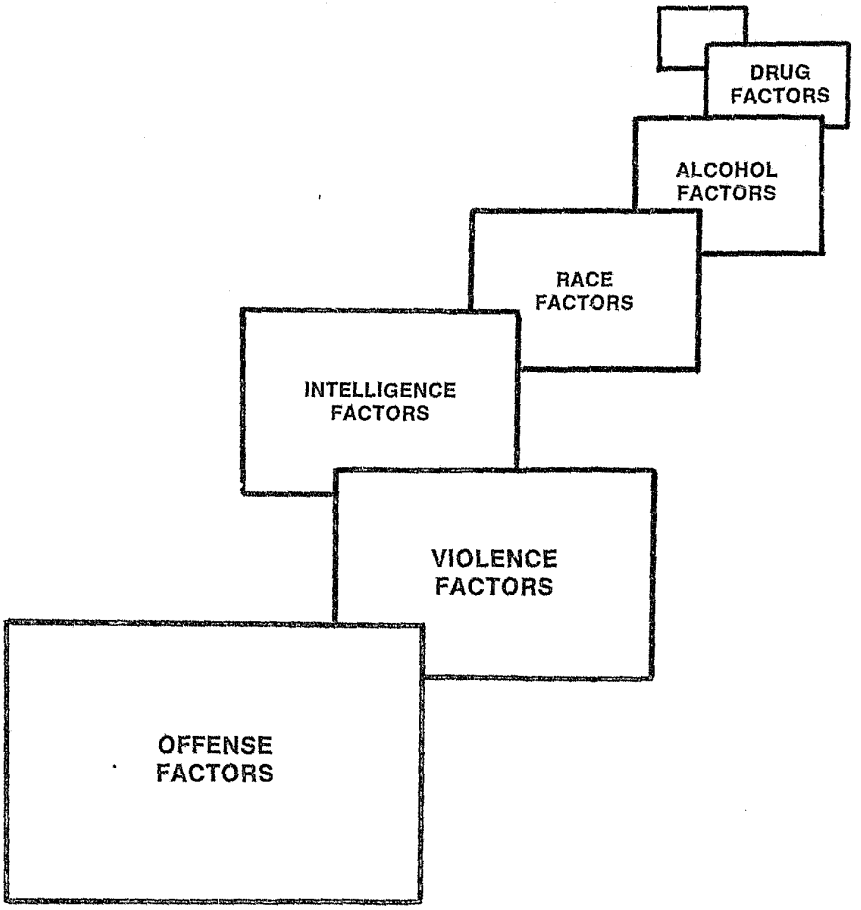

AN ANALYSIS OF CLASSIFICATION FACTORS FOR YOUNG ADULT OFFENDERS

BY
ERNST A. WENK
THOMAS V. HALATYN

VOLUME 2

INTELLIGENCE FACTORS

A contribution from Responsible Action, Inc., a California-based non-profit organization working toward responsible social change through educational means, made it possible to design and produce the circular symbols depicting the relationships of variables to parole outcome and to design and produce the data maps as supplements to some of the volumes in this series.

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Research

in
Collaboration
with

Publication

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OCTOBER 1974

RESEARCH CENTER
NATIONAL COUNCIL ON CRIME AND DELINQUENCY
609 SECOND STREET, SUITE D
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This research was funded in part by Grants No. 73-NI-0008G and No. 74-NI-99-0011G from the National Institute of Law Enforcement and Criminal Justice, Law Enforcement Assistance Administration, United States Department of Justice to the National Council on Crime and Delinquency Research Center.

VOLUME 2 OF THE REPORT ON GRANT 74-NI-99-0011G TO THE NATIONAL INSTITUTE OF LAW ENFORCEMENT AND CRIMINAL JUSTICE LAW ENFORCEMENT ASSISTANCE ADMINISTRATION UNITED STATES DEPARTMENT OF JUSTICE

The intent of this study is twofold: first, to present in a clear and well-organized fashion the results of extensive data collection on a most important offender group--the youthful offender. Special attention is given to information on positive factors or characteristics of this offender group that can be utilized by the correctional practitioner in rehabilitating and reintegrating the youthful offender. The information on negative factors is expected to contribute to the development of our knowledge base and to the improvement of methods designed to meet the critical needs of youth. Second, the study is intended to provide a substantial resource for the correctional theorist to assist him in understanding the crime phenomenon and in formulating hypotheses that deserve scientific attention. The discussion of the data in these project reports is in no way exhaustive and the reader is encouraged to use the data to explore in greater depth any of the areas of

special interest to him.

The views and interpretations expressed herein are the authors' own and do not reflect the views or policies of the Law Enforcement Assistance Administration, which funded the study, nor the views or policies of the National Council on Crime and Delinquency, the California Youth Authority, or the California State University at Sacramento, School of Social Work, which agencies collaborated in this study.

ACKNOWLEDGMENTS

Many persons have contributed to the work summarized in the volumes comprising the report on grant Number 74-NI-99-0011G to the National Institute of Law Enforcement and Criminal Justice of the Law Enforcement Assistance Administration. Two previous grants from the National Institute have been instrumental in developing this work: ACORN NI-095 gave us the opportunity to study aspects of the young assaultive offender (Wenk and Emrich, 1972a), and grant Number 73-NI-0008G provided funding to begin work on this classification study and carry out the computer analyses (Wenk and Emrich, 1972b; Wenk, et.al., 1972; Wenk and Houghten, 1973). The results of grant Number 73-NI-0008G are contained in seven volumes of computer print-outs that provide complete statistical descriptions on all subpopulations studied. The format and extent of these statistical descriptions are presented in Appendix A of Volume 1.

In addition to the thanks due to the many unnamed contributors, special appreciation is expressed to Allen Breed, Director of the California Department of the Youth Authority; Raymond Procunier, Director of the California Department of Corrections; former Director of the California Department of Corrections,

Walter Dunbar; Allen Cook, former Superintendent of Deuel Vocational Institution; and to Jerry Enomoto and Joseph Lorenzen, former Associate Superintendents of the Reception Guidance Center at Deuel Vocational Institution. Dr. Vitali V. Rozynko, Research Specialist with the California Department of Mental Hygiene, Professor Theodore R. Sarbin, University of California in Santa Cruz, and Professor Harrison G. Gough, University of California, Berkeley, were instrumental in initiating this research. Dr. Lawrence Bennett, Chief of Research, California Department of Corrections, and Dr. Keith Griffiths, Chief of Research, California Youth Authority, and some of their staffs, made substantial contributions to the work presented here.

Finally, the authors would like to thank Dr. Don M. Gottfredson, former Director of the Research Center, National Council on Crime and Delinquency and presently Dean of the School of Criminal Justice, Rutgers University, for his support of this work and the many significant contributions he made. Important assistance was also given by Dr. Robert L. Emrich, Dr. Marcus Neithercutt, and Dr. Peter Venezia of the NCCD Research Center, and by Eugene Doleschal, Director of the NCCD Information Center, and Armine Dikijian, Librarian of the NCCD Library. Max Zeigler and Jeffrey Houghten were primarily responsible for the computer analyses, and

Stephen D. Gottfredson, Claudia Wenk, and Donald Disler did extensive coding from case files and performed other research tasks. Rosalie Smith helped with library research for some of the volumes and Michael Blackman assisted in designing the tables and figures that present this data. In addition, Gwen Dodsley, Diane Pfoutz, Judith Ingram, Suzanne Mikesell, and Lynn Hilton contributed to the study as research assistants. It is apparent from the volume of this work that many unnamed individuals also contributed significantly to the completion of this study and their help is thankfully acknowledged.

Special thanks are due to Dean Jesse McClure from the School of Social Work, California State University, Sacramento, for allowing the reproduction of these volumes as teaching material for courses in the corrections sequence and the research sequence. It is the authors' hope that the information presented in these volumes will indeed be valuable to the academic instructor and correctional researcher as well as to the correctional planner and practitioner.

Davis, California
October, 1974

Ernst A. Wenk
Thomas V. Halatyn

PREFACE

This is Volume 2 of the report to LEAA on grant 74-NI-99-0011G. Entitled "An Analysis of Classification Factors for Young Adult Offenders," this project attempts to provide extensive descriptive data on 4,146 male California Youth Authority parolees to assist in the understanding of youthful offender characteristics that may be related to parole success. This undertaking was envisioned as a prerequisite to the development of typological descriptions of youthful offenders that may ultimately influence their treatment and rehabilitation.

This project was initially assumed to be a multi-chapter effort. As the work progressed, it became apparent that the volume of the reported data was far too great to be condensed into a single final report. To clearly present the relationships of the data elements to parole outcome and to provide some comparative data for all classification factors discussed, an alternative method of presentation was required. Since each previously designated chapter was itself a comprehensive effort, it was decided that each classi-

fication topic should be presented as an individual volume. This format necessitated that certain supplementary information, such as information sources and variable items, had to be included in each volume. The results of this project are reported in nine volumes entitled as follows:

Volume	Title
1	Background of the Study and Statistical Description of the Total Study Population
2	Intelligence Factors
3	Race Factors
4	Alcohol, Drug, and Opiate Factors
5	Psychological, Psychiatric, Educational, and Social Factors
6	Violence Factors
7	Offenders Against Persons
8	Offenders Against Property
9	Parole Issues

Volume 1 provides a narrative introduction to the project and presents comparative data for the entire study population on most of the 195 variables used in this study. Most volumes are divided into two parts: (1) basic introduction to previous research findings and issues concerning each topic of classification; and (2) descriptive statistics on the designated subgroups with respect to each classification topic.

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PART ONE

INTELLIGENCE FACTORS IN CLASSIFICATION: BACKGROUND AND RATIONALE

This Section provides a brief introduction to the background of the study. For a more detailed description see Volume 1, Background of the Study and Statistical Description of the Total Study Population.

I. BACKGROUND OF THE STUDY

THE CALIFORNIA YOUTH AUTHORITY

The California Youth Authority was created by the state legislature in 1941 with a correctional philosophy that substituted individualized treatment for retributive punishment. The legislative intent, as expressed in section 1700 of the California Welfare and Institutions Code, was to protect society more effectively by utilizing training and treatment methods to rehabilitate young lawbreakers. This philosophy has guided the Department since its establishment.

In 1942 the Youth Authority was given responsibility for California's three juvenile correctional institutions. Today, the CYA operates three reception centers, seven schools, five camps, over forty parole field offices, and a comprehensive community services program. In 1969 nearly 21,000 youngsters were under its jurisdiction. Some 6,300 were being held in Youth Authority institutions (schools, camps, reception centers), while slightly over 14,600 were on parole from the Youth Authority. About 3,900 state employees work in the Youth Authority in professional, administrative, and maintenance capacities. The budget for the CYA was $54,843,000 in 1969.

Today the Department administers a budget in excess of $100 million.

The organization of the Youth Authority is provided for by state law. The intent of the lawmakers was clearly to provide a unified state-wide approach to the control of delinquency. The Youth Authority was made a part of the state's Health and Welfare Agency by order of the Governor in 1966 and by law in 1968. The state's Welfare and Institutions Code contains the legal provisions for the Youth Authority.

A Youth Authority Board was created along with the establishment of the Department in 1941. The Board was given responsibility for assignment of wards to appropriate rehabilitative programs, approval of time and conditions of parole, and consideration of parole revocation and discharge. The Youth Authority Board consists of eight members, at least one of whom must be a woman, who devote full time to its work. Board members are appointed by the Governor and serve staggered four-year terms. The qualifications for appointment are stated in the code, which requires that persons serving on the Board should have "...a broad background in and ability for appraisal of youthful law offenders and delinquents, the circumstances of delinquency for which committed, and the evolution of the individual's progress towards reformation." The Board is assisted by seven Hearing

Representatives.

The Director of the Youth Authority, who is administrative head of the Department as well as chairman of the Youth Authority Board, is also appointed by the Governor for a four-year term. Mr. Allen F. Breed, a career member of the Youth Authority, is the present Director.

Section 1731.5 of the Welfare and Institutions Code defines the clients of the California Youth Authority and describes the persons over whom the Authority has control. The code provides that:

> After certification to the Governor a court may refer to the Authority any person convicted of a public offense who comes within all of the following descriptions:
>
> (a) Is found to be less than 21 years of age at the time of apprehension;
>
> (b) Is not sentenced to death, imprisonment for 90 days or less, or the payment of a fine, or after having been directed to pay a fine defaults in the payment thereof, and is subject to imprisonment for more than 90 days under the judgment;
>
> (c) Is not granted probation; or
>
> (d) Was granted probation and probation was revoked and terminated.

Youths under 21 years of age but older than 18 may, for certain offenses, be tried in a juvenile or an adult

court, and either court may assign a convicted youth to the Youth Authority. According to the commentary of the California Codes, the history of the Youth Corrections Authority Act and later amendments to it indicate that the legislature intended that all persons coming within the provisions of the Code should ultimately be referred to the Authority (People v. Walker, 1947, 82 CA end Ed. 196).

In 1943 the state legislature recognized that, to be effective, delinquency prevention efforts must be concentrated at the local level and the state has been moving in this direction since that time. However, the most marked shift in program emphasis from the state to the local level occurred in 1965, along with a similarly dramatic shift from a solely institutional program to one with a significant community corrections component.

THE INSTITUTIONAL SETTING: THE RECEPTION GUIDANCE CENTER, DEUEL VOCATIONAL INSTITUTION, TRACY, CALIFORNIA

In 1964 and 1965, when the basic data for the present study were collected, the California Youth Authority operated two reception guidance centers--one at Perkins near Sacramento for the northern counties and one at Norwalk near Los Angeles for the southern counties. Older wards committed to the CYA were received and processed under an interagency agreement

at the Reception Guidance Center, Deuel Vocational Institution (RGC-DVI), one of three reception guidance centers operated by the California Department of Corrections.* The RGC-DVI, where the testing and most of the data collection for the present study took place, has the capacity to house approximately 300 men in single cells. Testing rooms, testing shops, and offices for correctional counselors, psychologists, and medical consultants provided the setting for diagnostic work with CYA wards undertaken during the intial phase of institutionalization.

In 1964-65 the average stay in the RGC-DVI was approximately six weeks. Wards were processed in weekly classes, the first week being devoted entirely to intellectual, academic, vocational, and psychological assessment. The second and third weeks were programed for vocational testing and gave most wards an opportunity to demonstrate their vocational skills and aptitudes during one week in the wood shop and another week in the

*This interagency agreement between the California Youth Authority and the California Department of Corrections has been drastically changed since 1964-1965, substantially reducing the number of CYA wards housed in CDC institutions. In 1965 there were 1,536 CYA wards housed in CDC institutions, while in 1972 this number was reduced to 61. Diagnostic services for CYA admissions are now almost fully carried out in CYA diagnostic facilities.

metal shop. During the fourth week the caseworker conducted a social evaluation of each ward. During the fifth week the case was completed and a comprehensive case summary was created. With this material each ward was seen by the California Youth Authority Board at the end of the sixth week. During this meeting the Board discussed institutional programing with each ward, made final disposition of the case, and issued transfer orders. The diagnostic report assembled during the Reception Guidance Center stay was one of the major sources of information to aid the Board in its decision-making for institutional programing. For a detailed discussion of the organization and content of the Cumulative Case Summary see Volume I.

THE TESTING PROGRAM AT THE RECEPTION GUIDANCE CENTER, DEUEL VOCATIONAL INSTITUTION

1. The Testing Unit

During the period when the data for this study were collected the testing unit at the RGC-DVI was supervised by the senior author, a clinical psychologist. The objective of the unit was to compile meaningful test data on each inmate for purposes of diagnosis, counseling, guidance in institutional programing, and research. The various tests,

administered during the first week by trained inmate proctors under the supervision of clinical psychologists, produced the following:

a. An assessment of the level of academic functioning;

b. An estimate of vocational aptitudes;

c. An estimate of the level of intellectual functioning; and

d. Assessments of personality and psychopathology.

Most tests were administered to wards in groups. Additional tests were administered to individuals by the clinical psychologists and psychological consultants as needed.

All those in the weekly class were administered the reading vocabulary section of the California Achievement Test (CAT) battery, Junior High School level, as a screening device. Individuals who scored below the sixth grade on this test were assigned to the primary testing group, while those scoring about the sixth grade were assigned to intermediate and advanced testing groups. Each classification was rechecked for accuracy as more test results became available. The testing program was somewhat different for each group because of the reading difficulties of the primary

group.

2. Testing Program For the Primary Group

   a. Academic Assessment

      The primary group was tested with the elementary battery of the California Achievement Test. Individuals who scored very low on this battery were administered the primary battery of the California Achievement Test. In this way classifying an individual as illiterate was avoided in most cases, since each inmate received grade placement scores in reading vocabulary, reading comprehension, arithmetic reasoning, arithmetic fundamentals, mechanics of English and spelling, and equivalents of the total academic functioning level.

   b. Testing for Vocational Aptitude

      Together with the intermediate and advanced levels, the primary group was administered the General Aptitude Test Battery (GATB). This testing was administered weekly by staff of the California Department of Employment. The GATB provided scores for vocational counseling by the correctional counselor and diagnostic shop instructors on General Intelligence, Verbal

Aptitude, Numerical Aptitude, Spatial Aptitude, Perceptional Aptitude, Clerical Aptitude, Motor Coordination, Finger Dexterity, and Manual Dexterity.

c. Intellectual Assessment

The primary groups were administered the California Short Form Test of Mental Maturity (CTMM), the Revised Beta examination, the Raven Progressive matrices (1956), which yields an index of intellecual capacity believed to be fairly independent of cultural background or education, and another "culture-fair" intelligence test, the D-48 or Domino test.

Individuals in this group who functioned at a very low level of intelligence were individually tested by a clinical psychologist and given the Wechsler Adult Intelligence Scale (WAIS) in order to determine whether they were functioning at the mentally defective level. For those who were judged to be mentally defective, a special assessment report was prepared by the psychologist.

d. Assessment of Personality and Psychopathology Factors

Because of the difficulty of some of the items on the California Psychological Inventory (CPI) and the Minnesota Multiphasic Personality Inventory (MMPI), these tests were not administered to the primary group. Exceptions were made in special cases where the items were read to an individual who, although academically retarded, was otherwise able to comprehend the test items. Special referral cases were individually tested by clinical psychologists, using such tests as the Rorschach, Tafeln "Z", Sentence Completion Test, Thematic Apperception Test (TAT), the Goldstein-Scherrer Test for organicity, the Tree Test, and others.

3. Testing Program for the Intermediate and Advanced Groups

a. Academic Assessment

This groups was administered the Junior High or advanced battery of the California Achievement Test, giving the grade equivalents for the factors mentioned above.

b. Testing for Vocational Aptitude

The intermediate and advanced groups also took the General Aptitude Test Battery,

administered by the staff of the California Department of Employment.

c. Intellectual Assessment

The intermediate and advanced groups also were administered the Raven Progressive Matrices and the D-48, as relatively "culture-fair" tests, and the California Short Form Test of Mental Maturity (CTMM). The CTMM yields an IQ equivalent for a language portion and a non-language portion in addition to the combined IQ equivalent. These two groups were also administered the Army General Classification Test (AGCT) which gives, in addition to the total IQ, a percentile reading for Verbal Achievement, Numerical Reasoning, and Spatial Achievement. Individual testing with the Wechsler Adult Intelligence Scale (WAIS) was administered by psychologists as needed for diagnostic purposes.

d. Personality Assessment

The intermediate and advanced groups were administered the California Psychological Inventory (CPI) and the Minnesota Multiphasic Personality Inventory (MMPI).

The Shipley-Hartford Scale was administered to this group as a measurement of the intellectual capacity for conceptual thinking. Also, as in the primary group, individual testing by psychologists was carried out according to diagnostic needs, using a variety of personality and projective tests.

To assess maturity level, the Interpersonal Personality Inventory was administered to the intermediate and advanced groups.

STUDY POPULATION

The study population included 4,146 male California Youth Authority wards, or almost all those received at the Deuel Vocational Institution Reception Guidance Center during 1964 and 1965. Individual cases were eliminated from the study population for any one of the following reasons:

1. Failure to meet minimum requirements for completeness of data led to exclusion from the study. Cases with any one of the following information items missing were excluded: reception date, crime code for admission offense, date of release, or parole follow-up information.

2. Cases not released to a program of parole supervision were excluded. Discharges,

population were given the Minnesota Multiphasic Personality Inventory (MMPI). Slightly over one thousand persons were not given this test because they either did not meet the minimum academic requirement of a sixth-grade reading level or they happened to be in a weekly cohort when serious fog conditions practically closed down institutional programs for security reasons and made only minimal testing possible. Other information is not available because of changes in the testing battery; e.g., the D-48 was initiated after the study was in progress and for this reason is available on only about 65 per cent of the study population. These limitations must be kept in mind when the statistical descriptions provided in this study are considered. Such limitations will be further defined in the discussion of the various data elements.

2. Information Sources

The 195 variables selected for presentation in this report were collected from the following sources:

a. Pre-RGC-DVI case file CF

b. RGC-DVI case file

c. Testing program at RGC-DVI T

d. Caseworker's Information Sheet — IS

e. Cumulative Case Summary — CS

f. Psychiatric and Psychological Reports — P

g. CYA Board decisions — B

h. CYA Research Division (parole follow-up) — RD

i. Computer computations — CC

3. List of Variables and Definitions Used

While the following list of variables is complete, the text in subsequent reports will only selectively present and comment on these variables. The objective of the reports is to highlight the most significant characteristics and data elements as they relate to the topics discussed. Complete data on all variables are available from the author upon request.

An important feature of the present report is the organization of the information within eight conceptually defined categories:

1. Individual Case History Factors
2. Intelligence Factors
3. Academic Factors
4. Vocational Factors
5. Personality Factors
6. Psychiatric and Psychological Factors
7. Admission Offense and Parole Behavior Factors

8. Initial Institutional Program Factors

a. Individual Case History Factors

Race
Marital Status
Number of Children
Living Arrangement Prior to Admission
Marital Status of Natural Parents
Death of Parents
Commitment Court
Admission Status
Weight
Height
Age at Reception
Age at Release
Time in Institution
Military Disciplinary Action
History of Alcohol Misuse
Alcohol as Factor in Crime
History of Drug Misuse
Drugs as Factor in Crime
History of Opiate Use
Opiates as Factor in Crime
History of Marijuana Use
History of Glue Sniffing
History of Escape
History of Suicide Attempts
History of Homosexual Acts
History of Sexual Deviations
History of Rape
History of Personality Pattern Disturbance
History of Personality Trait Disturbance
History of Sociopathic Personality Disturbance
History of Neurosis
History of Psychosis
History of Brain Damage
History of Epilepsy

b. Intelligence Factors

Army General Classification Test
California Test of Mental Maturity
D-48
Raven Matrices
Shipley Hartford
Intelligence Classification by Clinical Staff

c. Academic Factors

California Achievement Test Battery
Grade Claimed
Grade Achieved
Academic Achievement Index I
Academic Achievement Index II
Academic Training Potential I
Caseworker's Rating
Academic Training Potential II
Caseworker's Recommendation
Staff Recommendation for Academic Training
Age Left School
Grade Claimed

d. Vocational Factors

General Aptitude Test Battery
Vocational Training Potential:
Wood Shop Instructor's Rating
Vocational Training Potential:
Metal Shop Instructor's Rating
Vocational Training Potential:
Counselor's Rating
Vocational Training Potential:
Caseworker's Recommendations
Staff Recommendation for Vocational Training
Occupational Disabilities
Occupational History
Union Status
Length of Work Experience
Primary Area of Vocational Interest For Vocational Training
Counselor's Recommendation for Training

e. Personality Factors

California Psychological Inventory
Minnesota Multiphasic Personality Inventory
Interpersonal Personality Inventory
Prediction Using Personality Test Data
CPI Equation
Applied CPI Prediction
MMPI Equation
Applied MMPI Prediction

f. Psychiatric Factors

Reasons for Referral
History of Prior Mental Health Care
Diagnosis of Acute Brain Disorders
Diagnosis of Chronic Brain Syndrome
Diagnosis of Affective Reactions
Diagnosis of Schizophrenic Reactions
Diagnosis of Psychoneurotic Reactions
Diagnosis of Personality Pattern Disturbance
Diagnosis of Personality Trait Disturbance
Diagnosis of Sociopathic Personality Disturbance
Diagnosis of Transitional Situational Personality Disturbance
Present Symptoms of Psychosis
Present Symptoms - General
Summary Psychiatric Diagnosis
Diagnosis of Treatment Motivation
Diagnosis of Violence Potential
Specific Conditions Related to Violence Potential
Recommendation for Psychotherapy
Recommendation for Group Counseling
Recommendation for Academic Vocational Training

g. Offense Related Factors Including Violence Information and Parole Follow-up

Admission Offense
Admission Offense Summary
Violation Offense
Violation Offense Summary
History of Violence
History of Carrying Weapons
Admission Offense Partners
CYA Parolee Partners
Individual Violence in Admission Offense
Weapon Used by Individual
Group Violence in Admission Offense If Partners
Weapons Used by Group if Partners
Economic Loss by Victim
Psychological Suffering by Victim
History of Violence - CYA Rating
Caseworker's Estimation of Violence Potential
Type of Parole Removal
Status of Off-Suspense Parole Removal

h. Initial Institutional Programing

Counselor's Transfer Recommendation
CYA Board Order for Transfer
CYA Board Order for Program (Months To Next Hearing)
Custodial Evaluation for Institutional Adjustment
Staff Recommendation for Special Housing
Staff Recommendation for Work Assignment
Staff Recommendation for Group Counseling
Staff Recommendation for Psychotherapy

II. CLASSIFICATION AND GROUNDED THEORY: SOME CONCEPTUAL ISSUES

The quest for an all-inclusive typology for the prediction or explanation of criminal behavior has long intrigued researchers in criminology. Offenders may be classified on the basis of their criminal behavior patterns or careers as well as a number of other typological criteria. Roebuck (1967) indicates that attempts to classify and explain criminal behavior must be directed toward the discovery and analysis of particular behavior patterns. Although this seems obvious enough, there are serious difficulties associated with the development of criminal typologies.

Before the issues of classification and the various approaches to classifying offenders can be discussed, several basic questions must be answered. A most essential problem surrounds the definition of "classification."

Webster (1970) defines classification as the "...systematic arrangement in groups or categories according to established criteria." Since the term

classification has been used almost interchangeably with taxonomy or typology, it is useful to define these terms in relation to "set" theory.

Assuming that a method of classification divides a group of individuals according to specified criteria, the general procedure of classification must typically satisfy several requirements. Basically, these are: (1) no subset is empty; (2) the intersection of the subsets is empty, i.e., subsets have no common elements; and (3) the union of all subsets is the total group (all subsets summed equal the set). An example can best clarify these prerequisites: the division of a group of offenders into two groups, one composed of adult offenders, the other of juvenile offenders. To fulfill the stated requirements, this classification must assure that: (1) "adult" and "juvenile" are clearly defined and each group comprises a defined subgroup; (2) the intersection of both groups is empty, i.e., no offenders are at the same time adult and juvenile; (3) the sum of both subsets (adults and juveniles) equals the total original set, providing that the entire group is divisible by the dichotomous definition. Although the above provides a "pure" example of classification, it is generally applicable to many studies in criminological research. The literature on the logic of classification is extensive and authors such as Barton (1955), Hempel

(1965), Lazarsfeld and Barton (1951), and McKinney (1966) provide excellent reviews of the topic.

In classifying juvenile offenders, no information need be given as to why such individuals commit offenses, nor is information necessarily provided about the effects of their behavior. Classification generally does not provide information as to why the elements of the subset occur or why they have specific characteristics. The relationship between classification and the development of theoretical explanation in criminology needs to be explored.

THE RELATIONSHIP OF CLASSIFICATION TO THEORETICAL EXPLANATION IN CRIMINOLOGY

Recent years have seen an increased interest in classification systems and in developing typologies of criminals and delinquents. Scientific progress depends upon reducing through conceptualization the infinite variety of problems to defined sets of problems that can be studied by scientific methods. Research efforts have required either "...the development of an etiology of criminal and delinquent behavior or a charting, in organized fashion, of the signs, symptoms, or dynamics of patterns covering the universe of offenders" (Warren, 1971). This "either-or" explanation tends to simplify a basic disagreement regarding

the relationship between classification and development of theory. For example, it has been claimed that classifications, though not directly permitting explanations, can lead to the construction of useful theories (Opp, 1973). Partially challenging this view has been the contention that existing classifications have not promoted the formulation of useful empirical theories (Blalock, 1969). It could be asked whether criminology should deal with explanations or only with descriptions. Resolution of this issue depends upon the type of problem surveyed and its implications.

Gibbons (1965) indicates that the construction of a criminal typology must consider not only the presumed function of the classification system but also the assumptions on which it is based. According to Gibbons, typologies have two primary functions--as a method of constructing etiological types or as a means of providing diagnostic treatment types. The value of the classification cannot be separated from how well it fulfills its described function.

The criterion of utility can be expressed as a hypothetical research situation. For example, the reorganization of correctional institutions for the purpose of achieving behavioral change among inmates must rest upon an understanding of the influence of the facility upon incarcerated individuals.

Such problems cannot be resolved by description or classification, since even knowing how inmates and staff behave does not necessarily help in identifying the effect of facility structure upon institutional or post-release behavior.

Some researchers contend that classification has explanatory value beyond its intended function. Opp (1973) states that it is not justified to presume that classification cannot lead to the construction of useful theories. The following hypothesis could be proposed: If phenomena have been classified, there is a higher probability of finding explanations for these phenomena than there would be without their classification. Classification strategies thus may be generally related to theoretical formulation in criminology. As Bottoms (1973) notes, "classification in criminology is, like the use of prediction techniques, certainly not an end in itself, but very much a tool, or a means to an end." Hood and Sparks (1970) point out that one of the main reasons why those concerned with the explanation of criminal behavior have turned to typologies is the great difficulty of generating a viable general theory to explain all criminal behavior.

A chief source of justification for the increased use of typologies seems to have followed from the

recognized inability of general theories (e.g., culture conflict, social class conflict, delinquent subculture, etc.) to provide compelling explanations of criminal behavior. Most such attempts, in the words of one author, "endeavor to explain too much and therefore actually explain too little" (Roebuck, 1967). This criticism reflects the expressed need for more "behaviorally accurate" definitions of behavior. Eysenck and Eysenck (1970) note that "by paying attention to differences within the criminal group in respect to psychoticism, extraversion, and neuroticism...we should be able to get much better differences between controls and homogeneous groups of criminals..." Although the search for a single theory of crime may be futile, it has often been concluded that subdividing "crime" into more homogeneous units is nevertheless desirable (Sutherland, 1939; Eysenck and Eysenck, 1970).

CLASSIFICATION STRATEGIES AND THEORETICAL DEVELOPMENT

Assuming that typologies can contribute to the construction of theory, it is essential to specify methods of classifying offenders and their respective relationships to criminological explanation. Ferdinand (1966) defines two kinds of typology, the empirical and the ideal. Empirical classification is defined as the most obvious simple patterns of distinction that seek

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to chart actual patterns displayed by specific kinds of individuals. This form provides the raw material from which theories might be constructed. Ideal typologies are defined in terms of utilizing a particular theory a priori as a means of classification. The main value of this kind of typology lies in its ability to support explanations of behavior. While the ideal model suggests that there are as many ideal typologies as there are theories of behavior, the empirical form lacks a theoretical basis.

Ferdinand suggests that a third kind of typology, the synthetic typology, could overcome the weaknesses of the other two. He defines this form as "the ultimate goal of all who are interested in crime and delinquency." Although this may overstate the case, attempts to advance theoretical explanation by means of classification strategies have been viewed as worthwhile (McClintock and Avison, 1964).

The discovery of theory from data, i.e., grounded theory, is a major task of sociologists today (Glaser and Strauss, 1968). Although derived from different assumptions than the typological systems of Ferdinand, grounded theory is roughly similar to empirical typology. This approach, according to Glaser and Strauss, consists of analyzing data and working outwards to develop explanations through the systematic or "theoretical sampling"

of the data. Although grounded theory may indicate a theoretical formulation, it must be further tested with other data bases, since it is not deduced from logical assumptions. The basic weakness of grounded theory is that, since the mind of the investigator is not a *tabula rasa*, it is uncertain how strongly his preconceptions might affect the theory derived (Rex, 1961; Bottoms, 1973).

An example of the application of grounded theory to the classification theory debate is provided by Megargee (1966). During his research, Megargee noted that in previous studies of murderers (e.g., Weiss, et al., 1960), MMPI profiles seemed to distinguish two broad personality types. The researcher titled these "undercontrolled" (few inhibitions) and "overcontrolled" (overly inhibited) types. Megargee then applied his findings to an additional sample to confirm his findings. Blackburn (1971) subsequently found the two-personality definition of violence to be over-simplified and Bottoms (1973) suggests that this was due to inadequate use of the grounded theory model.

Although "predictive classifications" have been developed for criminological purposes in determining parole success, violence potential, escape risk, etc., such typologies are really "artificially derived

classifications" which generally have more relevance to decision-making than to theory-building (Bottoms, 1973).

Another kind of typology has been derived from reformative treatment. Unlike the explanation of crime or the prediction of behavior, the treatment of offenders differs slightly in its primary assumption regarding classification. As Hood and Sparks (1970) state, "what is wanted for treatment purposes is a typology which separates offenders whose treatment needs are different; and such a typology may be utterly useless for explanatory purposes ...." It should be noted that the explanation of behavior is a peripheral rather than primary goal in the development of treatment classifications, although theory can evolve from such typologies.

Sparks (1968) states that treatment typologies (1) should be valid, i.e., should separate offenders whose treatment needs are different; (2) should be appropriate for the majority of offenders for whom the treatment choices may be applied; (3) should be as rich in types as possible, utilizing trial and error as the basis for demonstration; (4) should be easily and reliably identified; and (5) should be assessed for reliability. The requirements for explanatory typologies may differ somewhat since practical considerations are not of prime importance.

MODELS AND COMPETITION AMONG CRIMINAL CLASSIFICATIONS

Essentially, classification techniques are directed toward one of three concerns in criminology: causal-explanation, treatment, and prediction. Each of these concerns has a primary goal. Respectively, these are explanation-prevention, rehabilitation, and decision-making. Although these may appear to be mutually exclusive, it is more realistic to assume that there will be much overlap. For example, it is not uncommon to find a classification method designed to distinguish among potential delinquents applied as diagnostic and treatment aids in determining success in treatment (e.g., in the use of such instruments as the Jesness Scale and the Socialization Scale of the California Psychological Inventory).

According to Roebuck (1967), criminal typologies may be roughly divided into four camps, although there is certainly some overlapping among them: (1) the legalistic approach; (2) the physical-constitutional-hereditary approach; (3) the psychological-psychiatric approach; and (4) the sociological approach.

The legalistic approach holds that criminology is obligated to function from the base of statutory and judicial definitions of criminal acts. The criminal is

defined in terms of his intent and act, e.g., a robber is one who has been convicted of robbery. Legal classifications represent the earliest and most commonly used categories in dealing with the criminal offender.

The constitutional approach is derived largely from the study of heredity and disease. Various combinations of morphological, physiological, and mental characteristics are apparent in such typological attempts, e.g., physical trait deviation, physical trait inferiority, endocrine malfunction, somatotype and temperament, malstructure of nervous system, disharmonies of physical growth, unregulated bodily functions, epilepsy. Criminality is viewed as the result of indirect hereditary predisposition or the impact of environment upon defective or abnormal organisms.

The psychological-psychiatric approach holds that criminal typologies should be delineated in terms of different motivational patterns arising out of personality structure and various psychological states or disabilities. Explanations of delinquent and criminal behavior are derived from personality disorders and neurotic mechanisms by psychoanalysts, psychiatrists, and clinical psychologists. Trait disorders and neurotic mechanisms stem from mental conflicts and guilt reactions. The primary assumption is that criminals are

emotionally deficient in some way.

The sociological approach centers on a classification scheme that regards criminal behavior as a product of social interaction and culture. Crime is viewed as a social phenomenon; therefore, criminals must be classified in accordance with their social orientation and the values and cultural definitions of the social world in which they live. Sociologists' offender categories refer to role behavior in specific types of situations of more or less enduring response and not to types of personality organization. Historically, sociologists have been more interested in the relationships of the social characteristics of age, sex, race, nativity, social class, and ethnic subculture than in the construction of typologies (Roebuck, 1967).

All four of the preceding approaches share a common assumption. Regardless of typological approach, the criminal act per se is the initial focus of attention. The legal act has implications for the definition of "criminal constitution" and thus helps to distinguish habitual and occasional criminals from the populace at large. The latter three approaches often approximate the legal classification although their presumed intention is to extend the legal definition (Roebuck, 1967).

The foregoing does not assume that these approaches to classification are complementary; on the contrary, many criminal typologies are highly competitive. For example, behavioral scientists generally reject the legalistic approach because it inadequately considers human motivation, individual differences, group behavior, and social deviancy. The legalists counter that the behavioral scientist offers little more than a hodgepodge of conflicting theories. In many cases the legal approach seems to provide more clarity than behavioral classifications, although it may thereby neglect the relationship between "criminal" and "deviant" behavior. Further, the legalist may study only the adjudicated offender, which often restricts the generalizability of the classification.

The conflict, however, does not end with the basic disagreements between the behaviorists and legalists. Behaviorists disagree among themselves on many classification issues. Sociologists dismiss the biological determination of behavior while sociologists and psychologists both condemn the concept of hereditary predisposition. Sociologists claim that the psychological approach underestimates the importance of situational and cultural factors, while psychologists criticize the sociologist for his inability to explain and classify

crime as learned behavior. Others, most notably Martin and Fitzpatrick (1964), maintain that only an eclectic or interdisciplinary approach can do justice to the dynamics of criminal behavior, although the psychogenic-sociogenic rift complicates the construction of a more holistic typology.

A more critical controversy surrounding the development and application of criminal typologies is the question of whether classifications are justified at all. The dangers of stigmatization and labeling present problems that generally must be considered in any attempt to develop a criminal taxonomy. Szasz (1961) and Menninger, et al. (1963) criticize the presumed need to classify individuals in general. At issue here is the contention that science cannot presently generate enough data to adequately classify individuals. This criticism is partially unjustified; however, since classification generally precludes explanation, this disclaimer is not so much a comment on the method of deriving typologies as on their potential misuse. Of prime importance here is the premature application of classification before the approach in question has been validated in terms of accuracy or theoretical relevance.

In another attempt to define typological assignments, Grant (1961) describes six general approaches to classification: (1) Psychiatrically oriented approaches as exemplified by Jenkins and Hewitt, 1944; Erikson, 1950; Aichorn, 1935; Bloch and Flynn, 1956; Argyle, 1961; the Illinois State Training School for Boys Treatment Committee, 1953; the California Youth Authority Standard Nomenclature Committee, 1958; and Cormier, et al., 1959; (2) Social theory approaches as exemplified by Schrag, 1944; Sykes, 1958; and social class typologies as represented by Miller, 1959; (3) Behavioral, offense, or conformity-nonconformity studies as represented by Gibbons and Garrity, 1958; Ohlin, 1951; Reckless, 1950; and Lejins, 1954; (4) Social perception and interpersonal interaction studies such as those of Gough and Peterson, 1952; Peterson, Quay, and Cameron, 1959; and Sullivan, Grant, and Grant, 1956; (5) Cognitive understanding as summarized by Venezia, 1968; and (6) Empirically derived prediction-classification methods as exemplified by Mannheim and Wilkins, 1955; Gottfredson and Beverly, 1962; Glaser, 1962; Babst, et al., 1968; Gottfredson, et al., 1963; and Fildes and Gottfredson, 1972.

The approaches defined by Roebuck (1967) and Grant (1961) indicate the diversity of criminal typo-

logies although it remains unclear how much of this variety might be due to academic polarization. It is often suggested that more robust explanations or theories of human behavior might evolve if behaviorists would stop criticizing and learn to synthesize. This basic scientific issue is no less important to the formulation of multidisciplinary criminal typologies which, according to Roebuck (1967), has been discouraged because of criminologists who "...delight in the destruction of each other's theories." Cooperative research could lead not only to the pooling of findings but also to the development of new frames of reference.

Although plausible, such an optimistic fusion of schools of behaviorism will remain little more than an ideal vision unless the various forms of analysis that characterize each camp can be integrated. For example, some sociologists (e.g., Cohen, Ohlin, Parsons, Merton) posit stress-strain situations as determinants of delinquent behavior via subcultural memberships. On the other hand, psychologists are in a position to assess such hypotheses on the individual level and, therefore, to provide validating evidence of many sociological explanations (the same would be true for the societal or group validation of psychological explanations). The fusion of "macro"

and "micro" perspectives could improve the explanation and classification of offender types, but the degree to which behavioral disciplines can agree upon common constructs will ultimately determine the degree to which they can collaborate.

One attempt to demonstrate the communality among typologies was undertaken by Warren (1971), who developed a cross-classification of sixteen different offender typologies. This researcher noted considerable common ground and suggested a "synthetic" taxonomy of six subtypes: (1) asocial; (2) conformist; (3) anti-social manipulative; (4) neurotic; (5) subcultural identifier; and (6) situational. Although Warren concludes that this synthesis could culminate in a simplified taxonomy with almost immediately applicable significance, other authors have disagreed with this view. As Sparks (1968) had remarked earlier, "It is difficult to see why it should be thought desirable apart from an a priori belief--or a desperate hope--that this 'integration' will turn out to be useful for treatment purposes." Similarly, Bottoms (1973) states that like all typologies, Warren's common taxonomy, although innovative and ambitious, must await the sobering test of validation and the assessment of interaction effects (e.g., persons times settings).

In regard to classification (particularly treatment typologies), the issue of complexity is a difficult one. Palmer (1971) indicates that the treatment typology is complicated by at least four very broad interacting variables: type of program, type of treatment environment or setting, type of client, and type of staff worker. Sparks (1968) and King, et al. (1971) further admit that treatment typologies are at a "very primitive stage." Borjeson (1968) proposes a complex processual model that would make classification "more realistic."

CONCLUSION AND A CAUTIONARY REMARK

> "Sociologists continue to accuse psychological typologists of taking insufficient cognizance of environmental factors; psychologists continue to accuse sociological typologists of having insufficient regard for intra-psychic factors. Nevertheless, it is now possible to find investigators who are attempting to theoretically link the sociological, psychological, and situational variables which are all relevant to a completely satisfactory taxonomy."
>
> (Warren, 1971)

All classification schemes are not equally valuable for all purposes. Some have more direct treatment implications than others; some are more helpful in generating testable hypotheses, while others may facilitate various types of decision-making. Classification systems are needed for control, enunciation of probable etiology, and the demonstration of treatment effectiveness. All of these issues should be addressed, but not without an

awareness of their inherent complexity. The most important truth regarding classification can be expressed as a cautionary remark. The New Testament stresses the "uniqueness and worth of each human creature," which in turn is based upon the Judaic tradition of viewing man as a whole person. It is imperative to recognize that any classification will certainly fail to capture the individuality of man and may very well distort the wholeness of man. Unless we retain an awareness of this problem, the advantage gained through classification may not outweigh the loss to the individual.

III. CLASSIFICATION AND GROUNDED THEORY: THE SIGNIFICANCE OF THE PRESENT STUDY

The foregoing discussion has provided an introduction to several issues of classification in criminology. It is the purpose of this section to discuss more thoroughly those aspects of the previous narrative that are relevant to the description and interpretation of the data collected on the 4,146 male California Youth Authority wards who comprise the present study population. Two issues have significant methodological implications for the study of this data base: classification and grounded theory. Techniques of classification present a number of ways in which the data can be organized for analysis.

Grounded theory, on the other hand, provides several methodological techniques for the observation of descriptive data and the formulation or confirmation of hypotheses.

APPLIED ASPECTS OF CLASSIFICATION

Individual offenders may be classified on the basis of their criminal careers, criminal pattern categories (including *modi operandi*), and psychological and social characteristics. The present authors contend that classification can provide the means by which criminal behavior patterns can be linked to social and personal background factors. In this study parole outcome is the primary criterion of criminal behavior. Criminal behavior patterns must be studied in the individual case; however, in order to form useful classifications, it must be demonstrated that a sizable group of offenders who engage in the same type of crime share certain personality and social background factors.

The following dimensions are suggested by Roebuck (1967) as homogeneous units with respect to which offenders can be classified: (a) offense pattern; (b) *modi operandi;* (c) social attributes; (d) personality type; (e) self-concept; (f) attitudes; and (g) situations. Roebuck's dimensions are not generally similar to the

typological dimensions applied by the investigators in the present study. This study has subdivided the data into the following categories: (a) offense; (b) intelligence; (c) race; (d) alcohol and other drugs; (e) psychological and psychiatric factors; and (f) violence factors. It is apparent that these classifications cut across only three of Roebuck's dimensions -- offense, social attributes, and personality type -- although this research has certain implications for the other dimensions as well.

Roebuck identifies additional data elements considered essential for constructing homogeneous typologies. These include: (1) delinquent and/or criminal career; (2) family background; (3) developmental history in the family; (4) developmental history in the community; (5) reference group orientation and identification; (6) attitudes; (7) developmental history, physical; (8) developmental history, personal. Although the present study makes no attempt to approximate Roebuck's dimensions of classification, it is nevertheless important to specify those information areas that are emphasized in this study. The existing data base offers little in relation to family background, family and community developmental history, or offender attitudes. On the other hand, personal developmental information (intelligence test scores, personality profiles, infor-

mation on the offender's delinquent career, physical history, and reference group orientation) is relatively well represented. Like most general order variables derived from legal sources, the data base as it exists today does not achieve the depth of developmental understanding (e.g., family conflict information, family cohesion, parent attitude) that Roebuck defines as important to his "dimensional analysis," although such information is available to the project in narrative form from the cumulative case summaries.

Since the construction of any "ideal" typology is not presently feasible, the limits to classification in this study were defined by the data base. For example, the cumulative case summary, which provided 50 of the 195 variable items collected on the study population, does present some developmental information in the social evaluation by the caseworker. Difficulty arises, however, in the attempt to classify each offender on the basis of any defined developmental cue. Because of the variation in assessment procedures among caseworkers, no universal item of information is collected on all offenders. This inhibits the construction of a developmental typology based on behavioral indices.

Since behavioral and developmental information is generally lacking in most studies based on legal records, developing behavioral classifications beyond the legal

definition is difficult. This should not imply that information derived from legal sources is not of great importance, but rather that fewer behavioral classifications are possible.

To understand why the present classification dimensions were selected, one must consider an essential goal of this study. Rather than seeking to develop treatment, predictive, or etiological typologies, the investigators defined the research effort as an exploratory venture in which the primary goal was quantitative description and comparison.

An additional goal of the study was to generate comparative data that might ultimately lead to improving treatment and/or parole outcome. When application of study results is considered, it becomes important not only to define the investigators' definition of "exploration" but also to explain the method used to derive relationships. This will require that the assumptions and methodological techniques of grounded theory be considered.

APPLIED ASPECTS OF GROUNDED THEORY

Grounded theory, according to Glaser and Strauss (1968), may be defined as "... analyzing data and working outwards to generalize explanations through the systematic

or theoretical sampling of the data." This process is methodologically relevant to this study. The present investigators have assumed only that grounded theory can provide the methodological assumptions on which data comparison can proceed. Although theoretical formulation is generally an important goal of research, it is the methodological procedures of grounded theory that are of primary importance here. To attempt theoretical explanations would have been beyond the scope of this study. Glaser and Strauss (1968) view grounded theory as "...purposefully discovering theory through social research," which differs somewhat from the descriptive purpose of this study.

The theoretical contributions of this project are more in line with those of Merton (1949) who defines "serendipity" as the unanticipated, anomalous, and strategic finding giving rise to new hypotheses. It is the manner in which the present investigators have proceeded with this project's descriptive and comparative tasks that engenders a wealth of exploratory possibilities for the reader as well.

The comparative aspects of this project are important because of the general relations between categories that may emerge from the various forms of classification. For example, comparing groups of offenders classified

according to intelligence level (i.e., mental defective, borderline, dull normal, average, bright normal, superior, very superior) with their respective average success on parole can have further implications, providing the relationship between the two variables seems roughly linear.

The primary value of grounded theory to this study concerns the manner in which data are analyzed and relationships and potential hypotheses are noted. The cross-tabulation of any two variables can lead to the generation of hypotheses. As Glaser and Strauss (1968) remark, "When quantitative data are reported in verificational and descriptive studies, typically each association is given in table form with a technically exact discussion of it; and then the statement is qualified by tentative statements and alternative explanations or interpretations." Glaser and Strauss also note that the direction and magnitude of detected relationships are important to the further elaboration of the association, since the reader may then verify such a finding for himself. Many of these methodological procedures were integrated into this project, including proportions, frequencies, and comparative direction and magnitude, as well as methods of facilitating visual comparison.

Grounded theory also has important implications for

determining the statistical significance of relationships between any two variables. In this project the percentage deviation from the parole success rate of an overall offender population is the primary variable of comparison. Although percentage difference can suggest relationships, this method has its real limitations in accurately determining such associations. As our efforts are primarily descriptive, the application of statistical tests of significance was regarded as beyond the parameters of our study. As Glaser and Strauss (1968) state, "Statistical tests of signficance of an association between variables are not necessary when the discovered associations between indices are used for suggesting hypotheses.". This study could be defined also as a survey analysis and "...this process [tests of significance] should be relaxed for all survey analysis" (Selvin, 1957). Selvin also questions whether such tests are appropriate with survey data, since the statistical assumptions necessary to use them cannot be met with such data. To use percentage differences as the primary method of displaying associations was considered sufficient for the exploration of suggested relationships. This method of data presentation permits the development of hypotheses from the inspection of the data and thus fulfills one of the expectations of the project.

IV. A DISCUSSION OF CLASSIFICATION BY INTELLIGENCE FACTORS

THE NATURE OF INTELLIGENCE

The term "intelligence," as used by psychologists, is of fairly recent origin. Introduced as a technical term in psychology near the turn of the century, it has since filtered down into common parlance. However, precise definition of intelligence is difficult and there is no universal agreement on any single definition of the term.

Many psychologists have abandoned the attempt to give a formal definition of intelligence and offer instead a practical definition: "Intelligence is that which an intelligence test measures" (Goldenson, 1970). This operational stance allows intelligence to be defined in relation to its measurable properties as identified by the tests designed for its measurement. Some of the properties emphasized by intelligence tests are: (a) versatility or flexibility, (b) utilization of a variety of mental processes, (c) ability to learn, (d) application of learning and experience to the

solution of new problems.

Those who develop the tests indicate that intelligence is not a single entity, but a complex, multi-faceted set of abilities. Over sixty years ago Binet (1905) defined intelligence as the ability to maintain mental direction, ability to adapt means to ends, and the capacity for self-criticism or dissatisfaction with partial solutions. More recently, Wechsler (1966) defined intelligence as "...the aggregate capacity...to act purposefully, to think rationally, and to deal effectively with[the]environment." These definitions appear to do little to clarify the term's meaning. Nevertheless, as Hilgard and Atkinson (1967) point out, "Although the statement sounds empty it is not...All the tests constructed by psychologists distinguishing bright from dull show high intercorrelations...therefore they are measuring something in common. What they measure in common is intelligence." It becomes apparent that intelligence is no more definable than the "items" selected to measure various abilities. Among them are mathematical problems requiring numerical reasoning, vocabulary questions that test an understanding of words, perception items requiring accurate observation, as well as problems based on such mental processes as drawing analogies, abstract reasoning, and verbal comprehension.

There are two general approaches to identifying the mental activities most indicative of intelligence: the first emphasizes test items; the second focuses on the components or factors of intelligence. The first approach, utilized by Binet, assumes that the relationship between an individual's mental age and his chronological age provides a basis for calculating intelligence or I.Q. The second approach utilizes factor analysis to identify the components of intelligence. For example, Spearman (1904) and Thurstone (1938) identified unitary factors of intelligence as the basis for measuring mental ability.

Because human intelligence is a vast topic within the field of psychology, it would be inappropriate to attempt to review here the many theoretical issues and currents of thought in this area. Countless articles and large volumes have been written on the subject (e.g., Stoddard, 1943; Guilford, 1967). An enlightening brief account of the history of the concept has been presented by Burt (1968). Adequate description of most I.Q. testing instruments can be found in the Burroughs' Mental Measurement Yearbook series as well as Anastasi (1968) and Cronbach (1970).

Quite recently, considerable disagreement has arisen among psychologists over the issue of "herita-

bility" versus the environmental determination of intelligence. Some writers, such as Jensen (1969,1972, 1973), have indicated that genetic endowment is the major determinant of intelligence and the educability of "less intelligent" individuals has become a potentially volatile issue that could influence social policy.

INTELLIGENCE, CRIME AND DELINQUENCY

The relationship between intelligence and criminality has long been a favorite topic of researchers (Ferracuti, 1966). Many surveys suggest that delinquents tend to perform relatively poorly on I.Q. tests, although there are several limitations to this kind of comparative investigation (West and Farrington, 1973). Particularly with respect to studies comparing the intelligence of delinquents and nondelinquents, certain cautionary remarks should be made. The primary limitation of many I.Q. comparisons has been the lack of nondelinquent control groups. Usually, the test scores of delinquents are compared with the test norms, an approach that is valid only if the sample on which the norms are based is drawn from the same population as the delinquent group. Too often, delinquents are evaluated according to test norms derived from adolescents who are racially and culturally different. It has been shown, for example,

that test norms have often been based on samples with higher socioeconomic status than the general population (Richardson, et al., 1972).

For this reason, it is advisable to contrast the intelligence of delinquents with that of a properly comparable control group. The present review found that studies utilizing such control groups are relatively rare.

The applicability of the intelligence factor to the classification of youthful offenders is a complex issue. Previous research can be crudely defined as either "descriptive" or "inferential." The latter term refers to the study of intelligence as a causative factor in crime and delinquency. The descriptive element of the chapter will be divided into six subheadings: (1) Intelligence comparisons of delinquent and nondelinquent youth; (2) Intelligence comparisons of delinquent boys and delinquent girls; (3) Intelligence classification studies of delinquent youth; (4) Delinquency and mental retardation; (5) Delinquent intelligence and race; (6) Delinquent intelligence and multiple measurement. All studies and references identifying or discussing intelligence as a causative factor in delinquency will be summarized in the section on inferential studies.

DESCRIPTIVE STUDIES OF INTELLIGENCE FACTORS

1. Intelligence Comparisons of Delinquent and Nondelinquent Youth

Studies that seek to demonstrate the difference in intelligence between delinquent and nondelinquent groups are generally inconclusive. Although earlier studies sought to demonstrate some "global" difference in intelligence between these groups, later research has been more cautious in explaining not only the difference in intellectual functioning between groups, but the possible limitations of this kind of research.

One of the earliest comparisons of delinquent and nondelinquent groups was undertaken by Caldwell (1929), who compared the intelligence of a group of industrial school delinquents with that of a "normal" group. Results showed that 65 per cent of 408 delinquent boys and 78 per cent of 252 delinquent girls, compared with 11 per cent of the "normal" group, had I.Q.'s below 85.

Several years later Rogers and Austin (1934) compared the intelligence ratings of 3,584 juvenile delinquents (age 12 to 16 years) with the standardized frequency curve. Scores were obtained by using the Stanford-Binet Intelligence Test and the National Group Test of Intelligence. Although the frequency distribution was found to be similar to the normal distribution, the mean I.Q. was located at 82.2, some 20 points below

the normative mean.

Charles (1936) compared intelligence quotients of incarcerated delinquent boys and a group of St. Louis public school boys on the Kuhlmann-Anderson intelligence test. Public school boys between the ages of 12 and 16 were found to be of higher intelligence than boys of the same age in reform schools.

Similar comparative studies were completed during the next twenty-five years, although their frequency of appearance waned. It was not until the early 1960's that intelligence comparisons of delinquents and non-delinquents again received relatively widespread attention.

In a classic study, Prentice and Kelly (1963) reviewed the findings of twenty-one previous investigations in which the Wechsler Intelligence Scales were used to assess delinquent intelligence. The authors noted that in all of these studies the perceptual motor tasks (Performance scale) scores were in the normal range, while scores on verbal skills (Verbal scale) were in the high dull normal range. This consistent discrepancy led the authors to suggest that intelligence and delinquency be "reconsidered" to indicate that a low verbal score may be diagnostic of a learning disability rather than a pure measure of intelligence. This is

extremely important since Wechsler previously had assumed that a Performance score higher than a Verbal score was simply indicative of delinquency.

There is a good deal of interest in the hypothesis that delinquents have an average nonverbal I.Q. and a low verbal I.Q. The study by Prentice and Kelly confirms this hypothesis, although later studies by Naar (1965) and Henning and Levy (1967) are not wholly in agreement.

Murphy (1963) tested the hypothesis that female offenders tend to be below average in intelligence as compared with non-offenders. After compiling intelligence scores for all women in New York State treatment facilities, the author notes"...most of the scores on the Stanford-Binet and Wechsler intelligence tests fell into "average" and "low average" categories." Murphy concludes her study by indicating that the "subnormal" hypothesis may be false.

Camp (1966) compared the WISC scores of 139 acting-out and delinquent children (referred for psychiatric evaluation) with the WISC standardized population. Girls did not differ significantly from the standardized population, but a significantly larger proportion of the boys had performance scores greater than verbal scores.

Siegman (1966) found that the intelligence scores of 24 delinquents were correlated with their estimation of time intervals. Compared with a control group, delinquents also were less accurate in judging time intervals. The author states that lower intelligence in the delinquent group may account for this finding.

Another indication of a revised comparison of delinquent and nondelinquent intelligence is reported by Cowie, Cowie, and Slater (1968). Finding the mean intelligence of 318 delinquent girls to be below that of the general population, these authors noted that their low level of educational achievement might account for much of their "low intelligence."

In a study similar to that by Siegman (1966), Barabasz (1969) found that delinquents between the ages of 14 and 17 were more time-constricted when telling stories. This finding was inversely related to intelligence for both delinquent and control groups.

After reviewing previous research findings, Cavan (1969) reports that delinquents and nondelinquents share the same distributions of intelligence. The most noteworthy difference was found to be sociocultural and not characteristic of individual delinquents.

Reporting a similar finding, Smith, Fenton, and Hammacher (1969) found that the intelligence scores of

a group of 15-year old delinquents (on the Revised Beta Examination) were comparable to the performance of the standardization group.

Gibson and West (1970) compared the intelligence scores of delinquent and nondelinquent boys derived prior to the commitment of first offenses. A group of boys convicted of crimes before the age of 16 were compared with other boys on intelligence tests given to all of these boys at the age of eight. Those who subsequently became delinquents were found to have substantially lower I.Q.'s than the other boys.

In a rare study utilizing a proper control group, Wolfgang, et al., (1972) surveyed nearly 10,000 boys born in 1945 who lived in Philadelphia at least between their tenth and eighteenth birthdays. They discovered that delinquents had a lower verbal intelligence than non-delinquents of the same race and socioeconomic status, although the differences were only three to four points.

Although far from exhausting the topic of comparative intelligence, the studies summarized here provide a brief overview of research in this area. The inconclusive nature of many findings indicates that the intelligence of the delinquent individual is either far from a unitary phenomenon or that it is a complex research issue often clouded by inadequate study design.

2. Intelligence Comparisons of Delinquent Boys and Girls

Studies comparing the intellectual abilities of delinquent boys and delinquent girls are somewhat less common, although the mean intelligence is often presented separately for each sex. Indeed, it is not generally agreed whether sex should be a distinguishing factor in the study of delinquent intelligence. Many studies simply combine male and female delinquent samples when comparing their intelligence scores to the standardized norms or a control study sample, while others provide comparisons of delinquent intelligence by sex. The most striking characteristic of these comparative studies has been the general lack of sound sampling methods and the tendency to ignore important confounding or extraneous variables when making comparisons.

One of the earliest comparisons of male and female delinquent intelligence was undertaken by McClure (1933), who compared the Stanford-Binet I.Q.'s of boys and girls. For a population of 600 delinquents, the author noted that the mean I.Q. of the group was 79.34 with a range of 40 to 118. The average I.Q. of the boys was slightly less than three points higher than that of the girls.

Mann and Mann (1939a) studied the intelligence of 1,731 juvenile delinquents (mean age 14.5 years). The mean I.Q. for the total group was 84.45 and two-thirds

of the group were boys. The authors found no sex differences of statistical significance with respect to mean age, variability of age, mean I.Q., variability of I.Q., and percentages of various I.Q. levels. The only difference noted was a slight increase in I.Q. with age for the boys that did not appear with the girls.

Richardson and Surko (1956) compared the WISC intelligence scores of 15 girls and boys. No significant differences were found between boys and girls, although the Verbal mean I.Q. (87) and the Performance I.Q. (92) of the total group differed significantly from the standardization group. These authors also noted that young delinquents score lowest in reading and arithmetic and suggested that "these young delinquents have less handicaps in intellectual ability than in its use in the school situation."

In a study of 426 delinquent youth (321 boys and 105 girls), Posselt (1968) found that the average I.Q. for boys was 95.8, while the average for girls was 93.8. Again, the most significant finding was that the performance of the total group on basic subject areas was significantly lower than that of the standardization group.

During a study previously mentioned, Camp (1966) found that the proportion of boys with higher Performance

than Verbal scores on WISC was greater than that for girls. Girls did not differ significantly from the standardization population, while boys showed significantly greater Verbal-Performance discrepancies.

In conclusion, it should be noted that many of these comparative studies suffered from the limitations noted in the previous section, i.e., insufficient consideration given to related variables and a lack of sound sampling methods. It remains uncertain whether the inconclusiveness of the findings is due to faulty study design or to the complexity of the phenomenon itself.

3. Intelligence Classification Studies of Delinquent Youth

Up to this point only the most simple study designs have been reviewed, usually consisting of comparisons of central tendencies on a single intelligence variable. This section reviews a number of studies that compare delinquents with each other, a control group, or a standardized distribution on more than a single measure of intelligence.

In one of the earlier studies of intelligence and classification, McCaulley (1925) found that 42 per cent of 100 delinquent boys fell into either the feeble-minded or borderline groups. However, this author notes that the distinction between individuals in regard to intelli-

gence is not a major obstacle to improvement.

In a study of the relationship between delinquent intelligence and school adjustment, Mercer (1930) examined the cases of 85 delinquent boys. In only 12 cases was school adjustment satisfactory. The remaining cases were either truant or underachievers. The author notes that only one-fourth of the group had I.Q.'s above 90.

White and Fenton (1931) compared 117 delinquent boys with I.Q.'s greater than 95 and 160 boys with I.Q.'s lower than 95. These authors arrived at the following conclusions: "(1) The brighter boys come from home environments at least as unfavorable as the homes of the duller boys. (2) Companionship in both groups is about equal. (3) Forgery is the only type of offense that shows a significant relationship with high intelligence."

In a similar study, Ruggles (1932) compared the intelligence, mechanical ability, and early home training of 103 boys between the ages of 16 and 22. It was concluded: (1) that the boys studied were significantly below average in intelligence and mechanical ability; (2) that crimes requiring mechanical ability were committed by boys ranking highest on the mechanical ability test; (3) that the baser sex crimes were perpetrated by the feeble-minded; and (4) that broken and unhappy homes seemed closely associated with criminal behavior.

In a review of a number of previous studies, Lane and Witty (1935) note that low mental status and delinquency tend to be associated; however, they also point out that the average I.Q. of a population of 700 delinquent boys was not lower than that of nondelinquents when the groups were matched for racial and socioeconomic factors. The authors found that recidivists and nonrecidivists do not differ in intelligence and that offenders from unbroken homes tend to average slightly higher in intelligence than offenders from broken homes. Correlations between I.Q. and age at first arrest, age at first commitment, number of convictions, and "seriousness" of offense were found to be insignificant.

Following the application of the Army Alpha intelligence test to 1,285 young male offenders, Hill (1936) found that, while the group scored predominantly in the dull normal range, there was no relationship between these scores and age of commitment or severity of crime. White offenders and frequent recidivists were found to be more intelligent and a substantial relationship was noted between low intelligence and retardation in school.

In a later study, Caplan and Powell (1964) compared 100 delinquents of average I.Q. with 100 delinquents of superior I.Q. on personal characteristics, school behavior,

delinquency, and family background. Important between-group differences were obtained on a number of items, some of which traditionally have been found to distinguish between delinquent and nondelinquent samples. The authors suggest that the relationship between intelligence and delinquent behavior cannot be expressed as a single fixed value, but only as a multiple consideration.

Shapiro (1968) emphasizes the point that there is no qualitative difference between delinquents of high intelligence and those of low intelligence. This author also contends that there is no relationship between type of offense and level of intelligence, but that type of offense can be attributed to a number of highly interrelated etiological factors, such as maturity level, organic factors, neurotic mechanisms, and social factors.

In a similar undertaking, Gath, Gavin,and Pidduck (1971) compared the criminal characteristics of 50 delinquent boys of superior intelligence with 50 delinquent boys of average intelligence. The two groups were found to be similar in number of prior convictions and type and distribution of offense, although more boys of superior intelligence committed offenses that seemed to be psychologically determined.

These studies should not be viewed as representative of research undertaken to identify the correlates of

delinquent intelligence. They are meant only to provide examples of the types of study that have been completed.

4. Delinquency and Mental Retardation

Special attention should be given to the mentally retarded offender. It has been suggested that, compared to offenders of normal intelligence, the mentally retarded are more easily apprehended and convicted of crimes, confined in penal institutions for longer periods of time, and likely to have had less education (Allen, 1968; Doleschal, 1970; Giagiari, 1971).

The purpose of this section is to review selected aspects of the retarded delinquent, his definition, intelligence, several of his characteristics, and the types of crimes he is likely to commit.

Calhoon (1928) followed up 100 intellectually normal and 100 retarded delinquent boys. It was found that the retarded boys more frequently came from broken homes and their parents were more frequently foreign-born. The offenses committed by the dull group were much less serious than those of the normal group. The number of court appearances, months incarcerated, and total monetary cost of crimes committed were also less for the retarded group.

Applying the Wechsler-Bellevue Intelligence Tests to 109 delinquents, Durea and Taylor (1948) found that the

median scores on all parts of the tests (except the non-verbal section) fall into the mentally retarded level. The authors note that the findings on the mental level of this delinquent group are consistent with the results of other studies and indicate that their intelligence scores may be related to poor socioeconomic conditions. On the nonverbal scale of the instrument, which is least affected by socioeconomic factors, the median I.Q. falls within the class interval for average intelligence.

In an extensive review of more than thirty previous studies, Cooper (1960) concludes that the relationship between delinquency and "mental inferiority" is indeed real. The author concludes: "Delinquency tends on the whole to be much more common among the feeble-minded than among people in general...mental deficiency is likely to be more prevalent among delinquents...and the educational status of offenders is inferior to that of the general population."

Blackhurst (1968) studied the relationship between I.Q. of retarded offenders and types of crimes committed by the subnormal offender. Few differences were noted when the retarded group was compared to a normal offender group.

Brown, Courtless, and Silber (1970) drew a sample of 56 retarded (I.Q. less than 70) offenders from six

prisons. Comparison of the retarded inmate group with normal inmates found that the former group was older, less educated, and serving longer sentences than the non-retarded group. Administration of the Thematic Apperception Test to the retarded subjects indicated that the retarded person may not understand the results of his aggressive actions.

Brown and Courtless (1967) found that a higher proportion of retarded persons commit crimes against the person, including a high percentage of homicide in the I.Q. group below 55. On the Wolfgang-Sellin scale of offense severity, those in the retarded group tended to cluster at the "serious" end of the scale. The most frequent offense for the mentally deficient was criminal homicide.

Similar findings are noted by Calkins (1967), who indicates that sexual offenses are also common among retarded offenders. Gary (1968) found that certain sex offenses--exhibitionism, homosexuality, and molesting young children--are predominant among older retarded male delinquents.

Boslow (1965) found that urban and rural areas both supplied large proportions of retarded offenders and the single largest group of retarded offenders consisted of urban Negroes.

In a survey of juvenile institutions Vaughn (1970) found that the extent of mental retardation among inmate populations ranged from 10 per cent to 33 per cent.

Bhagat and Fraser (1971) sought to determine the relationship between the low intelligence of retarded offenders and their social perception. The results of their study indicate that retarded offenders are less able to experience affection.

5. Delinquent Intelligence and Race

The relationship between race and intelligence has become a highly controversial issue. Numerous studies have attempted to compare the relative intelligence levels of white, black, and Mexican-American delinquents.

Smith, Fenton, and Hammacher (1969) found that a sample of Negro youths performed as well as the standardization group on the Revised Beta Examination. These authors note that the small group of youths tested might have influenced the representativeness of the study sample.

Levi and Seborg (1971) sought to obtain the verbal and nonverbal intelligence scores of 200 white, 68 black, and 67 Mexican women inmates. All subjects were administered the Raven Test and the California Achievement Tests. Black and Mexican subjects performed much better on the nonverbal tests than the verbal tests; however, both

groups received significantly lower scores than whites on both verbal and nonverbal tests. The authors conclude that both verbal and nonverbal tests still may be culturally loaded, even though the nonverbal instrument emphasizes patterns and structures.

Rozynko and Wenk (1965) conducted three independent studies to investigate intellectual test differences among delinquent white, Negro and Mexican-American California Youth Authority wards. These studies were carried out in the setting that provided the information for the present study. Subjects were selected randomly from a pool of 984 inmates.

The first study contained 78 subjects in each of three subgroups, while the second and third studies contained 60 in each subgroup. All subgroups were matched for age. The three samples contained a total of 534 subjects, with the mean age of 19.24 years. Educational level varied among the groups, with the white group scoring higher than either the Negro or Mexican-American group on grade-rated achievement tests (white = 8.45; Negro = 6.69; Mexican-American = 6.87; $F = 11.65$, $p < .01$). Standard instructions were used in test administration. Analyses of variance and t tests were used to identify differences.

On the California Test of Mental Maturity (CTMM) in

all three studies, the white group scored highest, the Negro group, lowest. The Mexican-American group equalled the Negro group on the language portion of the test and tended to occupy an intermediate position between the Negro and white groups on the nonverbal portions of the test. All differences were significant at the .01 level.

On the General Aptitude Test Battery (GATB), the Negro group tended to score consistently low on both verbal and nonverbal tests, while the whites scored consistently high. The Mexican-Americans occupied an intermediate position on the nonverbal tests but were as low as the Negroes on the verbal tests. Only four of the 27 analyses of variance were not significant, four were significant at the .05 level, and the rest obtained probabilities of less than .01.

Initial hypotheses regarding the Mexican-American group were borne out. This group performed most poorly when performance depended on either language ability or knowledge of material taught in school, while they performed best on non-academic subjects. The Negro group tended to score lower than the white group on all tests and lower than the Mexican-American group on nonverbal tests. Test differences between the white and Mexican-American groups paralleled differences in educational

level. However, differences in educational level cannot explain the poorer performance of Negroes on the nonverbal tests, especially when compared with the Mexican-American group, since the two groups do not differ in school achievement. The authors conclude that these unexpected results suggest inadequate motivation to be extremely important in determining the Negro inmate's test performance.

In a later study of the effects of motivation on test performance, Wenk, et al. (1971) could not improve the test performance of Negro subjects by using monetary incentives. In conclusion, the authors question the fairness of some of the testing procedures carried out in institutional settings, pointing out that most tests are conceived, developed, and standardized within limited cultural frameworks and, regardless of attempts to eliminate bias, are inherently unfair to members of minority cultural groups. It is suggested that re-standardization for particular groups may prove inadequate as a corrective measure and it may be necessary to develop totally new tests that are appropriate to the culture in which they are to be used.

Until culture-fair testing is achieved, the results of cross-ethnic intelligence testing must be cautiously interpreted. And until the importance of differential

cultural conditioning of racial groups is recognized, an instrument that enables interracial comparisons of intelligence will continue to evade our grasp.

6. Delinquent Intelligence and Multiple Measurement

Multiple measurement of delinquent intelligence began early in this century. Charles (1933) found that the intelligence quotients obtained on the Kuhlmann-Anderson and Binet-Simon for a group of 62 delinquent boys were similar, although scores on the Otis group test tended to average 10 points higher. In an attempt to locate other measures of delinquent ability, Laslett and Manning (1934) correlated intelligence scores of the Otis Self-Administering Test with the Murray inventory and the Laslett Test of Delinquent Tendencies. Correlations indicated that neither measures mental ability. Moore (1937) gave the Otis Self-Administering Test and the Myers (nonverbal) mental measure to groups of delinquent and dependent boys. Results indicated that both of these tests measure intelligence. Embree (1938) administered the Illinois General Intelligence Scale (group test) and the Stanford-Binet to 102 delinquent boys. The two tests were found to correlate .905. In an attempt to measure changes in I.Q. over ten years time, Mann and Mann (1939b) gave Form L of the Stanford-Binet

to 428 delinquents. Follow-up testing later indicated that the total mean change in I.Q. was less than one point.

Weider, Levi and Risch (1943) gave the Wechsler-Bellevue Intelligence Scale and Form L of the Stanford-Binet to 61 delinquents. While both instruments classified the group mean score in the dull normal range, it was found that low scorers score higher on the Bellevue Scale while the reverse is true for high scorers. Needleman, Leakerman, and Kelner (1967) found high positive correlation between scores on the Wechsler Adult Intelligence Scale (WAIS) and the Revised Beta Examination. Levy (1968) found that while the Revised Beta was a valid test of mental retardation in delinquents, the Otis Intermediate Form B yields unrealistically high retardation scores. To determine whether the Satz-Mogel WAIS short-form is a valid measure of inmate intelligence, Masser and Arnette (1968) correlated it with the regular form of the WAIS. The resulting high correlations indicate that the shortened version can be used for diagnostic purposes. Carney and Kartgin (1971) found high correlations between the Slosson Intelligence Test and the WAIS, indicating that the Slosson test could be used with criminal populations.

INFERENTIAL STUDIES RELATED TO INTELLIGENCE FACTORS

1. Intelligence as a Cause of Delinquency

Considering the limitations of research design and statistics, the demonstration of causality continues to be a major problem in the behavioral sciences. The study of intelligence as a cause of delinquency is no exception, since the bulk of evidence in this area has been forced to approximate "informed opinion." The following narrative is meant to provide a sample of various informed opinions without seeking to determine the relative merits and weaknesses of each.

As early as the 1930's, Steinbach (1934) studied the backgrounds of 37 low-scoring delinquents on the Stanford-Binet examination. Subjects' socioeconomic backgrounds and "biological and temperamental equipment" were examined. The author concludes that "the problem of juvenile delinquency is provoked by a number of causative factors... of which intellectual deficiency receives disproportionate attention."

After reviewing several studies, Williams (1940) concluded that since there is insufficient information and hypotheses are inadequate, no causal relationship between delinquency and low intelligence can be demonstrated. Williams states: "A more reasonable interpretation of the results from most data is that groups of low intelligence simply show a higher incidence of delinquency."

Wheway (1958) reviewed a number of studies in an attempt to identify a "causal chain" that might explain delinquency. The studies reviewed suggested that low intelligence is rarely if ever a primary causative factor in delinquency. This author states that the poor showing of delinquents on intelligence tests can be explained by the inappropriateness of the tests and by the delinquents' lower social status, poor health, and emotional instability.

Following a survey of studies researching the relationship between low intelligence and delinquency, Woodward (1955) concludes that "low intelligence plays little or no part in delinquency."

Allen (1968) suggests that the higher incidence of mental retardation detected in prisons may be explained by the fact that inmates are usually from lower socio-economic classes. Mental retardation and crime may be more significantly related to environmental factors than to each other.

In an attempt to specify the causes of delinquency, Shapiro (1968) notes that disturbances found in the maladapted delinquent do not depend on intelligence and that etiological factors are highly intertwined. The author identifies these factors as immaturity, organicity, neurotic mechanisms, and social factors.

Although a group of delinquent girls was diagnosed as having lower intelligence than the general population, Cowie, Cowie, and Slater (1968) point out that these same girls were educationally deprived. Symptoms noted were psychiatric abnormalities, recurrent depression, and personality deviations. The authors conclude that disturbance of the home life is a major cause of delinquent behavior.

Rhodes and Reiss (1969) view juvenile delinquency largely as a reaction to the social frustrations accompanying school failure and suggest that intellectual ineptitude may be the "initiator" of juvenile delinquency.

Cavan (1969) contends that delinquents and nondelinquents share the same distributions of intelligence, personality types, and characteristics. The author states: "If delinquency seems to be predominant in certain groups or areas, it is most likely that it is because the socio-cultural pressures are uniform in these groups and areas."

In a major review of theories of delinquency, Rosenquist and Megargee (1969) indicate that environmental variables seem to be the most plausible etiological factors. The authors conclude from the analysis of the literature that, while defective intelligence may be important in individual cases, it cannot be regarded as

CONTINUED

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a necessary or sufficient explanation of delinquency.

Hirschi (1969) examined the effects on behavior of the school experience and the personal attachments of youth to school. This author found a causal chain linking academic incompetence to poor school performance to dislike of school to the rejection of school authority to the commission of delinquent acts. It is concluded that a lack of intellectual skills is a general forerunner of delinquency.

A review of the literature on delinquency and intelligence leads Giagiari (1971) to note, "the belief that low intelligence is a cause of crime and delinquency is unsupported by research...Mental deficiency is a complicating factor in, rather than a direct cause of delinquency,...retardation and delinquency itself are frequently the results of deprivation."

West and Farrington (1973) conclude their study by noting: "Opinions differ about the extent to which school failure is predetermined by innate ineptitude or by acquired aversion to the scholastic approach. However that may be, I.Q. measures are, almost by definition, highly predictive of school performance. Hence, one would expect low I.Q. to be an important precursor of juvenile delinquency."

In summary, it cannot be determined whether intelli-

gence is part of Hirschi's (1969) "causal chain," a factor in Giagiari's (1971) complication pattern, or the "precursor" of which West and Farrington (1973) speak. The relationship between intelligence and delinquency will continue to receive multiple interpretations and the issue will continue to be debated at least for the foreseeable future.

PART TWO

STATISTICAL DESCRIPTION OF THE INTELLIGENCE CLASSIFICATION SUBGROUPS

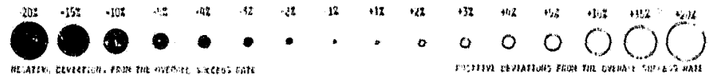
V. TECHNIQUES OF DATA DESCRIPTION AND ANALYSIS

Part Two of this volume presents the statistical information on the Intelligence Classification Subgroups contained in the computer print-outs described and exhibited in Volume 1. In contrast to Volume 1, which presents data on the total study population, Volume 2 gives comparative data on seven intelligence groups classified according to Wechsler (1958). The comparative tables give frequencies, percentages (%) for each frequency in regard to the proportion of the particular subgroup the cell contains, and the per cent success (%S) of the particular part of the study population represented in the cell. The use of percentage differences as the primary method of displaying associations was considered sufficient for the exploration of relationships. This method of data presentation could lead to the development of hypotheses, thus fulfilling one of the expectations of the project. The purpose of this section is to describe the format for the presentation of data and the methodology by which relationships are noted and discussed throughout the reports of

the project.

Of great descriptive importance is the criterion of parole success, which is the primary variable for comparisons between and among classification subgroups. The following technique was developed to present classification data and their relationships to parole success or failure.

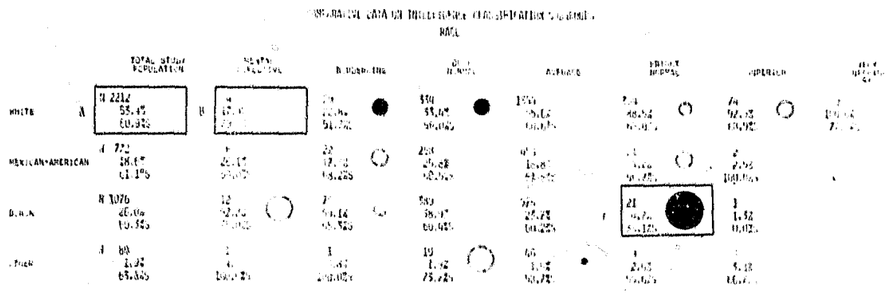
The relationship between the category of any variable item and parole success will be expressed by a symbol denoting deviation from the overall average success rate. Included with most per cent success (%S) figures of any population subgroup will be a circular figure designed to express graphically both magnitude and direction of the deviation from the overall parole success rate of 60.9 per cent for the 4,146 youthful offenders followed on parole over a 15-month period. This procedure is quite in accordance with the suggestion of Glaser and Strauss. The symbols depicted in the figure below will be used throughout most reports of this project.



As noted, solid circles will symbolize parole success rates <u>below</u> the overall success rate of 60.9 per cent, while empty circles will denote success rates <u>above</u> the overall rate. The magnitude or size of each circle will approximate the percentage point deviation from the overall success rate.

Before turning to an exemplary table demonstrating the process by which a relationship between one or two independent variables and the dependent variable (parole outcome) can be detected, several other tabular guides should be discussed.

The table below is an actual summary table extracted from this volume, in which the seven Wechsler intelligence classification categories are presented on the horizontal axis and the second variable of interest (in this case, race) is presented on the vertical axis. In addition to the specific classification categories discussed in each volume and presented on the horizontal axis, each standard set of comparative tables contains, in the first column, the data on the total study population as a point of reference. To permit a clearer view of the comparative data on the specific classification categories discussed, this first column does not contain the circular symbols.



Reference Point A has been selected to provide explanation of data results for the cross-classification of two variable items (in this case, the number of the total study population who are Caucasian). From top to bottom within A, the first figure refers to the total number of cases falling within that category, while the second figure indicates the percentage of that category within this column. The third figure reports the percentage of the subgroup that was successful on parole (%S) 15 months after release. The difference between this figure and the total success rate is often figuratively displayed, using circular symbols, although not every category contains a symbol of parole success deviation. When no symbol is displayed in the comparative tables, it is usually for one of three reasons: (1) The deviation symbol has been provided elsewhere, (for example,

total study population data are presented in Volume 1: Background of the Study and Statistical Description of the Total Study Population). (2) There are too few cases (fewer than 10) in the category to justify use of the symbol. (3) There is no appreciable deviation (less than 1 per cent) from the overall parole success rate. As exemplified in Reference point B, when ten or fewer cases are reported in any category there will be no accompanying symbol. In those cases where a sizable deviation symbol is found, the frequency (N) of that subgroup should be noted. Reference point C identifies a case in which, upon initial scanning, there appears to be a sizable negative deviation from the overall success rate. However, the figurative display must be interpreted cautiously since the category in question contains only 21 cases. When deviations of substantial magnitude occur and the N is small, the importance of the information should be weighed with the frequency in mind.

An actual table from this volume has been selected to provide an example of how a relationship between one or two variables and the criterion of parole success can be noted. The table below shows the relationships among the seven Wechsler intelligence classi-

fications (horizontal axis), total amount of work experience (vertical axis), and parole success for the study population.

COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS AND WORK EXPERIENCE

	TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NONE	N 459 11.5% 58.8%	1 5.0% 100.0%	15 12.1% 46.7%	108 11.2% 52.8%	278 11.8% 59.7%	47 10.9% 68.1%	6 8.0% 83.3%	
0 - 6 MONTHS	N 1466 36.7% 59.3%	10 50.0% 50.0%	34 31.5% 53.8%	311 32.4% 57.6%	890 37.7% 59.7%	171 39.1% 57.3%	34 45.3% 79.4%	4 40.4% 100.0%
6 - 12 MONTHS	N 725 18.1% 65.2%	2 10.0% 100.0%	27 21.6% 74.1%	190 19.8% 66.3%	398 16.9% 64.3%	88 20.5% 69.3%	13 17.3% 46.2%	3 33.3% 33.3%
12 - 18 MONTHS	N 314 7.9% 59.9%		7 5.6% 71.4%	76 7.9% 59.2%	191 8.1% 57.6%	33 7.7% 66.7%	6 8.0% 83.3%	1 11.1% 100.0%
18 - 24 MONTHS	N 138 3.5% 63.8%	1 5.0% 100.0%	4 3.2% 50.0%	26 2.7% 65.4%	91 3.9% 61.5%	13 3.0% 76.9%	3 4.0% 66.7%	
24 MONTHS AND OVER	N 433 10.6% 66.3%	4 20.0% 75.0%	15 12.1% 80.0%	121 12.6% 62.8%	259 10.8% 65.7%	50 7.0% 70.0%	7 9.3% 85.7%	1 11.1% 100.0%

Recalling that solid circles denote parole outcome below the overall success rate while empty circles symbolize deviations above the total success rate, several one- and two-variable relationships can be noted. Within the borderline and dull normal intelligence subgroups there appears to be some relationship with work experience. Scanning these two subgroups vertically indicates that parole success improves with amount of work experience. This association also seems to imply

that the transition from negative to positive deviation from the overall success rate takes place between the zero-to-six-months category and the six-to-twelve-months category. This relationship apparently diminishes for the average and bright normal groups, although some degree of association is still found.

Another interesting relationship is the interaction among length of work experience, intelligence classification, and parole outcome. For example, for offenders with work experience of six months or less there seems to be a relationship between parole success and intelligence. It appears that as intelligence increases for these experience groups so does the percentage of parole success. It is apparent from this table that persons who are handicapped in both employment history and intelligence have a relatively high recidivism rate.

As Glaser and Strauss suggest, figurative display allows the reader to verify findings for himself while noting proportions, N's, comparative direction of relationships, and magnitude of deviations. However, few explanations of relationships will be offered in the project reports. The extensiveness of the data derived from this project prevents "in-depth" discussion of either the direction or the extraneous implications of

a noted relationship. It is simply unknown whether any noted relationship is causal (e.g., work experience causing improved parole success, intelligence causing parole success) or whether other variables of importance are involved. More precise verification of correlational procedures and inferential techniques is required before directionality can be determined from these data.

The relevance of the findings to rehabilitation and treatment is also uncertain. Until the etiological aspects of the data can be sorted out, no conclusive statement can be made regarding either the explanation or the treatment of criminal behavior.

An ability to scrutinize the data is of primary importance to the extraction of relationships among variables.* "The reader must have a perspective that will help him see relevant data and abstract significant categories from his examination of the data" (Glaser and Strauss, 1968). Grounded theory provides the basis for systematic data analysis, but the reader should be aware of the possibilities of extracting additional relationships. The table below suggests how a table can be scrutinized not only for the dominant implications of parole success deviation figures but also for simple

* The data map for Volume 2, containing Tables 1-55 exclusively, presents the findings on intelligence in a more concentrated form. This data map can be obtained separately.

proportional relationships between two independent variables. This table presents intelligence classification groups along the horizontal axis and individual violence in the admission offense along the vertical axis.

COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
INDIVIDUAL VIOLENCE IN ADMISSION OFFENSE

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NONE	N	2900	15	97	685	1704	335	56	6
		72.5%	75.0%	70.2%	71.2%	72.2%	77.9%	74.7%	66.7%
		58.5%	66.7%	59.8%	56.2%	58.7%	60.9%	66.1%	66.7%
THREAT NO WEAPON	N	122	1	4	35	72	8	2	
		3.1%	5.0%	3.2%	3.6%	3.1%	1.9%	2.7%	
		63.9%	100.0%	100.0%	54.3%	63.9%	75.0%	100.0%	
THREAT WITH WEAPON	N	304	2	16	76	162	36	9	1
		7.6%	10.0%	12.9%	7.9%	6.9%	8.4%	12.0%	11.1%
		71.1%	100.0%	56.3%	65.8%	72.2%	77.8%	88.9%	100.0%
MINOR INJURIES	N	393		9	103	250	23	2	
		9.8%		7.3%	11.2%	10.6%	5.3%	2.7%	
		68.2%		66.7%	69.4%	67.2%	73.9%	100.0%	
MAJOR INJURIES	N	107		3	25	64	12	1	
		2.7%		2.4%	2.6%	2.7%	2.8%	1.3%	
		68.2%		100.0%	72.0%	67.2%	58.3%	0.0%	
DEATH	N	36			9	23	5	2	1
		0.9%			0.4%	1.0%	1.2%	2.7%	11.1%
		72.2%			75.0%	69.6%	80.0%	100.0%	100.0%

Ignoring for a moment the figures of parole success deviation, it is interesting to note the distribution of violence in the admission offense for each intelligence subgroup. In the average intelligence group, for example, 72 per cent did not threaten or actually commit a violent act, 3 per cent threatened their victim, 7 per cent threatened their victim with a weapon, etc. It can also be seen that these proportions are generally similar across all intelligence groups.

Another proportional analysis that can be applied to this table is not as straightforward since no

percentage figures are provided in the tables. This analysis consists of a comparison of the distribution of intelligence groups for each violent category. These percentage figures have been inserted for demonstration purposes as numbers outside each category. For example, the "none" distribution indicates that of those who did not threaten or commit a violent act, 3 per cent were of borderline intelligence, 23 per cent were of dull normal intelligence, 59 per cent were of average intelligence, and 12 per cent were of bright normal intelligence. Comparisons across all violent groups reveal that these proportions are relatively constant, indicating that individuals of average intelligence account for 54 to 64 per cent of violent behavior within all violent categories. The insertion of percentage figures should imply that: (1) the tabular display of data is not exhaustive, in that certain additional relationships must be extracted by computation; and (2) the number of possible relationships is usually more extensive than the typical table can present. Manipulating the descriptive data may help to derive additional relationships that might otherwise remain hidden.

In addition to the comparative proportional relationships of the independent variables in the table above, brief mention should be made of the dependent

variable of parole success. Since success deviation from the overall success rate remains the primary variable of comparison, this table should also be analyzed on the basis of this criterion. Within the entire range of deviation figures, the most noteworthy finding seems to be a "clustering" of parole success deviations. It appears that CYA wards of below average intelligence, who used no threat or threat without actual violence, generally have a below average success rate. On the other hand, wards with average or above average intelligence, who used a more serious threat or actual violence in their admission offense, display parole success rates above that of the total group. This "clustering" effect could be due to any of a number of reasons, the determination of which must await further investigation.

In examining the data presented in these project reports, it should be remembered that the findings are partially limited by the priorities of data assessment selected by the project investigators. Considering the primary goals of this project, parole success is the most important variable of comparison and grounded theory provides the methodological basis for ordering the data derived from the process of cross-classification. This does not presume, however, that

other kinds of proportional analysis are not possible with the same data. The present investigators have provided several examples of how the data are assessed throughout the reports of this project as well as examples of how the data can be independently analyzed. Undoubtedly, there are methods of tabular analysis that go beyond the methodological techniques of grounded theory and that might glean many other interpretations from the data presented in the tables and figures of the various project reports.

It is therefore appropriate to present this study as both a report and a challenge. Considering the extensiveness of the data base, the examination of alternate techniques of analysis will be most important to its optimal use.

VI. INTRODUCTION TO THE DATA PRESENTATION

Before proceeding with the presentation of data, some issues particularly relevant to this volume should be discussed. The first issue concerns cultural factors that may influence test performance, while the second concerns the testing procedure as it relates to early identification of persons who appear to function at a mentally defective level.

During the period when data for the present study were collected, the authors collaborated with several other researchers in the investigation of intelligence factors. The studies (Rozynko and Wenk, 1965; and Wenk et al., 1971), which are briefly discussed in Part One of this volume and reprinted in Appendix A and B, were designed to clarify the differences among ethnic groups in performance on intelligence and aptitude tests. Because the test results obtained at the Reception Guidance Center were used in program and placement decisions, the "culture-fairness" of the testing program was of great concern. In addition, the effect of the test proctor on test results was of interest to the researchers.

The study reported by Wenk et al. examined the effects of incentives upon the aptitude performances of white and Negro wards of the California Youth Authority. The hypothesis that an effective incentive (material reward) would operate to narrow the gap between white and Negro performances was not upheld. The failure of Negro wards to improve their relative position under the conditions of material reward led the researchers to speculate that, while some other type of incentive might be more effective in closing the performance gap, it is also possible that the tests are inherently unfair to minority group members regardless of the steps taken to reduce this bias. It was concluded that, if this is the case, restandardization for particular groups may prove an inadequate corrective as totally new tests--appropriate to members of the culture in which they are to be used--would be required (Wenk, et al., 1971).

The study reported by Rozynko and Wenk was based on data collected on three consecutive samples of white, Mexican-American, and black CYA wards. The first sample consisted of 78 individuals in each ethnic group. The second and third samples consisted of 50 individuals in each ethnic group. All of the Mexican-American admissions were included in the samples, while blacks and whites were eliminated in a random fashion to equalize the number of subjects in each group. Tests for all

three samples were administered by a trained inmate proctor. The proctor was a Caucasian graduate student from the University of California in Berkeley; he was intellectually superior, matter-of-fact, well organized, and authoritarian. Soon after testing for these three samples was completed he was replaced by a black proctor, a former Army officer who was intelligent, well organized, warm, supportive, and generally concerned about anyone with whom he came in contact. He communicated his human qualities to his classes and seemed to receive much cooperation from the CYA wards, despite the fact that he was considerably older than they were.

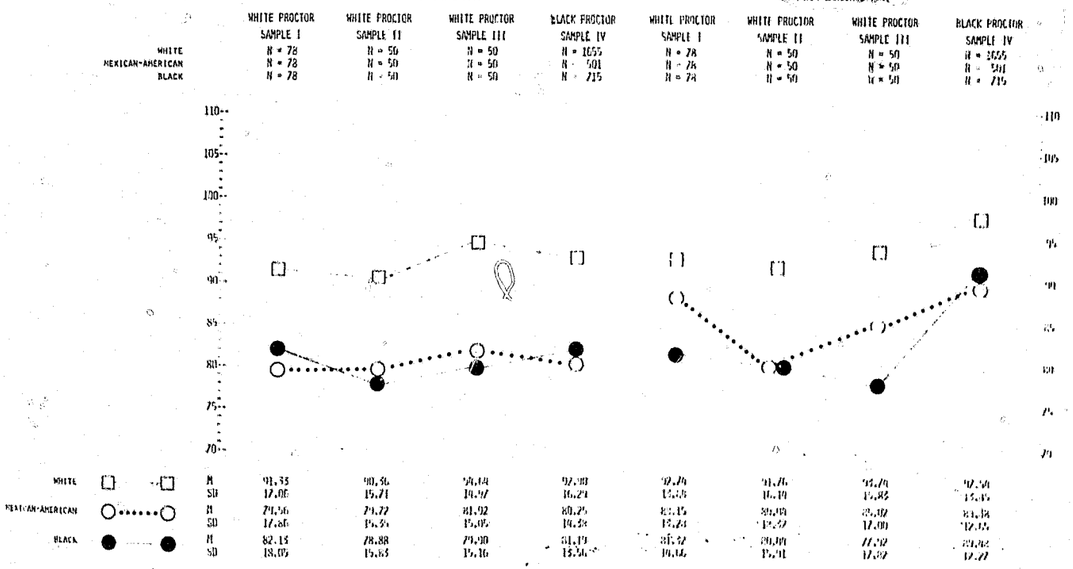


FIGURE 1
CTMM RESULTS OF FOUR SAMPLES OF CYA WARDS SHOWING DIFFERENCES OCCURRING WITH WHITE AND BLACK TEST PROCTORS

Figure 1 gives the results on the California Test of Mental Maturity (CTMM) for the three small consecutive samples tested by the white test proctor and the large sample tested over a period of 15 months by the black proctor. The black proctor appeared to be successful in motivating almost everyone to give their best test performance. The results are presented separately for the language portion and the non-language portion of the CTMM. As can be seen, the results on the language portion are minimally affected. Motivation does not significantly affect test results if needed language skills are not present. On the non-language portion, however, some interesting changes occur. Test scores for all three ethnic groups improve with the black proctor, but they improve most dramatically for the black CYA wards. This rather drastic gain for blacks on test performance appears to have two sources: (1) Together with the other two groups, blacks are affected by an improved social climate that generally enhances test performance, particularly in tests that do not rely heavily on formal academic skills. (2) Blacks appear to receive an additional boost from the presence of the black proctor who provided them with a desirable model with which they could identify. Although not derived from the formal studies carried out at the Diagnostic Center, this observation is felt to be important to any discussion of the

test data presented in this volume. Both the effect of the test proctor and the culture-fairness of the tests should be considered in examining the data of the present study.

Figure 2 presents examples of drawings on the Tree test by mentally defective wards. This test, along with a short diagnostic vocabulary test, was given at the beginning of the week-long testing program. The drawings

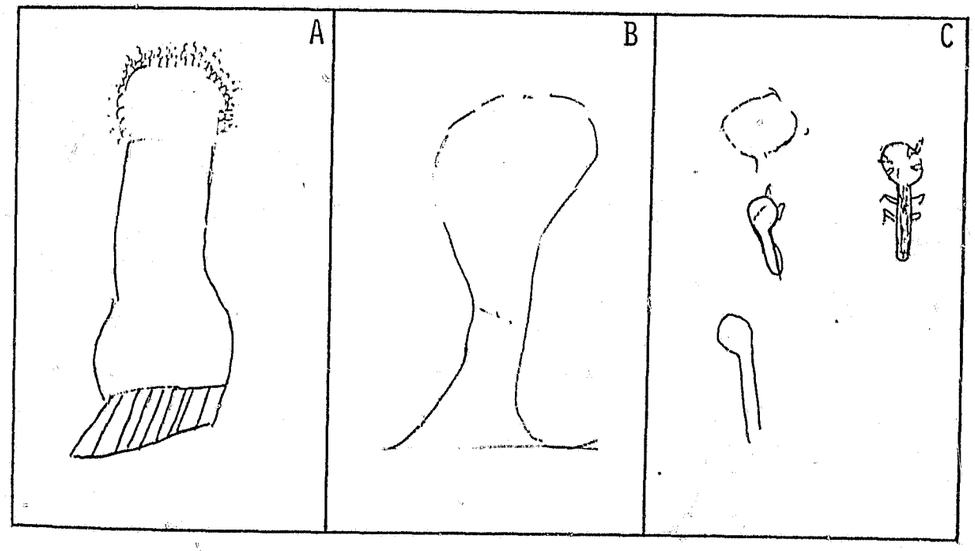


FIGURE 2

SAMPLES OF DRAWINGS BY MENTAL DEFECTIVE CYA WARDS ON THE TREE TEST

give immediate evidence of possible retardataion. The trees shown in A and B of Figure 2 are reduced in size to one-third while the trees shown in C are reduced to one-half. The Tree test was used as a screening device; follow-up interviews and individual testing were carried out on a selective basis. Early diagnosis was felt to be important because of the potential vulnerability of retarded individuals within a delinquent population where victimization of any handicapped person was a daily possibility. This procedure assisted staff in protecting certain individuals and in preventing possible victimization.

The remainder of this volume presents the comparative tables that provide all the data in compact form. The tables are supplemented by figures that present some of the findings in graphic form and by a brief discussion of the statistics. The data map for Volume 2, containing Tables 1-55 exclusively, presents the findings on intelligence in a more concentrated form.*

VII. INDIVIDUAL CASE HISTORY INFORMATION

Table 1 presents a breakdown by commitment court for the seven intelligence classifications. While juvenile court commitments have a generally low success rate, this is particularly true for wards who are of

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* This data map can be obtained separately.

average or bright normal intelligence. In contrast, juvenile court commitments who are of dull normal intelligence show average performance on parole.

1 COMMITMENT COURT

TABLE 1
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
COMMITMENT COURT

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
JUVENILE COURT	N	345	4	14	76	205	35	8	
		8.3%	17.4%	11.0%	7.6%	8.4%	7.9%	10.0%	
		51.6%S	75.0%S	57.1%S	60.5%S	48.8%S	42.9%S	75.0%S	
SUPERIOR COURT	N	3339	19	104	802	1963	361	63	9
		80.7%	82.6%	81.9%	80.3%	80.6%	81.3%	76.8%	100.0%
		62.2%S	68.4%S	62.5%S	59.6%S	62.4%S	65.7%S	71.4%S	77.8%S
MUNICIPAL COURT	N	438		9	120	253	47	9	
		10.6%		7.1%	12.0%	10.0%	10.6%	11.3%	
		58.0%S		77.8%S	55.0%S	58.1%S	61.7%S	44.4%S	
JUSTICE COURT	N	18			1	15	1		
		0.4%			0.1%	0.6%	0.2%		
		55.6%S			0.0%S	53.3%S	100.0%S		

Among superior court commitments, a slightly older group, the parole success rates for the bright normal and superior groups are substantially higher.

2 ADMISSION STATUS

TABLE 2
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
ADMISSION STATUS

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
FIRST ADMISSION	N	2470	11	77	569	1460	280	54	1
		60.5%	47.8%	62.1%	58.2%	60.6%	65.1%	70.1%	27.8%
		67.0%S	81.8%S	71.4%S	62.7%S	67.5%S	74.0%S	70.2%S	69.2%S
FIRST RETURN	N	800	5	26	189	468	92	12	
		19.6%	21.7%	21.0%	19.3%	19.4%	21.4%	14.4%	
		54.9%S	60.0%S	50.0%S	57.1%S	53.8%S	56.5%S	83.3%	
2ND AND MORE RETURNS	N	732	6	21	200	429	61	4	1
		17.9%	26.1%	16.9%	20.4%	17.8%	13.9%	11.1%	22.2%
		47.0%S	50.0%S	47.6%S	51.0%S	46.2%S	42.0%S	55.3%	50.0%
RE-ADMISSION AFTER DISCHARGE FROM CYA	N	83	1		20	50	5	5	
		2.0%	4.3%		2.0%	2.2%	1.1%	5.7%	
		57.8%S	100.0%S		55.0%S	55.6%S	80.0%S	16.7%S	

Table 2 presents data on admission status. As expected, the parole success rate for first admissions

is markedly higher, except that among the dull normal group only slightly higher success is evident for first admissions. Progressively worse success rates are found for first returns and for persons with more than three admissions to the CYA.

3 RACE

TABLE 3
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
RACE

	TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
WHITE	N 2212 55.4% 60.9%S	4 17.4% 75.0%S	29 22.8% 52.7%S	334 33.4% 56.0%S	1354 55.6% 60.6%S	394 88.5% 65.0%S	74 92.5% 68.9%S	9 100.0% 77.8%S
MEXICAN-AMERICAN	N 772 18.6% 61.1%S	6 26.1% 50.0%S	22 17.3% 68.2%S	258 25.8% 60.5%S	458 18.8% 61.6%S	21 4.7% 66.7%S	2 2.5% 100.0%S	
BLACK	N 1076 26.0% 60.3%S	12 52.2% 75.0%S	75 59.1% 65.3%S	389 38.9% 60.4%S	576 23.7% 60.2%S	21 4.7% 38.1%S	1 1.3% 0.0%S	
OTHER	N 80 1.9% 63.8%S	1 4.3% 100.0%S	1 0.8% 100.0%S	19 1.9% 73.7%S	46 1.9% 58.7%S	9 2.0% 55.6%S	3 3.8% 66.7%S	

Table 3 shows the breakdown of the data into ethnic groups. Wards of average intelligence do not show any differences among the ethnic groups. Only a small difference is found within the dull normal groups in which white wards show a somewhat lower parole success rate than the other ethnic groups. Interesting differences are found within the borderline and bright normal groups in which Mexican-Americans do somewhat better than average in both groups while whites and blacks show a different pattern. Whites of bright normal intelligence do relatively well on parole while blacks of bright-normal intelligence do relatively poorly. This pattern is reversed for individuals of borderline and dull normal

4 AGE, TIME IN INSTITUTION, WEIGHT, AND HEIGHT

TABLE 4
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
AGE, TIME IN INSTITUTION, WEIGHT, AND HEIGHT

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
AGE AT ADMISSION	N	4134	23	127	998	2429	446	80	9
	M	19.44	19.52	19.41	19.45	19.41	19.54	19.67	19.67
	SD	0.94	0.80	0.94	0.97	0.91	1.03	0.92	0.87
AGE AT RELEASE	N	4057	22	125	981	2389	430	80	9
	M	20.24	20.27	20.17	20.25	20.22	20.32	20.40	20.34
	SD	0.99	1.07	1.01	1.01	0.97	1.07	0.92	0.96
TIME IN INSTITUTION	N	4138	23	127	999	2433	444	81	9
	M	9.23	8.39	8.47	9.28	9.34	8.93	8.23	8.67
	SD	4.77	6.13	4.88	4.80	4.71	4.92	4.08	3.99
WEIGHT	N	4131	23	127	998	2429	442	81	9
	M	149.67	144.26	147.91	148.16	149.59	153.40	156.60	159.33
	SD	20.64	17.65	19.92	20.78	20.57	20.01	22.79	15.56
HEIGHT	N	4133	23	127	998	2430	443	81	9
	M	68.33	68.26	68.19	67.90	68.33	69.16	69.57	68.11
	SD	2.85	2.75	3.09	2.89	2.77	2.86	3.15	2.09

intelligence: whites do poorly and the performance of blacks is either average or better than average.

Table 4 presents information on the age of the study population and time spent in the institution as well as data on weight and height. As can be seen, the differences between the groups on these factors are rather small. It should be noted that age is expressed in years, while time in institution is expressed in months.

The marital status of the wards is depicted in Table 5. Over 80 per cent of the wards are single and their recidivism rate closely resembles the rates for the intelligence classification groups regardless of marital status. Married individuals show a slightly higher success rate.

5 MARITAL STATUS

TABLE 5
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
MARITAL STATUS

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
SINGLE	N	3277	15	107	802	1919	353	58	9
		81.9%	75.0%	86.3%	83.4%	81.3%	81.9%	77.3%	100.0%
		61.0%S	66.7%S	63.6%S	58.6%S	61.0%S	64.3%S	72.4%S	77.8%S
MARRIED	N	387	2	9	94	227	42	10	
		9.7%	10.0%	7.3%	9.8%	9.6%	9.7%	13.3%	
		63.3%S	50.0%S	33.3%S	64.9%S	63.0%S	66.7%S	70.0%S	
DIVORCED	N	55			5	37	11	1	
		1.4%			0.5%	1.6%	2.6%	1.3%	
		56.4%S			80.0%S	59.5%S	36.4%S	100.0%S	
DIVORCED, REMARRIED	N	18			3	13	1	1	
		0.5%			0.3%	0.6%	0.2%	1.3%	
		33.3%S			33.3%S	38.5%S	0.0%S	0.0%S	
SEPARATED	N	112	1	3	23	68	12	5	
		2.8%	5.0%	2.4%	2.4%	2.9%	2.8%	6.7%	
		66.1%S	100.0%S	66.7%S	73.9%S	60.3%S	75.0%S	80.0%S	
COMMON-LAW	N	128	2	3	27	68	11		
		3.2%	10.0%	2.4%	2.8%	3.6%	2.6%		
		57.8%S	100.0%S	66.7%S	55.6%S	50.3%S	54.5%S		
WIDOWED	N	2			1	1			
		0.1%			0.1%	0.0%			
		50.0%S			100.0%S	0.0%S			

From Table 6 it is evident that, for wards classified as dull normal, responsibility for children is related to somewhat better parole performance; for wards of

6 CHILDREN ACKNOWLEDGED

TABLE 6
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CHILDREN ACKNOWLEDGED

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NONE	N	3321	17	103	785	1953	372	66	9
		83.0%	85.0%	85.1%	81.6%	82.8%	86.3%	88.0%	100.0%
		61.2%S	70.8%S	60.2%S	58.7%S	61.2%S	64.0%S	72.7%S	77.8%S
ONE	N	516	2	15	135	306	47	8	
		12.9%	10.0%	12.1%	14.0%	13.0%S	10.9%	10.7%	
		60.5%S	50.0%S	66.7%S	63.0%S	58.8%S	63.8%S	62.5%S	
TWO	N	127		4	31	82	9	1	
		3.2%		3.2%	3.2%	3.5%	2.1%	1.3%	
		64.6%S		75.0%S	64.5%S	64.6%S	55.6%S	100.0%S	
THREE	N	28	1	1	10	15	1		
		0.7%	5.0%	0.8%	1.0%	0.6%	0.2%		
		64.3%S	100.0%S	100.0%S	70.0%S	53.3%S	100.0%S		
FOUR AND MORE	N	8		1	1	4	2		
		0.2%		0.8%	0.1%	0.2%	0.5%		
		62.5%S		100.0%S	100.0%S	50.0%S	50.0%S		

average intelligence, responsibility for one child is related to slightly lower success.

7 LIVING ARRANGEMENTS

TABLE 7
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
LIVING ARRANGEMENTS

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
WIFE/GIRL FRIEND	N	349	3	7	78	222	26	9	1
		8.7%	15.0%	5.7%	8.1%	9.4%	6.0%	12.0%	11.1%
		60.5%	100.0%	28.6%	66.7%	57.7%	66.4%	66.7%	100.0%
NATURAL PARENTS	N	1185	10	40	295	719	103	18	
		29.6%	50.0%	32.5%	30.7%	30.5%	23.9%	18.7%	
		61.8%	50.0%	67.5%	64.7%	60.8%	69.3%	64.3%	
RELATIVES	N	298	1	11	67	150	17	2	
		6.2%	5.0%	8.9%	7.0%	6.4%	3.9%	2.7%	
		62.9%	100.0%	72.7%	67.2%	59.3%	60.7%	100.0%	
FOSTER PARENTS	N	76		1	18	43	13		
		1.9%		0.8%	1.9%	1.8%	3.0%		
		50.0%		0.0%	61.1%	44.2%	53.8%		
FRIENDS, FIXED	N	134		4	22	71	27	8	2
		3.4%		3.3%	2.3%	3.0%	6.3%	10.7%	22.2%
		67.9%		75.0%	59.1%	70.4%	63.0%	75.0%	100.0%
ALONE, FIXED	N	144		5	32	74	28	2	
		3.6%		4.1%	3.3%	3.1%	6.5%	2.7%	
		64.6%		80.0%	45.8%	67.6%	82.1%	100.0%	
ALONE, NOT FIXED	N	207	1	3	30	137	32	4	
		5.2%	5.0%	2.4%	3.1%	5.8%	7.4%	5.3%	
		57.0%	0.0%	66.7%	50.0%	56.2%	68.8%	50.0%	
GROUP HOME	N	17			3	11	3		
		0.4%			0.3%	0.5%	0.7%		
		47.1%			33.3%	45.6%	0.0%		

Table 7 presents information on living arrangements maintained by wards prior to institutionalization. Wards of borderline and dull normal intelligence who had lived with parents or other relatives performed better than average on parole. Persons of dull normal intelligence who lived alone, either fixed (stable) or not fixed (frequent moves), performed poorly on parole, as did wards of average intelligence who lived with foster parents or alone, not fixed.

Tables 8 and 9 give data on the marital status of

parents and whether or not the parents were deceased when the admission offense was committed. The most striking result is found for the dull normal groups (Table 8). Dull normal wards whose parents were married at the time the admission offense was committed are more successful on parole than are wards whose parents were separated at that time.

8 MARITAL STATUS OF PARENTS

TABLE 8
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
MARITAL STATUS OF PARENTS

		Total Study Population	Mental Defective	Borderline	Dull Normal	Average	Bright Normal	Superior	Very Superior
Never Married	N	214 5.4% 61.72%S	2 10.0% 100.0%S	9 7.3% 66.72%S	45 [illegible] 56.44%S	155 5.7% 63.0[illegible]%S	13 3.0% 61.54%S		
Married	N	1631 40.8% 62.92%S	9 45.0% 66.72%S	40 32.3% 65.02%S	575 41.5% 65.32%S	[illegible] 40.8% 61.52%S	165 33.5% 62.42%S	45 60.0% 75.64%S	2 22.2% [illegible]
Divorced	N	50 0.8% 66.72%S	1 5.0% 100.0%S		9 0.9% 55.64%S	18 0.8% 72.2[illegible]%S	2 0.5% 50.0%S		
Divorced, Remarried	N	345 8.6% 61.72%S	2 10.0% 100.0%S	13 10.5% 53.82%S	122 12.7% 57.82%S	174 7.6% 62.6[illegible]%S	27 6.3% 65.0%S	2 2.7% 100.0%S	
Separated	N	1263 31.6% 61.22%S	6 30.0% 50.0%S	37 29.8% 64.92%S	[illegible] 27.1% 56.5[illegible]%S	725 32.0% 61.4[illegible]%S	155 36.0% 64.54%S	22 27.5% 59.12%S	4 44.4% 100.0%S
Common-Law	N	8 0.2% 62.52%S			5 0.5% 66.72%S	4 0.2% 50.0%S	1 0.2% 100.0%S		
Widowed	N	3 0.1% 33.33%S				3 0.1% 33.3[illegible]%S			

Table 9 shows that the dull normal group also seems to be more affected by the death of one or both parents than are the other groups. The data show a slight decrease in parole success for dull normal wards who lost one or both parents through death.

9 DEATH OF PARENTS

TABLE 9
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
DEATH OF PARENTS

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
FATHER DEAD	N	498	2	9	108	306	64	8	1
		12.0%	8.7%	7.1%	10.8%	12.6%	14.1%	.9%	11.1%
		61.0%	100.0%	55.6%	56.5%	62.4%	61.9%	87.5%	100.0%
MOTHER DEAD	N	193		7	59	113	10	2	1
		4.7%		5.5%	5.9%	4.6%	2.2%	2.5%	11.1%
		62.7%		71.4%	57.6%	62.8%	60.0%	100.0%	100.0%
BOTH DEAD	N	64		5	24	26	6	2	
		1.5%		3.9%	2.4%	1.1%	1.3%	2.5%	
		56.3%		80.0%	54.2%	53.8%	50.0%	100.0%	
BOTH LIVING	N	3391	21	106	809	1932	367	69	7
		81.8%	91.3%	85.5%	80.9%	81.7%	82.3%	89.2%	77.8%
		60.8%	66.7%	62.3%	59.8%	60.6%	63.8%	63.8%	71.4%

Military history appears to have a generally positive impact on parole performance that is not negated by disciplinary actions incurred while in the service or by dishonorable discharge (Tables 10 and 11).

10 MILITARY DISCIPLINARY ACTION

TABLE 10
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
MILITARY DISCIPLINARY ACTION

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
YES	N	301			11	205	72	12	
		7.5%			1.1%	8.7%	16.7%	16.0%	
		65.1%			55.0%	64.9%	70.6%	85.7%	
NO	N	167	1	1	18	111	29	2	
		4.2%	5.0%	0.8%	1.9%	4.7%	6.7%	9.1%	
		68.9%	0.0%	0.0%	44.4%	66.5%	86.2%	85.7%	
NO SERVICE	N	3506	19	123	928	2051	329	55	9
		87.7%	95.0%	99.2%	96.5%	86.1%	76.2%	75.3%	100.0%
		60.5%	73.7%	62.6%	59.9%	60.2%	61.1%	70.9%	77.8%

11 MILITARY DISCHARGE

TABLE 11
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
MILITARY DISCHARGE

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
HONORABLE	N	109		1	13	72	16	2	
		2.6%		0.8%	1.4%	3.1%	3.7%	2.7%	
		57.7%S		0.0%S	46.2%S	56.9%S	68.8%S	100.0%S	
GENERAL, HONORABLE CONDITIONS	N	109			7	74	21	2	
		2.6%			0.7%	3.1%	4.9%	2.7%	
		54.8%S			28.6%S	54.1%S	66.7%S	50.0%S	
DISHONORABLE, ETC.	N	117	1		4	77	27	8	
		2.9%	5.0%		0.4%	3.3%	6.3%	10.7%	
		70.1%S	0.0%S		75.0%S	71.4%S	70.4%S	62.5%S	
MEDICAL	N	25			1	20	4		
		0.6%			0.1%	0.8%	0.9%		
		76.0%S			0.0%S	80.0%S	75.0%S		
OTHER	N	59			4	33	17	4	
		1.5%			0.4%	1.4%	3.9%	5.3%	
		72.9%S			75.0%S	72.7%S	70.6%S	75.0%S	

Tables 12 through 17 present data related to various clinical problems. Tables 12, 13 and 14 provide information on alcohol, drug misuse, and the use of opiates. There are two kinds of information presented in these tables: (1) a rating of the severity of the particular clinical problem; and (2) information on the relationship of the problem to the present admission offense or to past offenses.

The first three columns of Table 12 show the severity of the alcohol problem. Moderate alcohol misuse implies an alcohol problem that periodically affects the ward's social functioning. These individuals have one or more arrests involving drinking, or they were dismissed from work for reasons involving alcohol use, or they have

12 HISTORY OF ALCOHOL MISUSE

TABLE 12
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
HISTORY OF ALCOHOL MISUSE

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NO HISTORY OF ALCOHOL MISUSE	N	2278	11	70	533	1327	270	46	6
		59.9%	47.8%	55.1%	53.3%	54.5%	60.5%	56.8%	66.7%
		60.8%S	63.6%S	58.6%S	59.5%S	61.0%S	62.6%S	69.5%S	66.7%S
MODERATE ALCOHOL MISUSE	N	1144	6	36	305	748	116	27	2
		30.0%	26.1%	28.3%	30.5%	30.7%	26.0%	33.3%	22.2%
		62.1%S	83.3%S	75.0%S	61.3%S	60.3%S	69.0%S	70.4%S	100.0%S
SEVERE ALCOHOL MISUSE	N	624	6	21	162	362	60	8	1
		15.1%	26.1%	16.5%	16.2%	14.9%	13.5%	9.9%	11.1%
		58.5%S	66.7%S	57.1%S	54.3%S	60.5%S	58.3%S	50.0%S	100.0%S
ALCOHOL NO FACTOR IN CRIME	N	2555	14	83	608	1487	283	57	6
		61.6%	60.9%	65.4%	60.8%	61.0%	65.5%	70.4%	66.7%
		60.9%S	71.4%S	63.9%S	60.7%S	60.3%S	62.9%S	70.2%S	66.7%S
ALCOHOL FACTOR IN ADMISSION OFFENSE	N	1024	6	29	252	625	93	14	1
		24.7%	26.1%	22.8%	25.2%	25.6%	20.9%	17.3%	11.1%
		62.1%S	50.0%S	69.0%S	57.5%S	63.7%S	63.4%S	57.1%S	100.0%S
ALCOHOL FACTOR IN PAST OFFENSES ONLY	N	567	3	15	140	325	70	10	2
		13.7%	13.0%	11.8%	14.0%	13.3%	15.7%	12.3%	22.2%
		58.4%S	100.0%S	46.7%S	55.7%S	57.2%S	61.9%S	70.0%S	100.0%S

experienced occasional frictions in their immediate social environment because of drinking. Thirty per cent of the study population were identified by caseworkers as having a moderate alcohol problem. This rate does not fluctuate appreciably among the various intelligence groups. The recidivism rates of persons with a moderate alcohol problem are either average or above average.

The picture is somewhat different for the approximately 15 per cent of the total study population who were rated as having a severe alcohol problem. Wards in this category were found to have drinking problems that seriously affected their social functioning and were identified by caseworkers as alcoholic or in immediate

danger of becoming alcoholic. Wards of borderline and dull normal intelligence with severe drinking problems were particularly less successful on parole. Bright normal individuals were also less successful on parole, although to a lesser degree.

The relationship between parole outcome and alcohol-related criminal behavior is somewhat different, particularly with respect to the admission offense. In this classification parole success rates are slightly higher except for the dull normal group which shows a consistent tendency to perform more poorly. Parole success rates of wards who showed evidence of alcohol

13 HISTORY OF DRUG MISUSE

TABLE 13
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
HISTORY OF DRUG MISUSE

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NO HISTORY OF DRUG MISUSE	N	3488	19	111	857	2042	371	69	5
		84.1%	82.6%	87.4%	85.7%	83.8%	83.2%	79.0%	55.6%
		61.9%S	73.7%S	64.0%S	60.7%S	61.9%S	63.1%S	64.1%S	80.0%S
ISOLATED DRUG MISUSE	N	263	2	4	58	162	26	7	3
		6.3%	8.7%	3.1%	5.8%	6.6%	5.8%	8.6%	33.3%
		59.3%S	50.0%S	75.0%S	56.9%S	57.4%S	69.2%S	85.7%S	66.7%S
MODERATE MISUSE	N	337	2	11	74	197	41	9	1
		8.1%	8.7%	8.7%	7.4%	8.1%	9.2%	11.1%	11.1%
		53.4%S	50.0%S	45.5%S	44.6%S	53.3%S	68.3%S	77.8%S	100.0%S
SEVERE DRUG MISUSE	N	58	0	1	11	36	8	1	
		1.4%		0.8%	1.1%	1.5%	1.8%	1.2%	
		50.0%S		100.0%S	54.5%S	47.2%S	50.0%S	100.0%S	
DRUGS NO FACTOR IN CRIME	N	3788	20	116	925	2227	401	69	9
		91.4%	87.0%	91.3%	92.5%	91.4%	89.5%	85.2%	100.0%
		61.2%S	75.0%S	62.9%S	59.9%S	61.1%S	65.3%S	66.7%S	77.8%S
DRUGS FACTOR IN ADMISSION OFFENSE	N	209	3	6	41	123	28	7	
		5.0%	13.0%	4.7%	4.1%	5.0%	6.3%	8.6%	
		57.4%S	33.3%S	83.3%S	56.1%S	55.3%S	57.1%S	100.0%S	
DRUGS FACTOR IN PAST OFFENSES ONLY	N	149		5	34	87	17	5	
		3.6%		3.9%	3.4%	3.6%	3.8%	6.2%	
		57.0%S		40.0%S	44.1%S	59.8%S	82.4%S	40.0%S	

problems in previous crimes are also considerably lower except for persons of bright normal or superior intelligence.

While alcohol seems to have some impact on parole outcome, the effects of drug misuse appear more pronounced. This is particularly noticeable in the category of moderate drug misuse. Included in these groups are persons with a history of using stimulant drugs (e.g., cocaine, amphetamines) and/or depressant drugs (e.g., barbiturates.) Users of opiates, marijuana, alcohol, and glue were excluded from this rating and coded separately.

The percentage of persons using drugs, and particularly the percentage of persons in whose case drug misuse is part of the admission offense, increases noticeably as intelligence increases. Parole success rates drop considerably for all persons illegally involved with drugs, even for those who have only experimented with drugs on one or two occasions. An exception to this pattern is found for the bright normal group, who function relatively well on parole despite drug misuse. Wards for whom drug misuse was part of the offense history also are poorer parole risks, but the tendency is less pronounced.

14 HISTORY OF OPIATE USE

TABLE 14
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
HISTORY OF OPIATE USE

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NO HISTORY OF OPIATE USE	N	3971	22	124	958	2335	427	75	9
		95.8%	95.7%	97.6%	95.8%	95.8%	95.7%	92.6%	100.0%
		61.4%S	72.7%S	63.7%S	59.5%S	61.5%S	63.7%S	66.7%S	77.8%S
ISOLATED OPIATE USE	N	43	1	1	8	25	6	2	
		1.0%	4.3%	0.8%	0.8%	1.0%	1.3%	2.5%	
		62.8%S	0.0%S	100.0%S	75.0%S	56.0%S	66.7%S	100.0%S	
MODERATE OPIATE USE	N	102		1	28	58	11	3	
		2.5%		0.8%	2.8%	2.4%	2.5%	3.7%	
		42.2%S		0.0%S	46.4%S	37.9%S	54.5%S	66.7%S	
SEVERE OPIATE USE	N	30		1	6	19	2	1	
		0.7%		0.8%	0.6%	0.8%	0.4%	1.2%	
		43.3%S		0.0%S	50.0%S	36.8%S	100.0%S	100.0%S	
OPIATES NO FACTOR IN ADMISSION OFFENSE	N	4046	23	126	973	2382	433	78	9
		97.6%	100.0%	99.2%	97.3%	97.7%	97.1%	96.3%	100.0%
		61.3%S	69.6%S	65.5%S	59.6%S	61.3%S	64.0%S	67.9%S	77.8%S
OPIATES FACTOR IN ADMISSION OFFENSE	N	73		1	18	45	7	1	
		1.8%		0.8%	1.8%	1.8%	1.6%	1.2%	
		42.5%S		0.0%S	55.6%S	33.3%S	71.4%S	100.0%S	
OPIATES FACTOR IN PAST OFFENSES ONLY	N	27			9	10	6	2	
		0.7%			0.9%	0.4%	1.3%	2.5%	
		37.0%S			22.2%S	50.0%S	33.3%S	50.0%S	

Table 14 presents data indicating that opiate use, a relatively rare occurrence among this study population, quite dramatically increases the risk of failure on parole.

15 HISTORY OF MARIJUANA AND GLUESNIFFING

TABLE 15
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
HISTORY OF MARIJUANA AND GLUESNIFFING

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NO HISTORY OF USE OF MARIJUANA	N	3345	18	106	819	1991	374	63	6
		80.7%	78.3%	83.5%	81.9%	79.6%	83.9%	77.8%	66.7%
		61.3%S	72.2%S	63.2%S	59.0%S	61.7%S	62.8%S	68.7%S	66.7%
MARIJUANA USE	N	801	5	21	181	476	72	18	4
		19.3%	21.7%	16.5%	18.1%	20.4%	16.1%	22.2%	44.5%
		59.2%S	60.0%S	61.9%S	60.2%S	56.9%S	68.1%S	72.2%S	100.0%
NO HISTORY OF GLUESNIFFING	N	3090	19	120	928	2291	427	77	9
		93.8%	82.6%	94.5%	92.6%	94.0%	95.7%	95.1%	100.0%
		61.0%S	78.9%S	63.3%S	59.7%S	60.8%S	63.0%S	66.2%S	77.8%
HISTORY OF GLUESNIFFING	N	256	4	7	72	186	19	4	
		6.2%	17.4%	5.5%	7.2%	6.0%	4.3%	4.9%	
		58.6%S	25.0%S	57.1%S	52.8%S	58.9%S	78.5%S	100.0%S	

Table 15 presents information on the history of marijuana use and glue-sniffing. Dull normal individuals with a history of glue-sniffing performed poorly on parole; those of average intelligence performed slightly better, although they still performed below the overall mean. Wards of average intelligence with a history of smoking marijuana performed relatively poorly on parole. This is of particular interest not only because this group is quite large, but also because a reversed pattern is evident for bright normal and superior wards with a history of marijuana use.

Table 16 provides a variety of data on wards who had a history of escape and/or sexually deviant behavior. The most striking feature is the impressive drop in parole success rate for all persons with a history of escape, regardless of whether the escape was from a minimum-security facility without force or from a secure facility with force. This finding appears particularly significant because of the relatively large number of persons in this category. It is noteworthy that, within this group of escapees, a group of bright normal individuals shares the poor parole performance record of wards classified as average and dull normal in intelligence. Bright normal individuals usually are exceptions to the variable pattern in that they maintain a rather consistently favorable parole

performance pattern.

16 HISTORY OF ESCAPE AND SEXUAL DEVIATION

TABLE 16
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
HISTORY OF ESCAPE AND SEXUAL DEVIATION

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NO ESCAPES	N	3539	16	117	885	2049	370	75	8
		85.4%	69.6%	92.1%	88.5%	84.1%	83.0%	92.6%	88.9%
		69.3%S	75.0%S	62.4%S	60.2%S	65.4%S	68.6%S	70.7%S	75.0%S
ESCAPES FROM MINIMUM SECURITY	N	526	7	8	104	338	60	6	1
		12.7%	30.4%	6.3%	10.4%	13.9%	13.5%	7.4%	11.1%
		47.9%S	57.1%S	75.0%S	55.8%S	67.0%S	40.0%S	33.3%S	100.0%S
ESCAPES WITH FORCE	N	81		2	11	50	16		
		2.0%		1.6%	1.1%	2.1%	3.6%		
		39.5%S		50.0%S	27.3%S	62.0%S	37.5%S		
NO HISTORY OF FORCIBLE RAPE	N	4026	23	149	962	2376	431	80	9
		97.1%	100.0%	97.6%	98.2%	97.5%	96.6%	98.8%	100.0%
		60.9%S	69.6%S	62.1%S	58.8%S	60.9%S	64.3%S	67.5%S	77.8%S
HISTORY OF FORCIBLE RAPE	N	120		3	38	61	15	1	
		2.9%		2.4%	3.8%	2.5%	3.4%	1.2%	
		60.0%S		100.0%S	68.4%S	55.7%S	46.7%S	100.0%S	
NO HISTORY OF SEXUAL DEVIATION	N	3929	22	119	941	2329	420	75	9
		94.8%	95.7%	93.7%	94.1%	95.4%	94.2%	92.6%	100.0%
		60.8%S	72.7%S	63.9%S	59.4%S	60.5%S	65.8%S	65.3%S	77.8%S
HISTORY OF ISOLATED SEXUALLY DEVIANT BEHAVIOR	N	156		5	45	81	15	5	
		3.8%		3.9%	4.5%	3.3%	3.4%	6.2%	
		57.1%S		40.0%S	51.1%S	60.5%S	46.7%S	100.0%S	
HISTORY OF REPEATED SEXUALLY DEVIANT BEHAVIOR	N	61	1	3	14	32	10	1	
		1.5%	4.3%	2.4%	1.4%	1.3%	2.2%	1.2%	
		72.1%S	0.0%S	66.7%S	71.4%S	75.0%S	70.0%S	100.0%S	
NO HISTORY OF HOMOSEXUALITY	N	4009	21	123	960	2358	431	77	9
		96.7%	91.3%	96.9%	96.3%	96.6%	96.6%	95.1%	100.0%
		61.4%S	76.2%S	65.0%S	59.6%S	61.1%S	64.5%S	67.5%S	77.8%S
HISTORY OF ISOLATED HOMOSEXUAL BEHAVIOR	N	79	1	5	17	45	8	4	
		1.9%	4.3%	2.4%	1.7%	1.8%	1.8%	4.9%	
		40.5%S	0.0%S	0.0%S	35.3%S	44.4%S	37.5%S	25.0%S	
HISTORY OF REPEATED HOMOSEXUAL BEHAVIOR	N	43			13	23	6		
		1.0%			1.3%	0.9%	1.3%		
		53.5%S			53.8%S	56.5%S	50.0%S		
HISTORY OF HOMOSEXUAL PATTERN	N	15	1	1	1	11	1		
		0.4%	4.3%	0.8%	0.1%	0.5%	0.2%		
		53.3%S	0.0%S	0.0%S	100.0%S	63.6%S	0.0%S		

The data on persons with a history of forcible rape also are noteworthy. The few dull normal individuals in this category do relatively well on parole. In contrast, the parole performance of average and bright normal wards with a history of forcible rape is rather poor. It is possible that the former are more passive,

follower-type individuals who commit such a crime as part of a group while the latter represent a more aggressive individual who acts alone or is the initiator or leader of a group crime. For the ward with a history of homosexual conduct the findings are quite pronounced, but the total number in this category is rather small.

Table 17 gives the caseworker's summary of psychiatric history and psychiatric labels applied to the ward during previous psychiatric evaluations. This information was contained in earlier clinical case files that were requested and received by reception guidance center staff from corrections and mental health agencies with which the ward had contact. For all practical purposes, psychiatric problems seem to be confined to the dull normal and average groups. Generally the frequencies in the psychiatric categories are small: Less than 1 per cent of the total study population had a history of frequent suicide gestures, serious suicide attempts, brain damage, or epilepsy. Slightly more than 1 per cent had a history of infrequent suicide gestures, neurosis, and psychosis. Approximately 3 per cent had a history of sociopathic personality disturbance and personality pattern disturbance and 6.7 per cent had a history of personality trait disturbance.

17 PREVIOUS PSYCHIATRIC DIAGNOSIS

TABLE 17
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
PREVIOUS PSYCHIATRIC DIAGNOSIS

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NO HISTORY OF SUICIDE ATTEMPTS	N	4047	23	125	990	2369	431	78	9
		97.0%	100.0%	98.4%	99.0%	97.2%	96.6%	96.3%	100.0%
		61.1%S	69.6%S	63.2%S	59.5%S	61.0%S	64.0%S	67.9%S	77.8%S
INFREQUENT SUICIDE GESTURES	N	65		1	8	44	9	3	
		1.6%		0.8%	0.8%	1.8%	2.0%	3.7%	
		50.8%S		0.0%S	25.0%S	52.3%S	66.7%S	66.7%S	
FREQUENT SUICIDE GESTURES	N	24			2	17	5		
		0.6%			0.2%	0.7%	1.1%		
		50.0%S			50.0%S	52.9%S	40.0%S		
SERIOUS SUICIDE ATTEMPTS	N	10		1		7	1		
		0.2%		0.8%		0.3%	0.2%		
		40.0%S		100.0%S		42.9%S	0.0%S		
NO HISTORY OF BRAIN DAMAGE	N	4118	21	125	990	2425	445	80	9
		99.3%	91.3%	98.4%	99.0%	99.5%	99.8%	98.8%	100.0%
		60.9%S	71.4%S	64.0%S	59.3%S	60.7%S	63.6%S	67.5%S	77.8%S
HISTORY OF BRAIN DAMAGE	N	28	2	2	10	12	1	1	
		0.7%	8.7%	1.6%	1.0%	0.5%	0.2%	1.2%	
		53.6%S	50.0%S	0.0%S	50.0%S	58.3%S	100.0%S	100.0%S	
NO HISTORY OF EPILEPSY	N	4125	21	127	994	2426	445	81	9
		99.5%	91.3%	100.0%	99.4%	99.5%	99.8%	100.0%	100.0%
		60.8%S	71.4%S	63.0%S	59.1%S	60.8%S	63.8%S	67.9%S	77.8%S
HISTORY OF EPILEPSY	N	21	2		6	11	1		
		0.5%	8.7%		0.6%	0.5%	0.2%		
		61.9%S	50.0%S		83.3%S	54.5%S	0.0%S		
NO HISTORY OF NEUROSIS	N	4092	23	126	993	2404	438	80	8
		98.7%	100.0%	99.2%	99.3%	98.6%	98.2%	98.8%	88.9%
		61.1%S	69.6%S	62.7%S	59.2%S	61.1%S	65.5%S	67.5%S	75.0%S
HISTORY OF NEUROSIS	N	54		1	7	33	8	1	1
		1.3%		0.8%	0.7%	1.4%	1.8%	1.2%	11.1%
		44.4%S		100.0%S	57.1%S	33.3%S	75.0%S	100.0%S	100.0%S
NO HISTORY OF PSYCHOSIS	N	4097	22	126	980	2416	444	78	8
		98.8%	95.7%	99.2%	98.0%	99.1%	99.6%	96.3%	88.9%
		60.8%S	68.2%S	63.5%S	59.6%S	60.6%S	63.5%S	66.7%S	87.5%S
HISTORY OF PSYCHOSIS	N	49	1	1	20	21	2	3	1
		1.2%	4.3%	0.8%	2.0%	0.9%	0.4%	3.7%	11.1%
		61.2%S	100.0%S	0.0%S	40.0%S	76.2%S	100.0%S	100.0%S	0.0%S
NO HISTORY OF PERSONALITY TRAIT DISTURBANCE	N	3870	21	123	947	2265	411	72	9
		93.3%	91.3%	96.9%	94.7%	92.9%	92.2%	88.9%	100.0%
		61.6%S	71.4%S	62.6%S	59.2%S	61.7%S	65.0%S	68.1%S	77.8%S
HISTORY OF PERSONALITY TRAIT DISTURBANCE	N	276	2	4	53	172	35	9	
		6.7%	8.7%	3.1%	5.3%	7.1%	7.8%	11.1%	
		51.1%S	50.0%S	75.0%S	58.5%S	48.3%S	48.6%S	66.7%S	
NO HISTORY OF PERSONALITY PATTERN DISTURBANCE	N	4012	21	123	952	2369	437	79	9
		96.8%	91.3%	96.9%	95.2%	97.2%	98.0%	97.5%	100.0%
		61.2%S	76.2%S	63.4%S	59.8%S	61.0%S	63.8%S	68.4%S	77.8%S
HISTORY OF PERSONALITY PATTERN DISTURBANCE	N	130	2	4	48	68	9	2	
		3.2%	8.7%	3.1%	4.8%	2.8%	2.0%	2.5%	
		50.0%S	0.0%S	50.0%S	47.9%S	51.5%S	55.6%S	40.0%S	
NO HISTORY OF SOCIOPATHIC PERSONALITY DISTURBANCE	N	4031	23	127	984	2360	431	78	9
		97.2%	100.0%	100.0%	98.4%	96.8%	96.6%	96.3%	100.0%
		61.3%S	69.6%S	65.0%S	59.7%S	61.2%S	64.0%S	67.9%S	77.8%S
HISTORY OF SOCIOPATHIC PERSONALITY DISTURBANCE	N	115			16	77	15	3	
		2.8%			1.6%	3.2%	3.4%	3.7%	
		45.2%S			51.9%S	46.8%S	53.3%S	66.7%S	

With the exception of wards of average intelligence with a previous diagnosis of psychosis, wards who had been given a psychiatric label consistently performed

poorer on parole. There does not seem to be a great deal of variation among the various intellectual subgroups with respect to the percentage who received diagnoses of psychiatric disturbance. Mentally defective wards contribute a relatively high percentage to most clinical categories but their total numbers are rather small.

VIII. INTELLIGENCE FACTORS

As mentioned in the introduction to Part Two of this volume, a great deal of attention was directed to the problems of the cultural bias of the test instruments and the possible impact of the test proctor on test results. The results of intelligence testing are presented with the reminder that cultural bias of the test instruments may in part invalidate the intellectual assessment of culturally mixed groups. The important issues of culture-fairness still are not satisfactorily resolved and these results must be interpreted cautiously.

18 INTELLIGENCE CLASSIFICATION

TABLE 18
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
INTELLIGENCE CLASSIFICATION

	TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
INTELLIGENCE CLASSIFICATION	N 4196 100.0% 60.9%	23 0.6% 69.6%	127 3.1% 69.0%	1000 24.2% 59.2%	2440 59.1% 60.7%	406 10.8% 65.7%	81 2.0% 67.9%	9 0.2% 77.8%

Table 18 presents the distribution for the intelligence categories. Each ward was classified into one of the Wechsler intelligence categories by the clinical psychologist who was supervising the testing program. Wards who scored on the group tests in the mental defective range were given the Wechsler Adult Intelligence Scale and were classified as mental defectives only if they scored in the mental defective range on this individually administered test. The results of this classification procedure are depicted in Figure 3.

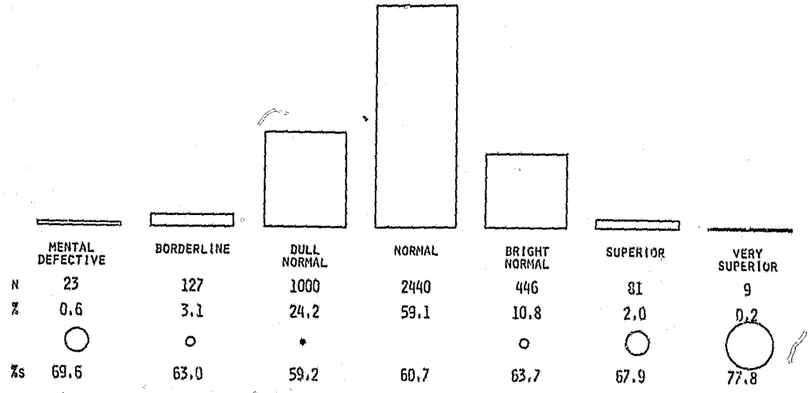
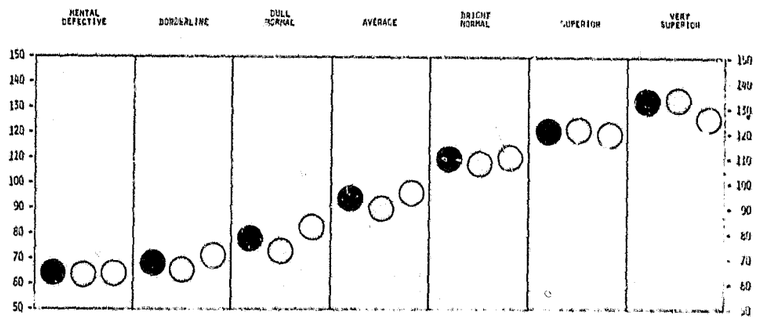


FIGURE 3
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
INTELLIGENCE CLASSIFICATION

Generally, the distribution follows the normal curve with slight overrepresentation in the below-average category of dull normal. This distribution refutes the

idea that delinquent populations are composed mainly of retarded or borderline defective individuals. This rigorous classification procedure produced results suggesting that the distribution on the intelligence factor approximates distributions found for nondelinquents drawn from similar social groups.

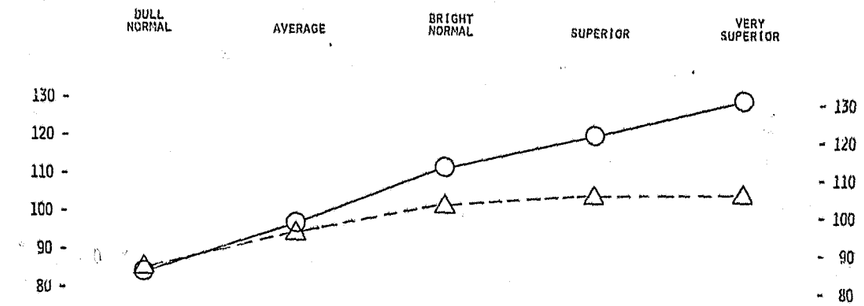
The Army General Classification Test (AGCT) and the California Test of Mental Maturity (CTMM) were the principal intelligence tests used. The General Aptitude Test Battery (GATB), the results of which are reported in the following section, also provided a measure of intelligence in the G-score that presumably represents a measure of general intelligence.



			MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
TOTAL I.Q.	●	N	9	107	940	2293	418	77	9
		M	63.67	67.46	77.50	93.01	103.99	120.57	132.78
		SD	10.83	7.70	7.69	9.17	6.85	6.94	6.00
LANGUAGE I.Q.	○	N	9	106	941	2301	419	77	8
		M	63.33	64.96	72.51	88.99	107.40	121.18	133.50
		SD	11.85	7.36	10.00	12.60	9.09	11.14	9.67
NON-LANGUAGE I.Q.	○	N	11	106	944	2306	419	77	8
		M	63.45	70.23	82.02	96.60	109.63	119.84	126.50
		SD	12.15	11.55	9.73	10.12	8.87	8.42	6.55

FIGURE 4
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
RESULTS ON THE CALIFORNIA TEST OF MENTAL MATURITY (CTMM)

Most of the wards were given the CTMM; however, total I.Q. was not computed for individuals who, because of illiteracy, did not complete the language portion of the test. Only those wards who scored above the sixth grade on the California Achievement Test (CAT) battery were given the AGCT. This is reflected in the lower N in Figures 4 and 5 and Table 19 where the data on these two tests are presented.



ARMY GENERAL CLASSIFICATION TEST	○	N	256	1898	435	81	9
		M	84.21	97.37	112.63	121.16	130.67
		SD	7.38	8.04	4.29	4.61	4.44
SHIPLEY HARTFORD	△	N	88	1188	395	79	9
		M	84.84	94.28	102.08	104.87	105.11
		SD	15.13	13.92	12.54	11.98	13.53

FIGURE 5
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
RESULTS ON THE ARMY GENERAL CLASSIFICATION TEST (AGCT)
AND THE SHIPLEY-HARTFORD CONCEPTUAL QUOTIENT

Two tests administered over part of the two-year period when these data were collected were presumably culture-fair tests that did not require reading skills. For these two tests, the D-48 or Domino Test and the

Raven Progressive matrices, only raw scores are available. These scores are presented in Figure 6 and Table 19.

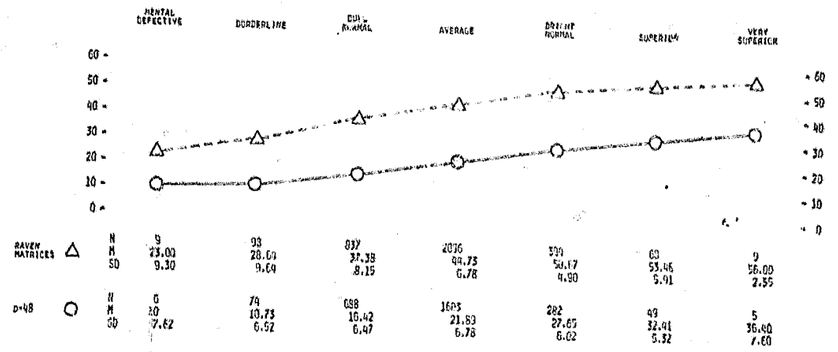


FIGURE 6
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
RESULTS ON THE RAVEN MATRICES AND D-48 DOMINO TEST
RAW SCORES

The Shipley Hartford Conceptual Quotient is a score that indicates the relationship between verbal skills and aptitude for abstract thinking: the lower the conceptual quotient the greater the impairment in abstract thinking as compared to verbal ability. This measure was computed only when the level of verbal ability made such comparison valid. If this level in verbal skills was not reached by an individual his CQ was not computed. This procedure explains the discrepancy in N found in Figure 5 and Table 19 where the Shipley Hartford data are presented.

A summary of the results of the intelligence testing is provided in Table 19. It should be kept in mind that classification into intelligence categories was based

TABLE 19
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
RESULTS OF INTELLIGENCE TESTING

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
ARMY GENERAL CLASSIFICATION TEST I.Q.	N	2684			256	1898	435	81	9
	M	99.42			84.21	97.37	112.63	121.16	130.67
	SD	11.23			7.38	8.04	4.29	4.61	4.44
VERBAL PERCENTILE RANK	N	2679			254	1895	435	81	9
	M	48.80			26.30	46.09	70.49	84.65	96.22
	SD	21.25			14.32	11.37	14.16	12.28	4.38
NUMERICAL PERCENTILE RANK	N	2682			255	1896	436	81	9
	M	56.08			25.69	51.94	84.03	93.91	98.67
	SD	25.83			16.58	21.90	11.91	6.94	1.00
SPATIAL PERCENTILE RANK	N	2683			256	1896	435	82	9
	M	54.10			28.40	49.91	80.02	88.99	98.89
	SD	24.64			17.38	21.17	13.20	12.24	7.57
CALIFORNIA TEST OF MENTAL MATURITY TOTAL I.Q.	N	3865	9	107	940	2239	418	77	9
	M	90.81	63.67	67.86	77.50	95.01	108.94	120.57	132.78
	SD	13.69	10.63	7.70	7.69	9.17	6.85	6.94	6.00
LANGUAGE I.Q.	N	3867	9	106	941	2301	419	77	8
	M	86.98	63.33	64.93	72.51	88.99	107.40	121.18	133.50
	SD	16.56	11.85	7.36	10.00	12.66	9.04	11.14	9.67
NONLANGUAGE I.Q.	N	3877	11	106	944	2306	419	77	8
	M	94.17	63.45	70.23	82.02	96.60	109.89	119.84	126.50
	SD	14.09	12.15	11.55	9.73	10.12	8.87	8.42	6.55
D-48 RAW SCORE	N	2712	6	74	688	1603	282	49	5
	M	20.97	10.00	10.73	16.42	21.89	27.65	32.43	34.40
	SD	7.74	7.62	6.52	6.47	6.78	6.02	5.32	2.50
RAVEN MATRICES RAW SCORE	N	3517	9	98	837	2096	394	68	9
	M	43.33	23.00	28.64	37.38	44.73	50.67	55.46	56.00
	SD	8.66	9.30	9.64	8.15	6.78	4.90	5.41	2.55
SHIPLEY HARTFORD CONCEPTUAL QUOTIENT	N	1767		3	88	1188	395	79	9
	M	96.05		85.67	89.84	94.28	102.08	109.87	105.11
	SD	14.38		37.58	15.13	13.92	12.54	11.98	13.53
LANGUAGE RAW SCORE	N	2767		12	363	1873	424	79	9
	M	23.75		14.92	18.62	23.41	28.21	31.54	34.33
	SD	5.45		2.97	4.99	4.70	3.52	3.30	1.77
ABSTRACT RAW SCORE	N	2696		12	348	1828	417	79	9
	M	24.02		10.67	15.93	23.67	30.64	33.75	34.00
	SD	7.98		9.51	7.12	6.93	5.07	5.20	6.25

on clinical judgments derived from a composite of information on each individual. This is reflected, for instance, in the mean scores of the dull normal group on the CTMM. While the scores for this group on Total IQ and on the language portion of the test are in the borderline defective range, their mean score on the non-language portion is in the dull normal range. These

individuals apparently have the capacity to perform at a significantly higher level on tasks not dependent on academic skills, indicating that a higher classification is more valid than would be suggested by results on tests that are highly dependent on acquired academic skills.

IX. ACADEMIC FACTORS

School-related factors increasingly are coming under study as it becomes evident that the school experience is of critical importance in the development of alienation and social deviance (Wenk, 1974). The data on academic factors are presented here in some detail to allow for discovery of possible leads useful in designing new types of learning environments for that large proportion of youth who do not seem to be served by the existing educational system.

The results of the academic achievement testing on the California Achievement Test battery (CAT) are presented separately for each intelligence classification subgroup as well as in a summary table. Figures 7 through 13 present in graphic form the results on the CAT for each group. The circles indicate the level of achievement by grade level. The lines represent the level achieved by the total study population. This

permits an assessment of the relative academic standing of each group. The summary table presents data on the total group.

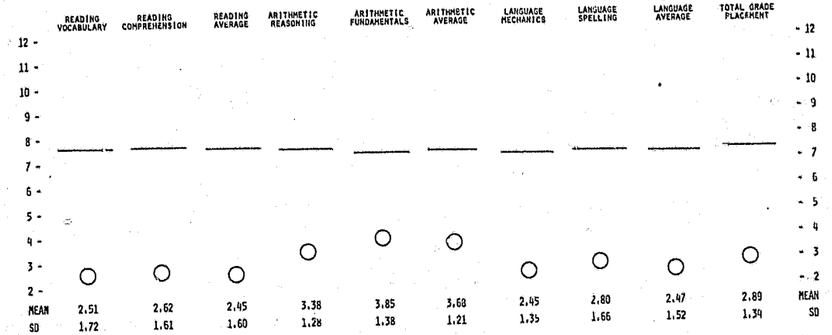


FIGURE 7
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF MENTAL DEFECTIVE INTELLIGENCE
RESULTS ON THE CALIFORNIA ACHIEVEMENT TEST BATTERY (CATB)
N = 13

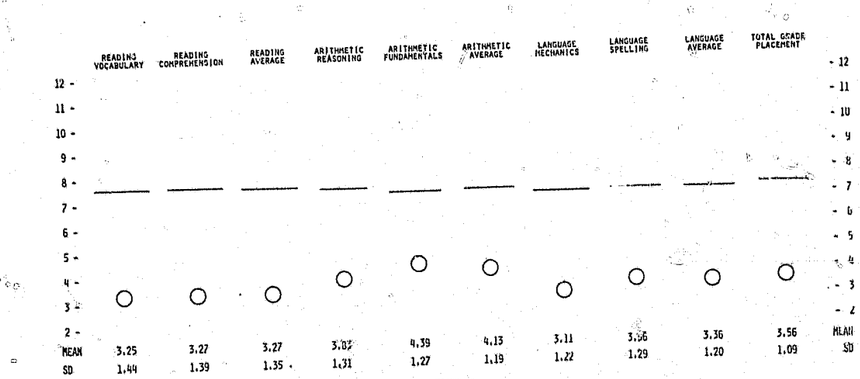


FIGURE 8
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF BORDERLINE DEFECTIVE INTELLIGENCE
RESULTS ON THE CALIFORNIA ACHIEVEMENT TEST BATTERY (CATB)
N = 115

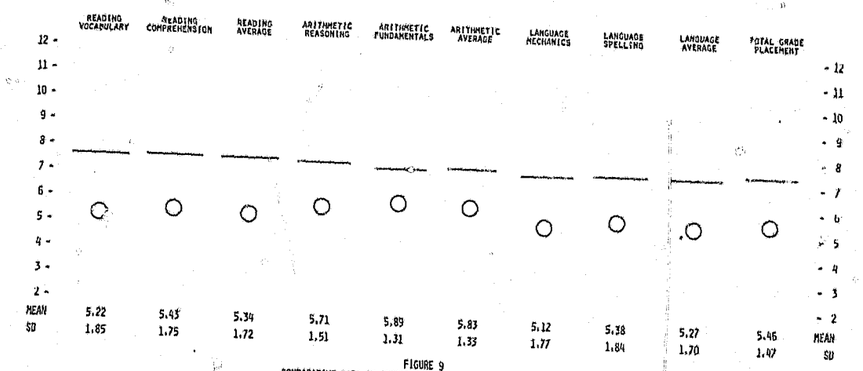


FIGURE 9
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF DULL NORMAL INTELLIGENCE
RESULTS ON THE CALIFORNIA ACHIEVEMENT TEST BATTERY (CATB)
N = 986

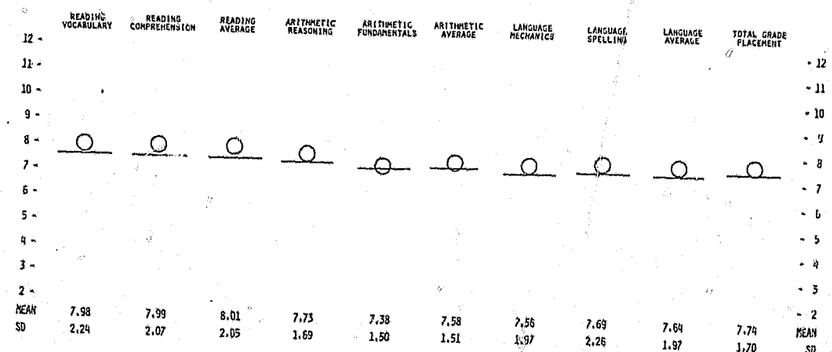


FIGURE 10
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF AVERAGE INTELLIGENCE
RESULTS ON THE CALIFORNIA ACHIEVEMENT TEST BATTERY (CATB)
N = 2419

FIGURE 11
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF BRIGHT NORMAL INTELLIGENCE
RESULTS ON THE CALIFORNIA ACHIEVEMENT TEST BATTERY (CATB)
N = 440

FIGURE 12
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF SUPERIOR INTELLIGENCE
RESULTS ON THE CALIFORNIA ACHIEVEMENT TEST BATTERY (CATB)
N = 81

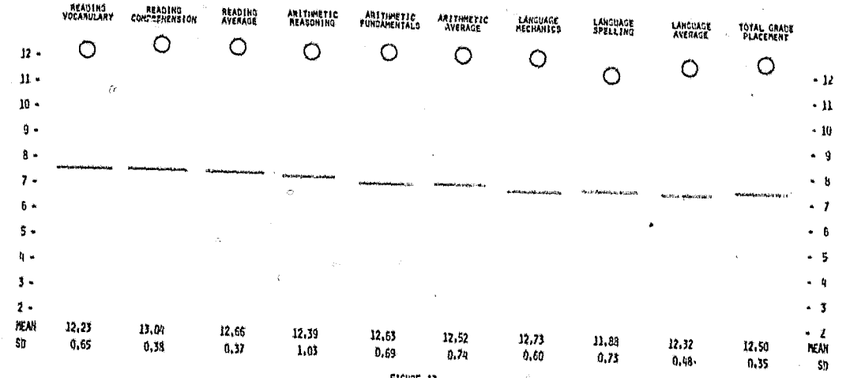


FIGURE 13
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF VERY SUPERIOR INTELLIGENCE
RESULTS ON THE CALIFORNIA ACHIEVEMENT TEST BATTERY (CATB)
N = 9

20 RESULTS OF THE CALIFORNIA ACHIEVEMENT TEST BATTERY

TABLE 20
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
RESULTS ON THE CALIFORNIA ACHIEVEMENT TEST BATTERY

		TOTAL STUDY POPULATION N = 4067	MENTAL DEFECTIVE N = 13	BORDERLINE N = 116	DULL NORMAL N = 966	AVERAGE N = 2420	BRIGHT NORMAL N = 440	SUPERIOR N = 81	VERY SUPERIOR N = 9
READING VOCABULARY	M	7.55	2.51	3.25	5.22	7.98	10.77	11.84	12.23
	SD	2.76	1.72	1.44	1.85	2.24	1.12	0.96	0.65
READING COMPREHENSION	M	7.66	2.62	3.27	5.43	7.99	11.08	12.52	13.04
	SD	2.69	1.02	1.33	1.75	2.07	1.32	0.96	0.38
READING AVERAGE	M	7.62	2.45	3.27	5.34	8.01	10.93	12.22	12.66
	SD	2.66	1.60	1.35	1.72	2.05	1.05	0.90	0.37
ARITHMETIC REASONING	M	7.47	3.38	3.83	5.71	7.73	10.22	11.60	12.33
	SD	2.23	1.28	1.31	1.51	1.69	1.34	1.13	1.03
ARITHMETIC FUNDAMENTALS	M	7.27	3.85	4.33	5.83	7.38	9.75	11.42	12.65
	SD	1.98	1.38	1.27	1.31	1.50	1.61	1.30	0.69
ARITHMETIC AVERAGE	M	7.39	3.68	4.13	5.83	7.58	10.01	11.51	12.52
	SD	2.03	1.21	1.19	1.33	1.51	1.34	1.06	0.74
LANGUAGE MECHANICS	M	7.22	2.45	3.11	5.12	7.56	10.13	11.42	12.73
	SD	2.52	1.35	1.22	1.77	1.97	1.32	1.23	0.60
LANGUAGE SPELLING	M	7.35	2.80	3.56	5.38	7.69	9.96	11.15	11.88
	SD	2.60	1.66	1.29	1.84	2.26	1.52	1.41	0.73
LANGUAGE AVERAGE	M	7.30	2.47	3.36	5.27	7.64	10.07	11.29	12.32
	SD	2.45	1.52	1.20	1.70	1.97	1.20	1.19	0.48
TOTAL GRADE PLACEMENT	M	7.42	2.89	3.56	5.46	7.74	10.34	11.68	12.50
	SD	2.28	1.34	1.09	1.47	1.70	0.94	0.85	0.35

CONTINUED

3 OF 5

A summary of the test results on the California Achievement Test battery is given in Table 20. Generally, little variation among academic subjects is found; two exceptions are noted for mental defective and borderline defective individuals who show a slight increase in the arithmetic score. With these two exceptions, measured academic achievement of mentally defective wards was at the 2nd grade level; measured academic achievement levels for the remaining groups were as follows: borderline defective, 3rd grade; dull normal, 4th grade; average, 7th grade; bright normal, 10th grade; superior, 11th grade; very superior, 12th grade.

Figures 14 though 20 present information on frequency distribution, grade completed in school, grade achieved during testing on the CAT, and age left school.

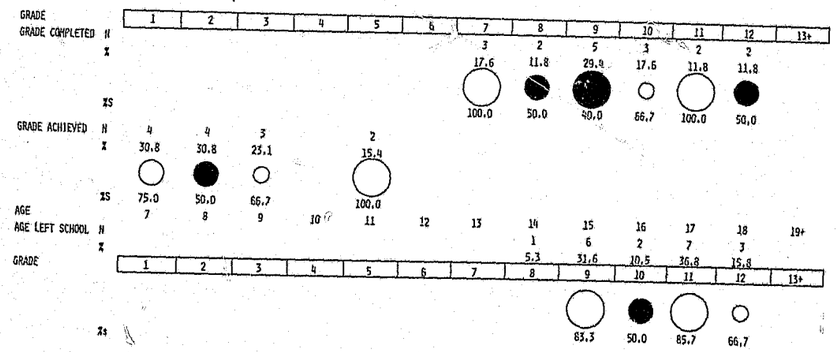


FIGURE 14
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF MENTAL DEFECTIVE INTELLIGENCE
GRADE COMPLETED, GRADE ACHIEVED, AND AGE LEFT SCHOOL

Figure 14 shows no specific pattern for mentally defective wards. There are so few individuals in this category that any conclusions drawn from the findings must be qualified. All of these wards completed at least the 7th grade, while two finished high school. Because of their limitations, their achievement is modest. None left school before the age of 15.

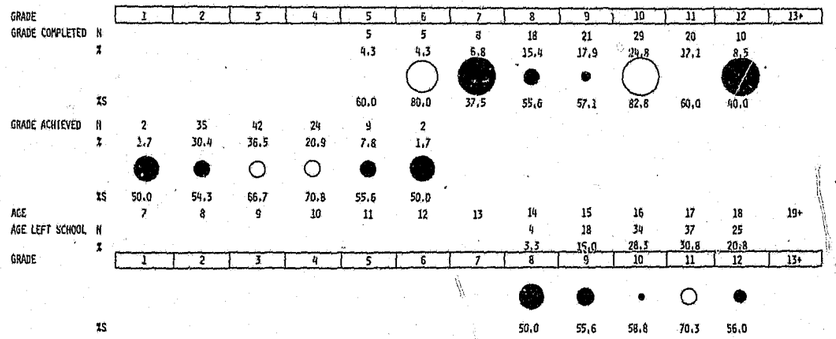


FIGURE 15
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF BORDERLINE DEFECTIVE INTELLIGENCE
GRADE COMPLETED, GRADE ACHIEVED, AND AGE LEFT SCHOOL

Data on the borderline defective group are presented in Figure 15. Some of these wards completed only the fifth grade, but more than half of the group completed at least the 9th grade. The achievement of this group also was low because of their limitations. Nearly half of them dropped out of school by age 16.

The dull normal group is depicted in Figure 16. A few individuals completed only elementary school. This

GRADE		1	2	3	4	5	6	7	8	9	10	11	12	13+
GRADE COMPLETED	N			1	3	14	12	31	121	224	242	227	105	
	%			0.1	0.3	1.4	1.2	3.2	12.3	22.9	24.7	23.2	10.7	
	%S			0.0	66.7	35.7	50.0	64.5	58.7	57.6	57.0	60.8	63.8	
GRADE ACHIEVED	N	5	42	132	167	250	263	96	24	2	2	2	1	
	%	0.5	4.3	13.4	16.9	25.4	26.7	9.7	2.4	0.2	0.2	0.2		
	%S	60.0	57.1	58.3	61.1	61.6	57.8	61.5	41.7	50.0	50.0	50.0		
AGE		7	8	9	10	11	12	13	14	15	16	17	18	19+
AGE LEFT SCHOOL	N						4	6	38	103	270	313	210	
	%						0.4	0.6	4.0	10.9	28.6	33.2	22.2	
GRADE		1	2	3	4	5	6	7	8	9	10	11	12	13+
	%S						50.0	50.0	68.4	54.4	60.0	55.3	66.7	

FIGURE 16
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF DULL NORMAL INTELLIGENCE
GRADE COMPLETED, GRADE ACHIEVED, AND AGE LEFT SCHOOL

may represent a small group of children of migrant agricultural laborers who move frequently throughout the southwestern United States. Their achievements are primarily spread throughout the first eight grades, although a few individuals tested higher than the eighth grade. Four individuals left school at age 12 and six left school at age 13. An emerging pattern seems to indicate that the fewer grades a ward completed and the younger he left school the more he is prone to recidivism. This pattern does not seem to include actual achievement level.

As shown in Figure 17, this same pattern is even clearer for wards of average intellectual potential. Again, grade completed and age left school are indicative of recidivism but the findings for academic achievement

level are inconclusive.

GRADE		1	2	3	4	5	6	7	8	9	10	11	12	13+
GRADE COMPLETED	N					2	21	48	174	390	697	660	402	20
	%					0.1	0.9	2.0	7.2	16.1	28.8	27.3	16.6	0.8
	%S					50.0	57.1	58.3	60.9	60.0	59.7	61.2	61.9	80.0
GRADE ACHIEVED	N		26	74	74	146	332	584	623	383	151	23	2	
	%		1.1	3.1	3.1	6.0	13.7	24.1	25.8	15.8	6.2	1.0	0.1	
	%S		69.2	71.6	60.8	58.2	59.3	61.1	60.8	59.3	58.9	69.6	50.0	
AGE		7	8	9	10	11	12	13	14	15	16	17	18	19+
AGE LEFT SCHOOL	N						6	12	45	162	700	840	561	
	%						0.3	0.5	1.9	7.0	30.1	36.1	24.1	
GRADE		1	2	3	4	5	6	7	8	9	10	11	12	13+
	%S						33.3	41.7	46.7	61.7	60.1	61.1	64.0	

FIGURE 17
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF AVERAGE INTELLIGENCE
GRADE COMPLETED, GRADE ACHIEVED, AND AGE LEFT SCHOOL

GRADE		1	2	3	4	5	6	7	8	9	10	11	12	13+
GRADE COMPLETED	N							4	7	39	122	118	139	10
	%							0.9	1.6	8.8	27.6	26.7	31.4	2.3
	%S							50.0	85.7	69.2	63.1	61.9	63.3	70.0
GRADE ACHIEVED	N							6	21	104	200	98	10	
	%							1.4	4.8	23.6	45.5	22.3	2.3	
	%S							66.7	61.9	58.7	64.5	66.3	90.0	
AGE		7	8	9	10	11	12	13	14	15	16	17	18	19+
AGE LEFT SCHOOL	N						2	1	4	18	106	165	128	
	%						0.5	0.2	0.9	4.2	25.0	38.9	30.2	
GRADE		1	2	3	4	5	6	7	8	9	10	11	12	13+
	%S						50.0		75.0	66.7	65.1	61.8	66.4	

FIGURE 18
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF BRIGHT NORMAL INTELLIGENCE
GRADE COMPLETED, GRADE ACHIEVED, AND AGE LEFT SCHOOL

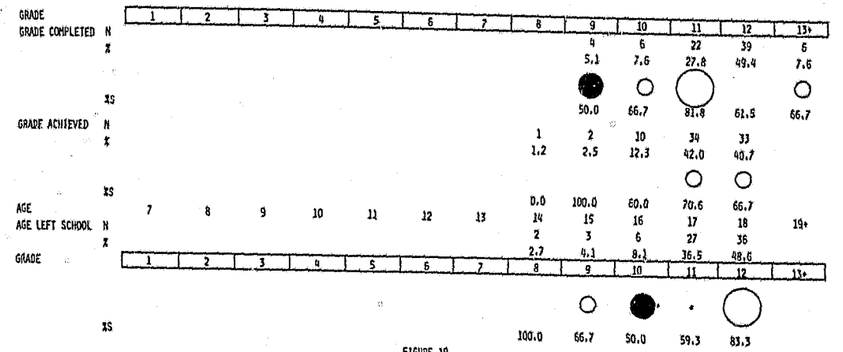


FIGURE 19
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF SUPERIOR INTELLIGENCE
GRADE COMPLETED, GRADE ACHIEVED, AND AGE LEFT SCHOOL

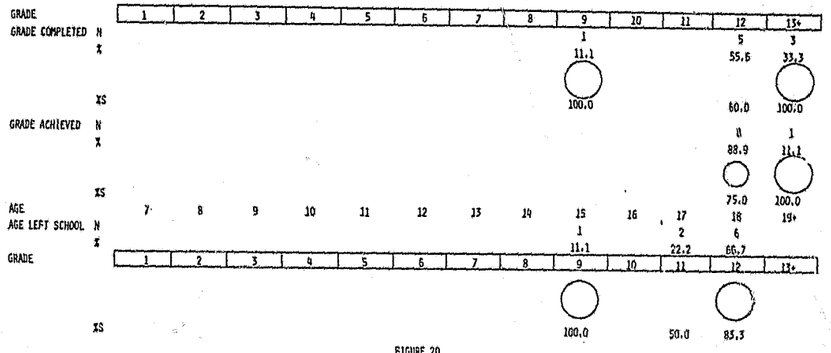


FIGURE 20
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF VERY SUPERIOR INTELLIGENCE
GRADE COMPLETED, GRADE ACHIEVED, AND AGE LEFT SCHOOL

The data for the three highest intelligence classification subgroups are depicted in Figures 18, 19 and 20. For all practical purposes, the few instances of a parole success rate below the average of the total study popu-

lation can be ignored for these groups. These groups generally perform above average on parole regardless of academic achievement, grade completed, or age left school.

These data are represented in the comparative tables for grade completed (Table 21), grade achieved (Table 22), and age left school (Table 23).

21 GRADE COMPLETED

TABLE 21
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
GRADE COMPLETED

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
1	N								
2	N								
3	N	5 0.1% 0.0%S			1 0.1% 0.0%S	2 0.1% 0.0%S			
4	N	5 0.1% 40.0%S			3 0.3% 66.7%S	1 0.0% 0.0%S	1 0.2% 0.0%S		
5	N	21 0.5% 42.9%S		5 4.3% 23.8%S	14 1.4% 35.7%S	2 0.1% 50.0%S			
6	N	38 0.9% 57.9%S		5 4.3% 80.0%S	12 1.2% 50.0%S	21 0.9% 57.1%S			
7	N	94 2.3% 59.6%S	3 17.6% 100.0%S	8 6.8% 37.5%S	31 3.2% 64.5%S	48 2.0% 58.3%S	4 0.9% 50.0%S		
8	N	323 7.9% 60.4%S	2 11.8% 50.0%S	18 15.4% 55.6%S	121 12.3% 58.7%S	174 7.2% 60.9%S	7 1.6% 85.7%S		
9	N	685 16.8% 59.4%S	5 29.4% 40.0%S	21 17.9% 57.1%S	224 22.9% 57.6%S	330 16.1% 60.0%S	39 8.8% 69.2%S	4 5.1% 50.0%S	1 11.1% 100.0%S
10	N	1099 27.0% 60.1%S	3 17.6% 66.7%S	29 24.8% 82.8%S	242 24.7% 57.0%S	597 28.8% 59.7%S	122 27.6% 65.1%S	6 7.6% 66.7%S	
11	N	1051 25.8% 62.5%S	2 11.8% 100.0%S	20 17.1% 60.0%S	227 23.2% 64.8%S	660 27.3% 61.2%S	118 26.7% 61.9%S	22 27.8% 81.8%S	
12	N	706 17.3% 62.0%S	2 11.8% 50.0%S	10 8.5% 40.0%S	105 10.7% 63.8%S	402 16.6% 61.9%S	139 31.4% 65.3%S	39 49.4% 61.5%S	5 55.6% 60.0%S
13+	N	40 1.0% 75.0%S		1 0.9% 0.0%S		20 0.8% 80.0%S	10 2.3% 70.0%S	6 7.6% 66.7%S	3 33.3% 100.0%S

22 GRADE ACHIEVED

TABLE 22
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
GRADE ACHIEVED

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
1	N	12	4	2	5	1			
		0.3%	30.8%	1.7%	0.5%	0.0%			
		58.3%S	75.0%S	50.0%S	60.0%S	0.0%S			
2	N	107	4	35	42	26			
		2.6%	30.8%	30.4%	4.3%	1.1%			
		58.9%S	50.0%S	54.3%S	57.1%S	69.2%S			
3	N	252	3	42	132	74			
		6.2%	23.1%	36.5%	13.4%	3.1%			
		63.5%S	66.7%S	66.7%S	58.3%S	71.6%S			
4	N	266		24	167	74			
		6.5%		20.9%	16.9%	3.1%			
		62.0%S		70.8%S	61.1%S	60.8%S			
5	N	408	2	9	250	146			
		10.0%	15.4%	7.8%	25.4%	6.0%			
		60.3%S	100.0%S	55.6%S	61.6%S	58.2%S			
6	N	537		2	263	332			
		14.7%		1.7%	26.7%	13.7%			
		58.6%S		50.0%S	57.8%S	59.3%S			
7	N	687			96	584	6		
		16.9%			9.7%	24.1%	1.4%		
		61.1%S			61.5%S	61.1%S	66.7%S		
8	N	671			24	625	21	1	
		16.5%			2.4%	25.8%	4.8%	1.2%	
		60.2%S			41.7%S	60.8%S	61.9%S	0.0%S	
9	N	402			2	383	104	2	
		12.1%			0.2%	15.8%	23.6%	2.5%	
		59.1%S			50.0%S	59.3%S	58.7%S	100.0%S	
10	N	363			2	151	200	10	
		8.9%			0.2%	6.2%	45.5%	12.3%	
		62.0%S			50.0%S	58.9%S	64.5%S	60.0%S	
11	N	157			2	23	98	34	
		3.9%			0.2%	1.0%	22.3%	42.0%	
		67.5%S			50.0%S	69.6%S	66.3%S	70.6%S	
12	N	50			1	2	10	33	8
		1.3%			0.1%	0.1%	2.3%	40.7%	88.9%
		72.2%S			100.0%S	50.0%S	90.0%S	66.7%S	75.0%S
13	N	1							1
		0.0%							11.1%
		100.0%S							100.0%S

23 AGE LEFT SCHOOL

TABLE 23
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
AGE LEFT SCHOOL

AGE	GRADE		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
12	6	N	13 0.3% 46.2%S		1 0.8% 100.0%S	4 0.4% 50.0%S	6 0.3% 33.3%S	2 0.5% 50.0%S		
13	7	N	20 0.5% 45.0%S		1 0.8% 100.0%S	6 0.6% 50.0%S	12 0.5% 41.7%S	1 0.2% 0.0%S		
14	8	N	95 2.4% 56.8%S	1 5.3% 0.0%S	4 3.3% 50.0%S	38 4.0% 68.4%S	45 1.9% 46.7%S	4 0.9% 75.0%S	2 2.7% 100.0%S	
15	9	N	314 8.0% 59.9%S	6 31.6% 83.3%S	16 15.0% 56.6%S	103 10.9% 54.4%S	162 7% 61.7%S	18 4.2% 66.7%S	3 4.1% 66.7%S	1 11.1% 100.0%S
16	10	N	1126 28.6% 60.1%S	7 10.5% 50.0%S	34 28.3% 58.8%S	270 28.6% 60.0%S	700 30.1% 60.1%S	106 25.0% 65.1%S	6 8.1% 50.0%S	
17	11	N	1396 35.5% 60.2%S	7 36.8 85.7%S	37 30.8% 70.3%S	313 33.2% 55.3%S	840 36.1% 61.1%S	165 38.9% 61.8%S	27 36.5% 59.3%S	2 22.2% 50.0%S
18	12	N	971 24.7% 65.6%S	3 15.8% 66.7%S	25 20.8% 56.0%S	210 22.2% 60.7%S	561 24.1% 64.0%S	128 30.2% 66.4%S	36 48.6% 83.3%S	6 66.7% 83.3%S

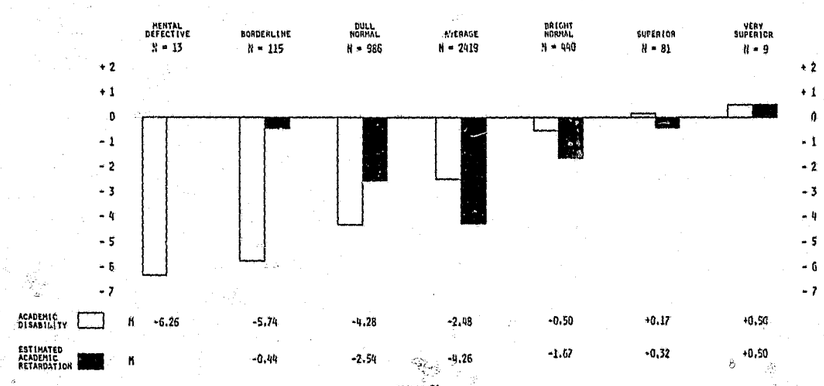


FIGURE 21
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
ACADEMIC DISABILITY

Figure 21 provides information on two indices that were developed for the project to aid in the assessment of academic retardation. The first index provides an academic disability score indicating the average difference between grade completed in school and functioning level as measured by the CAT. The second index provides an estimate of academic retardation by computing the difference between a rather conservative, arbitrarily set expectation and the achieved grade on the CAT:

Intelligence Classification	Expected Grade Placement on the CAT
Mental Defective	0
Borderline Defective	4th Grade
Dull Normal	8th Grade
Average and above	12th Grade

Using this procedure, each person was given a score representing achieved grade minus expected grade. Most scores are minus scores: the greater the minus value, the greater the academic retardation as measured against the above standards. The fact that no expectations were set for mentally defective individuals should not suggest the assumption that these individuals could not achieve academically. The decision was made, perhaps erroneously, that expectations for mentally defective and borderline defective wards should be kept low in order to minimize academic retardation. It might have been preferable to

set the expectation somewhat higher: i.e., at the 4th grade level for mental defectives and at the 6th grade level for borderline defectives.

It is evident from Figure 21 that the largest discrepancies between grade level attending and grade level functioning are found in the lower intelligence categories. This seems particularly critical for the dull normal and average groups in which nearly 1,000 wards are functioning more than four grades below the grade they were attending and 2,419 wards are functioning more than two grades below the grade they completed.

The estimated academic retardation index reveals that the average group is most handicapped with respect to these arbitrarily set expectations: wards of average intelligence performed more than four grades below the expected standard. The dull normal group had an academic retardation index score of -2.5, indicating an achievement deficit of more than two grades. It is clear from these data that the academic disabilities of these wards are quite pronounced. This fact cannot be dismissed with arguments that delinquent populations are handicapped by lack of mental ability. Mental ability and intellectual potential generally are present but are not being productively utilized. This finding takes on added significance when it is considered that very few individuals in the study population showed psychological or

psychiatric disturbances.

In spite of the good intentions that may underlie the programs and curricula designs in the public schools, it seems likely that quite early in the school experience of these academically handicapped youths something went wrong. The school environment should be subjected to scientific scrutiny to determine why the needs of these young people are not being met by the present system.

24 ACADEMIC DISABILITY

TABLE 24
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
ACADEMIC DISABILITY

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
ACADEMIC DISABILITY	N	4039	13	113	975	2405	438	79	9
	M	-2.74	-6.26	-5.74	-4.28	-2.48	-0.50	+0.17	+0.50
	SD	2.19	2.29	1.88	1.81	1.84	1.29	1.27	1.31
ESTIMATED ACADEMIC RETARDATION	N	4053		115	986	2419	440	81	9
	M	-3.37		-0.46	-2.54	-4.26	-1.67	-0.32	+0.50
	SD	1.95		1.09	1.47	1.70	0.94	0.65	0.35

Table 24 presents the data on academic disability in the form of a comparative table.

25 RATING ON MOTIVATION FOR ACADEMIC TRAINING

TABLE 25
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
RATING ON MOTIVATION FOR ACADEMIC TRAINING

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
ACADEMIC TRAINING POTENTIAL MOTIVATED	N	2589	11	67	573	1580	296	45	5
		66.5%	52.4%	54.0%	61.7%	68.7%	70.6%	63.4%	62.5%
		62.4%S	81.8%S	67.2%S	58.3%S	62.6%S	66.9%S	68.9%S	100.0%S
NOT MOTIVATED	N	1303	10	57	355	721	123	26	3
		33.5%	47.6%	46.0%	38.3%	31.3%	29.4%	36.6%	37.5%
		57.6%S	60.0%S	59.6%S	60.6%S	56.3%S	56.9%S	57.7%S	33.3%S
HIGH SCHOOL DIPLOMA	N	424		2	40	230	105	36	9
		10.6%		1.6%	4.2%	9.7%	24.4%	48.0%	100.0%
		66.0%S		50.0%S	62.5%S	67.4%S	62.9%S	69.4%S	77.8%S
STAFF RECOMMENDATION FOR ACADEMIC TRAINING	N	2886	11	81	667	584	131	36	6
		72.2%	55.0%	65.3%	69.4%	24.8%	30.4%	48.0%	66.7%
		61.8%S	81.8%S	63.0%S	60.0%S	58.9%S	63.4%S	63.9%S	66.7%S
NO STAFF RECOMMENDATION FOR ACADEMIC TRAINING	N	1112	9	43	294	1775	300	39	3
		27.8%	45.0%	34.7%	30.6%	75.2%	69.6%	52.0%	33.3%
		59.5%S	55.6%S	60.5%S	58.6%S	61.6%S	64.0%S	79.5%S	100.0%S

Table 25 provides information on ratings by caseworkers on wards' motivation for academic training while incarcerated. The most striking finding is the relatively poor parole performance of individuals of average, bright normal, or superior intelligence who were judged to be unmotivated for academic training. The differences between motivated and unmotivated wards of average intelligence is 6.3 per cent in favor of the motivated; for the bright normal this figure is 10 per cent; for the superior, 11.2 per cent.

X. VOCATIONAL FACTORS

The results of the testing on the General Aptitude Test Battery are presented in Figures 22 through 28. The scores obtained by each intelligence group are related to the average scores obtained by the total study population. Approximate results for the intelligence groups are depicted by the circles while the average for the total study population is indicated by the horizontal lines.

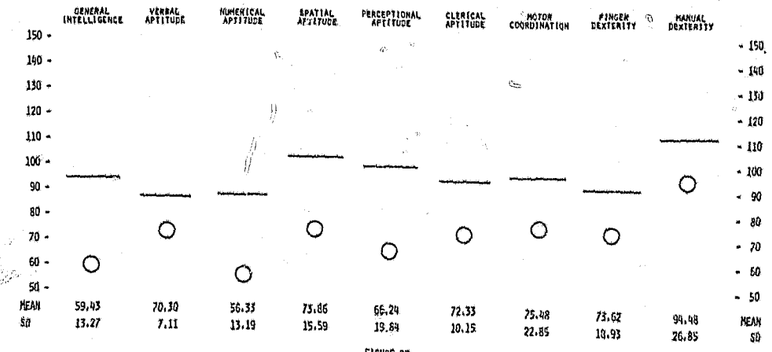


FIGURE 22
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF MENTAL DEFECTIVE INTELLIGENCE
RESULTS ON THE GENERAL APTITUDE TEST BATTERY (GATB)
N = 21

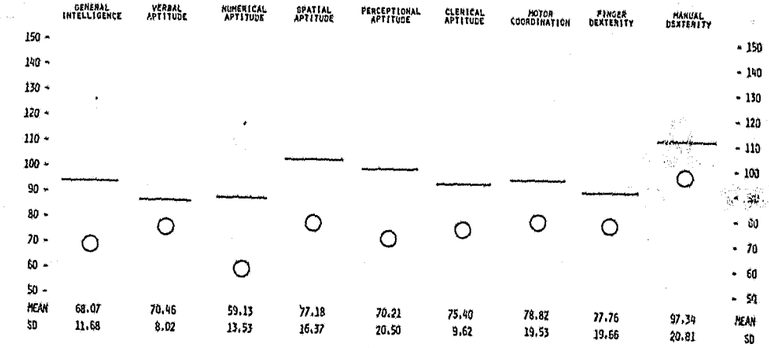


FIGURE 23
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF BORDERLINE INTELLIGENCE
RESULTS ON THE GENERAL APTITUDE TEST BATTERY (GATB)
N = 112

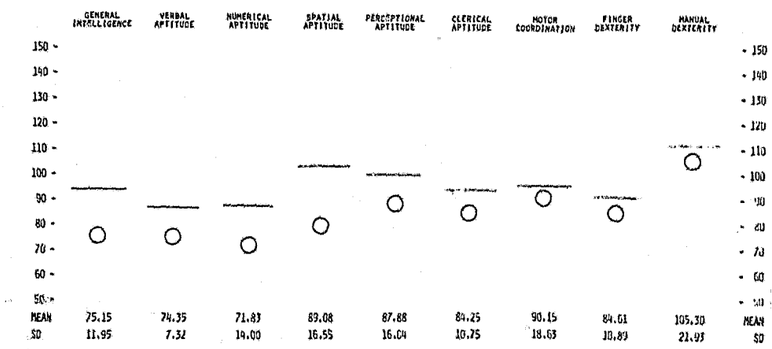


FIGURE 24
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF DULL NORMAL INTELLIGENCE
RESULTS ON THE GENERAL APTITUDE TEST BATTERY (GATB)
N = 940

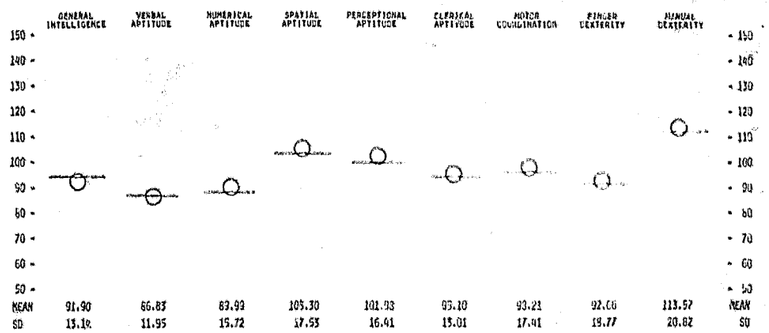


FIGURE 25
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF AVERAGE INTELLIGENCE
RESULTS ON THE GENERAL APTITUDE TEST BATTERY (GATB)
N = 2305

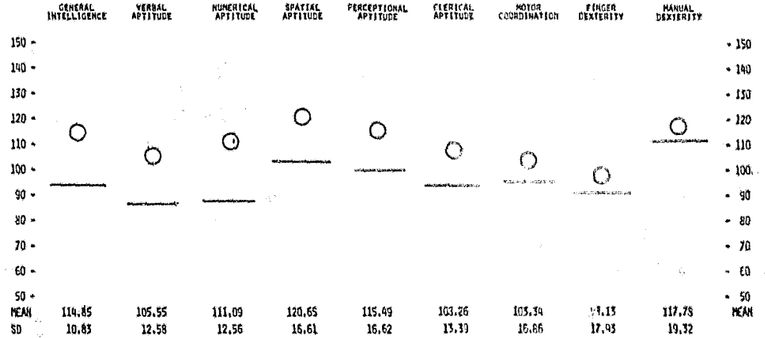


FIGURE 26
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF BRIGHT NORMAL INTELLIGENCE
RESULTS ON THE GENERAL APTITUDE TEST BATTERY (GATB)
N = 428

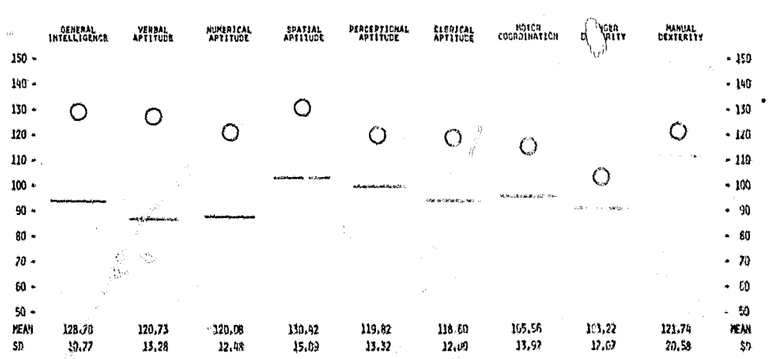


FIGURE 27
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF SUPERIOR INTELLIGENCE
RESULTS ON THE GENERAL APTITUDE TEST BATTERY (GATB)
N = 75

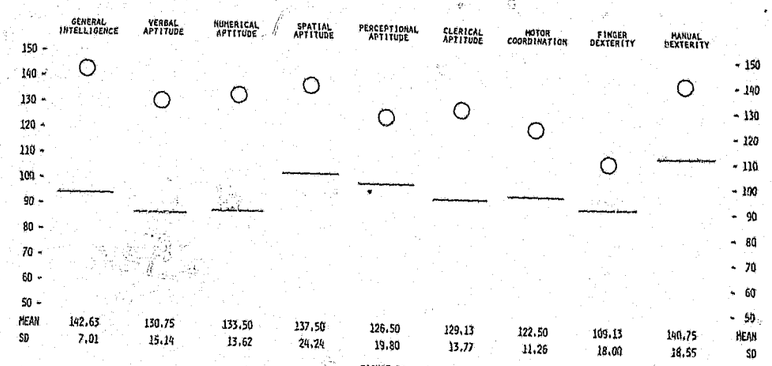


FIGURE 28
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF VERY SUPERIOR INTELLIGENCE
RESULTS ON THE GENERAL APTITUDE TEST BATTERY (GATB)
N = 8

A summary of these results is presented in Table 26. This table shows that, particularly for those individuals classified as average or below average, the lowest scores are found for numerical aptitude followed by the scores for verbal aptitude. This again suggests the poor academic skills of these individuals as compared to their fairly good aptitudes for vocational pursuits and their relative ranking on intellectual potential.

Figures 29 through 34 present information on occupational history, primary area of interest for vocational training, and recommendation by the caseworker for vocational training during institutionalization.

26 RESULTS ON GENERAL APTITUDE TEST BATTERY

TABLE 26
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
RESULTS ON THE GENERAL APTITUDE TEST BATTERY

		TOTAL STUDY POPULATION N = 3889	MENTAL DEFECTIVE N = 21	BORDERLINE N = 112	DULL NORMAL N = 940	AVERAGE N = 2306	BRIGHT NORMAL N = 426	SUPERIOR N = 75	VERY SUPERIOR N = 8
GENERAL INTELLIGENCE	M	90.30	59.43	68.07	75.15	91.90	114.85	128.78	142.63
	SD	18.24	13.27	11.68	11.95	13.14	10.83	10.77	7.01
VERBAL APTITUDE	M	86.06	70.20	70.46	74.35	86.83	105.55	120.73	130.75
	SD	15.20	7.11	8.02	7.52	11.95	12.58	13.28	15.14
NUMERICAL APTITUDE	M	87.50	56.33	59.13	71.83	89.98	111.09	120.08	133.50
	SD	19.93	13.19	13.53	14.00	15.72	12.56	12.48	13.62
SPATIAL APTITUDE	M	102.63	75.86	77.18	89.08	105.30	120.65	130.42	137.50
	SD	20.43	15.59	16.37	16.55	17.53	16.61	15.09	24.24
PERCEPTIONAL APTITUDE	M	99.32	66.24	70.21	87.88	101.98	115.49	119.82	126.50
	SD	19.51	19.84	20.50	16.84	16.41	16.62	13.32	19.80
CLERICAL APTITUDE	M	93.74	72.33	75.40	84.25	95.10	108.26	118.60	129.13
	SD	15.06	10.15	9.62	10.75	13.01	13.39	12.80	13.77
MOTOR COORDINATION	M	96.34	75.48	78.82	90.15	98.21	103.34	105.56	122.50
	SD	18.54	22.89	19.53	18.63	17.41	16.86	13.92	11.26
FINGER DEXTERITY	M	91.02	73.62	77.76	84.61	92.66	98.13	103.22	109.13
	SD	19.42	18.93	19.66	18.89	18.77	17.95	17.67	18.00
MANUAL DEXTERITY	M	111.70	94.48	97.34	105.30	113.57	117.78	121.74	140.75
	SD	21.61	26.85	20.81	21.93	20.82	19.32	20.58	18.55

Figure 29 presents data on skilled trades in the construction field. In order to maintain clarity, the frequencies are omitted from these figures. The percentages are based on the following frequencies for the various subgroups: Mental Defective, N=20; Borderline Defective, N=124; Dull Normal, N=962; Average, N=2,360; Bright Normal, N=431; Superior, N=75; Very Superior, N=9.

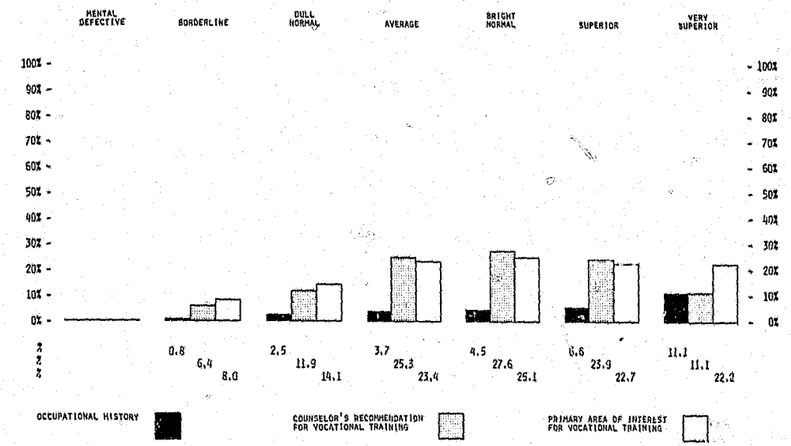


FIGURE 29
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CARPENTRY, CONSTRUCTION, ELECTRICAL, MASONRY, MILL AND CABINET, HOUSEPAINTING, PLASTERING, PLUMBING, REFRIGERATION AND AIRCONDITIONING, SHEET METAL, AND OTHER SKILLED TRADES

Very few wards have had practical experience in these trades. It is difficult to estimate how much of this deficiency is directly attributable to the lack of school-related skills that prevents these youths from obtaining vocational training or employment, but lack of basic academic skills certainly aggravates the problem. Another contributing factor is probably the scarcity of training and employment opportunities in certain neighborhoods and communities. This is reflected in the data presented in Volume 3, where ethnic factors are discussed. From these data

it appears that offenders from minority groups are even more deficient than Caucasian offenders in practical vocational experience of a skilled nature. The rate for offenders from minority groups is less than half that of the white offenders: 4.5 per cent of the white offenders and only about 2 per cent of the blacks and Mexican-Americans had experience in a skilled construction trade.

With the exception of those in the mentally defective group, many individuals were interested in receiving training in construction. As can be seen, the caseworkers recommended training for approximately the same proportion as showed interest: from 8 to 25 per cent of the various groups. While the data do not indicate whether the individual who voiced interest received the appropriate recommendation, it can be assumed that wards generally were guided toward training for which they were motivated.

Figure 30 presents this information with respect to mechanic trades, as well as for body and fender work, heavy equipment operation, T.V. repair, and welding. The data are similar to those describing the situation in the construction trades. Again, in the mechanical vocations, ethnic minorities have

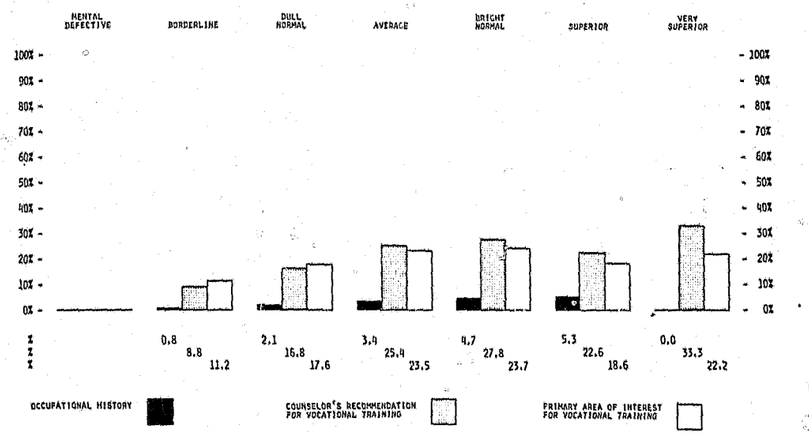


FIGURE 30
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
AIR MECHANICS, AUTO MECHANICS, BODY AND FENDER, HEAVY EQUIPMENT OPERATOR, GENERAL MECHANICS, T.V. REPAIR, WELDING

substantially less work experience than Caucasian subjects. This information will be dealt with in more detail in Volume 3 where racial factors are discussed.

From Figure 31 it is strikingly apparent that the great majority of these youth, regardless of their intellectual and vocational aptitudes, fall into the semi-skilled and unskilled categories. The picture appears even more bleak when it is considered that the unskilled category includes approximately 90 per cent of the individuals reported in this figure under occupational history. These data make

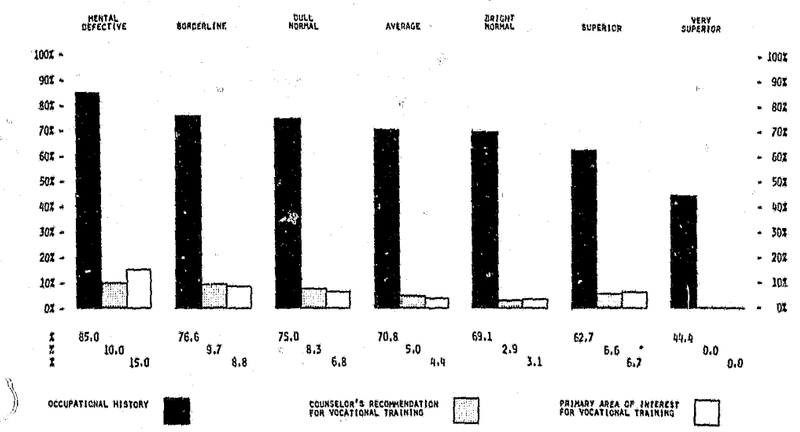


FIGURE 31
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
MAINTENANCE, INDUSTRIES, LANDSCAPING, WAREHOUSE TRAINING,
AND OTHER SEMISKILLED AND UNSKILLED TRADES

it clear that the majority of the youth in this study had serious vocational handicaps that put considerable economic and psychological strains on them and probably contributed heavily to their criminal activities. This finding points up the need for remedial vocational training programs. Perhaps the community college system could provide such training for probationers and parolees as well as other young people who need it.

Figures 32, 33, and 34 present information on food services trades, various services vocations, and the graphic arts.

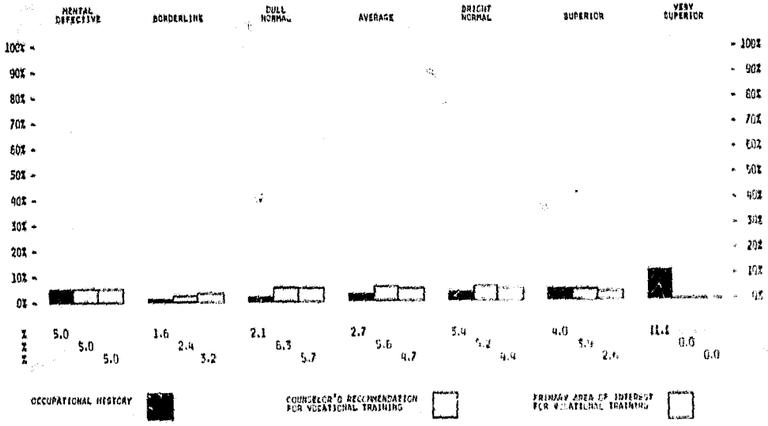


FIGURE 32
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
BAKING, COOKING, CULINARY ARTS, FOOD SERVICES, AND MEATCUTTING

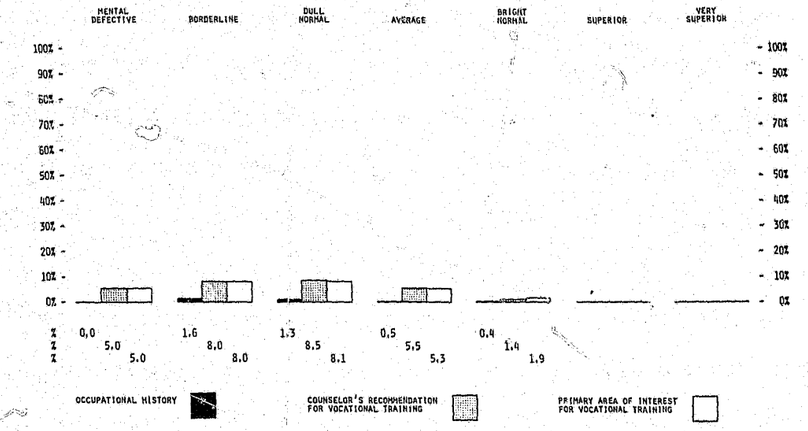


FIGURE 33
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
BARBERING, DRY CLEANING, SHOE REPAIR, UPHOLSTERY

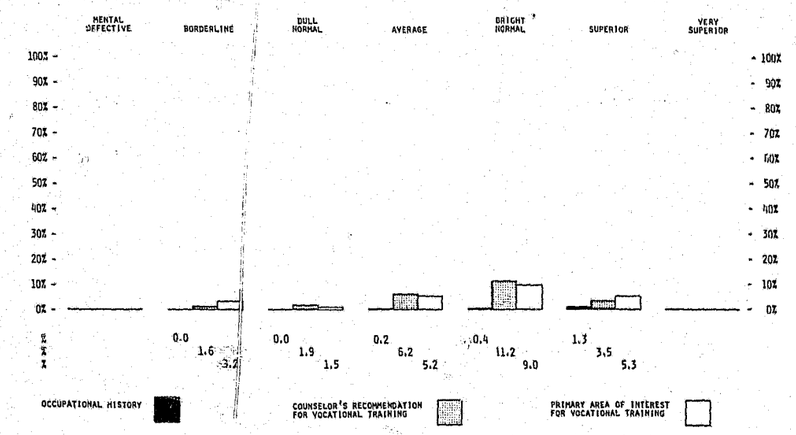


FIGURE 34
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
ARTS AND CRAFTS, GRAPHIC ARTS, MECHANICAL DRAFTING,
PRINTING

The Reception Guidance Center program focused much attention on the assessment of vocational needs and carried out two related programs that tested small groups of wards during a one-week period. One program centered around wood-working activities and another around metal-working activities. The ratings on motivation for training made by the two instructors of these programs are shown in Table 27, together with the results of a similar rating by the caseworker. The latter rating was based solely on an interview while the shop instructors based their ratings on an interview after several days of job observation in the metal and wood shops. Also presented in this table is the information on whether or not the individual was recommended by the caseworker for vocational training.

From this table it is apparent that the motivation of the individual as perceived by staff is particularly critical for the average and dull normal groups where individuals perceived by staff as unmotivated show considerably less success on parole than individuals who were perceived as being motivated for vocational training. This tendency also is evident in regard to the bright normal groups and, in part, the superior and borderline defective groups. It is interesting to note that the pattern is reversed for the mental

27 RATINGS OF MOTIVATION FOR VOCATIONAL TRAINING

TABLE 27
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
RATINGS OF MOTIVATION FOR VOCATIONAL TRAINING

	TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
N	773	5	11	150	498	92	13	1
WOODSHOP INSTRUCTOR RATING - MOTIVATED	74.6%	71.4%	50.0%	70.4%	75.9%	80.7%	65.0%	100.0%
	60.8%S	60.0%S	63.6%S	59.3%S	59.8%S	67.4%S	69.2%S	100.0%S
N	263	2	11	63	158	22	7	
- NOT MOTIVATED	25.4%	28.6%	50.0%	29.6%	24.1%	19.3%	35.0%	
	60.1%S	100.0%S	63.6%S	63.5%S	57.6%S	63.6%S	57.1%S	
N	396	4	15	122	454	83	15	1
METALSHOP INSTRUCTOR RATING - MOTIVATED	69.9%	80.0%	57.7%	59.2%	72.4%	76.1%	75.0%	100.0%
	62.5%S	50.0%S	66.7%S	62.3%S	59.9%S	73.5%S	80.0%S	100.0%S
N	300	1	11	84	173	26	5	
- NOT MOTIVATED	30.1%	20.0%	42.3%	40.8%	27.6%	23.9%	25.0%	
	58.3%S	100.0%S	81.8%S	56.0%S	57.2%S	65.4%S	40.0%S	
N	2779	10	65	616	1722	301	49	5
COUNSELOR'S RATING - MOTIVATED	71.4%	47.6%	52.4%	66.4%	74.8%	72.2%	69.0%	62.5%
	62.4%S	60.0%S	67.7%S	60.1%S	62.3%S	66.4%S	65.3%S	80.0%S
N	1113	11	59	312	581	116	22	3
- NOT MOTIVATED	28.6%	52.4%	47.6%	33.6%	25.2%	27.8%	31.0%	37.5%
	57.1%S	81.8%S	59.3%S	57.4%S	56.1%S	57.8%S	63.6%S	66.7%S
N	2872	3	50	578	1829	342	54	5
COUNSELOR'S RATING II - MOTIVATED	71.8%	15.0%	40.3%	60.1%	77.6%	79.4%	72.0%	55.6%
	62.2%S	66.7%S	70.0%S	61.8%S	61.3%S	64.9%S	70.4%S	80.0%S
N	691	7	19	197	376	67	17	2
- NOT MOTIVATED	17.3%	35.0%	15.3%	20.5%	15.9%	15.5%	22.7%	22.2%
	57.7%S	71.4%S	57.9%S	55.8%S	57.7%S	58.2%S	76.5%S	100.0%
N	1065	5	45	580	1879	352	58	4
STAFF RECOMMENDATION FOR VOCATIONAL TRAINING - YES	26.6%	25.0%	36.3%	60.3%	79.7%	81.7%	77.3%	40.4%
	59.7%S	40.0%S	64.4%S	61.6%S	61.1%S	64.2%S	69.0%S	75.0%S
N	2934	15	79	382	480	79	17	5
- NONE	73.4%	75.0%	63.7%	39.7%	20.3%	18.3%	22.7%	55.6%
	61.8%S	80.0%S	60.8%S	56.8%S	60.4%S	62.0%S	82.4%S	80.0%S

defective group, in which individuals perceived as unmotivated consistently perform better on parole. In addition, mental defective wards not recommended for vocational training were more successful on parole than were those who had been recommended for vocational training. Although the numbers are small this finding could suggest that while mentally defective wards may need vocational training, the programs offered in the correctional setting may not be appropriate for this kind of person and therefore

may have an adverse effect on them. Designing training programs to accommodate the intellectually handicapped may help to solve this problem. There may also be a lack of suitable training programs for superior and very superior wards. These two groups follow the pattern of the mental defectives: persons not recommended by the caseworker for vocational training are more successful on parole than are persons recommended for training. In contrast, for intelligence categories in the middle range, the pattern is reversed.

Information on work experience is provided in Table 28. Generally, work experience of less than six months is negatively related to parole success, a finding that is more pronounced for the lower intelligence categories. Inconsistency is evident in the data on individuals with work experience between 12 - 18 months where for some reason the success rate decreases. Clearly, within the borderline and dull normal intelligence subgroups there appears to be some relationship with work

28 WORK EXPERIENCE, UNION MEMBERSHIP, AND VOCATIONAL DISABILITY

TABLE 28
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
WORK EXPERIENCE, UNION MEMBERSHIP, AND VOCATIONAL DISABILITY

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NONE	N	459	1	15	102	278	47	6	
		11.5%	5.0%	12.1%	11.2%	11.8%	10.9%	8.0%	
		58.8%S	100.0%S	46.7%S	52.8%S	59.7%S	68.1%S	83.3%S	
0 - 6 MONTHS	N	1466	10	39	311	890	171	34	4
		36.7%	50.0%	31.5%	32.4%	37.7%	39.8%	45.3%	44.4%
		59.3%S	50.0%S	53.8%S	57.6%S	59.7%S	57.3%S	79.4%S	100.0%S
6 - 12 MONTHS	N	725	2	27	190	398	88	13	3
		18.1%	10.0%	21.8%	19.8%	16.9%	20.5%	17.3%	33.3%
		65.2%S	100.0%S	74.1%S	66.3%S	64.3%S	69.3%S	46.2%S	33.3%S
12 - 18 MONTHS	N	314		7	76	191	33	6	1
		7.9%		5.6%	7.9%	8.1%	7.7%	8.0%	11.1%
		59.9%S		71.4%S	59.2%S	57.6%S	66.7%S	83.3%S	100.0%S
18 - 24 MONTHS	N	138	1	4	26	91	13	3	
		3.5%	5.0%	3.2%	2.7%	3.9%	3.0%	4.0%	
		65.8%S	100.0%S	50.0%S	65.4%S	61.5%S	76.9%S	66.7%S	
24 MONTHS AND OVER	N	433	4	15	121	254	30	7	1
		10.8%	20.0%	12.1%	12.6%	10.0%	7.0%	9.3%	11.1%
		66.3%S	75.0%S	80.0%S	62.8%S	65.7%S	70.0%S	85.7%S	100.0%S
SPORADIC	N	407	2	13	114	230	42	3	
		10.2%	10.0%	10.5%	11.9%	9.7%	9.8%	4.0%	
		58.7%S	100.0%S	61.5%S	55.3%S	60.0%S	61.9%S	66.7%S	
UNION MEMBER	N	309		5	52	200	41	9	1
		7.7%		4.0%	5.4%	8.5%	9.5%	12.0%	11.1%
		65.7%S		100.0%S	61.5%S	66.0%S	70.7%S	44.4%S	100.0%S
NOT A UNION MEMBER	N	3661	70	118	905	2138	388	66	8
		91.5%	100.0%	95.2%	94.1%	90.6%	90.0%	88.0%	88.9%
		60.8%S	70.0%S	61.0%S	59.6%S	60.4%S	63.4%S	75.6%S	75.0%S
VOCATIONAL DISABILITY	N	239	2	9	62	134	25	6	1
		6.0%	10.0%	7.3%	6.5%	5.7%	5.8%	8.0%	11.1%
		62.8%S	0.0%S	77.8%S	62.9%S	60.4%S	63.8%S	71.0%S	100.0%S
NO VOCATIONAL DISABILITY	N	3722	17	113	892	2203	401	69	8
		93.1%	85.0%	91.1%	92.8%	93.4%	93.0%	92.0%	88.9%
		61.1%S	82.4%S	61.9%S	59.4%S	60.9%S	63.6%S	71.0%S	75.0%S

experience. Scanning these two subgroups vertically indicates that parole success rate improves with amount of work experience; also, this association seems to imply that the transition from negative to positive deviation from the success rate of the entire study group takes place between the zero-to-six-months category and the six-to-twelve-months category.. This relationship seems to diminish for the average

and bright normal groups, although some degree of association is still apparent.

Another relationship of interest involves the interaction of amount of work experience, intelligence classification, and parole outcome. For example, offenders with work experience of six months or less seem to display a relationship between parole success and intelligence. It appears that as intelligence increases for these experience groups so does their percentage of parole success. It certainly is quite apparent from this table that individuals who are handicapped in both employment history and intelligence show a relatively high recidivism rate.

Table 28 gives information on union status and vocational disability. With the exception of the superior group, union membership increased the success rate on parole, making this group a better risk on parole and pointing again to the importance of vocational skills and job stability to the successful readjustment of youthful offenders to the community.

XI. PERSONALITY FACTORS

1. Personality Test Results

The purpose of this section is to present the findings on three personality tests--the California Psychological Inventory (CPI), the Minnesota Multiphasic Personality Inventory (MMPI), and the Interpersonal Personality Inventory (IPI), as they relate to the intelligence classification subgroups. As in previous sections, extensive use is made of graphic presentations and comparative tables. The overall profiles on the CPI and the MMPI, which serve as a guide for the comparison, are presented in Figure 35, as are the mean and standard deviations for all subscales.

It is fortunate that the data on both the CPI and the MMPI are available on all wards who met the requirement of a sixth-grade reading skill, which seems necessary to comprehend the items on these tests. These data also are available on wards who functioned testwise below this level but could comprehend the items when they were presented to them by tape recording. The two tests permit a valuable assessment of personality factors.

Measures of the nature and extent of possible psychological disturbance are provided by the MMPI and measures

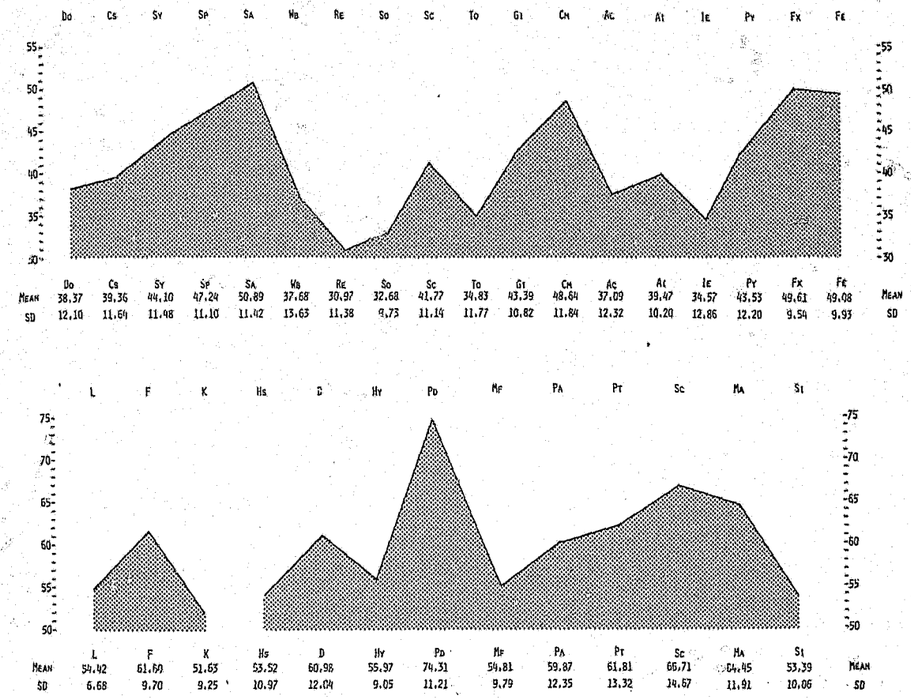


FIGURE 35
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CPI AND MMPI PROFILES FOR TOTAL STUDY POPULATION

N = 3103

of the psychological and social strength and patterns of interpersonal behavior are provided by the CPI. Table 29 presents data on the two tests for some of the individuals in the mental defective and borderline defective categories. No profiles are provided for these two groups because of their questionable ability to comprehend some of the test items.

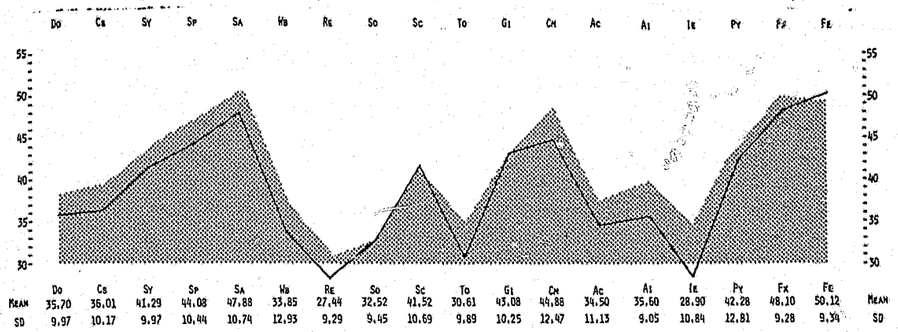


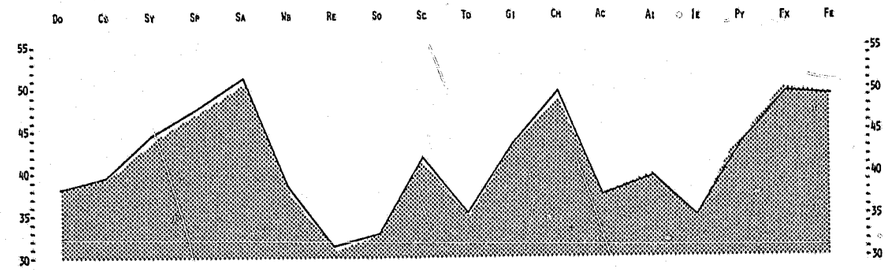
FIGURE 36
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CPI PROFILE OF CYA WARDS CLASSIFIED AS OF
DULL NORMAL INTELLIGENCE
N = 648

Figure 36 shows the results on the CPI for the dull normal group, indicating the areas of difficulty that this group may encounter. The six lowest scores are found on Wb (sense of well being), Re (responsibility), So (socialization), To (tolerance), Ac (achievement via conformance), and Ie (intellectual efficiency), as in the profile of the total study population, but more pronounced. This would characterize the group as lacking in a general sense of physical and psychological well-being and lacking in seriousness of thought, well-developed values, and dependability. Further, the group shows a great lack of maturity and social integration, often experiences friction with others, and exhibits little tolerance or acceptance of others. The group also has a generally low capacity to achieve in settings where con-

formance is required and there are indications that intellectual and personal resources are poorly utilized.

On the more positive side the CPI profile shows relatively fair scores on the six subscales Sp (social presence), Sa (self-acceptance), Gi (good impression), Cm (communality), Fx (flexibility), and Fe (femininity), indicating group characteristics of social spontaneity, a fair degree of feelings of self-worth, a desire to create a good impression, a fair capability to adapt in thinking, and a general preference for an accommodating and low-key social posture.

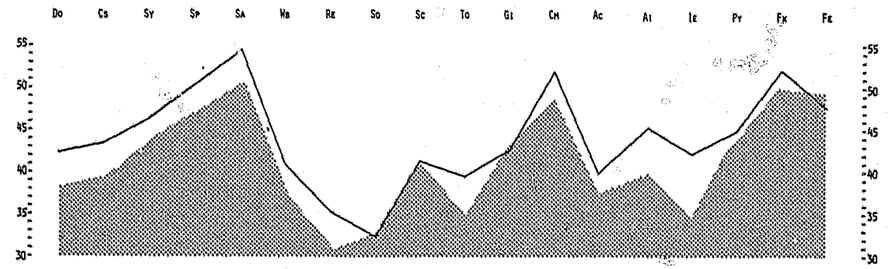
Figure 37 depicts the results on the CPI for groups classified as average in intelligence. As can be seen, the profile approximates the total study population pro-



	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	At	Ie	Py	Fx	Fe	
Mean	38.13	39.49	44.40	47.61	51.07	38.37	31.12	32.70	41.91	35.15	43.51	49.62	37.23	39.49	34.77	43.39	49.68	49.09	Mean
SD	11.99	11.54	11.53	10.84	11.19	13.54	11.28	9.79	11.11	11.66	10.90	11.34	12.24	9.89	12.35	11.91	9.39	9.92	SD

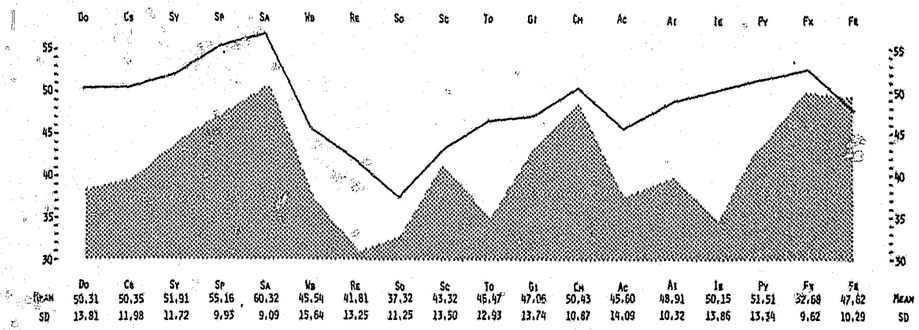
FIGURE 37
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CPI PROFILE OF CYA WARDS CLASSIFIED AS OF
AVERAGE INTELLIGENCE
N = 1922

file. As intelligence increases, scores on most CPI scales improve dramatically. A striking and psychologically significant exception is seen in the persistently low scores on the socialization scale, (Sc), which clearly point up the deficient socialization process that characterizes these young men regardless of intelligence. The relatively low scores on the Responsibility scale (Re) for all groups is similarly noticeable, although much less pronounced.



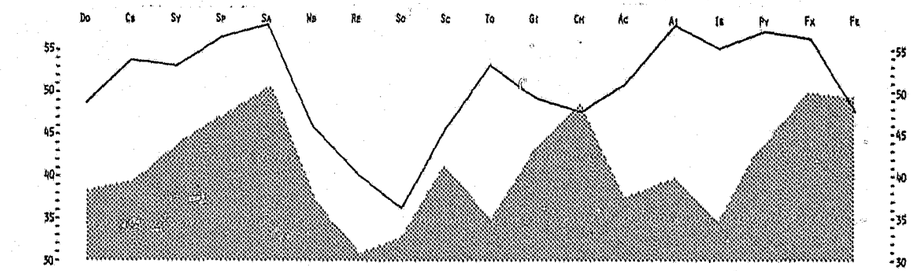
	Do	Cs	Sy	Sp	SA	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe	
Mean	42.21	43.26	46.18	50.21	54.21	40.73	35.13	32.39	41.37	39.41	42.51	51.85	39.81	45.06	42.06	44.95	52.06	47.63	Mean
SD	13.57	11.92	12.42	11.61	12.14	12.77	12.21	9.68	11.61	11.43	10.86	10.16	12.74	9.25	11.95	11.09	9.74	10.36	SD

FIGURE 38
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CPI PROFILE OF CYA WARDS CLASSIFIED AS OF
BRIGHT NORMAL INTELLIGENCE
N = 374



	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe	
Mean	50.31	50.35	51.91	55.16	60.32	45.54	41.81	37.32	43.32	46.47	47.06	50.43	45.60	48.91	50.15	51.51	32.68	47.62	Mean
SD	13.81	11.98	11.72	9.93	9.09	15.64	13.25	11.25	13.50	12.93	13.74	10.87	14.09	10.32	13.86	13.34	9.62	10.29	SD

FIGURE 39
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CPI PROFILE OF CYA WARDS CLASSIFIED AS OF
SUPERIOR INTELLIGENCE
N = 68



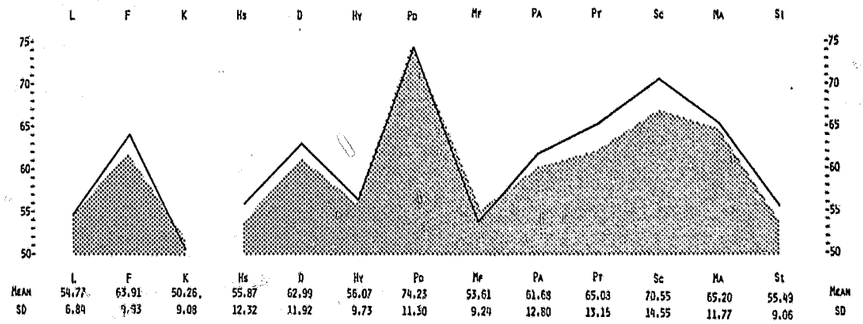
	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe	
Mean	48.50	53.63	53.00	56.50	62.88	46.00	40.38	36.13	45.75	53.13	49.25	47.63	50.75	58.88	55.25	57.25	55.50	47.50	Mean
SD	15.98	13.86	15.42	13.28	10.34	13.84	16.80	9.88	14.76	13.80	16.12	15.22	18.52	11.66	17.36	4.80	11.58	11.90	SD

FIGURE 40
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CPI PROFILE OF CYA WARDS CLASSIFIED AS OF
VERY SUPERIOR INTELLIGENCE
N = 8

In examining the CPI and MMPI profiles one must keep in mind that for the CPI the more desirable scores appear in the upper range of the scores, while for the MMPI the less pathological scores appear in the lower range of the scores. High peaks on the CPI therefore denote desirable

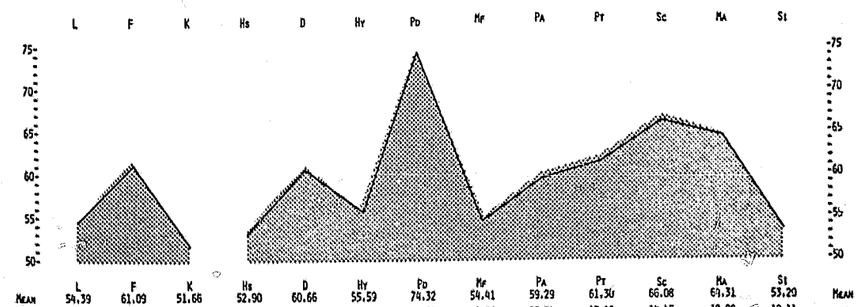
social attributes while high peaks on the MMPI denote possible psychological disturbance or pathology.

The test results on the MMPI are presented in Figures 41 through 45. These profiles are included despite some justified criticism of the original clinical scales. There is a vast body of research using this clinical test and some of the concepts utilized still



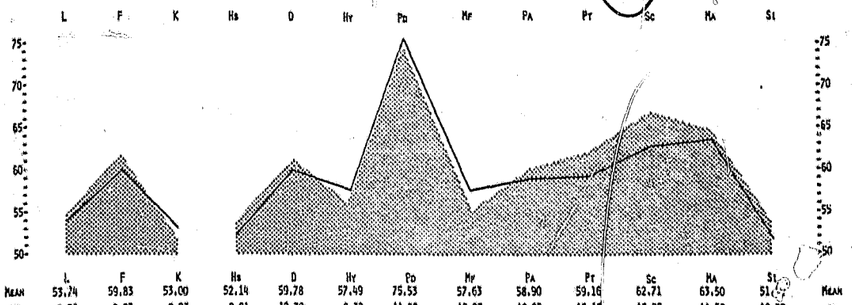
	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si	
Mean	54.77	63.91	50.26	55.87	62.99	56.07	74.23	53.61	61.68	65.03	70.55	65.20	55.49	Mean
SD	6.84	9.93	9.08	12.32	11.92	9.73	11.50	9.24	12.80	13.15	14.55	11.77	9.06	SD

FIGURE 41
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
MMPI PROFILE OF CYA WARDS CLASSIFIED AS OF
DULL NORMAL INTELLIGENCE
N = 646



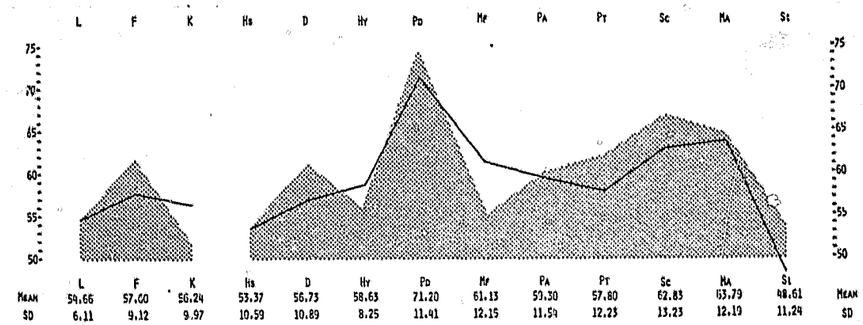
	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si	
Mean	54.39	61.09	51.66	52.90	60.66	55.59	74.32	54.41	59.29	61.30	66.08	69.31	53.20	Mean
SD	6.61	9.52	9.26	10.52	11.99	8.92	11.08	9.65	12.34	13.19	14.45	12.00	10.11	SD

FIGURE 42
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
MMPI PROFILE OF CYA WARDS CLASSIFIED AS OF
AVERAGE INTELLIGENCE
N = 1939



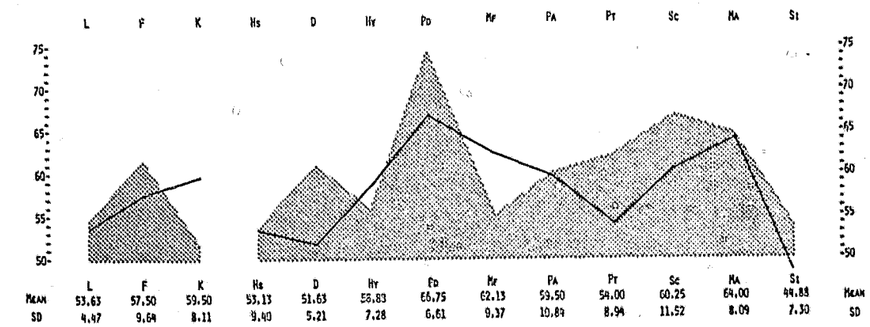
	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	St	
Mean	53.74	59.83	53.00	52.14	59.78	57.49	75.53	57.63	58.90	59.16	62.71	63.50	51.[illegible]	Mean
SD	6.72	8.93	9.03	9.91	12.39	8.32	11.88	10.07	10.95	13.16	13.95	11.55	10.77	SD

FIGURE 43
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
MMPI PROFILE OF CYA WARDS CLASSIFIED AS OF
BRIGHT NORMAL INTELLIGENCE
N = 379



	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	St	
Mean	54.66	57.60	56.24	53.37	56.73	58.63	71.20	61.13	59.30	57.80	62.83	63.79	48.61	Mean
SD	6.11	9.12	9.97	10.59	10.89	8.25	11.41	12.15	11.54	12.23	13.23	12.19	11.24	SD

FIGURE 44
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
MMPI PROFILE OF CYA WARDS CLASSIFIED AS OF
SUPERIOR INTELLIGENCE
N = 70



	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	St	
Mean	53.63	57.50	59.50	53.13	51.63	58.83	66.75	62.13	59.50	58.00	60.25	64.00	48.88	Mean
SD	4.47	9.64	8.11	9.40	5.21	7.28	6.61	9.37	10.84	8.94	11.52	8.09	7.30	SD

FIGURE 45
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
MMPI PROFILE OF CYA WARDS CLASSIFIED AS OF
VERY SUPERIOR INTELLIGENCE
N = 8

have considerable meaning for clinical workers. For these reasons the profiles will be useful to both clinicians and researchers.

The profiles of the total study population, as depicted by the dotted gray area, describe the group as relatively unhappy, with poor morale and generally lacking in hope about the future. The high scores on the Psychopathic Deviate scale (Pd) indicate notable difficulties in social adjustment and reflect their histories of delinquency and antisocial behavior in general. The results on the Pa (paranoia), Pt (psychasthenia), Sc (schizophrenia), and Ma (hypomania) scales suggest that the group is generally suspicious, has a high degree of anxiety, and shows thought patterns often found in psychiatrically disturbed persons. They also seem easily distractable and prone to impulsive and irrational acting-out behavior. These characteristics are more pronounced for the dull normal group, but there is evidence that some of the responses of this group may be invalid because of carelessness, misunderstanding, or other reasons. It is interesting to note that the scores on Depression (D), Psychopathic Deviance (Pd), and the Hypomania Scale (Ma), are fairly constant for the dull normal, average, and bright normal groups, showing a relationship that is often found among delinquent populations. This constancy is maintained for the

superior and very superior groups on the Ma while the scores on D and Pd are decreasing slightly. Generally, we see a similar overall pattern as with the CPI. As intelligence increases MMPI scores improve, with the exception of Pd and Ma, the two main indicators of delinquency problems.

A summary of the results on the CPI and MMPI is provided in Tables 29 and 30. These tables also include the data on those mental defective and borderline defective individuals who took the test by tape recording. Table 31 gives the data on the Interpersonal Personality Inventory (IPI) suggesting that social maturity as measured by this inventory increases as intellectual potential increases.

29 RESULTS ON THE CALIFORNIA PSYCHOLOGICAL INVENTORY

TABLE 29
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
RESULTS ON THE CALIFORNIA PSYCHOLOGICAL INVENTORY

		TOTAL STUDY POPULATION N = 3193	MENTAL DEFECTIVE N = 9	BORDERLINE N = 55	DULL NORMAL N = 648	AVERAGE N = 1922	BRIGHT NORMAL N = 574	SUPERIOR N = 68	VERY SUPERIOR N = 8
DOMINANCE	M	38.37	39.89	35.71	35.70	38.13	42.21	50.31	48.50
	SD	12.10	9.98	9.70	9.97	11.99	13.57	13.81	15.98
CAPACITY FOR STATUS	M	39.36	32.00	35.13	36.01	39.49	43.26	50.35	53.63
	SD	11.64	9.41	10.68	10.17	11.54	11.92	11.98	13.86
SOCIABILITY	M	44.10	41.33	47.04	41.29	44.40	46.18	51.91	53.00
	SD	11.48	9.82	10.01	9.97	11.53	12.42	11.72	15.42
SOCIAL PRESENCE	M	47.24	43.11	47.62	44.08	47.61	50.21	55.16	56.50
	SD	11.10	9.25	12.80	10.44	10.84	11.61	9.93	13.28
SELF ACCEPTANCE	M	50.89	49.67	44.89	47.88	51.07	54.21	60.32	62.88
	SD	11.42	7.84	10.24	10.74	11.19	12.14	9.09	10.34
SENSE OF WELL-BEING	M	37.68	30.33	29.95	33.85	38.37	40.73	45.54	46.00
	SD	13.63	14.82	12.70	12.93	13.54	12.77	15.64	13.84
RESPONSIBILITY	M	30.97	28.89	25.55	27.44	31.12	35.13	41.81	40.38
	SD	32.68	10.73	8.57	9.29	11.28	12.21	13.25	15.80
SOCIALIZATION	M	32.68	31.56	30.35	32.52	32.70	32.39	37.32	36.13
	SD	9.73	9.14	8.07	9.45	9.79	9.68	11.25	9.88
SELF CONTROL	M	41.77	41.00	41.11	41.52	41.91	41.37	43.32	45.75
	SD	13.14	10.62	10.42	10.69	11.11	11.61	13.50	14.76
TOLERANCE	M	34.83	33.11	27.69	30.61	35.15	39.41	46.47	53.13
	SD	11.77	16.29	9.29	9.89	11.66	12.43	12.93	13.80
GOOD IMPRESSION	M	43.39	42.33	44.65	43.08	43.51	42.51	47.06	49.25
	SD	10.82	9.86	8.87	10.25	10.90	10.86	13.74	16.12
COMMUNALITY	M	48.64	42.11	38.16	44.88	49.62	51.85	50.43	47.63
	SD	11.84	15.27	14.09	12.47	11.34	10.16	10.87	15.22
ACHIEVEMENT VIA CONFORMANCE	M	37.09	31.78	33.56	34.50	37.23	39.81	45.60	50.75
	SD	12.32	15.06	11.23	11.12	12.24	12.74	14.09	18.52
ACHIEVEMENT VIA INDEPENDENCE	M	39.47	35.22	34.20	35.60	39.49	45.06	48.91	58.88
	SD	10.20	14.13	10.05	9.05	9.89	9.25	10.32	11.66
INTELLECTUAL EFFICIENCY	M	34.57	23.67	24.31	28.90	34.77	42.06	50.15	55.25
	SD	12.86	6.40	8.04	10.84	12.35	11.95	13.86	17.36
PSYCHOLOGICAL MINDEDNESS	M	43.53	46.22	43.55	42.28	43.39	44.95	51.51	57.25
	SD	12.20	11.64	15.43	12.81	11.91	11.09	13.34	4.80
FLEXIBILITY	M	49.61	48.78	45.05	48.10	49.68	52.06	52.68	55.50
	SD	9.54	12.54	9.45	9.28	9.39	9.74	9.62	11.58
FEMININITY	M	49.08	55.44	48.95	50.12	49.09	47.63	47.62	47.50
	SD	9.93	13.04	9.82	9.34	9.92	10.36	10.29	11.90
CPI EQUATION	M	49.82	50.39	50.63	50.47	49.81	48.78	49.33	47.92
	SD	4.98	3.48	4.26	4.69	4.99	5.22	5.61	5.76

30 RESULTS ON THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY

TABLE 30
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
RESULTS ON THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY

		TOTAL STUDY POPULATION N = 3103	MENTAL DEFECTIVE N = 10	BORDERLINE N = 56	DULL NORMAL N = 646	AVERAGE N = 1939	BRIGHT NORMAL N = 379	SUPERIOR N = 70	VERY SUPERIOR N = 8
LIE	M	54.42	54.80	55.55	54.77	54.39	53.74	54.66	53.63
	SD	6.68	9.62	7.34	6.84	6.61	6.72	6.11	4.47
VALIDITY	M	61.60	68.90	68.20	63.91	61.09	59.83	57.60	57.50
	SD	9.70	9.89	10.06	9.93	9.52	8.93	9.12	9.64
CORRECTION FACTOR	M	51.63	49.80	50.43	50.76	51.66	53.00	56.24	59.50
	SD	9.25	9.40	8.41	9.08	9.26	9.03	9.97	8.11
HYPOCHONDRIASIS	M	53.52	58.10	57.88	55.87	52.90	52.14	53.37	53.13
	SD	10.97	15.46	10.92	12.32	10.52	9.91	10.59	9.40
DEPRESSION	M	60.98	59.40	65.11	62.99	60.66	59.78	56.73	51.63
	SD	12.04	12.04	11.78	11.92	11.99	12.39	10.89	5.21
HYSTERIA	M	55.97	53.00	55.36	56.07	55.59	57.49	58.63	58.88
	SD	9.05	12.03	9.44	9.73	8.92	8.32	8.25	7.28
PSYCHOPATHIC DEVIATE	M	74.31	72.80	72.80	74.23	74.32	75.53	71.20	66.75
	SD	11.21	6.46	9.46	11.30	11.08	11.88	11.41	6.61
MASCULINITY-FEMININITY	M	54.81	57.50	54.46	53.81	54.41	57.63	61.13	62.13
	SD	9.79	9.13	8.05	9.24	9.65	10.07	12.15	9.37
PARANOIA	M	59.87	62.50	65.48	61.68	59.29	58.90	59.30	59.50
	SD	12.35	14.72	14.18	12.80	12.34	10.95	11.54	10.84
PSYCHASTHENIA	M	61.81	61.10	66.48	65.08	61.30	59.16	57.80	54.00
	SD	13.32	16.14	15.18	13.15	13.19	13.16	12.23	8.94
SCHIZOPHRENIA	M	66.71	72.30	75.46	70.55	66.08	62.71	62.83	60.25
	SD	14.67	17.94	15.93	14.55	14.45	13.95	13.23	11.52
HYPOMANIA	M	64.45	66.60	66.95	65.20	64.31	63.50	63.79	64.00
	SD	11.91	10.50	12.09	11.77	12.00	11.55	12.19	8.09
SOCIAL INTROVERSION	M	53.39	55.50	55.43	55.49	53.20	51.52	48.61	44.88
	SD	10.06	5.40	9.22	9.06	10.11	10.77	11.24	7.30
MMPI EQUATION	M	50.91	49.83	49.90	50.69	51.01	50.95	50.84	50.82
	SD	3.05	2.92	2.90	2.87	3.13	2.73	2.86	1.82

31 RESULTS ON THE INTERPERSONAL PERSONALITY INVENTORY

TABLE 31
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
RESULTS ON THE INTERPERSONAL PERSONALITY INVENTORY

		TOTAL STUDY POPULATION N = 3181	MENTAL DEFECTIVE N = 2	BORDERLINE N = 45	DULL NORMAL N = 658	AVERAGE N = 2095	BRIGHT NORMAL N = 586	SUPERIOR N = 74	VERY SUPERIOR N = 6
IPI	M	44.88	37.50	37.93	40.54	44.82	51.12	56.08	58.17
	SD	8.98	2.12	5.97	7.48	8.42	8.67	8.74	19.98

2. Parole Prediction Results based on Personality Tests.

This section gives the results on prediction efforts based on personality test data. The extensive use of graphs and tables for this comparative analysis seems justified. Presenting such data in detail throughout the various volumes may reveal some of the internal workings of these equations that will help to improve the prediction strategies.

All information presented on prediction is based on work carried out in 1964 and published in 1965 (Gough, Wenk, and Rozynko, 1965). The equations developed on the CPI (success = 45.078 - .353 Sp - .182 Sa + .532 So + .224 Sc) and the MMPI (Success = 66.363 - .081F + .065K - .055 Pd - .168 Mf - .456 Ma) were applied to the total study population and all subgroups. Base Expectancy (BE) scores were not available for this work as the BE formula was changed during the study period.

These equations for parole prediction were developed in an effort to increase the clinical utility of prediction instruments and to retain flexibility in individual assessments over time. BE techniques lack flexibility because they are based primarily on background factors that, once they are part of an individual's history, cannot be altered. Prediction instruments based on personality tests allow the changing of pre-

diction scores and allow the re-assessment of probability values when the test is reapplied and change between test administrations is noted. Prediction based on personality assessment therefore is desirable for its flexibility, in addition to its possibly greater utility because of the clinically meaningful potential of the CPI and MMPI equations.

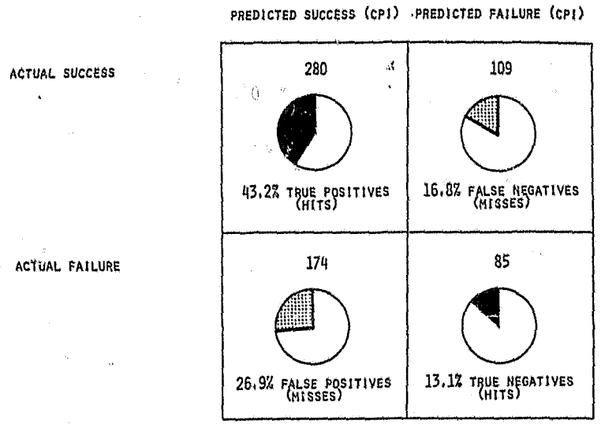


FIGURE 46
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF DULL NORMAL INTELLIGENCE
RESULTS OF PAROLE PREDICTION BY CPI EQUATION

	PREDICTED SUCCESS (CPI)	PREDICTED FAILURE (CPI)
ACTUAL SUCCESS	777 40.4% TRUE POSITIVES (HITS)	400 20.8% FALSE NEGATIVES (MISSES)
ACTUAL FAILURE	434 22.6% FALSE POSITIVES (MISSES)	311 16.2% TRUE NEGATIVES (HITS)

CHI SQUARE = 11.46** 2 DF

FIGURE 47
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF AVERAGE INTELLIGENCE
RESULTS OF PAROLE PREDICTION BY CPI EQUATION

	PREDICTED SUCCESS (CPI)	PREDICTED FAILURE (CPI)
ACTUAL SUCCESS	150 40.1% TRUE POSITIVES (HITS)	93 24.9% FALSE NEGATIVES (MISSES)
ACTUAL FAILURE	65 17.4% FALSE POSITIVES (MISSES)	66 17.6% TRUE NEGATIVES (HITS)

CHI SQUARE = 4.62* 2 DF

FIGURE 48
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF BRIGHT NORMAL INTELLIGENCE
RESULTS OF PAROLE PREDICTION BY CPI EQUATION

	PREDICTED SUCCESS (CPI)	PREDICTED FAILURE (CPI)
ACTUAL SUCCESS	27 39.7% TRUE POSITIVES (HITS)	17 25.0% FALSE NEGATIVES (MISSES)
ACTUAL FAILURE	10 14.7% FALSE POSITIVES (MISSES)	14 20.6% TRUE NEGATIVES (HITS)

CHI SQUARE = 1.70 2 DF

FIGURE 49
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF SUPERIOR INTELLIGENCE
RESULTS OF PAROLE PREDICTION BY CPI EQUATION

	PREDICTED SUCCESS (CPI)	PREDICTED FAILURE (CPI)
ACTUAL SUCCESS	3 37.5% TRUE POSITIVES (HITS)	3 37.5% FALSE NEGATIVES (MISSES)
ACTUAL FAILURE	0 0.0% FALSE POSITIVES (MISSES)	2 25.0% TRUE NEGATIVES (HITS)

CHI SQUARE = 0.18 2 DF

FIGURE 50
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF VERY SUPERIOR INTELLIGENCE
RESULTS OF PAROLE PREDICTION BY CPI EQUATION

The results of predictions with the CPI equation are depicted in Figures 46 through 50. The proportion of successful predictions (hits) for the 15-month parole follow-up period increases slightly from the lower to the higher intelligence classification subgroups. However, this increase is very small, particularly for the dull normal, average, and bright normal groups (56.3%, 56.6%, and 57.7%,respectively) which contain most of the cases.

The tendency of the equations to predict more accurately for the higher intelligence classification subgroups is more pronounced in the results of the MMPI

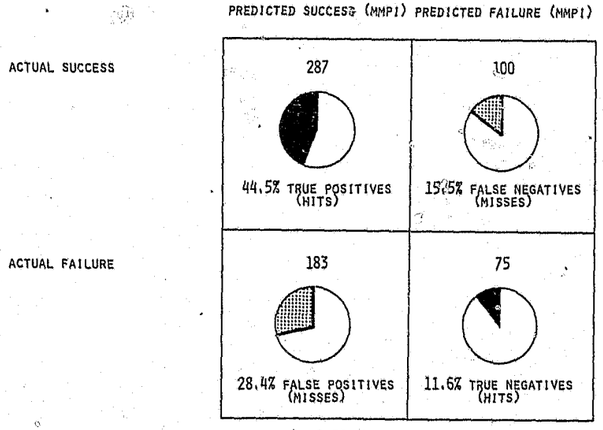
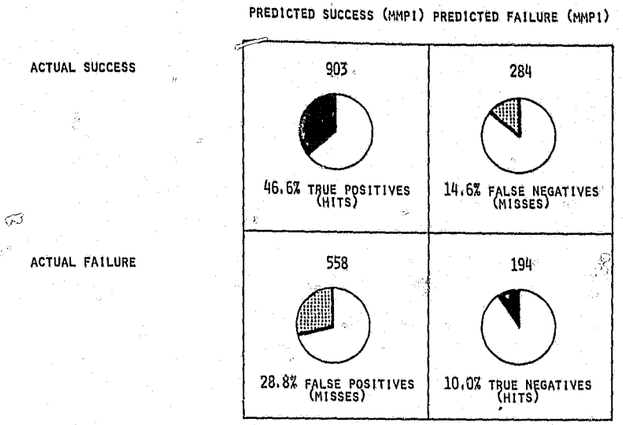
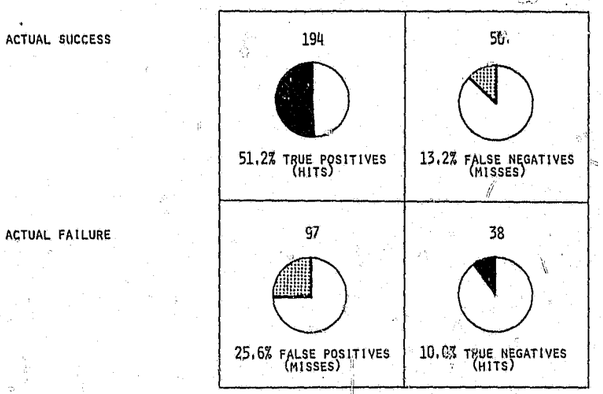


FIGURE 51
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF DULL NORMAL INTELLIGENCE
RESULTS OF PAROLE PREDICTION BY MMPI EQUATION



CHI SQUARE = 0.77 2 DF

FIGURE 52
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF AVERAGE INTELLIGENCE
RESULTS OF PAROLE PREDICTION BY MMPI EQUATION



CHI SQUARE = 2.44 2 DF

FIGURE 53
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF BRIGHT NORMAL INTELLIGENCE
RESULTS OF PAROLE PREDICTION BY MMPI EQUATION

	PREDICTED SUCCESS (MMPI)	PREDICTED FAILURE (MMPI)
ACTUAL SUCCESS	38 54.3% TRUE POSITIVES (HITS)	8 11.4% FALSE NEGATIVES (MISSES)
ACTUAL FAILURE	15 21.4% FALSE POSITIVES (MISSES)	9 12.9% TRUE NEGATIVES (HITS)

CHI SQUARE = 2.46 2 DF

FIGURE 54
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF SUPERIOR INTELLIGENCE
RESULTS OF PAROLE PREDICTION BY MMPI EQUATION

	PREDICTED SUCCESS (MMPI)	PREDICTED FAILURE (MMPI)
ACTUAL SUCCESS	5 62.5% TRUE POSITIVES (HITS)	1 12.5% FALSE NEGATIVES (MISSES)
ACTUAL FAILURE	1 12.5% FALSE POSITIVES (MISSES)	1 12.5% TRUE NEGATIVES (HITS)

FIGURE 55
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF VERY SUPERIOR INTELLIGENCE
RESULTS OF PAROLE PREDICTION BY MMPI EQUATION

equations. This is particularly true for bright normal individuals, and even more so for the superior and very superior individuals, although the frequencies in the latter groups are small.

The results of the predictions for the two equations by score level related to per cent parole success (%S) are shown in Figures 56 through 58. These figures indicate the relative success of this prediction method for the three intelligence classification subgroups that contain most of the wards. They depict clearly where the equations performed adequately and where there were deficiencies that lowered predictive accuracy.

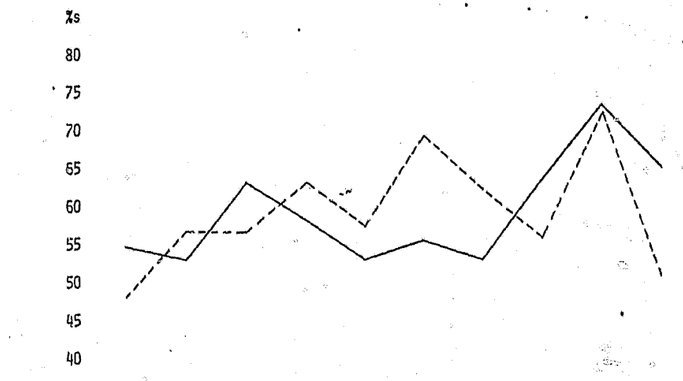


FIGURE 56
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF DULL NORMAL INTELLIGENCE
SUMMARY OF RESULTS OF PAROLE OUTCOME PREDICTION
WITH THE CPI AND MMPI

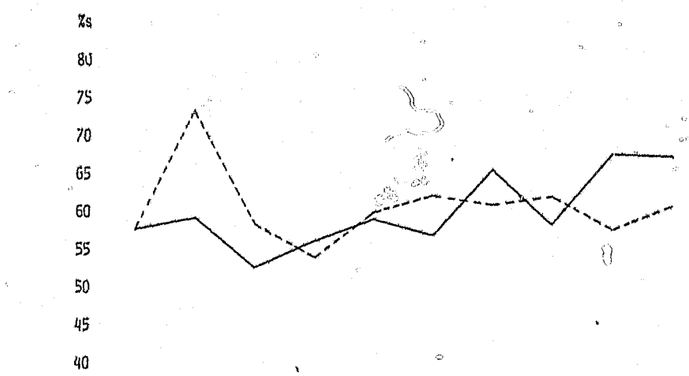


FIGURE 57
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF AVERAGE INTELLIGENCE
SUMMARY OF RESULTS OF PAROLE OUTCOME PREDICTION
WITH THE CPI AND MMPI

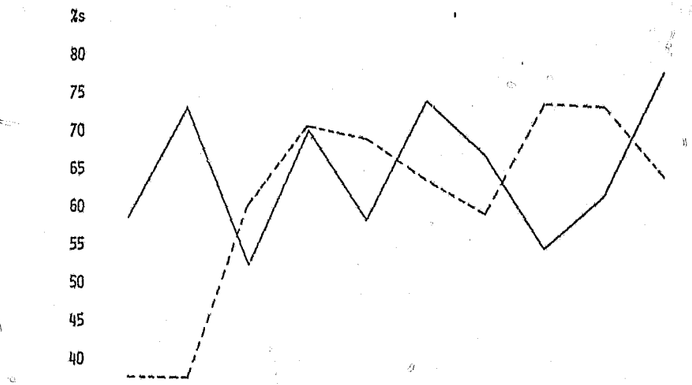


FIGURE 58
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA WARDS OF BRIGHT NORMAL INTELLIGENCE
SUMMARY OF RESULTS OF PAROLE OUTCOME PREDICTION
WITH THE CPI AND MMPI

A comparative summary of overall predictive accuracy, i.e., a combination of both true negatives and true pos-

CONTINUED

4 OF 5

itives for both the CPI and MMPI, is provided in Table 32. The predictive efficiency of each instrument in terms of both true positives and negatives and false positives and negatives is reported in Tables 33 and 34.

32 RESULTS OF CPI AND MMPI PREDICTIONS

TABLE 32
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
RESULTS OF CPI AND MMPI PREDICTIONS

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
CPI PREDICTION - HITS	N	1766	6	35	365	1088	216	41	5
		56.9%	66.7%	63.6%	56.3%	56.6%	57.8%	60.3%	62.5%
CPI PREDICTION - MISSES	N	1336	3	20	283	834	158	27	3
		43.1%	33.3%	36.4%	43.7%	43.4%	42.2%	39.7%	37.5%
MMPI PREDICTION - HITS	N	1797	8	34	362	1097	232	47	6
		57.5%	80.0%	60.7%	56.1%	56.6%	61.2%	67.1%	75.0%
MMPI PREDICTION - MISSES	N	1329	2	22	283	842	147	23	2
		42.5%	20.0%	39.3%	43.9%	43.4%	38.8%	32.9%	25.0%

33 RESULTS OF THE CPI PREDICTIONS

TABLE 33
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
RESULTS OF THE CPI PREDICTIONS

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
HITS TRUE POSITIVES	N	1278	5	30	280	777	150	27	3
		41.2%	55.6%	54.5%	43.2%	40.4%	40.1%	39.7%	37.5%
HITS TRUE NEGATIVES	N	488	1	5	85	311	66	14	2
		15.7%	11.1%	9.1%	13.1%	16.2%	17.6%	20.6%	25.0%
MISSES FALSE POSITIVES	N	704	2	12	174	434	65	10	
		22.7%	22.2%	21.8%	26.9%	22.6%	17.4%	14.7%	
MISSES FALSE NEGATIVES	N	632	1	8	109	400	93	17	3
		20.4%	11.1%	14.5%	16.8%	20.8%	24.9%	25.0%	37.5%

34 RESULTS OF THE MMPI PREDICTIONS

TABLE 34
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
RESULTS OF THE MMPI PREDICTIONS

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
HITS TRUE POSITIVES	N	1463	5	25	287	903	194	38	5
		46.8%	50.0%	44.6%	44.5%	46.6%	51.2%	54.3%	62.5%
HITS TRUE NEGATIVES	N	334	3	9	75	194	38	9	1
		10.7%	30.0%	16.1%	11.6%	10.0%	10.0%	12.9%	12.5%
MISSES FALSE POSITIVES	N	872	1	9	183	558	97	15	1
		27.9%	10.0%	16.1%	28.4%	28.8%	25.6%	21.4%	12.5%
MISSES FALSE NEGATIVES	N	457	1	13	100	284	50	8	1
		14.6%	10.0%	23.2%	15.5%	14.6%	13.2%	11.4%	12.5%

These results seem to indicate that prediction techniques utilizing personality test data may be quite feasible, particularly if predictive accuracy could be improved. These prediction results and the results reported in the following volumes could be a valuable source of information that would aid in refining such procedures.

It may seem that these prediction efforts showed only modest success and that the accuracy figures are not overly impressive. The results of these efforts seem to suggest little utility, particularly when they are compared with the accuracy of an undifferentiated prediction that all parolees will succeed, a "chance" prediction that will be correct for 60.9 per cent of the cases. Such a comparison, however, seems inappropriate. An undifferentiated "prediction" has no practical utility, while true prediction statements are potentially useful in casework management, even though their accuracy may be less than optimal. Further efforts to improve the prediction equations may provide a method of prediction of sufficient accuracy, flexibility, and clinical meaning to be valuable to the caseworker.

XII. PSYCHIATRIC FACTORS

This section deals exclusively with a subpopulation that was identified to be in need of psychiatric evaluation. Because psychiatric services were limited, only

those individuals specifically referred for evaluation were psychiatrically examined. This subpopulation consists of 511 individuals (12.3 per cent of the total study population) who were referred by caseworkers, custodial staff, administrative staff, California Youth Authority Board members, etc., for various reasons. Self-referral by wards was a reason for psychiatric examination in seven instances. It should be noted that the tables in this section reflect only a summary of the variables; thus, the total frequencies reported do not account for all 511 individuals psychiatrically examined. For instance, Table 35 presents data only on the three major reasons for referral and does not give any information on other reasons (e.g., assessment of treatment needs, narcotics problem, suicide potential, etc.) that concern only a few cases. For a detailed breakdown one should consult Volume 1 which gives this information for the total study population.

35 REASONS FOR REFERRAL

TABLE 35
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
REASONS FOR REFERRAL FOR PSYCHIATRIC EVALUATION

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
MENTAL ILLNESS	N	60	1	1	13	34	6	3	
		11.7%	4.3%	0.8%	1.3%	1.4%	1.3%	3.7%	
		56.7%S	100.0%S	100.0%S	46.2%S	55.9%S	50.0%S	100.0%S	
SEXUAL PROBLEMS	N	115		3	36	58	15	3	
		22.5%		2.4%	3.6%	2.4%	3.4%	3.7%	
		62.5%S		66.7%S	63.9%S	62.1%S	55.3%S	100.0%S	
VIOLENCE POTENTIAL	N	242	1	9	60	103	23	3	1
		47.4%	4.3%	7.1%	6.0%	5.9%	5.2%	3.7%	11.1%
		62.8%S	100.0%	77.8%S	61.7%S	61.5%S	60.9%S	100.0%S	100.0%S

Table 35 shows that three categories account for most of the referrals and relatively few individuals fall into categories that have a noticeably lower parole success rate. It should be noted that there may be several reasons for referral mentioned for a particular individual; e.g., a person may have been referred for reasons of prior mental illness and assessment of violence potential. The data presented below, including diagnostic labels and symptoms, are descriptive only of this selected group and it is not implied that the other 87.7 per cent not psychiatrically examined are free of psychiatric disorders. It can reasonably be assumed, however, that most individuals with psychiatric liabilities were screened out for examination through the referral procedure.

36 SYMPTOMS FOUND DURING PSYCHIATRIC EVALUATION

TABLE 36
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
SYMPTOMS FOUND DURING PSYCHIATRIC EVALUATION

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
DEPRESSION	N	115	1	2	30	62	16	2	1
		2.8%	4.3%	1.6%	3.0%	2.5%	3.4%	2.5%	11.1%
		60.0%S	100.0%S	100.0%S	70.0%S	51.0%S	62.5%S	100.0%S	100.0%S
ANXIETY	N	117	1	4	31	61	15	4	1
		2.8%	4.3%	3.1%	3.1%	2.5%	3.4%	4.9%	11.1%
		56.4%S	0.0%S	75.0%S	54.8%S	59.0%S	40.0%S	75.0%S	100.0%
DEPENDENCY	N	131	1	2	39	73	14	2	1
		3.2%	4.3%	1.6%	3.4%	3.1%	3.1%	2.5%	11.1%
		54.2%S	0.0%S	50.0%S	55.9%S	54.7%S	42.9%S	100.0%S	100.0%S

Table 36 gives information on the three major symptoms found during the psychiatric examination. As can be seen, the depressive group taken as a whole has a parole success rate that is similar to the total study population rate. However, the breakdown into intelligence classification subgroups reveals that the group classified as average in intelligence is particularly vulnerable on parole while the dull normal and bright normal individuals are more successful. In both groups, individuals who showed signs of anxiety or dependency showed a decrease in parole success that was particularly pronounced for the bright normal groups.

37 PSYCHIATRIC DIAGNOSIS

TABLE 37
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION AND PSYCHIATRIC DIAGNOSIS

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
BRAIN DISORDERS	N	4	1		1	2			
		0.1%	4.3%		0.1%	0.1%			
		100.0%	100.0%		100.0%	100.0%			
PSYCHOTIC	N	29			13	14	1	1	
		0.7%			1.3%	0.6%	0.2%	1.2%	
		62.1%			46.2%	71.4%	100.0%	100.0%	
NEUROTIC	N	40	1	1	10	15	8	4	1
		1.0%	4.3%	0.8%	1.0%	0.6%	1.8%	4.9%	11.1%
		60.0%	0.0%	100.0%	70.0%	53.3%	87.5%	75.0%	100.0%
PERSONALITY PATTERN DISTURBANCE	N	109	1	6	38	51	7	4	
		2.6%	4.3%	4.7%	3.8%	2.1%	1.6%	4.9%	
		67.0%	100.0%	83.3%	60.5%	68.0%	57.1%	100.0%	
PERSONALITY TRAIT DISTURBANCE	N	205		5	41	131	22	3	1
		4.9%		3.9%	4.1%	5.4%	4.9%	3.7%	11.1%
		56.6%		80.0%	53.7%	56.5%	50.0%	100.0%	100.0%
SOCIOPATHIC PERSONALITY DISTURBANCE	N	44	1	1	9	26	5	2	
		1.1%	4.3%	0.8%	0.9%	1.1%	1.1%	2.5%	
		63.6%	0.0%	100.0%	77.8%	57.7%	60.0%	100.0%	
TRANSITIONAL SITUATIONAL PERSONALITY DISTURBANCE	N	49		1	7	33	8		
		1.2%		0.8%	0.7%	1.4%	1.8%		
		57.1%		0.0%	57.1%	69.6%	37.5%		

Table 37 summarizes the results of the psychiatric diagnosis by major diagnostic categories. The most outstanding feature is the consistently poor performance on parole of individuals diagnosed as having some personality trait disturbance. Most of these persons received a psychiatric label of either "emotional unstable personality" or "passive-aggressive personality." Individuals of average intelligence who received a diagnosis of "personality pattern disturbance" showed a surprisingly good parole outcome record. This category was primarily composed of persons who received psychiatric labels of inadequate personality and schizoid personality.

From these data it is apparent that the incidence of psychiatric illness among the youthful offenders studied is rather infrequent. Psychosis was found in only .6 per cent of the total study group. The incidences for the other psychiatric categories are as follows: neurotic disorders, .9 per cent; personality pattern disturbances, 2.6 per cent; personality trait disturbances, 4.9 per cent; sociopathic personality disturbances, 1 per cent; and transitional situational personality disturbances, 1.1 per cent. Considering the rigorous screening procedures employed to channel all suspect individuals toward a psychiatric evaluation, it must be concluded that serious psychiatric disturbances

are largely absent from such delinquent populations and serious psychiatric symptoms such as delusions, hallucinations, thought distortions, and reality distortions are rare indeed. On the other hand, dependency, anxiety, and depression appear to be quite common in this delinquent population, with the first two showing a fairly strong relationship to parole outcome.

XIII. OFFENSE RELATED FACTORS INCLUDING VIOLENCE INFORMATION AND PAROLE FOLLOW-UP

This section will focus on offense-specific data, with particular attention given to violence committed and weapons used during commission of the offense. The types of offenses that led to institutionalization are summarized in Table 38. As is commonly found in studies of adult criminal offenders, individuals who offend against persons are much better risks on parole (in regard to recidivism per se) than are persons who engage in property offenses. Examples of the former include wards committed for robbery and assault, while examples of the latter include wards committed for vehicle theft and forgery, a pattern that is clearly visible from this table.

A noteworthy exception is the low success rate for

TABLE 30
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
ADMISSION OFFENSE

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
HOMICIDE	N	19			1	14	3	1	
		0.5%			0.1%	0.6%	0.7%	1.2%	
		52.6%S			100.0%S	50.0%S	33.3%S	100.0%S	
NEGLIGENT MANSLAUGHTER	N	13			2	7	2	1	1
		0.3%			0.2%	0.3%	0.5%	1.2%	11.1%
		100.0%S			100.0%S	100.0%S	100.0%S	100.0%S	100.0%S
ROBBERY	N	438	2	18	114	238	52	11	1
		10.6%	8.7%	14.2%	11.4%	9.8%	11.7%	15.5%	11.1%
		70.3%S	100.0%S	66.7%S	62.3%S	72.3%S	75.0%S	90.9%S	100.0%S
ASSAULT	N	233	2	9	53	150	14	1	
		5.6%	8.7%	7.1%	5.3%	6.2%	3.2%	1.2%	
		71.7%S	50.0%S	77.8%S	71.7%S	71.3%S	85.7%S	0.0%S	
BURGLARY	N	1080	10	41	269	620	117	18	
		26.1%	43.5%	32.3%	26.9%	25.4%	26.4%	22.2%	
		60.0%S	60.0%S	58.5%S	55.8%S	61.5%S	65.2%S	61.1%S	
THEFT	N	421	1	8	108	249	49	8	
		10.2%	4.3%	6.3%	10.8%	10.0%	11.0%	9.9%	
		61.0%S	100.0%S	50.0%S	62.0%S	59.8%S	65.3%S	62.5%S	
VEHICLE THEFT	N	719	1	19	185	417	73	18	3
		17.4%	4.3%	15.0%	18.5%	17.1%	16.4%	22.2%	33.3%
		53.4%S	100.0%S	68.4%S	55.1%S	50.6%S	56.2%S	72.2%S	66.7%S
FORGERY	N	207	1	3	32	135	27	6	1
		5.0%	4.3%	2.4%	3.2%	5.6%	6.1%	7.4%	11.1%
		52.7%S	0.0%S	66.7%S	43.8%S	55.5%S	51.9%S	50.0%S	0.0%S
FORCIBLE RAPE	N	28			8	14	5		
		0.7%			0.8%	0.6%	1.1%		
		71.4%S			75.0%S	71.4%S	60.0%S		
STATUTORY RAPE	N	82		2	24	45	11		
		2.0%		1.6%	2.4%	1.8%	2.5%		
		56.1%S		50.0%S	41.7%S	62.2%S	63.6%S		
OTHER SEX OFFENSES	N	44		2	9	27	5		
		1.1%		1.6%	0.9%	1.1%	1.1%		
		63.6%S		50.0%S	88.9%S	55.6%S	80.0%S		
NARCOTICS OFFENSES	N	370		8	79	233	35	9	3
		8.9%	13.0%	6.3%	7.9%	9.6%	7.9%	11.1%	33.3%
		65.9%S	100.0%S	75.0%S	67.1%S	63.9%S	71.4%S	55.6%S	100.0%S
ALCOHOL OFFENSES	N	37		5	10	19	8	1	
		0.9%		3.9%	1.0%	0.8%	0.5%	1.2%	
		67.6%S		40.0%S	80.0%S	68.4%S	50.0%S	100.0%S	
OTHER	N	304	3	7	77	177	34	4	
		7.3%	13.0%	5.5%	7.7%	7.3%	7.7%	4.9%	
		60.2%S	66.7%S	85.7%S	55.8%S	62.1%S	58.8%S	50.0%S	
PAROLE VIOLATION	N	148		5	29	95	15	3	
		3.6%		3.9%	2.9%	3.9%	3.4%	3.7%	
		53.4%S		40.0%S	65.5%S	50.5%S	46.7%S	100.0%S	

individuals committed for homicide. Contrary to expectations, this group performed poorly on parole. This small group shows a great deal of variation in parole success rate when subdivided according to ethnic background (8 Whites, 37.5%S; 5 Mexican-Americans, 80%S;

and 5 Blacks, 60%S). A further discussion of this finding will be presented in Volume 7, Offenses Against Persons. When inspecting the data on persons committed for narcotics offenses, one should bear in mind that this group includes not only the user but the seller of narcotics as well. Since this group consists of a complex mix of persons, offenses, and motives it cannot be regarded as an offense-specific group.

Information on parole violation offenses is provided in Table 39. Tables 40 and 41 present this information on offenses against persons and offenses against property for both admission and revocation offenses. Included in the person offenses are: homicide, negligent manslaughter, robbery, assault, and sex offenses; among the property offenses are such crimes as burglary, theft, vehicle theft, forgery, and narcotics and alcohol offenses. Again, it is apparent from Table 40 that person offenders generally are better parole risks, in terms of recidivism, than are property offenders.

Table 42 provides data on the caseworker's rating of the severity of violence known in the background of each ward and Table 43 gives the caseworker's estimate of each ward's violence potential. These ratings were carried out agency-wide to assess criminal violence.

39 VIOLATION OFFENSE

TABLE 39
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
VIOLATION OFFENSE

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
HOMICIDE	N	17			5	10	1		
		1.2%			1.4%	1.2%	0.7%		
NEGLIGENT MANSLAUGHTER	N	1				1			
		0.1%				0.1%			
ROBBERY	N	168		11	39	58	16	1	
		12.0%		26.2%	10.8%	11.9%	11.1%	5.9%	
ASSAULT	N	89	1	3	27	50	7	1	
		6.3%	25.0%	7.1%	7.5%	6.1%	4.9%	5.9%	
BURGLARY	N	265	1	8	65	158	28	2	
		18.9%	25.0%	19.0%	18.0%	19.2%	19.4%	11.8%	
THEFT	N	123	1	6	25	69	20		
		8.8%	25.0%	14.3%	6.9%	8.4%	13.9%		
VEHICLE THEFT	N	168		2	53	90	19	3	1
		12.0%		4.8%	14.7%	10.9%	13.2%	17.6%	50.0%
FORGERY	N	58			12	38	8		
		4.1%			3.3%	4.6%	5.6%		
FORCIBLE RAPE	N	10		1	4	3	2		
		0.7%		2.4%	1.1%	0.4%	1.4%		
STATUTORY RAPE	N	9			2	6	1		
		0.6%			0.6%	0.7%	0.7%		
OTHER SEX OFFENSES	N	17			3	13	1		
		1.2%			0.8%	1.6%	0.7%		
NARCOTIC OFFENSES	N	222	1	4	50	137	25	3	1
		15.8%	25.0%	9.5%	13.9%	16.6%	17.4%	17.6%	50.0%
ALCOHOL OFFENSES	N	11		1	2	8			
		0.8%		2.4%	0.6%	1.0%			
OTHER	N	247		6	74	143	16	7	
		17.6%		14.3%	20.5%	17.4%	11.1%	41.2%	

40 ADMISSION OFFENSE SUMMARY

TABLE 40
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
ADMISSION OFFENSE SUMMARY

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
PERSON OFFENSES	N	857	4	31	211	495	92	14	2
		20.7%	17.4%	24.4%	21.1%	20.3%	20.7%	17.3%	22.2%
		69.1%S	75.0%S	67.7%S	64.5%S	69.9%S	73.9%S	85.7%S	100.0%S
PROPERTY OFFENSES	N	2427	13	71	593	1418	266	50	4
		58.6%	56.5%	55.9%	59.4%	58.2%	59.9%	61.7%	44.4%
		57.6%S	61.5%S	60.6%S	56.1%S	57.4%S	60.5%S	64.0%S	50.0%S
OTHERS	N	859	6	25	195	524	86	17	3
		20.7%	26.1%	19.7%	19.5%	21.5%	19.4%	21.0%	33.3%
		61.8%S	85.3%S	64.0%S	63.1%S	61.1%S	61.6%S	64.7%S	100.0%S

41 VIOLATION OFFENSE SUMMARY

TABLE 41
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
VIOLATION OFFENSE SUMMARY

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
PERSON OFFENSES	N	311	1	15	83	181	28	2	
		22.1%	25.0%	35.7%	22.2%	22.0%	19.4%	11.8%	
PROPERTY OFFENSES	N	614	2	16	155	355	75	5	1
		43.7%	50.0%	38.1%	42.9%	43.1%	52.1%	29.4%	50.0%
OTHERS	N	480	1	11	126	288	41	10	1
		34.2%	25.0%	26.2%	34.9%	35.0%	28.5%	58.8%	50.0%

42 CYA HISTORY OF VIOLENCE

TABLE 42
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA HISTORY OF VIOLENCE

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NONE	N	2457	13	75	537	1466	301	52	5
		61.4%	65.0%	60.5%	55.8%	62.1%	69.8%	69.3%	55.6%
		59.6%S	69.2%S	65.3%S	57.1%S	59.5%S	61.5%S	65.4%S	60.0%S
MODERATE	N	1000	6	30	286	561	93	16	2
		25.0%	30.0%	24.2%	29.7%	23.8%	21.6%	21.3%	22.2%
		62.7%S	83.3%S	60.0%S	62.9%S	61.1%S	69.9%S	81.3%S	100.0%S
SERIOUS	N	543	1	19	139	333	37	7	2
		13.6%	5.0%	15.3%	14.4%	14.1%	8.6%	9.3%	22.2%
		65.7%S	0.0%S	52.6%S	61.9%S	67.0%S	67.6%S	100.0%S	100.0%S

43 CASEWORKER ESTIMATION OF VIOLENCE POTENTIAL

TABLE 43
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CASEWORKER ESTIMATION OF VIOLENCE POTENTIAL

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
LEAST	N	662	5	24	153	373	81	22	2
		21.4%	29.4%	23.5%	19.9%	20.9%	24.5%	37.9%	25.0%
		63.9%S	60.0%S	62.5%S	58.2%S	64.9%S	64.1%S	68.2%S	100.0%S
MILD	N	820	3	23	192	493	92	12	1
		26.5%	17.6%	22.5%	24.9%	27.6%	27.8%	20.7%	12.5%
		61.8%S	100.0%S	69.8%S	59.4%S	61.3%S	66.3%S	58.3%S	100.0%S
MODERATE	N	1273	8	41	326	731	137	21	4
		41.2%	47.1%	40.2%	42.3%	40.9%	41.4%	36.2%	50.0%
		60.6%S	62.5%S	56.1%S	62.6%S	59.2%S	62.0%S	90.5%S	50.0%S
SERIOUS	N	311	1	12	95	174	20	2	1
		10.1%	5.9%	12.7%	12.3%	9.7%	6.0%	3.4%	12.5%
		61.1%S	100.0%S	61.5%S	53.7%S	66.1%S	50.0%S	100.0%S	100.0%S
GREATEST	N	24		1	4	16	1	1	
		0.8%		1.0%	0.5%	0.9%	0.3%	1.7%	
		70.8%S		100.0%S	50.0%S	68.8%S	100.0%S	100.0%S	

14 HISTORY OF VIOLENCE

TABLE 44
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
HISTORY OF VIOLENCE

	TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NONE	N 2386 57.5% 59.6%S	14 60.9% 64.3%S	73 57.5% 65.8%S	345 59.5% 56.9%S	1390 57.0% 60.3%S	288 64.6% 60.1%S	60 74.1% 60.0%S	5 55.6% 60.0%S
AGRESSIVE CRIMES BUT NO VIOLENCE	N 754 18.2% 65.1%S	4 17.4% 60.0%S	23 18.1% 52.2%S	192 19.2% 60.5%S	431 17.7% 65.3%S	83 18.6% 77.1%S	12 14.8% 91.7%S	3 33.3% 100.0%S
VIOLENCE	N 1006 24.3% 60.6%S	5 21.7% 60.0%S	31 24.4% 64.5%S	263 26.3% 60.5%S	616 75.3% 59.9%S	75 16.8% 62.7%S	9 11.1% 88.9%S	1 11.1% 100.0%S

The classifications in Table 44 were undertaken exclusively for the present study and represent an attempt to obtain data on the history of actual violence for each ward by expanding the definition of violence to include violence that is not necessarily criminal. The category of aggressive crimes without violence includes cases in which aggression was shown by threat with or without a weapon or where violence may have been committed by crime partners but where the ward classified in this category refrained from actual physical assault. In contrast, the category of "violence" includes persons who physically acted out. The outcome of the assault was regarded as immaterial and violence was defined as physical assault that could consist, for example, of the discharge of a firearm aimed at the victim or aimed into the sky, or any other assault perpetrated against a person. Rape cases were included in this category if

force was used, regardless of the legal label given the offense. Noncriminal assault (such as fighting, etc.) was also a reason for inclusion in this category.

45 HISTORY OF CARRYING WEAPONS

TABLE 45
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
HISTORY OF CARRYING WEAPONS

	TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NONE	N 2844 71.0% 61.0%S	16 69.6% 88.8%S	83 65.4% 65.9%S	655 69.5% 58.4%S	1746 71.6% 61.1%S	326 73.1% 65.0%S	50 72.8% 66.1%S	4 44.4% 75.0%S
YES	N 1202 29.0% 60.5%S	7 30.4% 71.4%S	44 34.6% 61.4%S	305 30.5% 61.0%S	691 28.4% 59.9%S	120 26.9% 60.0%S	22 27.2% 72.7%S	5 55.6% 80.0%S

Table 45 gives information on the history of carrying weapons. This category contains only individuals who have carried weapons or objects that were clearly meant to be used for offensive or defensive purposes. Weapons used for hunting or sports were not recorded. As can be seen, approximately 30 per cent had a history of carrying weapons for illegal purposes, either for the commission of crimes or use in gang activities or for self-defense in a hostile environment.

Table 46 shows that partners were part of the admission offense in more than half of the crimes committed. In one-sixth of these cases, the partner or partners were under parole supervision by the CYA. As can be seen in Tables 46 and 47, parole outcome for wards with crime partners was generally better than for wards who had acted alone.

46 PARTNERS IN ADMISSION OFFENSE

TABLE A6
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
PARTNERS IN ADMISSION OFFENSE

	TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NONE	N 1794 44.9% 56.1%S	16 50.0% 59.0%S	60 48.4% 60.0%S	414 43.1% 52.9%S	1045 44.9% 56.9%S	216 50.1% 57.4%S	29 58.7% 79.3%S	7 77.8% 71.4%S
ONE	N 1090 27.3% 64.1%S	4 20.0% 75.0%S	20 16.1% 60.0%S	260 27.1% 66.5%S	670 27.7% 62.4%S	122 28.3% 70.5%S	25 33.3% 56.0%S	1 11.1% 100.0%S
TWO	N 599 15.0% 67.3%S	3 15.0% 100.0%S	29 23.4% 65.5%S	154 16.0% 64.3%S	349 14.4% 69.1%S	52 12.1% 71.2%S	14 18.7% 85.7%S	1 11.1% 100.0%S
THREE OR MORE	N 513 12.8% 65.3%S	3 15.0% 100.0%S	15 12.1% 66.7%S	132 13.8% 62.1%S	314 13.0% 65.3%S	41 9.5% 68.3%S	7 9.3% 71.4%S	

47 CYA PAROLEE PARTNERS IN ADMISSION OFFENSE

TABLE A7
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA PAROLEE PARTNERS IN ADMISSION OFFENSE

	TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NONE	N 3350 83.9% 60.3%S	16 80.0% 68.8%S	103 87.9% 59.6%S	787 82.0% 58.1%S	1956 83.0% 60.2%S	389 90.0% 65.4%S	68 90.7% 72.1%S	9 100.0% 77.8%S
ONE	N 379 9.4% 65.6%S	2 10.0% 50.0%S	11 8.9% 72.7%S	104 10.8% 71.2%S	227 9.6% 63.4%S	28 6.5% 67.9%S	2 2.7% 0.0%S	
TWO	N 72 1.8% 63.9%S	1 5.0% 100.0%S	1 0.8% 100.0%S	18 1.9% 55.6%S	50 2.1% 64.0%S		2 2.7% 100.0%S	
THREE OR MORE	N 197 4.9% 66.5%S	1 5.0% 100.0%S	3 2.4% 100.0%S	51 5.3% 62.7%S	125 5.2% 69.6%S	15 3.5% 66.7%S	3 4.0% 100.0%S	

48 INDIVIDUAL VIOLENCE IN ADMISSION OFFENSE

TABLE A8
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
INDIVIDUAL VIOLENCE IN ADMISSION OFFENSE

	TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NONE	N 2900 72.5% 58.5%S	15 75.0% 66.7%S	87 70.2% 59.8%S	685 71.2% 55.2%S	1703 72.2% 58.7%S	335 77.9% 60.9%S	56 74.7% 66.1%S	6 66.7% 66.7%S
THREAT NO WEAPON	N 122 3.1% 63.9%	1 5.0% 100.0%S	4 3.2% 100.0%	35 3.6% 58.3%	72 3.1% 65.9%S	8 1.9% 75.0%S	2 2.7% 100.0%S	
THREAT WITH WEAPON	N 304 7.6% 71.1%S	2 10.0% 100.0%S	16 12.9% 56.3%S	76 7.9% 65.8%S	162 6.9% 72.2%S	35 8.4% 77.8%S	9 12.0% 88.9%S	1 11.1% 100.0%S
MINOR INJURIES	N 393 9.8% 68.2%S		9 7.3% 66.7%S	103 11.2% 69.4%S	250 10.6% 67.2%S	25 5.3% 73.9%S	2 2.7% 100.0%S	
MAJOR INJURIES	N 107 2.7% 68.2%S		3 2.4% 100.0%S	25 2.6% 72.0%S	64 2.7% 67.2%S	12 2.8% 58.3%S	1 1.3% 0.0%S	
DEATH	N 36 0.9% 72.2%S			4 0.4% 75.0%S	23 1.0% 69.6%S	5 1.2% 80.0%S	2 2.7% 100.0%S	1 11.1% 100.0%S

The frequency and kind of individual violence committed during the admission offense is presented in Table 48.

While only 6 per cent of the wards were admitted with a legal label that implied violence, such as convictions for assault, battery, and manslaughter, an analysis of behavior displayed during the admission offense revealed that in actuality 24.1 per cent of the total study population committed violent or aggressive acts ranging from threat without a weapon to inflicting major injuries that led to death in thirty-six cases.

In order to learn about violence committed by partners, data were collected under the same definitions as above but relative to partner-committed violence and use of weapons. The information on violence committed by partners is presented in Table 49.

49 **GROUP VIOLENCE IN ADMISSION OFFENSE**

TABLE 49
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
GROUP VIOLENCE IN ADMISSION OFFENSE

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NONE	N	3289	19	102	778	1935	371	62	7
		82.3%	95.0%	82.3%	80.9%	82.0%	86.3%	82.7%	77.8%
		59.1%	68.4%	59.8%	57.1%	59.2%	60.9%	69.4%	71.4%
THREAT NO WEAPON	N	70		3	19	41	5	1	
		1.8%		2.4%	2.0%	1.7%	1.2%	1.3%	
		65.7%		100.0%	57.9%	65.9%	60.0%	100.0%	
THREAT WITH WEAPON	N	240		8	61	132	32	6	1
		6.0%		6.5%	6.3%	5.6%	7.4%	8.0%	11.1%
		73.3%		75.0%	70.5%	69.7%	90.6%	83.3%	100.0%
MINOR INJURIES	N	240	1	6	61	158	10	3	
		6.0%	5.0%	4.8%	6.3%	6.7%	2.3%	4.0%	
		71.3%	100.0%	50.0%	70.5%	70.5%	90.0%	100.0%	
MAJOR INFURIES	N	71		2	20	38	3	2	
		1.8%		1.6%	2.1%	1.6%	2.1%	2.7%	
		69.0%		100.0%	75.0%	65.8%	66.7%	50.0%	
DEATH	N	14		1	3	9			
		0.4%		0.8%	0.3%	0.4%			
		71.4%		100.0%	100.0%	66.7%			

In more than half of these admission offenses in which violence or aggression was displayed by the ward, some kind of weapon was used. In most cases, this happened to be a firearm. Table 50 gives the breakdown by type of weapon for the individual and Table 51 gives the comparative data for weapons used by crime partners.

50 WEAPON USED BY INDIVIDUAL

TABLE 50
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
WEAPON USED BY INDIVIDUAL

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NONE	N	3285	16	94	797	1940	356	60	7
		82.2%	80.0%	75.8%	82.8%	82.2%	83.0%	80.0%	77.8%
		59.6%S	62.5%S	59.6%S	57.7%S	59.8%S	61.5%S	68.3%S	71.4%S
TOY GUN	N	40		2	12	20	4	2	
		1.0%		1.6%	1.2%	0.8%	0.9%	2.7%	
		65.0%S		50.0%S	75.0%S	65.0%S	25.0%S	100.0%S	
UNLOADED GUN	N	13		1	5	6	1		
		0.3%		0.8%	0.5%	0.3%	0.2%		
		76.9%S		100.0%S	80.0%S	66.7%S	100.0%S		
LOADED GUN	N	125		6	26	74	16		
		3.1%		4.8%	2.7%	3.1%	3.7%		
		69.6%S		66.7%S	69.2%S	70.3%S	75.0%S		
GUN, UNSPECIFIED	N	149	2	10	28	81	20	7	1
		3.7%	10.0%	8.1%	2.9%	3.4%	4.7%	9.3%	11.1%
		67.1%S	100.0%S	60.0%S	63.3%S	66.7%S	65.0%S	85.7%S	100.0%S
KNIFE, ETC.	N	135		5	33	82	12	2	
		3.4%		4.0%	3.4%	3.5%	2.8%	2.7%	
		71.9%S		100.0%S	66.7%S	68.3%S	91.7%S	100.0%S	
OTHER	N	116	1	3	30	70	10	2	
		2.9%	5.0%	2.4%	3.1%	3.0%	2.3%	2.7%	
		69.8%S	100.0%S	100.0%S	70.0%S	68.6%S	70.0%S	40.0%S	

51 WEAPONS USED BY GROUP

TABLE 51
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
WEAPONS USED BY GROUP

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NONE	N	3556	19	110	848	2102	386	67	7
		89.0%	95.0%	88.7%	88.2%	89.2%	90.0%	89.3%	77.8%
		56.8%S	68.4%S	59.1%S	57.9%S	59.8%S	61.4%S	71.6%S	71.4%S
TOY GUN	N	25		1	7	15	2		
		0.6%		0.8%	0.7%	0.6%	0.5%		
		76.0%S		100.0%S	85.7%S	66.7%S	100.0%S		
UNLOADED GUN	N	3			1	2			
		0.1%			0.1%	0.1%			
		66.7%S			100.0%S	50.0%S			
LOADED GUN	N	74		5	21	43	3	1	
		1.9%		4.0%	2.2%	1.8%	0.7%	1.3%	
		67.6%S		100.0%S	66.7%S	65.1%S	66.7%S	100.0%S	
GUN, UNSPECIFIED	N	143		3	32	84	20	3	1
		3.6%		2.4%	3.3%	3.6%	4.7%	4.0%	11.1%
		73.4%S		100.0%S	71.9%S	70.2%S	85.0%S	66.7%S	100.0%S
KNIFE, ETC.	N	68	1	2	17	38	10		
		1.7%	5.0%	1.6%	1.8%	1.6%	2.3%		
		66.2%S	100.0%S	100.0%S	70.6%S	60.5%S	90.0%S		
OTHER	N	65		2	16	40	3	4	
		1.6%		1.6%	1.7%	1.7%	0.7%	5.3%	
		75.4%S		100.0%S	69.8%S	72.5%S	66.7%S	75.0%S	

It is clear from these data that, regardless of their intellectual potential, wards who commit aggression and violence against persons have a relatively good parole success rate. This is also true for individuals who commit criminal acts in groups of two or more. These findings, which are consistently reported in the literature, suggest that offenders who strike out against others and offenders who have companions in crime are relatively better functioning psychologically and socially than are persons who commit property offenses and who pursue their criminal activities "in solo."

The loss incurred by victims is depicted in Table 52. It should be noted that the relatively high frequency in the category $1,000-$5,000 loss is a reflection of the fact that all vehicle thefts were recorded in this category. The low parole success rate in this group is consistent with the general finding that auto thieves are poor risks on parole.

52 ECONOMIC LOSS BY VICTIM

TABLE 52
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
ECONOMIC LOSS BY VICTIM

	TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
NONE	N 1110 27.8% 62.3%S	10 50.0% 80.0%S	32 25.8% 65.6%S	272 28.3% 64.7%S	657 27.9% 61.8%S	112 26.1% 56.3%S	16 21.3% 87.5%S	2 22.2% 100.0%S
LESS THAN $1	N 13 0.3% 69.2%S			4 0.4% 50.0%S	8 0.3% 87.5%S		1 1.3% 0.0%S	
$1 - $5	N 41 1.0% 68.3%S		1 0.8% 0.0%S	9 0.9% 55.6%S	28 1.2% 75.0%S	3 0.7% 66.7%S		
$5 - $20	N 120 3.0% 63.3%S	1 5.0% 0.0%S	6 4.8% 50.0%S	30 3.1% 60.0%S	63 2.7% 61.9%S	16 3.7% 81.3%S	3 4.0% 66.7%S	
$20 - $100	N 399 10.0% 65.4%S	4 20.0% 75.0%S	18 14.5% 55.6%S	109 11.3% 58.7%S	218 9.2% 64.2%S	41 9.6% 90.2%S	8 10.7% 75.0%S	
$100 - $500	N 503 12.6% 63.2%S	1 5.0% 100.0%S	12 9.7% 75.0%S	115 12.0% 57.4%S	306 12.9% 64.7%S	57 13.3% 71.9%S	11 14.7% 72.7%S	1 11.1% 0.0%S
$500 - $1000	N 143 3.6% 57.3%S		5 4.0% 40.0%S	23 2.4% 39.1%S	92 3.9% 62.0%S	18 4.2% 55.6%S	4 5.3% 75.0%S	1 11.1% 100.0%S
$1000 - $5000	N 821 20.6% 55.8%S	2 10.0% 50.0%S	25 20.2% 64.0%S	191 19.9% 54.5%S	493 20.9% 55.4%S	99 21.0% 57.8%S	14 18.7% 64.3%S	2 22.2% 50.0%S
MORE THAN $5000	N 207 5.2 58.0%S		4 3.2 100.0%S	44 4.6 50.0%S	121 5.1% 57.0%S	28 6.5% 64.3%S	9 12.0% 66.7%S	1 11.1% 100.0%S

XIV. INITIAL INSTITUTIONAL PROGRAMING

This last section of Part Two presents information on some of the recommendations and decisions made by staff of the Reception Guidance Center and the CYA Parole Board at the conclusion of the diagnostic study of each ward and before transfer of the ward to an institution for rehabilitation. Table 53 gives a summary of the evaluation made by custodial staff in regard to the ward's prognosis for institutional adjustment.

53 CUSTODIAL EVALUATION FOR INSTITUTIONAL ADJUSTMENT

TABLE 53
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CUSTODIAL EVALUATION FOR INSTITUTIONAL ADJUSTMENT

	TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
GOOD PROGNOSIS	N 3295 82.5% 62.0%	15 75.0% 75.5%	100 80.6% 64.0%	763 79.6% 60.0%	1953 82.8% 62.0%	377 87.7% 63.0%	66 88.0% 71.2%	6 66.7% 85.3%
POOR PROGNOSIS	N 681 17.1% 57.9%	5 25.0% 60.0%	24 19.4% 54.2%	193 20.1% 58.5%	394 16.72 56.3%	49 11.4% 67.3%	9 12.0% 77.8%	3 33.3% 66.7%

Table 54 summarizes the counselor's transfer recommendations. It should be noted that the resident population at Preston School of Industry is significantly younger than that of the other institutions of transfer and the higher recidivism rate is related to the relatively young age of these wards.

TABLE 54
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
COUNSELORS TRANSFER RECOMMENDATION

		TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
PRESTON SCHOOL OF INDUSTRY	N	202	4	17	88	82	8	2	
		5.1%	18.2%	13.6%	9.2%	5.5%	1.9%	2.7%	
		52.0%S	100.0%S	52.9%S	48.9%S	54.9%S	25.0%S	100.0%S	
YOUTH TRAINING SCHOOL	N	1349	2	3	148	941	221	26	5
		33.9%	9.1%	2.4%	15.5%	40.2%	51.9%	34.7%	55.6%
		62.0%S	100.0%S	100.0%S	60.1%S	61.2%S	64.7%S	69.2%S	80.0%S
CAMPS	N	838	6	39	267	491	60	20	2
		21.2%	27.3%	31.2%	28.0%	18.8%	14.1%	26.7%	22.2%
		64.2%S	66.7%S	65.7%S	62.9%S	65.3%S	68.3%S	45.0%S	50.0%S
DEUEL VOCATIONAL INSTITUTION	N	651	5	29	195	350	55	13	
		16.4%	22.7%	23.2%	20.4%	14.9%	12.9%	17.3%	
		59.8%S	60.0%S	63.0%S	59.5%S	58.0%S	63.6%S	84.6%S	
CORRECTIONAL TRAINING FACILITY	N	760	4	29	218	431	63	9	1
		19.1%	18.2%	23.2%	22.8%	18.4%	14.8%	12.0%	11.1%
		58.3%S	50.0%S	69.0%S	58.3%S	58.0%S	57.1%S	66.7%S	100.0%S

The CYA Board orders for transfer are presented in Table 55. Ben Lomond, Mt. Bullion, Pine Grove, and Washington Ridge are forestry camps. Assignment of wards to individual camps was made on the basis of place availability. Differences among camps in parole outcome rates therefore seem to be a result of differences in camps' social climate and program rather than the result of ward selection. As mentioned above, the Preston School of Industry had a significantly younger population and the lower success rate of their wards can be explained in part by the age factor. The Youth Training School received a selected group of residents who, because of the emphasis on vocational and academic training, were well motivated for such training. Deuel Vocational Institution and the Correctional Training Facility were under the Depart-

ment of Corrections and their institutional populations were composed of about 50 per cent persons committed to the Department of Corrections and 50 per cent committed to the California Youth Authority. This practice of transfering older CYA wards to Adult Correctional Institutions was in recent years discontinued.

55 CYA BOARD ORDER FOR TRANSFER

TABLE 55
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
CYA BOARD ORDER FOR TRANSFER

	TOTAL STUDY POPULATION	MENTAL DEFECTIVE	BORDERLINE	DULL NORMAL	AVERAGE	BRIGHT NORMAL	SUPERIOR	VERY SUPERIOR
PRESTON SCHOOL OF INDUSTRY	N 220 5.3% 54.1%S	6 26.1% 66.7%S	13 10.2% 61.5%S	71 7.1% 57.7%S	111 4.0% 49.5%S	13 2.9% 46.2%S	5 6.2% 100.0%S	
YOUTH TRAINING SCHOOL	N 1115 26.9% 65.0%S.	2 8.7% 100.0%S	4 3.1% 50.0%S	132 13.2% 62.9%S	770 31.7% 63.9%S	176 39.8% 70.5%S	19 23.5% 73.7%S	4 44.4% 75.0%S
BEN LOMOND	N 235 5.7% 65.5%S	1 4.3% 100.0%S	7 5.5% 71.4%S	61 6.1% 62.3%S	137 5.0% 67.9%S	21 4.8% 61.9%S	7 8.6% 57.1%S	1 11.1% 0.0%S
MT. BULLION	N 240 5.8% 67.1%S	1 4.3% 100.0%S	15 11.8% 60.0%S	65 6.5% 61.5%S	128 5.3% 68.8%S	22 5.0% 81.8%S	4 4.9% 50.0%S	2 22.2% 100.0%S
PINE GROVE	N 255 6.2% 69.3%S	1 4.3% 0.0%S	5 3.9% 40.0%S	76 7.6% 59.2%S	139 5.7% 65.2%S	26 5.9% 73.1%S	9 11.1% 88.9%S	
WASHINGTON RIDGE	N 329 8.0% 58.1%S	2 8.7% 50.0%S	9 7.1% 77.8%S	88 8.8% 62.5%S	195 8.0% 58.4%S	28 6.3% 53.6%S	6 7.4% 50.0%S	
DEUEL VOCATIONAL INSTITUTION	N 759 18.5% 57.7%S	5 21.7% 60.0%S	25 18.7% 48.0%S	206 20.6% 61.2%S	425 17.4% 57.0%S	72 16.3% 58.3%S	19 23.5% 47.4%S	
CORRECTIONAL TRAINING FACILITY	N 877 21.2% 57.5%S	5 21.7% 80.0%S	45 35.4% 73.3%S	271 27.2% 55.4%S	472 19.4% 58.1%S	69 15.6% 55.1%S	8 9.9% 75.0%S	2 22.2% 100.0%S

One feature of the standard computer print-out giving the statistical description of any definable subpopulation is the ranking by parole success rate of all subgroups that contain at least 100 individuals. Figure 59 gives this information for the two extreme ends: the low-risk groups and the high-risk groups. The cut-

off points for inclusion in this summary were arbitrarily set at 70 per cent and above for the low-risk groups, and at 50 per cent and below for the high-risk groups. The low-risk groups are primarily offenders against persons and persons who had crime partners. The two high-risk groups of relatively large proportion are offenders with a history of recidivism and/or escape from a minimum security facility.

LOW RISK GROUPS

SUBGROUP	VARIABLE	SUBCATEGORY	N	X	%S
AVERAGE	ADMISSION OFFENSE	ROBBERY	238	6.0	72.3
AVERAGE	INDIVIDUAL VIOLENCE IN ADMISSION OFFENSE	THREAT WITH WEAPON	162	4.0	72.2
AVERAGE	ADMISSION OFFENSE	ASSAULT	150	4.0	71.3
DULL NORMAL	CYA PAROLEE PARTNER	ONE	104	3.0	71.2
BRIGHT NORMAL	PARTNER IN ADMISSION OFFENSE	ONE	122	3.0	70.5
BRIGHT NORMAL	CYA ORDER FOR TRANSFER	YOUTH TRAINING SCHOOL	176	4.0	70.5
AVERAGE	GROUP VIOLENCE IN ADMISSION OFFENSE	MINOR INJURIES	158	4.0	70.3
BRIGHT NORMAL	ADMISSION STATUS	FIRST ADMISSION	280	7.0	70.0

HIGH RISK GROUPS

AVERAGE	CYA ORDER FOR TRANSFER	PRESTON SCHOOL OF INDUSTRIES	111	3.0	49.5
AVERAGE	COMMITMENT COURT	JUVENILE COURT	205	5.0	48.8
AVERAGE	HISTORY OF PERSONALITY TRAIT DISTURBANCE	YES	172	4.0	48.3
AVERAGE	HISTORY OF ESCAPE	FROM MINIMUM SECURITY	338	8.0	47.0
AVERAGE	ADMISSION STATUS	THIRD ADMISSION TO CYA	429	10.0	46.2

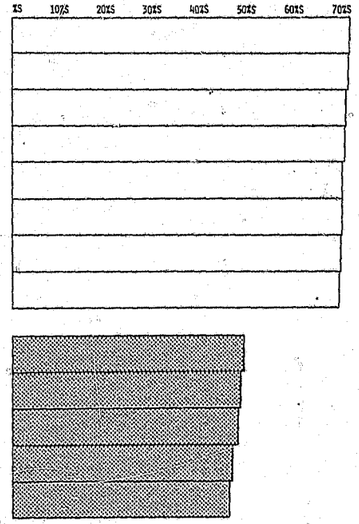


FIGURE 59
COMPARATIVE DATA ON INTELLIGENCE CLASSIFICATION SUBGROUPS
SUMMARY OF LOW RISK AND HIGH RISK GROUPS IN REGARD TO
PAROLE PERFORMANCE

The data presented in this volume describe in some detail offenders divided by intelligence classification. Many of these results are presented in the form of comparative tables which provide a basis for comparing intelligence subgroups with other variable items and with parole success. Although these tables provide a basis for visual comparison, the simplicity of the descriptive data disallows a more thorough analysis of relationships between variables. Although the format of many tables suggests possible linear relationships and clustering effects between variables, the confirmation of such association generally must await more powerful tests of significance, etc. This should not imply that the descriptive statistics are not useful since such analysis can suggest relationships and assist in the formulation of hypotheses which could not be derived from less extensive analysis of the same data.

Current interest in intelligence and its etiology provides a highly interesting backdrop for this volume. Considering that the relationship between criminality or delinquency and intelligence has long been of major concern to behaviorists, the preceding text provides an extensive basis for the comparison of Wechsler's seven intelligence classifications with numerous other variables. Also, the size of the study population (N = 4,146) in-

creases the probability that any relationship between intelligence and other factors is not due to chance, particularly in the subgroups of average, dull normal, and bright normal intelligence.

Summarily, this volume has indicated a number of possible relationships which deserve further scrutiny. Intelligence may indeed be related to parole outcome, with a number of variables (e.g., opiate use, drug use, admission status, etc.) acting as important second variables. It will be interesting to determine the relationships of these same variables to other classification subgroups. This issue (i.e., whether the variable items found related to intelligence and parole outcome via trend analysis also relate to classification by race or violence classifications, etc.) will become increasingly important with each volume. It is this broader form of inter-volume comparison which can also provide helpful clues to the ability of variable items to relate to the criterion, classification grouping, and whether such variables continue to indicate potential linear or cluster relationships.

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APPENDIX A

INTELLECTUAL PERFORMANCE OF THREE DELINQUENT GROUPS OF DIFFERENT ETHNIC ORIGIN[1]

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This study investigated intellectual test differences among delinquent white, Negro, and Mexican-American California Youth Authority (CYA) inmates. Three groups of CYA inmates of white, Negro, and Mexican-American origin were tested on both the California Test of Mental Maturity (CTMM) and the General Aptitude Test Battery (GATE). It was expected that the white group would score higher than the other two groups on Vocabulary and other school-related subjects and there would be no significant differences between the three groups on tests reflecting nonschool skills.

Three independent studies were done. All subjects were randomly selected, with the first study containing 78 subjects in each of three subgroups, the second and third 50 in each subgroup. All subgroups were equated on age. The three samples contained a total of 534 subjects, with the mean age being 19.24 years. Educational level varied among the groups, the white group scoring higher than either the Negro or Mexican-American group on grade-rated achievement tests (white = 8.45; Negro = 6.69; Mexican-American = 6.87; $F = 11.65$, $p < .01$). Standard instructions were used in test administration. Analyses of variance and t tests were used to evaluate differences.

On the CTMM in all three studies, the white group scored highest, the Negro group lowest. The Mexican-American group was equal to the Negro group in the language portion of the test and tended to occupy an intermediate position between the Negro and white groups on the nonlanguage portions of the test. All differences were significant at the .01 level.

On the GATB, the Negro group tended to score consistently low on both verbal and nonverbal tests, the whites consistently high. The Mexican-Americans tended to occupy an intermediate position on the nonverbal tests but were as low as the Negroes on the verbal tests. Only four of the 27 analyses of variance made were not significant, with four significant at the .05 level and the rest obtaining probabilities of less than .01.

Thus, the initial expectations were borne out with the Mexican-American group. This group performed most poorly when good performance depended on either language ability or knowledge of material taught in school. It performed best on nonacademic subjects. On the other hand, the Negro group tended to score lower than the white group on all tests and lower than the Mexican-American group on nonverbal tests. Test differences between the white and Mexican-American groups paralleled the differences in educational levels. However, differences in educational level cannot explain the poorer performance of Negroes on the nonverbal tests, especially when compared with the Mexican-American group, since the two groups do not differ in school achievement. When the third sample was examined, the Mexican and Negro groups failed to differ on socioeconomic status. The white group was significantly higher on this variable.

These results support the idea that inadequate motivation is an extremely important factor in Negro inmates' intellectual test performance. It may be that the Negro inmate shows his resistance to the institution by nonparticipation, or it may be that high test performance is not as socially desirable in the Negro as in the white or Mexican cultures. At least, the results point to the presence of an additional factor in Negro intellectual test performance.

[1] An extended report of this study may be obtained for a fee from the American Documentation Institute. Order Document No. 8386 from ADI Publications Project, Photoduplication Service, Library of Congress; Washington, D. C., 20540. Remitting in advance $1.25 for microfilm or $1.25 for photocopies. Make checks payable to: Chief, Photoduplication Service, Library of Congress.

Reprint from *Journal of Consulting Psychology*
1965, Vol. 29, No. 3

APPENDIX B

Reprint from JOURNAL OF RESEARCH IN CRIME AND DELINQUENCY
January 1971 — Vol. 8, No. 1

The Effect of Incentives Upon Aptitude Scores of White and Negro Inmates*

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California Youth Authority wards admitted to one Reception Guidance Center were retested under three conditions to determine the effect of incentives upon aptitude test performance. The study originated from the assumption that motivational factors might account for performance decrement on nonverbal tests, especially among minority ethnic groups. Material reward was found to provide superior inducement to test score elevation as compared to verbal encouragement or mere retest, but the effects were slight and not contingent on ethnic status. Results suggest either that insufficient incentive was applied or differing cultural experiences generate score biases regardless of motivational state.

In a previous study[1] intellectual test differences among White, Negro, and Mexican-American inmates of the California Youth Authority were examined. The present investigation is an attempt to isolate the determinants of certain unanticipated findings from that earlier study.

A brief sketch of the earlier study is in order. It was assumed that, owing to differences in cultural and socioeconomic factors, and as a consequence of academic deprivation,

*This study was supported in part by the General Research Support Grant 1 SOL RR-05693-01 from the National Institute of Health to the NCCD Research Center. We are grateful to Professor Harrison G. Gough for his critical reading of the manuscript.

[1]V. V. Rozynko and E. A. Wenk, "Intellectual Performance of Three Delinquent Groups of Different Ethnic Origin," *Journal of Consulting Psychology*, 24(3):282 (June, 1965).

members of the minority ethnic groups are at a distinct disadvantage on verbal or language portions of the tests; but such differences would be less pronounced or nonexistent on relatively nonverbal measures.

The study compared performances of White, Negro, and Mexican-American samples on two instruments, the California Test of Mental Maturity (CTMM) and the General Aptitude Test Battery (GATB). The CTMM is an intelligence test which includes a language and a nonlanguage section, and the GATB is a multiple factor test with eight special scales and one general scale.[2] The special scales variously measure verbal and nonverbal skills, with verbal aptitude, numerical aptitude, and clerical perception representing the former; and spatial aptitude, form perception, motor coordination, finger dexterity, and manual dexterity representing the latter.

On the CTMM, significant differences among ethnic groups ($p < .01$) were found on both verbal and nonverbal factors on all three test occasions. On verbal factors the Negro and Mexican-American subgroups clustered together each time with means between 79 and 82, with the Whites ahead at means between 90 and 95. On nonverbal factors, the Whites ranged from 92 to 94; and on two of the three occasions the Mexican-Americans closed the gap with means of 85 and 88, as had been predicted. The Negro samples, however, showed no superiority on nonverbal tasks, the means falling between 78 and 81. These findings were parallel to those on the GATB, where 23 of the 27 analyses of variance showed significant differences among ethnic groups, involving both the verbal and the nonverbal tests. As with the CTMM, the Whites were consistently higher on the GATB scales, with Mexican-Americans occupying an intermediate position on nonverbal tests but as low as Negroes on verbal tests.

These results were unexpected. It had been assumed that differences on nonverbal tests would be less than differences on verbal tests and that minority groups would "catch up." Although the Mexican-American sample tended to follow the prediction of the experimenters, the Negro sample did not.

PROBLEM

Since the performance of Negroes on nonverbal (presumably more culture-fair tests) was contrary to expectations, a plausible hypothesis was advanced: that motivational factors were an important factor in this performance, that Negroes were earning lower scores because of a subcultural de-emphasis on intellectual competition or a specific resistance to the correctional setting expressed through noninvolvement.

Test scores are considered by staff when making decisions regarding referral of inmates for vocational training programs. The skills derived from such training are a first step toward future employment. Low scoring inmates may be denied training opportunity because test scores are interpreted solely as reflecting aptitudes. It seems important, therefore, that means be found to determine whether these aptitudes are

[2] Elizabeth T. Sullivan, W. W. Clark, and E. W. Tiegs, *California Test of Mental Maturity: Manuals for Pre-Primary, Primary, Elementary, Intermediate, and Advanced Batteries*, (Los Angeles, California: California Test Bureau, 1951); and Anne Anastasi, *Psychological Testing*, (New York: McMillan, 1954), pp. 380-381.

masked by artifacts arising in the evaluation. The present study posits such a masking effect and assumes that incentives may serve to "unmask" performance, bringing it into closer alignment with actual potential.

METHOD

Samples of White and Negro inmates were retested on four nonverbal factors of the General Aptitude Test Battery under one control and two experimental conditions. It was assumed that the Negroes' performance would be suppressed by a motivational or attitudinal variable while the Whites would be scoring nearer to potential. The experimenters predicted greater gains for Negroes as opposed to Whites under the condition of an effective incentive. Because of the recognized differences in learning parameters for the subculture of poverty (Allen, 1970), we predicted that material reward would be the most effective incentive (particularly for Negroes); and that the effects of spoken encouragement by an institutional representative would be relatively slight (particularly for Negroes).[3]

For the material incentive, inmate "ducats" redeemable for canteen goods were used, with subjects under this testing condition clearly informed that each would receive a share based on his gain between original and retest scores. The social or symbolic incentive consisted of an experimenter's verbal encouragement of the inmates to improve performance in order to better their prospects in institutional programming. The "no incentive" sample was simply instructed to take the test again and given no reason for the retest.

Tests in each of the three conditions were administered by the same proctor, and all retesting took place one week after the routine Guidance Center testing. The GATB nonverbal tests employed were (*P*) form perception, (*S*) spatial ability, (*K*) motor coordination, and (*M*) manual dexterity. Two (spatial ability and form perception) represent predominantly cognitive tasks, and two (manual dexterity and motor coordination) represent predominantly motor tasks. Motivation or test-taking attitude was felt to be especially critical in nonverbal tests. It was for this reason these tests were selected. It is quite obvious that regardless of test-taking attitude, academically disadvantaged persons will be handicapped on verbal tests which require particular kinds of prior knowledge or familiarity.

RESULTS

Two hundred and twenty subjects distributed into six subsamples were involved. The size of the individual subsample ranged from 28 (Negro—material incentive) to 42 (White—no incentive condition). Initial test performances differed significantly both between races and experimental samples. No matching of subjects was performed. Tables I through IV present the means and standard deviations of the experimental samples by race for both the first and second testing.

The elevation of initial test scores is higher for Whites than Negroes for all experimental conditions and test scales except *M* under verbal incentive and *K* under material incentive. The same relationships held upon retest, except that the Negro sample

[3] V. L. Allen (ed.), *Psychological Factors in Poverty*, (Chicago: Markham, 1970).

overcame a slight initial disadvantage on *K* under verbal incentive and ended with a final score higher than Whites.

The hypothesis that an effective incentive (material reward) would operate to narrow the gap between White and Negro performances was not upheld. Whites widened their initial advantage over Negroes under the material incentive condition for all scales except *K*, on which Negroes

Table I

MEANS AND STANDARD DEVIATIONS OF EXPERIMENTAL GROUPS BY RACE SPATIAL FACTOR

Condition		White		Negro		Negro and White	
		T1	T2	T1	T2	T1	T2
Concrete Incentive	$\bar{X}$	109.33	124.15	95.04	107.43	103.37	117.16
	SD	18.44	22.83	17.95	19.34	19.30	22.68
	N	40	40	28	28	68	68
Verbal Incentive	$\bar{X}$	107.23	115.64	87.24	94.11	96.74	105.49
	SD	17.10	16.84	18.05	16.93	20.40	20.20
	N	39	39	33	33	72	72
No Incentive	$\bar{X}$	107.54	119.62	87.21	94.74	98.11	106.91
	SD	18.06	17.99	17.19	20.48	20.14	22.74
	N	42	42	38	38	80	80
All Conditions	$\bar{X}$	108.14	119.19	88.46	97.91	99.29	109.61
	SD	17.48	19.73	17.65	19.85	20.08	22.41
	N	121	121	99	99	220	220

Table II

PECEPTUAL FACTOR

Condition		White		Negro		Negro and White	
		T1	T2	T1	T2	T1	T2
Concrete Incentive	$\bar{X}$	105.64	117.33	95.25	103.18	107.16	110.79
	SD	18.82	19.48	17.09	18.78	18.60	20.80
	N	40	40	28	28	68	68
Verbal Incentive	$\bar{X}$	100.87	108.87	90.70	97.16	95.54	103.68
	SD	16.74	16.81	17.00	16.87	17.77	17.74
	N	39	39	33	33	72	72
No Incentive	$\bar{X}$	102.31	115.03	82.61	92.76	93.10	103.98
	SD	17.92	22.11	20.39	17.58	21.30	22.40
	N	42	42	38	38	80	80
All Conditions	$\bar{X}$	102.93	113.09	88.39	97.30	96.39	105.99
	SD	17.60	19.92	18.96	18.08	19.58	20.63
	N	121	121	99	99	220	220

Table III

COORDINATION FACTOR

Condition		White		Negro		Negro and White	
		T1	T2	T1	T2	T1	T2
Concrete Incentive	$\bar{X}$	92.05	101.08	102.32	112.82	96.21	105.88
	SD	61.05	18.90	19.06	13.33	17.87	17.56
	N	40	40	28	28	68	68
Verbal Incentive	$\bar{X}$	99.10	107.00	96.32	108.32	97.68	106.90
	SD	17.1[illegible]	13.55	1[illegible]	18.60	17.13	14.66
	N	3[illegible]	39	[illegible]	33	72	72
No Incentive	$\bar{X}$	104.18	116.18	97.55	108.18	100.99	112.84
	SD	20.07	18.59	15.[illegible]	16.31	18.08	18.74
	N	42	42	[illegible]	38	80	80
All Conditions	$\bar{X}$	98.46	108.51	98.[illegible]8	109.03	98.43	108.75
	SD	18.32	18.77	17.10	15.49	17.75	17.34
	N	121	121	99	99	220	220

Table IV

MANUAL DEXTERITY FACTOR

Condition		White		Negro		Negro and White	
		T1	T2	T1	T2	T1	T2
Concrete Incentive	$\bar{X}$	103.41	126.97	104.32	124.36	104.21	126.31
	SD	20.99	24.03	16.00	17.48	19.11	21.56
	N	40	40	28	28	68	68
Verbal Incentive	$\bar{X}$	105.54	115.74	106.00	118.86	104.33	115.71
	SD	16.50	13.50	15.72	18.68	15.12	13.89
	N	39	39	33	33	72	72
No Incentive	$\bar{X}$	116.90	132.97	101.79	121.97	110.26	128.09
	SD	25.88	29.42	22.28	28.19	25.11	29.29
	N	42	42	38	38	80	80
All Conditions	$\bar{X}$	109.37	125.89	102.88	120.55	106.45	123.49
	SD	22.15	24.48	17.83	21.59	20.53	23.33
	N	121	121	99	99	220	220

had an initial lead and extended that lead upon retest. Negro score gain exceeded that for Whites on one scale (*M*) under the no incentive condition, and on two scales (*K* and *M*) under verbal incentive.

The investigators' hypothesis that score gain for both White and Negro subjects would be greatest under the material incentive condition and least under no incentive was also not confirmed. The magnitude of gain on the spatial factor was greatest under concrete incentive for both

Table V

TEST-RETEST CORRELATIONS BY RACE AND INCENTIVE CONDITION

Race	Incentive	*N*	*S*	*P*	*K*	*M*
Negro	Material	28	.87	.84	.72	.65
	Verbal	33	.76	.82	.80	.63
	No Incentive	38	.85	.77	.62	.41
White	Material	40	.86	.79	.86	.80
	Verbal	39	.84	.85	.86	.77
	No Incentive	42	.61	.85	.82	.65

Whites and Negroes, but verbal incentive gain was least, with no incentive intermediate. The same pattern was found on the manual dexterity factor. The findings for scales *S* and *M* do not violate the assumed superiority of the material incentive condition. Verbal incentive appears inferior to none at all. However, even these generalizations fail on the form perception and the motor coordination scales.

All samples showed some mean score gain between initial testing and retesting. Much of this gain appears to be attributable to practice effects. It becomes relevant to attempt to determine which members of a particular subsample benefit most from incentive, or from mere retesting.

Test-retest correlations and first test score versus score gain correlations were calculated for each of the test factors by race and incentive conditions.[4]

If incentives were differentially effective among some members of a sample, then we should expect these scores to be markedly displaced, effecting a drop in the test-retest reliability of the sample. Table V, however, appears to indicate that simple retest of the no incentive condition generally produced the lowest and the material incentive condition produced the highest reliability coefficients. This finding suggests that an incentive may operate to stabilize retest perfomance by keeping most subjects interested, and that mere retest produces different degrees of boredom in different subjects.

Most of the test-retest correlations are moderately high, indicating that, despite some score gains attained through practice, individual subjects are likely to retain their relative position in the sample order. The test-retest reliabilities of Negroes and Whites are generally comparable on the cognitive factors (spatial ability and form perception) while on the motor factors (motor coordination and manual dexterity) they show

[4]William T. Meredith, Department of Psychology, University of California at Berkeley, provided statistical consultation for the data analysis; and Jeffery Houghten and Anthony Rollins, Computer Center, University of California at Davis, carried out the computer work. These contributions are thankfully acknowledged.

somewhat lower values for Negroes.

The correlations between initial test scores and the magnitude of score gain on retest are shown in Table VI below.[5]

Table VI suggests a general tendency for low initial scorers to gain more than high initial scorers. It is possible that this is partly attributable to a ceiling effect. These inverse correlations are, however, generally low and insufficient to disrupt the order among subjects that Table V showed to be relatively stable.

Since we have assumed a masking effect of apathy upon test scores that can be removed through incentive, it is reasonable to speculate that apathetic subjects would be more heavily represented among low scorers on initial testing. Therefore, an effective incentive condition would yield higher inverse correlations between initial test and score gain than mere retest would provide. This hypothesis was not supported. Table VI shows that material incentives yield larger inverse correlations than no incentive on only three of eight comparisons.

Differences between White and Negro samples on particular scales under particular conditions is evident in Table VI. Whites and Negroes seem to respond differentially with respect to both the test factor and the incentive condition depending upon their original testing score. For example, on the motor coordination factor (*K*) under the material incentive condition, Negroes with lower scores consistently gain more

Table VI

FIRST TEST-SCORE GAIN CORRELATIONS BY RACE AND INCENTIVE CONDITION

Race	Incentive	*N*	*S*	*P*	*K*	*M*
Negro	Material	28	−.12	−.13	−.72	−.33
	Verbal	33	−.43	−.31	−.21	−.26
	No Incentive	38	.01	−.52	−.37	−.38
White	Material	40	.10	−.28	.03	−.12
	Verbal	39	−.31	−.27	−.62	−.58
	No Incentive	42	−.44	.07	−.42	−.29

[5]The authors are aware of objections raised by some investigators in regard to this procedure. The reader is referred to the following two publications: G. H. Thomson, "A Formula to Correct for the Effect of Errors of Measurement on the Correlation of Initial Values with Gains," *Journal of Experimental Psychology*, 7:321-324, (1924); L. Zieve, "Note on the Correlation of Initial Scores with Gains," *Journal of Educational Psychology*, 31:391-394, (1940). Although the authors believe that the brief discussion of the correlations between initial scores and difference between second and first scores has meaning within the context of this paper, these objections should be kept in mind.

than their compatriots with higher first scores. Whites under the same condition fail to show this tendency. Other differential responses between Whites and Negroes are reflected in spatial ability and form perception factors under the no incentive condition and on the motor coordination and manual dexterity factors under the verbal condition.

These preliminary data suggest that Whites and Negroes respond differently to the incentive conditions depending both on the test administered and on the height of their original test score although there is not sufficient pattern or regularity in these differences to permit meaningful interpretation.

The next step in the analysis of performance differences by subjects at different initial test score levels was to divide each sample into three groups differing in the height of the original test score.

The lower group consisted of subjects whose scores were less than .50 *SD* below the mean, the higher group consisted of subjects whose scores were greater than .50 *SD* above the mean. The remaining group had scores ranging from +.50 to -.50 *SD* of the mean. A three-way analysis of variance for unequal *N* was then performed. The main variables were race, incentive condition, and original performance level. Computer program BMD 05V of the Biomedical Computer Programs statistical package was used.

Table VII presents the analysis of variance for the four test factors, and Table VIII presents the respective means and standard deviations for each group by test level and incentive condition.

The incentive condition was statistically significant for the spatial ability and manual dexterity factors. The original level of performance variable particularly was significant; no significant effects of race were demonstrated, either alone or in interaction with the other variables.

Table VIII also shows that an initial low performance on all save the *S* factor increases the probability of a greater than average score increase upon retesting. A similar nonsignificant trend is seen in the *S* factor scores.

Again, retest score gain appeared to be mediated by initial test performance. Subjects who performed least well initially accomplished greatest improvement through practice. Material reward seemed to produce somewhat greater effect on score gain than mere retest, and verbal encouragement may have been worse than none at all.

DISCUSSION

An attitudinal stance of greater test-taking apathy or resistance was hypothesized to account for performance decrements of youthful Negro offenders compared with White offenders on nonverbal (presumably more culture-fair) subtests of the General Aptitude Test Battery. The hypothesis was tested by offering White and Negro subjects material reward for score improvement and by verbal encouragement about bettering their prospects in institutional programming. Results for these groups were compared with practice improvement yielded by mere retesting. We predicted that in an effective incentive condition the Negro sample would improve and narrow the performance gap be-

Table VII

ANALYSES OF VARIANCE
INCENTIVE X RACE X ORIGINAL LEVEL OF PERFORMANCE

Factor S	*SS*	*df*	*MS*	*F*	*P*
Race	105.86	1	105.86	.75	n.s.
Initial Test Level	422.39	2	211.19	1.49	n.s.
Incentive	941.78	2	475.89	3.32	.05
Race x Level	89.06	2	44.53	.31	n.s.
Race x Incentive	55.97	2	27.98	.20	n.s.
Level x Incentive	1094.12	4	273.53	1.93	n.s.
Race x Level x Incentive	772.14	4	193.04	1.36	n.s.
Error		202	141.94		

Factor P	*SS*	*df*	*MS*	*F*	*P*
Race	82.46	1	82.46	.65	n.s.
Initial Test Level	815.59	2	407.79	3.22	.05
Incentive	188.80	2	94.40	.75	n.s.
Race x Level	419.78	2	209.89	1.66	n.s.
Race x Incentive	112.66	2	56.33	.45	n.s.
Level x Incentive	165.43	4	41.36	.33	n.s.
Race x Level x Incentive	708.52	4	177.13	1.38	n.s.
Error		202	128.36		

Factor K	*SS*	*df*	*MS*	*F*	*P*
Race	2.33	1	2.33	.02	n.s.
Initial Test Level	3791.36	2	1895.68	16.60	.001
Incentive	407.24	2	203.62	1.78	n.s.
Race x Level	6.03	2	3.01	.03	n.s.
Race x Incentive	442.15	2	221.08	1.94	n.s.
Level x Incentive	208.32	4	52.08	.46	n.s.
Race x Level x Incentive	657.26	4	164.32	1.44	n.s.
Error		202	114.11		

Factor M	*SS*	*df*	*MS*	*F*	*P*
Race	21.72	1	21.72	.07	n.s.
Initial Test Level	6531.65	2	3265.83	10.19	.001
Incentive	4117.70	2	2058.85	6.42	.005
Race x Level	370.60	2	185.30	.58	n.s.
Race x Incentive	345.97	2	172.99	.54	n.s.
Level x Incentive	1422.57	4	355.64	1.11	n.s.
Race x Level x Incentive	1614.43	4	403.61	1.26	n.s.
Error		202	320.33		

Table VIII

MEANS AND STANDARD DEVIATIONS OF CHANGE SCORES ON FOUR GATB FACTORS

			Factor S			Factor P			Factor K			Factor M		
			Concrete	Verbal	No Incentive	Concrete	Verbal	No Incentive	Concrete	Verbal	No Incentive	Concrete	Verbal	No Incentive
WHITE	Low	$\bar{X}$	10.67	10.85	17.00	12.55	9.50	10.35	10.00	18.22	21.70	22.60	17.36	28.67
		SD	9.25	10.76	11.18	18.35	7.54	10.39	10.75	5.91	13.61	11.14	6.64	18.63
		N	9	13	12	11	16	17	17	9	10	15	11	6
	Middle	$\bar{X}$	14.84	10.07	10.76	11.25	6.93	13.46	9.76	6.53	14.83	26.53	9.67	14.83
		SD	12.89	9.35	18.54	12.90	10.94	16.83	7.65	5.83	16.80	16.26	9.41	18.86
		N	19	14	17	16	15	13	17	15	12	15	21	18
	High	$\bar{X}$	17.75	3.83	2.38	8.85	7.00	11.08	4.67	3.07	7.45	20.50	.57	12.22
		SD	10.77	7.52	19.72	9.33	9.40	9.77	9.67	7.78	7.54	15.83	11.19	27.62
		N	12	12	13	13	8	12	6	15	20	10	7	18
NEGRO	Low	$\bar{X}$	10.57	10.00	8.33	9.75	12.13	9.50	17.83	13.69	17.75	26.67	20.88	8.33
		SD	9.88	8.73	11.01	6.80	5.96	7.84	10.07	11.51	19.64	17.00	17.29	11.01
		N	7	16	12	4	8	16	6	13	12	9	8	12
	Middle	$\bar{X}$	13.33	12.60	5.82	8.09	7.73	6.21	12.25	12.40	7.06	17.00	13.59	28.45
		SD	11.00	5.15	9.49	14.65	9.04	12.55	10.60	5.89	9.69	9.81	10.75	25.38
		N	12	10	17	11	15	14	12	10	16	8	17	11
	High	$\bar{X}$	12.56	2.29	9.67	7.23	6.10	2.40	4.00	5.40	7.80	16.82	2.88	3.77
		SD	8.80	11.19	13.83	7.25	8.29	9.55	15.61	6.29	7.02	13.53	13.63	27.93
		N	9	7	9	13	10	10	10	10	10	11	8	13

CONTINUED

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tween itself and its White counterpart.

All comparison groups showed substantial score gain in retest, but a large part of such gain appeared attributable to the practice effect. The incentive conditions yielded significant increments on two of the four subtests, with material reward most effective and verbal encouragement, especially for White subjects, seemingly less effective than mere retest.

The incentive conditions were not successful in improving the performance of Negro subjects relative to Whites, as posited in the motivational "masking" hypothesis. The money incentive appeared to be equally effective for both Whites and Negroes. Verbal encouragement operated contrary to the effect intended, creating either disruptive worry or resentment toward being pushed. This could suggest that the entire delinquent group was just as alienated and did not base its behavior on others' verbal behavior as much as do nondelinquent groups.

Correlations in magnitude of gain by individual subjects across the various subtests were generally positive in the Negro samples (binominal test, $p < .001$, one-tailed), supporting the idea of a general motivational effect. This phenomenon was not related to incentive, however, and failed to appear in the White samples.

The magnitude of retest score gain was found to be inversely related to initial performance levels and to account for significant portions of the score gain variance on three of the four subtests. This effect was less pronounced under the material incentive condition, where improvement in test performance seemed less dependent on initial performance level. The tendency for low-scoring subjects to achieve greater gains acted to reduce test-retest reliabilities, but these reliabilities remained moderately high.

Negro test-retest reliabilities were comparable to White reliabilities on the spatial and perceptual factors, but were lower on the motor tasks (factors *K* and *M*). The determinants of this lower reliability are not known, but the results require increased caution in making validity inferences from GATB *K* and *M* scores for Negro subjects if the object is to base training selection decisions on predictions of vocational success.

It appears important that research on the relationship between test scores and criterion variables for minority groups be conducted and that the results of such studies be widely disseminated among those responsible for personnel decisions. There is danger that a test will not be "fair" among the individual members of a minority population, regardless of whether it is also unfair to that population as a whole. It is understood, however, that decisions are not ordinarily made on the basis of interpretation of a single test score, and that the initial test and retest results may not have identical implications relative to an external performance criterion.

SUMMARY AND CONCLUSION

The present investigators have been concerned with the problem of motivational suppressors which might affect aptitude test performance without producing corresponding effects on training potential or job performance or which, if pro-

ducing such effects, might yield to counseling or other modes of intervention. Our findings support the hypothesis that immediate material incentive can improve some types of aptitude test performance but do not support the notion that such incentive can reduce the relative score disadvantage of minority group members. On predominantly motor factors of the GATB, Negro samples under retest in every case exceeded the initial test performance of White samples; but all samples manifested improvement attributable to practice.

The GATB was developed by the U. S. Employment Service for the use of counselors in the various state employment offices. The tests are also employed for decisions about vocational training placement for inmates of the California Youth Authority. In typical practice, an individual's test factor standard scores are plotted in a profile, and that profile is then "matched" with occupational ability patterns derived on groups of employed persons in many fields of work. Occupational ability patterns are described in terms of minimum scores in two to four field-relevant aptitudes, and the individual is considered matched with those patterns whose cut-off scores he exceeds.

Screening decisions based on such testing are suspect if aptitudes are masked by test-taking familiarity or attitudes. Yet it is extremely difficult to take into account variation due to cultural experience and the conditions under which testing is performed. If test scores are regarded by persons engaged in selection and classification decisions as straightforward measures of the particular characteristic in question, biased decisions are the likely result. The problem of reducing such bias without merely substituting other forms of bias in its place remains largely unsolved.

In regard to the failure of the central hypothesis of the current study—that Negro inmates had greater motivational decrements than Whites and would improve their relative position under condition of an effective incentive—two explanations are tenable.

The first would question whether the experiments had, in fact, succeeded by the means they used in providing an incentive which was effective and whether some other type of incentive would have been more effective. The relatively slight increment of gain over practice effect yielded by the material incentive makes this criticism tenable and leaves open the possibility of other, more effective incentives.

The second question is whether the motivational hypothesis offers a tenable explanation of Negro performance decrement; it might be, as some insist, that tests are conceived, developed, and standardized within essentially limited and anchored cultural frameworks and are, therefore, inherently unfair to members of other cultural groups, regardless of the steps taken to reduce this bias. If this is the case, restandardization for particular groups may prove an inadequate corrective as totally new tests—appropriate to members of the specific culture in which they are to be used—would be required.