the twenty-five boys predicted an even chance of becoming delinquents, nine did and sixteen did not.

Subsequent inquiries

Studies focusing largely on methodological matters.

The initial studies by Burgess and the Gluecks were modest in claim and scope. However, they led to a series of studies focusing largely on methodological matters. These studies by


14 Although Glueck's second prediction table was developed to predict delinquency, the writer felt that the items used were also applicable for parole prediction.
Vold, Tibbitts, Sanders, Hakeem, Ohlin and Duncan were concerned with the validity of specific experience tables (e.g., 1938 Illinois Experience Table), the relative efficiency of tables, the optimum number of items in a prediction battery, and the problems of weighting items.

Laune's "Innate Hunch" method in parole prediction. In 1934, Laune introduced the "Innate Hunch" method as a basis of predicting parole success. He solicited the opinions of

15 George B. Vold, Prediction Methods and Parole (Hanover, N. Y., 1931).

16 G. Tibbitts, "Success or Failure on Parole can be Predicted," Journal of Criminal Law and Criminology, 22, 1931, pp. 11-50.


several inmates in regard to the parole prospects of 150 fellow inmates. The inmates were divided into two groups: the Truth and the Volunteer groups. The Truth group attained a correlation coefficient of .629 between the "Hunch" scores and scores on the Burgess scale. The Volunteer group attained a correlation coefficient of .286 between the "Hunch" scores and scores on the Burgess scale. Laune concludes that the subjective judgments of "properly qualified" inmates regarding the probability of success on parole of other inmates possess some degree of validity. It should be noted that in a 1950 validation study of these inmate appraisals by Ohlin and Lawrence revealed that the "Hunch" method was not quite as efficient as the Burgess method.


Boy's perception of institutional experience and parole expectation studies. Sabnis,24 Moran,25 Zibners,26 and others under the direction of W. Reckless have done a series of studies in which the central theme has been to discover the impact of the institution on the boy as he sees it. The boy's perception of his institutional experience was related to the probability of his success of failure on parole.

Ohlin's modifications of the Illinois (Burgess) experience table. Ohlin, in his efforts to improve the Burgess Method of prediction formulated a technique to adjust the Illinois Experience Table on an annual basis. In order to deal with the variable of time, which may affect the reliability and validity of any of the predictive items, Ohlin devised a method for adjusting the experience table on an annual basis. For a five year period he tabulated the first and each

24 M. S. Sabnis, A Measurement of Impact Upon Adult Male Offenders, Ph.D. dissertation (The Ohio State University, 1943).

25 Mark R. Moran, Inmate Concept of Self in a Reforma­tory Society, Ph.D. dissertation (The Ohio State University, 1953).

26 Harry Zibners, "The Influence of Short-term Institutionalization Upon Emotionally Disturbed and Delinquent Children," Master thesis (The Ohio State University, 1954).
succeeding year's violations and related them to the total number of violations in the five year period. In this manner his prediction of the parole violation rates was based on the current parole violation rates and attuned to the possible changes in the social situation.\textsuperscript{27}

Additionally, Ohlin's study in \textit{Selection for Parole} in 1951, demonstrated that an experience table based on twelve items performs just as efficiently for prediction purposes as a table based on the twenty-one items originally used by Burgess. These twelve items are listed as follows: (1) type of offense; (2) sentence; (3) type of offender; (4) home status; (5) family interest; (6) social type; (7) work record; (8) community: urban or rural; (9) parole job; (10) number of associates; (11) personality; and (12) psychiatric diagnosis. He felt that the most efficient items defined an area of personal and group attitudes toward criminality. The question arises whether several prediction items reflect the possible influence of a single more inclusive factor.

\textbf{Glaser's identification with criminality scale.} An exception to the main trend of recent methodological studies has been Glaser's research for factors which were guided by a

\begin{flushright}
\end{flushright}
theoretical concept. The hypothesis that the degree of identification with criminality as a way of life would distinguish prospective violators and non-violators was the major concept he used. The resulting experience table was somewhat superior in efficiency to the 12-item table prepared by Ohlin.28

Reckless, Dinitz, et al.: variations in self-concept studies. Another study by Reckless, Dinitz, and their associates is also based on variations in self-concept. They studied why some boys who live in high delinquency areas appear to develop a resistance to delinquent behavior, (insulated) even in the most unfavorable social setting. The pilot study attempted, through interviews with teachers, mothers and boys, and through delinquency proneness and other scales to develop profiles of "insulated" boys in high delinquency areas. The results were encouraging. They portray the "insulated" boy as one who is thought by his teacher, parents, and others to be a good boy; and who conceives of himself similarly. These researchers' follow-up findings of 108 boys tested during the sixth grade in Columbus indicated that at sixteen years of age, well over

95 per cent of these boyd had no court record and planned to continue school. 29

Since the study seems to establish that there is an association between the self-concept of a boy and his behavior, the writer felt that this theoretical approach also had applicability to parole prediction studies.

**Prediction through use of standard tests.** Others have sought the key to prediction through standard and easily administered tests such as the Gough California Psychological Inventory and the Minnesota Multiphasic Personality Inventory. For example, Hathaway and Monachesi's findings indicate that among the subjects with high scores in the "psychopathic deviate" scale of the Minnesota Multiphasic Personality Inventory, almost twice as many were later arrested for delinquency than the rest of the group combined. 30


Prediction configuration method, development and use

The Prediction Configuration Method has been used and developed by R. F. Sletto, R. P. Stuckert, John Behling, and Amina K. S. Yadava in non-correctional concerns. By employing the method of predictive configurations, R. P. Stuckert predicted the probability of completing two years of course work successfully for the freshman class entering the College of Commerce and Administration at the Ohio State University during the autumn quarters of 1949, 1949, and 1950. Relative to the varied instruments used for predicting a dichotomized criterion, the predictive configuration instrument yielded the most efficient predictions in the two validation samples. The 1949 sample shows the efficiency of the configuration instrument was essentially equal to that


32 John H. Behling, "An Experimental Study to Measure the Effectiveness of Casework Services in a Public Assistance Agency, Franklin County, Columbus, Ohio, From October 1, 1959 to October 31, 1960," The Franklin County Department of Public Welfare, Columbus, Ohio, August, 1960.

multiple regression instrument and slightly superior to that of the Glueck instrument; the coefficients were .324, .318, and .291. The Burgess type instrument was the least efficient (.179)\(^3\) (Table 3).

Amina Yadava demonstrated that reliable and valid instruments to predict giving to community fund-raising federations can be constructed according to multiple linear regression, Burgess, Glueck, and predictive configuration methods. Almost all the prediction instruments were found to predict with a reasonable degree of accuracy and efficiency. The instruments based on the multiple linear regression approach predicted with greater accuracy and efficiency. The Glueck instruments were the next best.\(^3\)

Researchers' findings utilized in the selection of eight potential predictive categories

In view that the most useful prediction factors have generally been secured when the search has been closely guided by the theories and results of previous criminological research, a systematic effort was made to utilize the research findings listed in the review of the literature.

\(^3\)4 Stuckert, op. cit., p. 234.

\(^3\)5 Yadava, op. cit.
<table>
<thead>
<tr>
<th>Prediction method</th>
<th>Accuracy</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1948 sample</td>
<td>1949 sample</td>
</tr>
<tr>
<td><strong>Dichotomous Criterion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Predictive configuration</td>
<td>.784</td>
<td>.756</td>
</tr>
<tr>
<td>Multiple linear regression</td>
<td>.759</td>
<td>.754</td>
</tr>
<tr>
<td>Glueck</td>
<td>.757</td>
<td>.744</td>
</tr>
<tr>
<td>Burgess unit weighting</td>
<td>.762</td>
<td>.703*</td>
</tr>
<tr>
<td><strong>Trichotomous Criterion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Predictive configuration</td>
<td>.673</td>
<td>.615</td>
</tr>
<tr>
<td>Multiple linear regression</td>
<td>.597*</td>
<td>.567</td>
</tr>
</tbody>
</table>


* Difference between this coefficient and corresponding coefficient of predictive configuration method is statistically significant at the .05 level determined by the probability distribution of the difference of two proportions based upon large samples, two-tailed test.
The eight categories were adapted from the findings of E. Burgess, L. Ohlin, E. and S. Glueck, D. Glaser, W. Reckless, S. Dinitz, et. al., M. Sabnis, M. Moran, and H. Zibners.

Burgess^36 and Ohlin^37 in their work with the 1938 Illinois Experience Table* developed and stressed certain items for their parole prediction table. Some of the items that they used, such as: type of offense, type of offender, family interest, social type, number of associates, home status, and community: urban or rural, were adapted and redefined into three categories. These were: nature of offenses, personality traits, and home and neighborhood situation.

The Glueck's evaluation of the early parents relations and the emergent formative character structure were used as the basis for developing their five item prediction table for delinquency.\(^38\) These items were concerned with the boy's life at home, how he is supervised and disciplined, and the

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^37 Ohlin, *op. cit.*, pp. 441-452.

*Refers to the parole prediction table developed by Burgess based on a sample of 9,084 parolees released from the Illinois prisons during 1925 through 1935.

^38 Glueck, *op. cit.*, p. 137.
cohesiveness of the family. Glueck's contributions were defined in terms of these two categories: early family and life experiences and adequacy of the parents and family situation.

D. Glaser hypothesized and demonstrated that the degree of identification with criminality as a way of life would distinguish prospective violators and non-violators. Glaser's contributions were combined with W. Reckless, S. Dinitz et al. studies in self-concept in formulating the category of self-concept and identifications.

M. Sabnis, M. Moran, and H. Zibners' studies in which the central theme has been to discover the boy's perception of his institutional experiences show his perception was related to the probability of his success or failure on parole. These studies were adapted to two categories: institutional adjustment and parole plans.

40 Reckless, op. cit., pp. 566-570.
41 Sabnis, op. cit.
42 Moran, op. cit.
43 Zibners, op. cit.
Staff members' contribution in selection of two potential predictive categories. In addition to the researchers' contributions, the writer attempted to utilize the observation and insight acquired by the various staff members who work with the boys in the institutional setting or on parole. The meetings with the staff members resulted in adding two categories: pattern of adjustment to stress, and school adjustment.

Rationale for selection of each of the ten potential categories. The rationale for the selection and use of the ten potential predictive categories were based for the most part on the generally accepted tenets as proposed by the various research studies noted. Those that fall out of this general area (i.e., collective insights and observations of experienced staff) are indicated in the descriptive paragraphs.

1. Nature of offense

The particular type and pattern of offenses may indicate the boy's specific underlying needs, value orientation or a compensatory effort for deficiencies in his life. It may also indicate a set of unique experiences which condition the boy differently from the conventional citizen. The experience may suggest an exposure to influence and associations which usually lead to the development of delinquent attitudes and patterns of behavior.
2. School adjustment

There seems to be a high association between school drop-outs and delinquent activities. The culturally deprived, emotionally disturbed, mentally retarded, physically handicapped or immature boy may be lacking in motivation or find it difficult to compete academically or might feel that he does not fit in the total scheme of the educational experience. These are the potential drop-outs. The school drop-out is usually rejected socially by his non-drop-out peers. Occupationaly he finds that his age and lack of sufficient education strongly restricts his employability. At home, his disappointed parents prefer him out of the house because he reminds them of their own possible failure. The community generally has no community facility or recreation program for school drop-outs. The circumstances force him to associate with the other school drop-outs or delinquents, who, because of similar circumstances, tend to have similar needs and states of mind and are possibly highly vulnerable to delinquent activities. Just as the relative school adjustment of a boy may be indicative of his potential for dropping out of school and delinquent involvement, similarly, the relative school adjustment of a parolee may be indicative of his vulnerability to parole violation.
3. Early family and life experiences

The psychoanalytic school, as well as other personality theories, tend to place heavy emphasis on the early family and individual developmental experiences as a basis for personality development. The writer is concerned with the specific types of experiences that may have contributed toward certain attitudes or arrested development which makes the boy vulnerable on parole.

4. Personality traits

The unique personality trait or combination or traits or characteristics of a parolee may possibly be associated with success or failure on parole.

5. Adequacy of parents and the family situation

The adequacy of the family and parents as indicated by their cohesiveness and their use as models were considered partially predictive of parole success or failure. The size of the family and the composition of the siblings were also included in this category. Furthermore, the history of delinquency in the family was included as potentially predictive.

6. Home and neighborhood situation

The relative permanence of a home as assessed by ownership and years of residence and the external influences of
the neighborhood and the size of the community were assumed to be potentially predictive of parole success or failure.

7. Pattern of adjustment to stress

The writer assumed that the boy's specific pattern of behavior or pattern of responses to a stressful situation may be associated with success or failure on parole.

8. Self-concept and identification

It is generally accepted that people guide their actions to a large extent by the conceptions they have of themselves. These conceptions, in turn, reflect how they are regarded and treated by others.

9. Institutional adjustment

The institution staff's evaluation of the prospective parolee's motivation for parole, attitudes, and efforts toward rehabilitation were utilized as indicative of success or failure on parole and considered reasonably valid on the basis of their collective knowledge and experience.

10. Parole plans

Conceptions about parole vary with one's contact with the parole system, membership in social groups, major interests, and level of education. To the prospective parolee, parole means something different from what it does to the parole
worker, politician, police, and man on the street. The relative importance of the views held concerning parole is related to one's ability to influence the functions of the parole system. Consequently, the parole programs tend to be a product of acts, understandings, and misunderstandings of the persons able to exert the greatest influence. The writer assumes that the recommended study placement plans, the clarity of parole plans and conditions of parole may influence the parolee's perception and attitude toward parole, and thus, the parole outcome.

The ten selected categories and the related set of items used in the schedule

Each category was utilized as a general content guide in the selection and formulation of a set of potential predictive items. (Refer to Appendix A for the schedule which lists all the items.)

1. Nature of offenses
   Usual pattern of offenses
   Boy's delinquency pattern
   Parole violations

2. School adjustment
   School grade placement at time of admission to the Fairfield School for Boys
Average academic grades during the three year period preceding the boy's commitment to the Fairfield School for Boys.

School truancy record for the year preceding the boy's commitment to the Fairfield School for Boys.

School adjustment (institution).

3. Early family and life experiences

Family life during the boy's first five years was considered.

Boy's age relative to his first placement outside of his home.

Age of boy at the onset of a serious accident, illness, health impediment, or physical deformity which lasted six months or more.

Enuresis present beyond three years of age.

Age at first court appearance.

Age committed to the Fairfield School for Boys.

Number of years boy resided outside of his home preceding the commitment.

4. Home and neighborhood situation

Neighborhood delinquency rate.

Type of residential community.

Size of community.
5. Adequacy of parents and family situation

Marital relationship of parents
Discipline by parents
Discipline usually administered
Do parents provide good models for their son?
Current family group size residing in the home
Sibling composition
Number of siblings
History of delinquency in the family
Occupation of parents
Income of family per month
Education of father
Education of mother
Marital status of parents
Father's role as provider
Parents' combined marriages
Age of younger parent at marriage
Age difference between father and son
Age difference between parents
Interest of family or relatives
Ordinal position of boy in the family
6. Personality traits
Intelligence score
Relative demeanor of the boy
Classification of the boy in terms of relative self-control or stability

7. Pattern of adjustment to stress
Number of run-aways from home and placements preceding commitment to the Fairfield School for Boys
Use of a weapon: gun, club, etc., in a threatening manner during a fight or in committing an offense
Use of a weapon which resulted in injury to another person or persons
Number of run-aways at the Fairfield School for Boys
Number of fights at the Fairfield School for Boys

8. Self-concept and identifications
Attitude toward parental authority
Boy seems to be influenced most by:
Boy tends to be a:
Role at the Fairfield School for Boys

9. Institutional adjustment
Overall adjustment at the Fairfield School for Boys
Work adjustment
Cottage adjustment

Number of referrals to the institutional discipline committee for infractions by the cottage or work supervisors

Length of stay at the Fairfield School for Boys

Attitude toward authority figures

Institution program

10. Parole plans

Recommendations as listed by the Juvenile Diagnostic Center Study

Parole plan

Parole plan - definitiveness at time of release from Fairfield School for Boys
CHAPTER III

Methodology

Design of research

The primary aim of this study is to determine the possibility of constructing a simple and reliable juvenile parole prediction instrument to predict which children show the greatest probabilities of success or failure on parole. The necessary considerations for the construction of prediction instruments by the method of predictive configurations and the test of their effectiveness involved the following:

1. Determination of the predictive categories and the items contained in the categories
2. Availability of the data
3. Design of the predictive instrument
4. Sample for building the instrument
5. Building the instrument
6. Sample for testing the instrument
7. Testing the effectiveness of the predictive configurations

Determination of the predictive categories and the items contained in the categories. Factors which reflect the theoretical and factual results of research on all phases
of criminal behavior were utilized in selecting eight of ten predictive categories. Two additional categories were added largely due to the collective insights and observations of experienced staff (institutional social workers, psychologists, psychiatrists, and parole officers). (Refer to pages 32 through 36 for the list of ten categories and definitive explanations of them.)

Crucial to the development of a prediction instrument is the careful selection of prediction items. Consideration was given to items with potential predictability, stability over a period of time, and those that relate to particular experiences in the parole situation. In addition, the items which reflect the important differences in the life experiences of parole failures as opposed to parole successes were included. These factors, coupled with the research findings and the collective insights and observations of staff members, were influential in the selection of the items. After the items had been chosen, a series of sub-classes were listed on each factor to give the best possible separation between parole success and failures. The selected items, which related to the ten listed categories, were arranged in a schedule (Appendix A).

Availability of data. Recognizing that the administration of the schedules directly to the boys and staff members would be advantageous in providing latitude in data collection
and possibly increase the reliability of the information, time and cost, however, indicate the necessity of collecting the data from case records. Since the records were not designed to obtain the information requested by the schedule, they posed limitations in the formulation of some items. Nevertheless, some effort was made to compensate for the gaps of information by conferring with the staff members from the institution and the field.

Pre-test of the schedule. The schedule was pre-tested for its clarity and adequacy of information by utilizing data from the case records of twenty boys, ranging from ten through fifteen years of age, who had been studied at the Juvenile Diagnostic Center in 1961. The pre-test results influenced modifications and refinement of items in the schedule. This was particularly apparent in the categories dealing with self-concept and identifications and specific attitudes toward some aspects of institutional experiences and parole conditions. The final schedule was comprised of sixty-one items (Appendix A).

Reasons for the selection of an age-span of ten through fifteen years of age. The concern for obtaining relatively recent information and yet permit the boys sufficient time to have had the institutional experience and to have been released on parole for at least a year required the arbitrary
selection of the age span. Additionally, it provided for a focus on a sample largely comprised of first commitments in contrast to higher rates of returnees (parole violators) for the older age boys. Furthermore, since most boys are released from supervision after eighteen years of age, the parole experience information required in the study would be relatively limited for the older age group. The sixteen through eighteen year group might be appropriate for another similar study.

In addition to the research value, the ten through fifteen years of age was used because of practical considerations.

**Design of the predictive instrument.** The method of prediction-by-classification (predictive configuration) approach is intended to predict a criterion from a set of qualitative and quantitative predictors.

No complex statistical computations seem necessary for constructing this predictive configuration instrument.

The first step in the design of the predictive configuration was the selection of the initial predictive item. This was facilitated by arranging all the items in an array of probability values representing the distribution of the criterion. The items representing the higher probability values with distinct clusters of homogeneous cases in the
sub-samples were given close attention in the development of the predictive configurations. The arrangement of the items in an array of probability values, the Chi Square and Tschuprow's T values were the principal methods employed in identifying the initial predictors and other potential good predictors. The three methods lose value as each item was added to the predictive configuration. Nevertheless, those items with the highest Chi Square and Tschuprow's T values were used first on the assumption that they would produce the best probability values.

Secondly, the critical probability value of .80 was used to define success or failure predictive configurations. (The critical value is defined as a percentage value which represents the probability of an outcome occurring.) Since .80 was chosen as the critical value, the accuracy of the instrument should be approximately 80 per cent. The item selected as initial predictor with one or more sub-samples exceeding the critical value makes up the first predictor of the instrument. The cases included in these sub-samples were considered predictable cases and removed from the total sample. The relative value of the initial predictor is influenced not only by having one or more sub-samples exceed the critical value, but also that the remaining one or two sub-samples lend themselves to appropriate distribution with the addition of other variables.
Thirdly, the remaining sub-samples of the initial predictor was subdivided by classifying the cases in them according to additional items. (For clarity in terminology one considers a sub-sample an item when another variable is added.) The items used in subdividing the sample are selected so that the probability of a given outcome occurring exceeds the critical value for each sub-sample. Items are added until either the remaining cases become extremely small or the further division of a sub-sample does not result in significant changes in the probability values. At this stage, the remaining cases are considered non-predictable and placed in a residual class. (Refer to page 11 for illustrative problem.)

Sample for building the instrument. The total number of admissions to the Fairfield School for Boys for the fiscal year 1958-1959 was 1,088 boys. Of this number, 461, or 46.7 per cent, were boys ranging from ten through fifteen years of age at time of their commitment. The sample for building the instrument comprised of 300 boys was drawn on a random sample basis from this group of 461 boys. The data from the case records of the 300 boys provided the basic material for the development of the predictive configurations. (Table 4)

Characteristics of the sample for building the instrument. Analysis of the data from the sample for building the instrument produced some interesting insights in
TABLE 4

BOYS ADMISSIONS TO THE FAIRFIELD SCHOOL FOR BOYS
IN THE FISCAL YEAR 1958-59
DISTRIBUTED BY AGE

<table>
<thead>
<tr>
<th>Age</th>
<th>Number</th>
<th>Per Cent</th>
</tr>
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<tbody>
<tr>
<td>Total</td>
<td>1,088</td>
<td>100.0</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>2</td>
<td>.3</td>
</tr>
<tr>
<td>12</td>
<td>11</td>
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<td>15</td>
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<td>16</td>
<td>329</td>
<td>30.2</td>
</tr>
<tr>
<td>17</td>
<td>240</td>
<td>22.1</td>
</tr>
<tr>
<td>18 and above</td>
<td>11</td>
<td>1.0</td>
</tr>
</tbody>
</table>


b Mean age - 16 years

c Forty-seven boys - age not reported

regard to the characteristics of the population. The 300 boys in the sample are described in relation to their age at time of admission, intelligence score, ordinal position in family, size of family, and the family income.
TABLE 5

AGE OF BOYS AT TIME OF ADMISSION INTO THE FAIRFIELD SCHOOL FOR BOYS

<table>
<thead>
<tr>
<th>Years of Age</th>
<th>Sample for Building the Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>300</td>
</tr>
<tr>
<td>10 and 11</td>
<td>5*</td>
</tr>
<tr>
<td>12 and 13</td>
<td>40*</td>
</tr>
<tr>
<td>14 and 15</td>
<td>255</td>
</tr>
</tbody>
</table>

* Discrepancy of thirteen boys between ten and thirteen years of age between Table 4 and Table 5 is noted. Error may be due to the staff members' reliance on the boy's statement in regard to his age at the time of admission, when on occasion, the courts or the Juvenile Diagnostic Center fail to send the court and social history material with the boy. Other explanations may attribute differences in statistics to human errors either by the institution staff members or the writer.

The median IQ score for the 1,088 admissions is 83. Eighty-seven per cent of the boys attained IQ scores between 50 and 99. Table 6 shows that the large majority of the boys tend to score below 100, which is the theoretical norm.
<table>
<thead>
<tr>
<th>Interval IQ Scores</th>
<th>Number</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>1,088</td>
<td>100.0</td>
</tr>
<tr>
<td>130 and above</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>120 - 129</td>
<td>5</td>
<td>1.5</td>
</tr>
<tr>
<td>110 - 119</td>
<td>25</td>
<td>2.3</td>
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<tr>
<td>100 - 109</td>
<td>107</td>
<td>9.9</td>
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<td>90 - 99</td>
<td>223</td>
<td>20.5</td>
</tr>
<tr>
<td>80 - 89</td>
<td>282</td>
<td>25.9</td>
</tr>
<tr>
<td>70 - 79</td>
<td>364</td>
<td>33.5</td>
</tr>
<tr>
<td>60 - 69</td>
<td>66</td>
<td>6.0</td>
</tr>
<tr>
<td>50 - 59</td>
<td>15</td>
<td>1.4</td>
</tr>
<tr>
<td>40 - 49</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

\[\text{\footnotesize a\ 1958-1959 Fairfield School for Boys Annual Report, July, 1959}\]
TABLE 7
IQ SCORES OF BOYS IN THE SAMPLE FOR BUILDING THE INSTRUMENT

<table>
<thead>
<tr>
<th>IQ Scores</th>
<th>Sample for Building the Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>300</td>
</tr>
<tr>
<td>89 or less</td>
<td>154</td>
</tr>
<tr>
<td>90 - 109</td>
<td>127</td>
</tr>
<tr>
<td>110 plus</td>
<td>19</td>
</tr>
</tbody>
</table>

Similar to Table 6, the IQ score distribution in the sample listed above tends to be heavily weighted in the below average range.

TABLE 8
ORDINAL POSITION OF BOYS IN THEIR FAMILIES

<table>
<thead>
<tr>
<th>Ordinal Position</th>
<th>Sample for Building the Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>300</td>
</tr>
<tr>
<td>Oldest</td>
<td>86</td>
</tr>
<tr>
<td>Youngest or only</td>
<td>69</td>
</tr>
<tr>
<td>Between</td>
<td>145</td>
</tr>
</tbody>
</table>

Forty-eight per cent of the sample were boys in the in-between ordinal position of their siblings.
TABLE 9
SIZE OF FAMILIES OF BOYS
IN THE SAMPLE FOR BUILDING THE INSTRUMENT

<table>
<thead>
<tr>
<th>Sibling Number</th>
<th>Sample for Building the Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>300</td>
</tr>
<tr>
<td>2 or less</td>
<td>85</td>
</tr>
<tr>
<td>3 or more</td>
<td>215</td>
</tr>
</tbody>
</table>

Seventy-two per cent of the sample came from families with three or more siblings.

TABLE 10
INCOME OF FAMILY OF BOYS
IN THE SAMPLE FOR BUILDING THE INSTRUMENT

<table>
<thead>
<tr>
<th>Family Income Per Month</th>
<th>Experimental Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>300</td>
</tr>
<tr>
<td>$300 or less</td>
<td>192</td>
</tr>
<tr>
<td>$301 or more</td>
<td>108</td>
</tr>
</tbody>
</table>

The majority (64 per cent) of the boys from the sample came from families with income of less than $300 per month.

In summary, the typical personal and family characteristics of the boy from the sample for building the instrument would usually be described as follows: he is about fourteen or fifteen years of age at the time of his
admission, scores in the dull normal intelligence range, and generally is in an in-between ordinal position among his siblings. Furthermore, he usually came from a family with three or more siblings and with family income monthly of $300 or less.

**Building the instrument.** The data from the 300 schedules were edited, grouped and coded and this information was punched on the IBM statistical cards. The criterion for success of a parolee was based on his release from the Fairfield School for Boys during 1959-1960 and successfully serving out his parole period. Additionally, he is not known to have been in further difficulty up to December, 1962. The criterion for failure of a parolee was based on his release from the Fairfield School for Boys during 1959-1960 and violated his parole or got into further difficulty with the law prior to December, 1962. The sample for building the instrument of 300 cases sorted into 172 (.57) success cases and 128 (.43) failure cases.

**Significant Chi-Square and Tschuprow’s T values in the sample for testing the instrument.** Initially, the sixty-one items in the schedule were arranged in an array of probability values. Additionally, the Chi-Square and Tschuprow’s T values were the principal methods employed in identifying the initial predictor and other potential good predictors.
The Chi-Square method was employed to test the degree of independence among the following measures: the failure and success on parole and the sixty-one items relating to the various aspects of the parolee's personality traits, environmental situation and his adjustment to various situations (i.e., school, institution, etc.). The sample for building instrument yielded twenty significant Chi-Square values; twelve at the .01 per cent level of confidence and eight at the .05 per cent level of confidence. The Tschuprow's T values calculated from the twenty significant Chi-Square values indicate that five items yielded T values ranging between .19 to .23 at near or above the .05 per cent level of confidence. Ten items yielded T values ranging between .15 and .18. The remaining five T values ranged from .12 to .14. The T values seem to indicate that a majority of the significant Chi-Square values do not have an intense relation between the various items and outcome (Table 11).

In seeking initial predictors for the predictive configuration, the twenty items listed on Table 11 and about ten others from the list of array of probability values were tried as initial predictors. The relative value of the initial predictor is influenced not only by having one or more sub-samples exceed the critical value but that the remaining one or two sub-samples lend themselves to appropriate distribution
<table>
<thead>
<tr>
<th>Item</th>
<th>$X^2$</th>
<th>degrees of freedom</th>
<th>Probability</th>
<th>Tschuprow's $T$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-control classification of the boy</td>
<td>22.71</td>
<td>1</td>
<td>.01</td>
<td>.23</td>
</tr>
<tr>
<td>Usual demeanor of the boy</td>
<td>18.31</td>
<td>1</td>
<td>.05</td>
<td>.25</td>
</tr>
<tr>
<td>Boy's attitude toward parental authority</td>
<td>15.70</td>
<td>1</td>
<td>.01</td>
<td>.23</td>
</tr>
<tr>
<td>Referrals to Discipline Committee</td>
<td>17.06</td>
<td>2</td>
<td>.01</td>
<td>.20</td>
</tr>
<tr>
<td>Attitude toward authority at the Fairfield School for Boys</td>
<td>15.63</td>
<td>2</td>
<td>.01</td>
<td>.19</td>
</tr>
<tr>
<td>Boy's role in community life</td>
<td>13.91</td>
<td>2</td>
<td>.01</td>
<td>.18</td>
</tr>
<tr>
<td>Age at time of first court appearance</td>
<td>8.36</td>
<td>1</td>
<td>.01</td>
<td>.17</td>
</tr>
<tr>
<td>Cottage adjustment</td>
<td>12.67</td>
<td>2</td>
<td>.01</td>
<td>.17</td>
</tr>
<tr>
<td>Runaways before admission to institution</td>
<td>9.15</td>
<td>1</td>
<td>.01</td>
<td>.17</td>
</tr>
<tr>
<td>Institution adjustment</td>
<td>10.54</td>
<td>2</td>
<td>.01</td>
<td>.16</td>
</tr>
<tr>
<td>Discipline by parents</td>
<td>7.48</td>
<td>1</td>
<td>.01</td>
<td>.16</td>
</tr>
<tr>
<td>Family interest in boy</td>
<td>9.18</td>
<td>2</td>
<td>.05</td>
<td>.15</td>
</tr>
<tr>
<td>School truancy</td>
<td>9.46</td>
<td>2</td>
<td>.01</td>
<td>.15</td>
</tr>
<tr>
<td>Kind of father model</td>
<td>6.87</td>
<td>1</td>
<td>.01</td>
<td>.15</td>
</tr>
<tr>
<td>Role in institution</td>
<td>9.58</td>
<td>2</td>
<td>.01</td>
<td>.15</td>
</tr>
<tr>
<td>Age on date of admission to Fairfield School for Boys</td>
<td>8.14</td>
<td>2</td>
<td>.05</td>
<td>.14</td>
</tr>
<tr>
<td>Institution work adjustment</td>
<td>9.75</td>
<td>4</td>
<td>.05</td>
<td>.14</td>
</tr>
<tr>
<td>Stability of family life during boy's initial 5 years</td>
<td>5.02</td>
<td>1</td>
<td>.05</td>
<td>.13</td>
</tr>
<tr>
<td>Parents' marital relationships</td>
<td>4.34</td>
<td>1</td>
<td>.05</td>
<td>.13</td>
</tr>
<tr>
<td>Boy's IQ score</td>
<td>6.14</td>
<td>2</td>
<td>.05</td>
<td>.12</td>
</tr>
</tbody>
</table>
with the addition of other items. It is necessary for 80 per cent or more of the cases to be included in the predictive configurations with no more than 20 per cent of the cases to remain in the residual (non-predictable) category.

In a trichotomous criterion predictive configuration, the sixty-one items in the schedule provide 7,023 possible relations between the various items and the outcome \((61 + 60 \cdot 59 + 59 \cdot 58 = 7,023)\). The individual time and cost factors tend to be prohibitive in sorting the 300 cases to the full range of possibilities. The writer utilized the three methods (array of probability values, Chi-Square values and the Tschuprow’s T values) and personal judgment as guides in sorting as many combinations as time permitted. (It is suggested that the use of factor analysis may provide an efficient method of locating the initial predictors and significant relations with other combinations of variables.) Another alternative suggested for the current method of sorting would be to possibly program the sorting procedures for the IBM computers. Preliminary discussions of this problem have been made with Dr. Black, Director of the Computer Center at the University of Wisconsin, Milwaukee. He feels that it is feasible and is considering developing a program for the IBM machine to process the entire sorting procedure.

After the initial predictor is selected, the related sub-samples attaining the critical value of .80 or more are
accepted in the predictive configurations. The remaining sub-sample is subdivided on another item in order to distinguish between the success and failure outcome. The sub-samples attaining a critical value of .80 or above are again accepted and removed from the sample. The remaining sub-samples with critical values below .80 are subdivided again on another item. This pattern is continued until the remaining cases become extremely small or further division of a sub-sample does not result in a significant change in the probability values. At this stage, the remaining cases are considered non-predictable and placed in a residual class.

Employing the procedures discussed above, three major predictive configurations were built. (Refer to illustrative problem on page 11 and design of the instrument on page 41 for detailed elaboration of procedures.) The three major predictive configurations were built and identified as configurations - Sample 1, Sample 2, and Sample 3. These three major predictive configurations will be identified and discussed definitively in Chapter IV.

Sample for testing the instrument. One hundred twenty boys, ten through fifteen years of age, were selected on a random sample basis from admissions to the Fairfield School for Boys during the fiscal year 1959-1960. These boys were paroled from the institution during 1960-1961. The criterion for success of a parolee was based on his release from the
Fairfield School for Boys during 1960-1961 and successfully serving out his parole period. Additionally, he is not known to have been in further difficulty up to December, 1963. The criterion for failure of a parolee was based on his release from the Fairfield School for Boys and subsequently violating his parole or getting into further difficulty with the law prior to December, 1963. The 120 boys made up the sample for testing the instrument.

**Significant Chi-Square and Tschuprow's T values in the sample for testing the instrument.** Similar to the sample for building the instrument, the Chi-Square method was administered to the data of the sample for testing the instrument. The object was to determine how many of the 20 significant Chi-Square values present in the sample for building the instrument would be sustained in the sample for testing the instrument.

The computations produced seven significant Chi-Square values that were present in both samples. The seven items concerned were: usual demeanor, boy's role in community life, school truancy, boy's attitude toward his parental authority, self-control classification of the boy, attitude toward authority at Fairfield School for Boys, and kind of father model. The seven items, with the exception of one (kind of father model), yielded Chi-Square values at the .01 per cent level of confidence. The remaining one item yielded a Chi-Square value at the .05 per cent level of confidence. The Tschuprow's T values calculated from the above seven
significant Chi-Square values indicate the T values are significantly higher than those achieved from the sample for building the instrument. The sample for testing the instrument yielded T values ranging from .18 to .52. Five of the seven T values were above the .05 per cent level of confidence. The two other T values were .18 and .19. Considering the 120 cases in the sample for testing the instrument, the writer feels that T values could possibly attain higher values if the sample had been 300 cases (Table 12).

**TABLE 12**

SAMPLE FOR TESTING THE INSTRUMENT  
SCHEDULE ITEMS RELATED TO SUCCESS OR FAILURE ON PAROLE

<table>
<thead>
<tr>
<th>Factors</th>
<th>Sample for Testing the Instrument</th>
<th>X² Values</th>
<th>Degrees of Freedom</th>
<th>Probability</th>
<th>Tschuprow's T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-control classification of the boys</td>
<td></td>
<td>32.90</td>
<td>1</td>
<td>.01</td>
<td>.52</td>
</tr>
<tr>
<td>Boy's attitude toward his parental authority</td>
<td></td>
<td>28.62</td>
<td>1</td>
<td>.01</td>
<td>.49</td>
</tr>
<tr>
<td>Usual demeanor of the boy</td>
<td></td>
<td>23.01</td>
<td>2</td>
<td>.01</td>
<td>.44</td>
</tr>
<tr>
<td>School truancy</td>
<td></td>
<td>10.21</td>
<td>2</td>
<td>.01</td>
<td>.25</td>
</tr>
<tr>
<td>Attitude toward authority at the Fairfield School for Boys</td>
<td></td>
<td>9.99</td>
<td>2</td>
<td>.01</td>
<td>.24</td>
</tr>
<tr>
<td>Boy's role in community life</td>
<td></td>
<td>6.14</td>
<td>2</td>
<td>.01</td>
<td>.19</td>
</tr>
<tr>
<td>Kind of father model</td>
<td></td>
<td>3.92</td>
<td>1</td>
<td>.05</td>
<td>.18</td>
</tr>
</tbody>
</table>
Characteristics of the sample for testing the instrument.

Analysis of the data from the sample produced some interesting insights in regard to the characteristics of the population. The 120 boys in the sample for testing the instrument are described in relation to their age at time of admission, intelligence score, ordinal position in the family, size of the family, and the family income.

TABLE 13

AGE OF BOYS AT TIME OF ADMISSION INTO THE FAIRFIELD SCHOOL FOR BOYS

<table>
<thead>
<tr>
<th>Years of Age</th>
<th>Sample for Testing the Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>120</td>
</tr>
<tr>
<td>10 and 11</td>
<td>2</td>
</tr>
<tr>
<td>12 and 13</td>
<td>4</td>
</tr>
<tr>
<td>14 and 15</td>
<td>114</td>
</tr>
</tbody>
</table>

Ninety per cent of the sample are boys fourteen and fifteen years of age.

TABLE 14

IQ SCORE OF BOYS IN THE SAMPLE FOR TESTING THE INSTRUMENT

<table>
<thead>
<tr>
<th>IQ Scores</th>
<th>Sample for Testing the Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>120</td>
</tr>
<tr>
<td>110 plus</td>
<td>6</td>
</tr>
<tr>
<td>90 - 109</td>
<td>51</td>
</tr>
<tr>
<td>89 or less</td>
<td>63</td>
</tr>
</tbody>
</table>
Similar to Table 7, the IQ score distribution in both the sample for building the instrument and the sample for testing the instrument tends to be weighted in the below average range.

**TABLE 15**

ORDINAL POSITION OF BOYS IN THEIR FAMILIES

<table>
<thead>
<tr>
<th>Ordinal Position</th>
<th>Sample for Testing the Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>120</td>
</tr>
<tr>
<td>Oldest</td>
<td>37</td>
</tr>
<tr>
<td>Youngest or only</td>
<td>30</td>
</tr>
<tr>
<td>Between</td>
<td>53</td>
</tr>
</tbody>
</table>

Forty-eight per cent of the sample for building the instrument and forty-four per cent of the sample for testing the instrument were boys in the in-between ordinal position of their siblings.

**TABLE 16**

SIZE OF FAMILIES OF BOYS IN THE SAMPLE FOR TESTING THE INSTRUMENT

<table>
<thead>
<tr>
<th>Sibling number</th>
<th>Sample for Testing the Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>120</td>
</tr>
<tr>
<td>2 or less</td>
<td>36</td>
</tr>
<tr>
<td>3 or more</td>
<td>84</td>
</tr>
</tbody>
</table>

Seventy-two per cent of the sample for building the instrument and seventy per cent of the sample for testing the instrument came from families with three or more siblings.
TABLE 17
INCOME OF FAMILY OF BOYS IN THE
SAMPLE FOR TESTING THE INSTRUMENT

<table>
<thead>
<tr>
<th>Family Income per Month</th>
<th>Sample for Testing the Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>120</td>
</tr>
<tr>
<td>$300 or less</td>
<td>65</td>
</tr>
<tr>
<td>$301 or more</td>
<td>55</td>
</tr>
</tbody>
</table>

The majority of the boys from both samples came from families with income of less than $300 per month (64 per cent came from the sample for building the instrument, and 54 per cent from the sample for testing the instrument).

In summary, the typical personal and family characteristics of the boy from both samples were similar and would usually be described as follows: he is about fourteen or fifteen years of age at the time of his admission, scores in the dull normal intelligence range, and generally is in an in-between ordinal position among his siblings. Furthermore, he usually came from a family with three or more siblings and with a monthly income of $300 or less.
CHAPTER IV

Findings

Introduction

The method of predictive configurations applied to the data obtained from the case records of 300 boys in the sample for building the instrument produced three major configurations. These are configurations Sample 1, Sample 2, and Sample 3. Each major configuration will be discussed separately in this chapter.

Configuration - Sample 1

Figure 2 illustrates the overall prediction configuration of sample 1. The alphabet letters represent prediction items. For example, the letter "A" as indicated on Table 19 reads, "attitude toward authority at the Fairfield School for Boys". Table 19 lists the items that were used in the development of eighteen predictive configurations in sample 1. The rectangular box in Figure 2 indicates a success configuration, and a circle represents a failure configuration. Refer to Figure 3 for prediction probability scores for each success or failure prediction. For example [1] reads as a success prediction configuration - a boy whose attitude toward authority at the Fairfield School for Boys is good and whose cottage adjustment is fair has an 85 per cent probability of succeeding on parole.
Figure 2
Configuration - Sample 1
Overall Prediction Configurations

Alphabet letters represent prediction items (Table 19 for key to items)

Success configuration
Failure configuration

Parole Success
Parole Failure
N = 300 Cases

FIGURE 3
CONFIGURATION - SAMPLE 1
PREDICTION PROBABILITY SCORES

Alphabet letters represent prediction items (Table 19 for key to items)

Parole Success

Parole Failure
TABLE 18

CONFIGURATION - SAMPLE 1
SAMPLE FOR BUILDING THE INSTRUMENT

ALL CASES PREDICTED CORRECTLY AND INCORRECTLY
BY EACH CONFIGURATION AND ITS ACCURACY

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Total</th>
<th>Prediction</th>
<th>Correct</th>
<th>Incorrect</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td>237</td>
<td>63</td>
<td>.79</td>
<td></td>
</tr>
<tr>
<td>Parole Success</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>60</td>
<td>51</td>
<td>9</td>
<td>.85</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>22</td>
<td>18</td>
<td>4</td>
<td>.82</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>.83</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>32</td>
<td>28</td>
<td>4</td>
<td>.88</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>11</td>
<td>9</td>
<td>2</td>
<td>.82</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>12</td>
<td>9</td>
<td>3</td>
<td>.75</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>.50</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>16</td>
<td>10</td>
<td>6</td>
<td>.63</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>14</td>
<td>11</td>
<td>3</td>
<td>.77</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>.50</td>
<td></td>
</tr>
<tr>
<td>Parole Failure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>14</td>
<td>12</td>
<td>2</td>
<td>.86</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>16</td>
<td>13</td>
<td>3</td>
<td>.81</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>.80</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>21</td>
<td>19</td>
<td>2</td>
<td>.91</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>.50</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>28</td>
<td>23</td>
<td>5</td>
<td>.82</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>18</td>
<td>15</td>
<td>3</td>
<td>.83</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>9</td>
<td>2</td>
<td>7</td>
<td>.22</td>
<td></td>
</tr>
</tbody>
</table>
## TABLE 19

### CONFIGURATION - SAMPLE 1

**SAMPLE FOR BUILDING THE INSTRUMENT**

**FACTORS INCLUDED IN PREDICTION ANALYSIS BY PAROLE SUCCESS AND PAROLE FAILURE CATEGORIES**

<table>
<thead>
<tr>
<th>Code Factors</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Success</td>
</tr>
<tr>
<td>A Attitude toward authority at Fairfield School for Boys</td>
<td>Good, Moderate</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>B Cottage adjustment</td>
<td>Good, Fair</td>
</tr>
<tr>
<td>C Length of stay at Fairfield School for Boys</td>
<td>Over 6 months</td>
</tr>
<tr>
<td>D Boy's classification</td>
<td>Leader, Follower</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>E Boy influenced most by</td>
<td>Parent</td>
</tr>
<tr>
<td>F Family interest</td>
<td>Strong, Fair</td>
</tr>
<tr>
<td>G Family size</td>
<td>Small, Medium</td>
</tr>
<tr>
<td>H Attitude toward parental authority</td>
<td>Good, Intermediate</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>I Discipline by parents</td>
<td>Consistent Intermediate</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>J Cottage adjustment</td>
<td>Good, Fair</td>
</tr>
<tr>
<td>K Self control</td>
<td>Good, Moderate</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>L Boy's demeanor</td>
<td>Cheerful, Intermediate</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>M Cottage adjustment</td>
<td>Good, Fair</td>
</tr>
</tbody>
</table>
Figure 2 shows that ten configurations predict success on parole and eight configurations predict failure on parole. Figure 3 lists the configurations in detail and provides the statistical probability scores for each configuration. Table 18 summarizes the eighteen configurations outlined in Figure 2. This table indicates that of the eighteen configurations, eleven attained a probability level of .80 or over and seven fell below the critical value of .80. These seven configurations ranged in probability values from .22 to .79.

**Configuration - Sample 2**

Figure 4 illustrates the overall prediction configurations of sample 2. The alphabet letters represent prediction items. For example, the letter "A" as shown on Table 21, reads "self control". Table 21 lists the items that were used in the development of seven predictive configurations in sample 2. The rectangular box in Figure 4 indicates a success configuration and the circle represents a failure configuration. Refer to Figure 5 for prediction probability scores for each success or failure prediction. For example, \[2\] reads as a success prediction configuration - a boy with self-control which is rated good and whose parents administer discipline to him in a consistent manner. He has an 84 per cent probability of succeeding on parole.

Figure 4 shows that five configurations predict success on parole and two configurations predict failure on parole.
FIGURE 4
CONFIGURATION - SAMPLE 2

OVERALL PREDICTION CONFIGURATIONS

A
   A
  /   \\ B B C C
 /     /  \\
1 2     3  4

D D E E
 /     /
2     1

F F
 / \
5     2

Alphabet letters represent prediction items (see Table 21 for key to items)

Success Configuration

Failure Configuration

← Parole Success
→ Parole Failure
FIGURE 5
CONFIGURATION - SAMPLE 2
PREDICTION PROBABILITY SCORES

N = 300 Cases

Alphabet letters represent prediction items
(see Table 21 for key to items)

Parole Success
Parole Failure
TABLE 20

CONFIGURATION - SAMPLE 2
SAMPLE FOR BUILDING THE INSTRUMENT

ALL CASES PREDICTED CORRECTLY AND INCORRECTLY
BY EACH CONFIGURATION AND ITS ACCURACY

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Total</th>
<th>Correct</th>
<th>Incorrect</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Configuration</td>
<td>300</td>
<td>240</td>
<td>60</td>
<td>.80</td>
</tr>
<tr>
<td>Parole Success Outcome</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ............</td>
<td>69</td>
<td>58</td>
<td>11</td>
<td>.84</td>
</tr>
<tr>
<td>2. ............</td>
<td>20</td>
<td>8</td>
<td>12</td>
<td>.40</td>
</tr>
<tr>
<td>3. ............</td>
<td>52</td>
<td>42</td>
<td>10</td>
<td>.81</td>
</tr>
<tr>
<td>4. ............</td>
<td>28</td>
<td>22</td>
<td>6</td>
<td>.79</td>
</tr>
<tr>
<td>5. ............</td>
<td>31</td>
<td>26</td>
<td>5</td>
<td>.84</td>
</tr>
<tr>
<td>Parole Failure Outcome</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ............</td>
<td>84</td>
<td>70</td>
<td>14</td>
<td>.83</td>
</tr>
<tr>
<td>2. ............</td>
<td>16</td>
<td>14</td>
<td>2</td>
<td>.83</td>
</tr>
</tbody>
</table>
TABLE 21

CONFIGURATION - SAMPLE 2

FACTORS INCLUDED IN PREDICTION ANALYSIS BY PAROLE SUCCESS AND PAROLE FAILURE CATEGORIES

<table>
<thead>
<tr>
<th>Code</th>
<th>Factors</th>
<th>Categories</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Success</td>
<td>Failure</td>
</tr>
<tr>
<td>A</td>
<td>Self Control</td>
<td>Good, Moderate</td>
<td>Poor</td>
</tr>
<tr>
<td>B</td>
<td>Discipline by Parents</td>
<td>Consistent,</td>
<td>Inconsis-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intermediate</td>
<td>tent</td>
</tr>
<tr>
<td>C</td>
<td>Early Family Life</td>
<td>Stable, Intermediate</td>
<td>Unstable</td>
</tr>
<tr>
<td>D</td>
<td>Academic Grades</td>
<td>Average, Above Average</td>
<td>Below Average</td>
</tr>
<tr>
<td>E</td>
<td>Family Size</td>
<td>Small, Medium</td>
<td>Large</td>
</tr>
<tr>
<td>F</td>
<td>Cottage Adjustment</td>
<td>Good, Fair</td>
<td>Poor</td>
</tr>
</tbody>
</table>
Figure 5 lists the configurations in detail and provides the statistical probability scores for each configuration. Table 20 summarizes the seven configurations outlined in Figure 4. This table indicates that of the seven configurations, five attained a probability value of .80 or over, and two fell below the critical value of .80. These two configurations attained .40 and .79 probability values.

**Configuration - Sample 3**

Figure 6 illustrates the overall prediction configurations of sample 3. The alphabet letters represent prediction items. For example, the letter "A" as shown on Table 23 reads, "boy's demeanor". Table 23 lists the items that were used in the development of seven predictive configurations in sample 3. The rectangular box in Figure 6 indicates a success configuration and the circle represents a failure configuration. Refer to Figure 7 for prediction probability scores for each success or failure prediction. For example, \[1\] reads as a failure configuration - a boy with a cheerful or moderate demeanor and a poor cottage adjustment has a 75 per cent probability of failing on parole.

Figure 6 shows that four configurations predict success on parole and two configurations predict failure on parole. Figure 7 lists the configurations in detail and provides the statistical probability scores for each configuration. Table 22 summarizes the seven configurations outlined in Figure 6.
Alphabet letters represent prediction items (see Table 23 for key to items)

- Success Configuration
- Failure Configuration
- Parole Success
- Parole Failure
N = 300 Cases

FIGURE 7
CONFIGURATION - SAMPLE 3
PREDICTION PROBABILITY SCORES

N = 120
87-33
.72 .28

N = 180
85-95
.47 .53

N = 36
25-11
.69 .31

N = 68
58-10
.85 .15

N = 16
4-12
.25 .75

N = 67
56-11
.84 .16

N = 113
29-84
.26 .74

N = 19
16-3
.34 .16

N = 17
9-8
.53 .47

N = 10
7-3
.70 .30

N = 7
2-5
.29 .71

Alphabet letters represent prediction items
(see Table 23 for key to items)

<--- Parole success

--- Parole failure
## TABLE 22

**CONFIGURATION - SAMPLE 3**

**SAMPLE FOR BUILDING THE INSTRUMENT**

**ALL CASES PREDICTED CORRECTLY AND INCORRECTLY BY EACH CONFIGURATION AND ITS ACCURACY**

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Total</th>
<th>Correct</th>
<th>Incorrect</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Configuration</strong></td>
<td>300</td>
<td>238</td>
<td>62</td>
<td>.79</td>
</tr>
<tr>
<td><strong>Parole Success Outcome</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ..........</td>
<td>68</td>
<td>58</td>
<td>10</td>
<td>.85</td>
</tr>
<tr>
<td>2. ..........</td>
<td>19</td>
<td>16</td>
<td>3</td>
<td>.84</td>
</tr>
<tr>
<td>3. ..........</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>.70</td>
</tr>
<tr>
<td>4. ..........</td>
<td>67</td>
<td>56</td>
<td>11</td>
<td>.84</td>
</tr>
<tr>
<td><strong>Parole Failure Outcome</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ..........</td>
<td>16</td>
<td>12</td>
<td>4</td>
<td>.75</td>
</tr>
<tr>
<td>2. ..........</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>.71</td>
</tr>
<tr>
<td>3. ..........</td>
<td>113</td>
<td>84</td>
<td>29</td>
<td>.74</td>
</tr>
</tbody>
</table>
### TABLE 23

**CONFIGURATION - SAMPLE 3**

**FACTORS INCLUDED IN PREDICTION ANALYSIS BY PAROLE SUCCESS AND PAROLE FAILURE CATEGORIES**

<table>
<thead>
<tr>
<th>Code</th>
<th>Factors</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Success</td>
</tr>
<tr>
<td>A</td>
<td>Boy's Demeanor</td>
<td>Cheerful, Intermediate</td>
</tr>
<tr>
<td>B</td>
<td>Cottage Adjustment</td>
<td>Good, Fair</td>
</tr>
<tr>
<td>C</td>
<td>Discipline by Parents</td>
<td>Consistent, Intermediate</td>
</tr>
<tr>
<td>D</td>
<td>Boy Influenced by Most</td>
<td>Parents</td>
</tr>
<tr>
<td>E</td>
<td>Offenses</td>
<td>Minor (Misdemeanor)</td>
</tr>
</tbody>
</table>
This table indicates that of the seven configurations, three attained a success probability value of .80 or over, and four fell below the critical value of .80. These four configurations ranged in probability values from .70 to .79.

Accuracy and efficiency of the three major configurations

The overall accuracy and efficiency score of the thirty-two predictive configurations obtained from configurations - samples 1, 2, and 3 are .79 accuracy and .52 efficiency. The accuracy of the instrument is assessed by measuring the proportion of the total sample predicted correctly through the use of the instrument. The relative efficiency of an instrument is determined by measuring the proportional reduction in the error of prediction achieved through its application (Table 24). The accuracy score for the three major configurations clustered around .79 within a one point variation. The efficiency score for the three major configurations also did not vary much and tended to cluster around .51. The .51 efficiency score for the overall three major predictive configurations indicates that the prediction instrument is .51 improved over the normal distribution of .57 success and .43 failure for the 300 juvenile parolees in the sample for building the instrument.

Reader may interpret the .51 as 51 per cent
TABLE 24
MAJOR CLUSTERS OF PREDICTIVE CONFIGURATION
BY ACCURACY AND EFFICIENCY

<table>
<thead>
<tr>
<th>Major clusters</th>
<th>Accuracy</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Cases</td>
<td>.79</td>
<td>.52</td>
</tr>
<tr>
<td>Configuration - Sample 1</td>
<td>.79</td>
<td>.51</td>
</tr>
<tr>
<td>Configuration - Sample 2</td>
<td>.80</td>
<td>.53</td>
</tr>
<tr>
<td>Configuration - Sample 3</td>
<td>.79</td>
<td>.51</td>
</tr>
</tbody>
</table>

Accuracy and efficiency scores attained in testing the three major configurations

The application of the three major predictive configurations - Samples 1, 2, and 3 to the 120 boys in the sample for testing the instrument produced an overall accuracy score of .70. Configuration - Sample 2 yielded the best accuracy score of .80, and configuration - Sample 1, the low accuracy score of .66 (Table 25).

The three major predictive configurations applied to the 120 boys in the sample for testing the instrument produced an overall efficiency score of .18. Configuration - Sample 1
did not predict with any degree of efficiency. Configuration-Sample 3 attained a low efficiency score of .12. Configuration - Sample 2 yielded the best efficiency score of .42.

TABLE 25
ACCURACY AND EFFICIENCY SCORES ATTAINED IN TESTING THE THREE MAJOR CONFIGURATIONS

<table>
<thead>
<tr>
<th>Major clusters</th>
<th>Accuracy</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>All cases</td>
<td>.70</td>
<td>.18</td>
</tr>
<tr>
<td>Configuration - Sample 1</td>
<td>.66</td>
<td>.00</td>
</tr>
<tr>
<td>Configuration - Sample 2</td>
<td>.80</td>
<td>.42</td>
</tr>
<tr>
<td>Configuration - Sample 3</td>
<td>.70</td>
<td>.12</td>
</tr>
</tbody>
</table>

Tables 26, 27, and 28 provide a definitive listing of the predictive configurations in Configurations - Samples 1, 2, and 3 in terms of correct and incorrect predictions and accuracy scores. These three major predictive configurations total thirty-two configurations which are outlined in Figures 2, 4, and 6.
In summary, Configuration - Sample 2 performed better in its application test to the sample for testing the instrument by attaining a .80 accuracy score and a .42 efficiency score. Configuration - Sample 3 performed marginally under the test by attaining a .70 accuracy score and a .12 efficiency score. Configuration - Sample 1 performed poorly under the test by attaining a .66 accuracy score and an efficiency score of .00.
**TABLE 26**

**CONFIGURATION - SAMPLE 1 TEST OF THE INSTRUMENT**

ALL CASES PREDICTED CORRECTLY AND INCORRECTLY BY EACH CONFIGURATION AND ITS ACCURACY

<table>
<thead>
<tr>
<th>Prediction</th>
<th>Configuration Total</th>
<th>Correct</th>
<th>Incorrect</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>120</td>
<td>79</td>
<td>42</td>
<td>.66</td>
</tr>
</tbody>
</table>

**Parole Success Outcome**

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Correct</th>
<th>Incorrect</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>13</td>
<td>12</td>
<td>1</td>
<td>.92</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>.75</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>1.00</td>
</tr>
<tr>
<td>4</td>
<td>32</td>
<td>21</td>
<td>11</td>
<td>.66</td>
</tr>
<tr>
<td>5</td>
<td>16</td>
<td>12</td>
<td>4</td>
<td>.75</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>.67</td>
</tr>
<tr>
<td>7</td>
<td>15</td>
<td>9</td>
<td>6</td>
<td>.60</td>
</tr>
<tr>
<td>8</td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>.33</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>.00</td>
</tr>
<tr>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>.00</td>
</tr>
</tbody>
</table>

**Parole Failure Outcome**

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Correct</th>
<th>Incorrect</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>.20</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>.50</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>.60</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>.25</td>
</tr>
<tr>
<td>7</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>.75</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>.75</td>
</tr>
</tbody>
</table>
TABLE 27

CONFIGURATION - SAMPLE 2
TEST OF THE INSTRUMENT

ALL CASES PREDICTED CORRECTLY AND INCORRECTLY
BY EACH CONFIGURATION AND ITS ACCURACY

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Total</th>
<th>Correct</th>
<th>Incorrect</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parole Success Outcome</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ............</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>.67</td>
</tr>
<tr>
<td>2. ............</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>1.00</td>
</tr>
<tr>
<td>3. ............</td>
<td>31</td>
<td>28</td>
<td>3</td>
<td>.90</td>
</tr>
<tr>
<td>4. ............</td>
<td>17</td>
<td>15</td>
<td>2</td>
<td>.88</td>
</tr>
<tr>
<td>5. ............</td>
<td>22</td>
<td>17</td>
<td>5</td>
<td>.77</td>
</tr>
<tr>
<td>Total Configuration</td>
<td>120</td>
<td>96</td>
<td>24</td>
<td>.80</td>
</tr>
<tr>
<td>Parole Failure Outcome</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ............</td>
<td>42</td>
<td>30</td>
<td>12</td>
<td>.71</td>
</tr>
<tr>
<td>2. ............</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>.00</td>
</tr>
</tbody>
</table>
### TABLE 28

**CONFIGURATION - SAMPLE 3**

**TEST OF THE INSTRUMENT**

ALL CASES PREDICTED CORRECTLY AND INCORRECTLY BY EACH CONFIGURATION AND ITS ACCURACY

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Total</th>
<th>Correct</th>
<th>Incorrect</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Configuration</td>
<td>120</td>
<td>84</td>
<td>36</td>
<td>.78</td>
</tr>
<tr>
<td><strong>Parole Success</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outcome</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ...........</td>
<td>62</td>
<td>49</td>
<td>13</td>
<td>.79</td>
</tr>
<tr>
<td>2. ...........</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>.75</td>
</tr>
<tr>
<td>3. ...........</td>
<td>7</td>
<td>6</td>
<td>1</td>
<td>.86</td>
</tr>
<tr>
<td>4. ...........</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>.50</td>
</tr>
<tr>
<td><strong>Parole Failure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outcome</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ...........</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>.33</td>
</tr>
<tr>
<td>2. ...........</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>.00</td>
</tr>
<tr>
<td>3. ...........</td>
<td>35</td>
<td>23</td>
<td>12</td>
<td>.66</td>
</tr>
</tbody>
</table>
CHAPTER V

Conclusions and Implications

Conclusions

The purpose of this study was to utilize the method of prediction-by-classification approach in developing a simple and reliable juvenile parole prediction instrument.

The purpose of the study was partially fulfilled in the development of the three major configurations - Sample 1, Sample 2, and Sample 3.

These three major predictive configurations total thirty-two configurations: nineteen predicting success on parole and thirteen predicting failure on parole.

Sample for building the instrument - accuracy and efficiency scores. The three major predictive configurations as applied to the sample for building the instrument achieved a combined accuracy score of .79 and an overall efficiency score of .52. The individual major configurations as applied to the sample for building the instrument performed well in accuracy and efficiency scores.

Configuration - Sample 1 attained a .79 accuracy score and a .51 efficiency score.
Configuration - Sample 2 attained a .80 accuracy score and a .53 efficiency score.

Configuration - Sample 3 attained a .79 accuracy score and a .52 efficiency score.

Sample for testing the instrument - accuracy and efficiency scores. These three major configurations, when applied to the sample for testing the instrument obtained widely different levels in accuracy and efficiency. The three major configurations combined achieved an accuracy score of .70 and a combined efficiency score of .18. Configuration - Sample 1 performed very poorly by attaining an accuracy score of .66 and an efficiency score of .00. Configuration - Sample 2 performed favorably by attaining an accuracy score of .80 and an efficiency score of .42. Configuration - Sample 3 performed at widely different levels by attaining an accuracy score of .70 and an efficiency score of .12.

Configuration - Sample 2: specific configurations.
Configuration - Sample 2, which includes five success and two failure predictive configurations is acceptable as a juvenile parole prediction instrument. The seven predictive configurations are described in terms of the items contained in a configuration and the probability outcome.

1. A boy whose self control is rated good and discipline by parents is administered in a consistent manner is considered a .34 parole success probability.
2. A boy whose self control is rated good, discipline by parents is administered in an inconsistent manner and who also received average or above average academic grades is considered a .40 parole success probability.

3. A boy whose self control is rated poor and early family life experiences rated stable is considered a .80 parole success probability.

4. A boy whose self control is rated poor, early family life experiences rated unstable but comes from a small or medium family is considered a .79 parole success probability.

5. A boy whose self control is rated poor, early family life experiences rated unstable, comes from a large family, but makes a good institution cottage adjustment is considered a .84 parole success probability.

6. A boy whose self control is rated good but discipline by parents is administered in an inconsistent manner is considered a .83 parole failure probability.

7. A boy whose self control is rated poor, early family life experiences rated unstable, comes from a large family, and whose cottage adjustment is poor is considered a .87 parole failure probability.

Configurations - Sample 1 and Sample 3 are not acceptable at this time but warrant further study.
Implications

Hopefully, the three major predictive configurations developed from the success and failure experiences of the 300 boys in the sample for building the instrument by a statistical method should be more efficient in its application to the 120 boys in the sample for testing the instrument. Some of the variables that may have influenced the low efficiency score of configurations - Sample 1 and Sample 3 are discussed as follows:

Since statistical prediction methods usually develop instruments by studying how a factor operates in a majority of cases, they are most efficient in predicting for groups rather than an individual. Too little attention is given to individual variations in behavior. In this vein, it may be that the three predictive configurations developed from a sample of 300 boys may be more efficient in predicting for a group of 300 or more boys than the 120 boys in the sample for testing the instrument.

Sampling fluctuations may occur. Although it is not always clear to what theoretical population a predictive instrument applies, the statistical model of random sampling errors leads to the expectation of certain fluctuations which cannot be entirely controlled even with large numbers of cases. The seriousness of this error is indicated by Vold's study with a sample of 1,091 adult parolees. He randomly divided
the sample into two groups which he called the "operating and control groups" in his effort to develop a Burgess type experience table for predicting parole outcome. The comparisons warrant attention since they provide some indication of the differences in predictive efficiency which result from sampling variations. Absolute differences in percentage reductions of error for eight comparisons range from 4 to 13 per cent with a mean of over 9. This seems to indicate that random fluctuations in experience table prediction instruments may be quite large even for groups of size 300-600.\footnote{George B. Vold, "Prediction Methods Applied to Problems of Classification within Institutions," \textit{Journal of Criminal Law and Criminology}, XXVI (July 1935), pp. 202-209.}

The reliability of the data collected from the case records may have been affected by the fact that the records were not designed to obtain the information required by the schedule. Further, the accuracy of the recorded data is questioned since heavy reliance is placed on the opinions, heresay information, and individual judgments of non-professional workers. Additionally, due to the overcrowded conditions, the writer felt that at times the institution staff's evaluations of the boy's adjustment seemed slanted toward a favorable evaluation in order to obtain approval from the Guidance Committee for the boy's release on parole.
A major weakness in prediction studies in relation to data is the failure to deal with errors associated with lapse of time. Prediction instruments fail to take account of the important reality of change in personal and social conditions. Furthermore, the meaning of terms change from time to time and from discipline to discipline. The prediction instrument is built with the assumption that the personality traits and environmental factors will remain the same as they were when the instrument was constructed.

In the development and use of prediction instruments, the individual is generally reduced to a statistical type. By perceiving the problem in a mass perception, those who use the instrument may overlook the uniqueness of the individual case in respect to more subtle and seemingly unmeasurable features of the personality observed in the clinical situation.

Another weakness in the application of the instrument is in the area of interpretation. The items reflecting the attitude or behavior of the individual are not viewed in terms of the integral part of the boy's cultural context. Rather, they are viewed as a series of actions which are abstracted away from the cultural context. Thus, we may impute a negative value to a specific attitude or behavior when it may be expected reactions in the cultural context.
For example, a boy residing in the slums may manifest a short time orientation. The social worker from a middle class background may be prone to view the short time orientation as symptomatic behavior.

Another variable that may have influenced the study is that the criterion of success or failure on parole makes detection, arrest and degree of enforcement crucial.

Lloyd Ohlin, in his book, Selection for Parole, points out that "the ideal measure of parole success or failure would reflect the relative adjustment of the parolee in all the various spheres of his social activity, such as family life, employment, leisure time pursuits, and so on."

The writer feels that the three major configurations and the accuracy and efficiency scores achieved by the instruments demonstrate the feasibility of using the prediction-by-classification method in developing juvenile parole prediction instruments. The research can be considered an exploratory study and that further study is needed to improve the accuracy and efficiency of the instruments before they can be considered ready for general use.

Suggestions for further research in the area. The three major configurations indicate a need for selection of better items with stronger predictive discriminatory power between success and failure outcome. It may be that the theoretical
constructs and the selected categories employed in the study are too limiting and not highly associated with parole outcome.

In the light of some of the limitations experienced in this study, the writer suggests the following studies:

1. Research addressed toward exploring the literature from the various disciplines and consulting the practitioners in order to possibly identify original theoretical constructs or concepts which may identify items more highly associated with outcome. Most of our current predictive items tend to be restricted to items related to descriptive delinquent behavior, statistical sociological information, institutional adjustment factors and personal and family information. The relative interpretation of the information is implicitly or explicitly influenced by the analytical dynamic disease doctrine.

A different theoretical approach is illustrated by the Forsyth and Fairweather study in 1961 in regard to the community follow-up adjustment of the mentally ill patients. They measured nine areas of community adjustment: rehospitalization, employment, friendships, communication, general adjustment, problem behavior, degree of illness, alcoholic indulgence, and legal violations. Only three showed high and significant relationships with another.
This study demonstrated that remaining out of the hospital was most significantly related to being employed and being perceived as mentally well by acquaintances. Additionally, they found only one within-hospital measure—behavior in the last group therapy session—indicated a significant relationship with any item of community follow-up adjustment.\footnote{R. P. Forsyth and G. W. Fairweather, "Psychotherapeutic and other Hospital Treatment Criteria: the Dilemma," \textit{Journal of Abnormal and Social Psychology}, 62 (1961), pp. 598-604.}

Although the study was concerned with adult mentally ill patients, the writer felt that the research findings may have significant implications to the kind of original data we are seeking.

2. The writer suggests a second research study which permits access to original data from the boys and carried out over a period of about ten years. Data could be obtained from the boys and their parents from their earliest involvements and subsequent different phases of their probation, institution and parole experiences. Those succeeding in adjustment could be compared with others that continue to get into trouble. A comparable control group of non-delinquent boys could be studied. Data not available from case records could be obtained from each boy in regard to his self-concept, attitude toward significant figures in his life, and perception of his institutional experience as related to his
outside expectations on parole. Further, the boy's identification of meaningful roles he has assumed prior to his commitment and the roles he expects to pursue upon his release. The parents' and peers' perception and expectation of the boy upon his release may be possible predictive items. The sample should include about 1,000 boys.
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A. BOOKS


B. PUBLICATIONS OF THE GOVERNMENT, LEARNED SOCIETIES, AND OTHER ORGANIZATIONS

Behling, John H., "An Experimental Study to Measure the Effectiveness of Casework Services in a Public Assistance Agency, Franklin County, Columbus, Ohio, From October 1, 1959 to December 31, 1960," The Franklin County Department of Public Welfare, Columbus, Ohio, August, 1960.


C. ARTICLES AND PERIODICALS


Tibbitts, C., "Success or Failure on Parole can be Predicted," Journal of Criminal Law and Criminology, 22 (1931), 11-50.


D. UNPUBLISHED MATERIALS


E. NEWSPAPERS

IDENTIFYING INFORMATION

Schedule number ___________ Boy's F.S.B. number ______

Name ______________________ Birthdate ______ Age ______
    Surname  First

Address ______________________
    Street  City  County  State

Father ______________________ Birthdate ______ Age ______
Address ______________________
    Street  City  County  State

Mother ______________________ Birthdate ______ Age ______
Address ______________________
    Street  City  County  State

Date of admission to the F.S.B.  Release Date
1. 1.
2. 2.
3. 3.

Last cottage assignment ________________________________

Institutional Guidance Counselor _________________________

Regional Director _________ Current Field Counselor ______
1. Usual pattern of offenses
   ____ A Minor (misdemeanor, nuisance)
   ____ B Major (felony)

2. Boy's delinquency pattern
   ____ A Usually alone in committing an offense
   ____ B Usually with other boys in delinquent acts

3. Parole violations
   ____ A Minor (technical misdemeanor)
   ____ B Major (felony)

4. School grade placement at time of admission to the Fairfield School for Boys
   ____ A Appropriate for age or 1 year retarded
   ____ B Two years or more retarded or special slow learners class
   ____ C Expelled or dropped

5. Average academic grades during the three year period preceding the boy's commitment to the Fairfield School for Boys
   ____ A Above average
   ____ B Average
   ____ C Below average or failing

6. School truancy record for the year preceding the boy's commitment to the Fairfield School for Boys
   ____ A Seldom or never (3 days or less)
   ____ B Occasionally (4 days to 10 days)
   ____ C Frequently (11 days plus)
7. School adjustment (based on teachers' and guidance counselors' assessment of the boy's academic and behavior performances)
   _____ A Good
   _____ B Fair
   _____ C Poor

8. Family life during the boy's first five years was considered
   _____ A Stable (parents consistent attitude and performance in meeting child's overall needs)
   _____ B Intermediate
   _____ C Unstable (parents inconsistent attitude and performance in meeting child's overall needs)
   _____ D Unknown

9. Boy's age relative to his first placement outside of his home
   _____ A 10 years or less
   _____ B 11 years plus
   _____ C Unknown

10. Age of boy at the onset of a serious accident, illness, health impediment or physical deformity which lasted six months or more
    _____ A Birth to 5 years
    _____ B 6 to 10 years
    _____ C 11 years plus

11. Enuresis present beyond three years of age
    _____ A None
    _____ B 4 to 7 years of age
    _____ C 8 years plus
12. Age at first court appearance
   ___ A  12 years or less
   ___ B  13 to 14 years
   ___ C  15 years

13. Age committed to the Fairfield School for Boys
   ___ A  10 or 11 years
   ___ B  12 or 13 years
   ___ C  14 or 15 years

14. Number of years boy resided outside of his home preceding the commitment
   ___ A  None
   ___ B  2 years or less
   ___ C  3 or 4 years
   ___ D  5 years or more

15. Neighborhood delinquency rate (judgment of the police officer, probation officer, or field counselor)
   ___ A  Low
   ___ B  Average
   ___ C  High

16. Type of residential community
   ___ A  Good (attractive, well-kept homes, well organized community services, low crime rate and access to educational, social and recreational opportunities)
   ___ B  Fair (stable working class neighborhood, home owners)
   ___ C  Poor (slums, industrial, marginal areas, overcrowded, marginal housing, high crime rate)
17. Size of community
   ____ A 500,000 population or more
   ____ B 100,000 to 500,000
   ____ C Less than 100,000

18. Home ownership
   ____ A Owner
   ____ B Renter

19. Residence at present address
   ____ A Less than 3 years
   ____ B 3 to 10 years
   ____ C Over 10 years

20. Marital relationship of parents
   ____ A Compatible (usually stable, affectionate and harmonious relationship)
   ____ B Intermediate
   ____ C Incompatible (subject to frequent quarrels and lack of mutuality)

21. Discipline by parents
   ____ A Consistent (applied in a reasonable and logical manner to enhance the child's learning)
   ____ B Intermediate
   ____ C Inconsistent (erratic and illogical application of discipline, usually to vent one's hostility or irritation toward the child)

22. Discipline usually administered by
   ____ A Father
   ____ B Mother
   ____ C Both
23. Do parents provide good models for their son

<table>
<thead>
<tr>
<th>Father</th>
<th>Mother</th>
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24. Current family group size residing in the home (include relatives)

|        | A  Small (3 persons or less) |
|        | B  Medium (4 or 5) |
|        | C  Large (6 or more) |

25. Sibling composition

|        | A  None |
|        | B  All females |
|        | C  All males |
|        | D  Mixed |

26. Number of siblings

|        | A  None |
|        | B  One or two |
|        | C  Three or more |

27. History of delinquency in the family

|        | A  None |
|        | B  Moderate (1 to 2 family members with police records) |
|        | C  Pronounced (3 or more family members with police records) |
28. Occupation of parents
   _____ A Father ________________________________
   _____ B Mother ________________________________

29. Income of family per month
   _____ A $501 or more
   _____ B $301 to $500
   _____ C $300 or less

30. Education of father
   _____ A College graduate or more
   _____ B High school graduate, business or trade school graduate, or 1 to 3 years of college
   _____ C Less than high school graduate

31. Education of mother
   _____ A College graduate or more
   _____ B High school graduate, business or trade school graduate or 1 to 3 years of college
   _____ C Less than high school graduate

32. Marital status of parents
   _____ A Married
   _____ B Divorced, separated, widowed
   _____ C Common-law relationship

33. Father's role as provider
   _____ A Reliable (steady employment and good provider)
   _____ B Intermediate
   _____ C Unreliable (erratic employment, unreliable in providing for the family)
34. Parents combined marriages (once for each parent = 2)
   ___ A  3 or less
   ___ B  4 or more times

35. Age of younger parent at marriage
   ___ A  20 years or less
   ___ B  21 to 30
   ___ C  31 years or more

36. Age difference between father and son
   ___ A  20 years or less
   ___ B  21 to 35
   ___ C  36 or more

37. Age difference between parents
   ___ A  3 years or less
   ___ B  4 to 10 years
   ___ C  11 years or more

38. Interest of family or relatives
   ___ A  Strong (combination of 6 plus letters and visits)
   ___ B  Fair (combination of 3 to 5 letters and visits)
   ___ C  Poor (combination of 2 or less visits and letters)

39. Ordinal position of the boy in the family
   ___ A  Oldest
   ___ B  Youngest or only
   ___ C  Between

40. Intelligence score
   ___ A  110 +  Above average
   ___ B  90 - 109  Average
   ___ C  89 or less  Below average
41. Relative demeanor of the boy
   ____ A Cheerful (usually stable and pleasant disposition)
   ____ B Intermediate
   ____ C Moody (temperamental, erratic, swings of mood, etc.)

42. Classification of boy in terms of relative self-control or stability
   ____ A Good (high tolerance level, rarely upset, steady, reliable performance)
   ____ B Moderate in control and stability. Reasonable variation in performance
   ____ C Poor (impulsive, easily upset, erratic performance, low frustration tolerance)

43. Number of runaways from home and placements preceding commitment to the Fairfield School for Boys
   ____ A 0 to 2
   ____ B 3 or more

44. Use of weapon: gun, club, etc. in a threatening manner during a fight or in committing an offense
   ____ A None
   ____ B Once
   ____ C Two or more times

45. Use of weapon which resulted in injury to another person or persons
   ____ A None
   ____ B Once
   ____ C Two or more times

46. Number of runaways at the Fairfield School for Boys
   ____ A Once or none
   ____ B Two or more times
Number of fights at the Fairfield School for Boys
- A Once or none
- B Two or more times

Attitude toward parental authority
- A Good (usually conforming and obedient)
- B Intermediate
- C Poor (usually resistive, defiant or hostile)

Boy seems to be influenced most by his
- A Parents
- B Peers
- C Others

Boy tends to be a
- A Leader, Intermediate (accepted as leader by peers, reasonably independent in decisions)
- B Follower (dependent attitude, easily influenced)
- C Loner (social isolate)

Role at the Fairfield School for Boys
- A Leader, Intermediate (accepted as leader by peers, reasonably independent in decisions)
- B Follower (dependent attitude, easily influenced)
- C Loner (social isolate)

Overall adjustment at the Fairfield School for Boys
- A Good (positive work, school, peer and cottage adjustment)
- B Fair (moderate work, school, peer and cottage adjustment)
- C Poor (negative work, school, peer and cottage adjustment)
53. Work adjustment

- **A** Good (positive attitude toward learning, responsible performance, etc.)
- **B** Fair
- **C** Poor (negative attitude toward work supervisors, careless about work, etc.)

54. Cottage adjustment

- **A** Good (positive attitude toward the staff members and peers, assumes daily responsibilities well)
- **B** Fair
- **C** Poor (negative attitude toward the staff members and peers, erratic in assuming daily responsibilities)

55. Number of referrals to the institutional discipline committee for infractions by the cottage and work supervisors

- **A** 1 to 2
- **B** 3 to 4
- **C** 5 or more

56. Length of stay at the Fairfield School for Boys

- **A** Less than 6 months
- **B** 6 to 11 months
- **C** More than 11 months

57. Attitude toward authority figures (teachers, work supervisors, cottage parents)

- **A** Positive (relates well to the staff members)
- **B** Moderate
- **C** Negative (resistive, overly conforming and generally does not relate well to staff members)
58. Institution program

- A Full-time school
- B Full-time work
- C Combination

59. Recommendations as listed by the Juvenile Diagnostic Center Study

- A Return home, relative's home, or foster home
- B Boarding school
- C Treatment oriented boarding school with special residential psychiatric treatment facility
- D Placement in a state correctional institution

60. Parole plan

- A Return home
- B Relative or foster home
- C Wage home or boarding school placement
- D Further state institutionalization

61. Parole plan - definitiveness at time of release from the Fairfield School for Boys

- A Definite - return home and school, return home and assured employment
- B Partial - definite placement but to seek work
- C Indefinite - return home pending opening in a boarding school or out of state placement, or awaiting an opening in another state institution