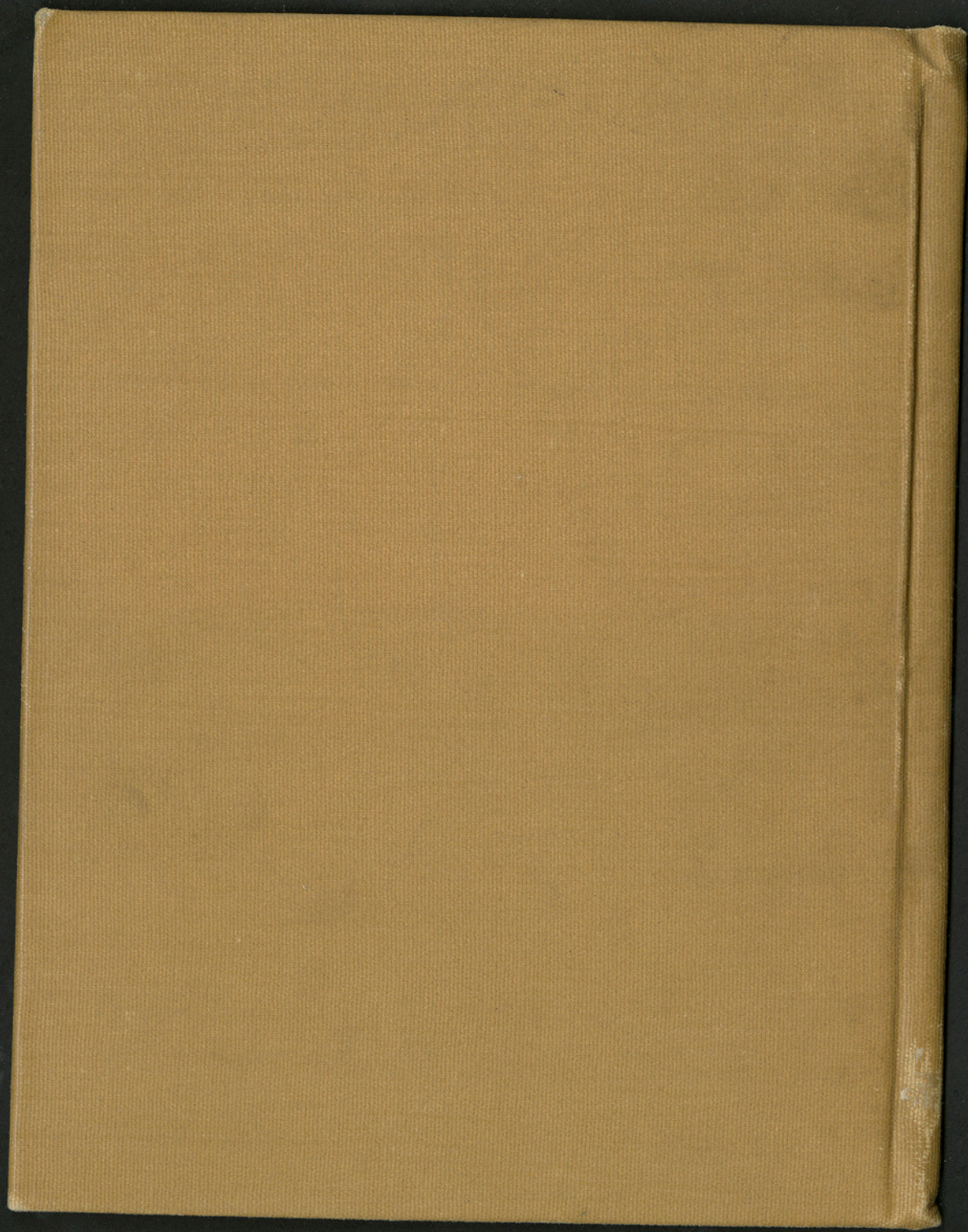


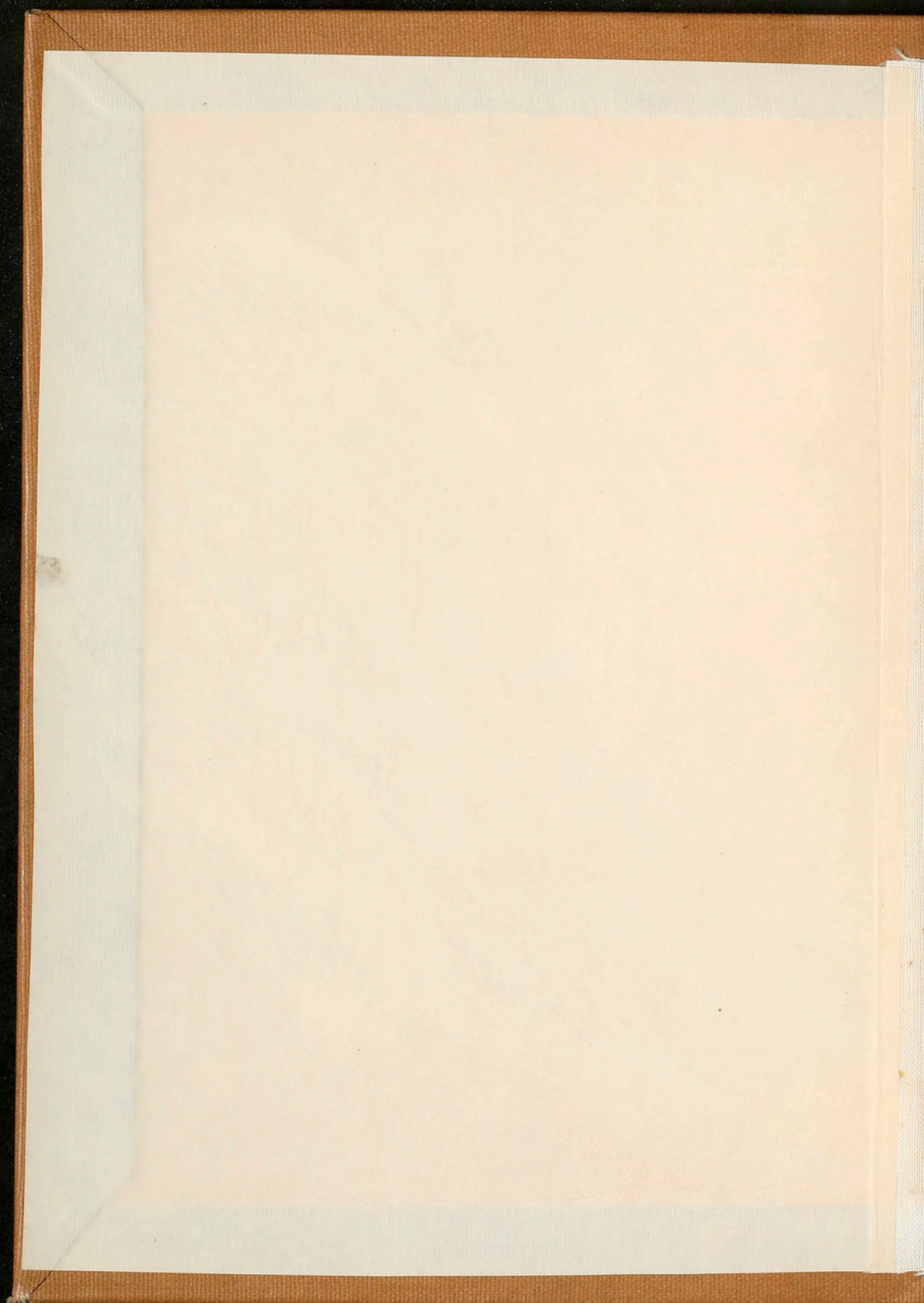


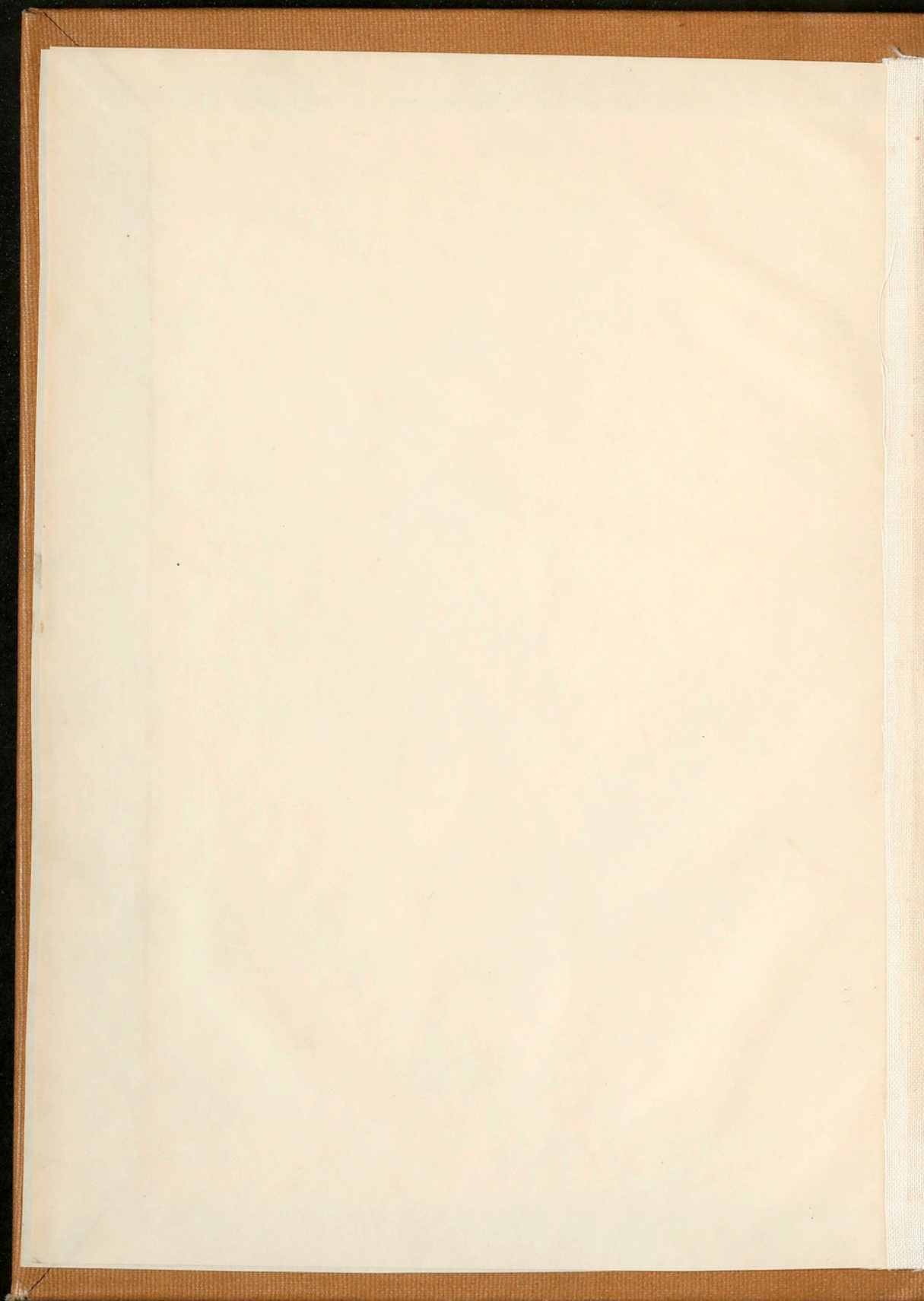
A STUDY
OF THE MENTAL CAPACITY
OF DEPENDENT CHILDREN

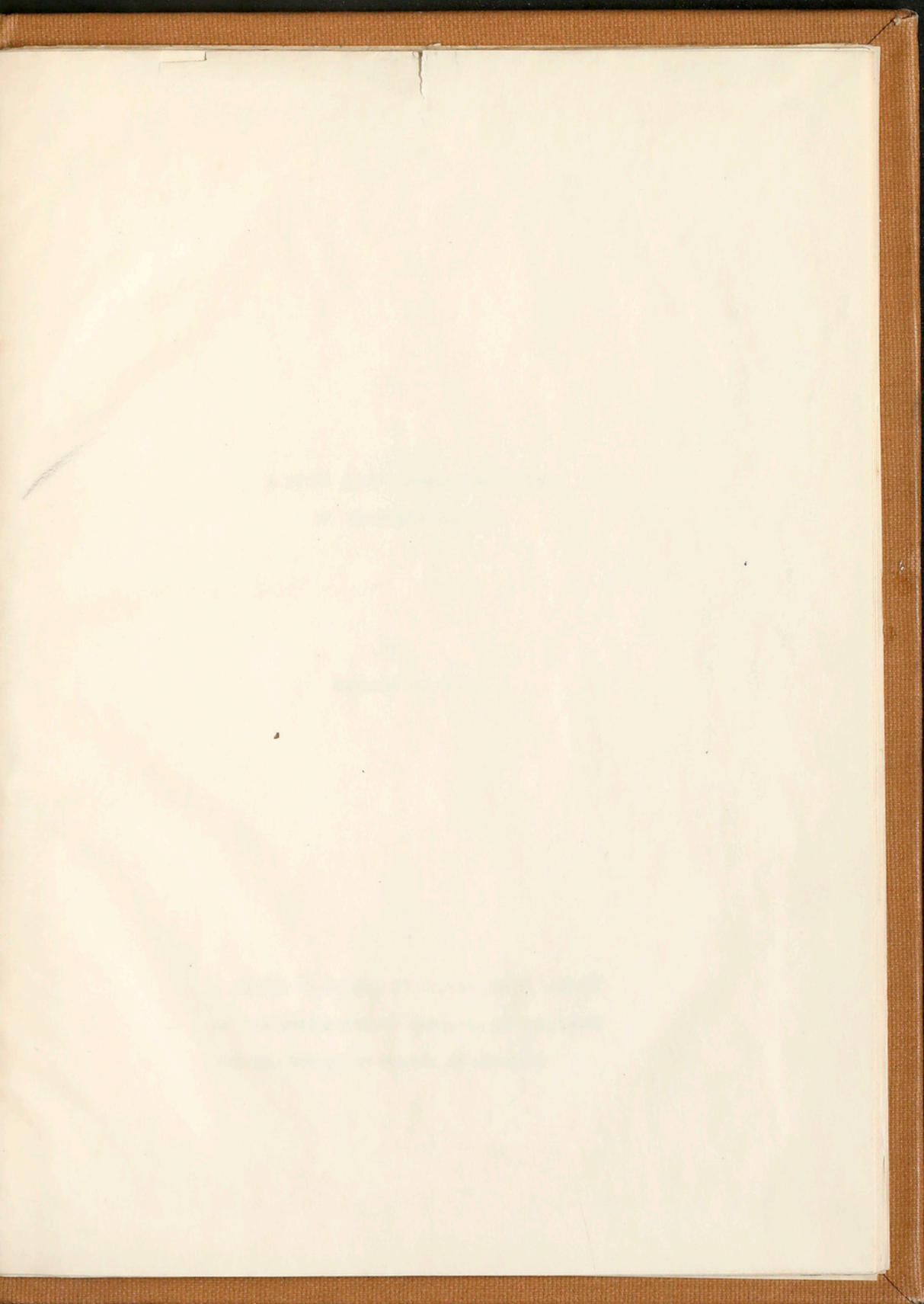
BY
BERNARD O. WISE













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A STUDY OF THE MENTAL CAPACITY
OF DEPENDENT CHILDREN

By

Bernard O. Wise.

A THESIS PRESENTED TO THE ACADEMIC FACULTY
OF THE UNIVERSITY OF VIRGINIA IN CANDIDACY
FOR THE DEGREE OF MASTER OF SCIENCE.

U. Va. Masters
Thesis

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C O N T E N T S

Part I. A SUMMARY OF METHODS AND RESULTS
OF PREVIOUS STUDIES OF DEPENDENT CHILDREN.

Part II. A STUDY OF THE MENTAL CAPACITY OF
DEPENDENT CHILDREN IN THE CHARLOTTESVILLE
CHILDREN'S HOME.

THE CHURCH

THE CHURCH OF THE FUTURE IS THE CHURCH OF THE PRESENT
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THE INTELLIGENCE TEST.

There is no instrument in the world the like of a
general intelligence test. In his youth, Binet, of
the Paris-School Test for the deaf-mutes, there has been
such research conducted to determine the degree of in-
telligence possessed by particular classes of backward
children of people. The speech, the hand, the mind, the
eye, the hearing, the touch, the feeling, and the movement
have all been the basis of these intelligence tests. It is
the study of these tests that has led to the very beginning of
this study.

PART I

METHODS AND RESULTS OF SURVEYS MADE

TO ASCERTAIN THE INTELLIGENCE

OF DEPENDENT CHILDREN.

THE SURVEY OF AN INTELLIGENCE TEST.

To ascertain the intelligence quotient of the whole
population of dependent groups in our population, many tests of
intelligence have been developed. The test which will be
used in this study for the dependent groups, will be
the Binet-Simon test for the dependent groups, and will
be a fair test of measuring the intelligence of an indi-
vidual. This test will be composed of the Binet-Simon test
and the Binet-Simon test for the dependent groups. The
Binet-Simon test for the dependent groups will be the
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THE INTELLIGENCE TEST.

Since Binet introduced to the world the idea of a general intelligence and introduced his great creation,-- the Binet-Simon Test for its measurement, there has been much research undertaken to determine the degree of intelligence possessed by particular classes or homogeneous groups of people. The soldier, the deaf, the blind, the negro, the foreign born, the delinquent, and the dependent have all been the target of these investigations. While the study of delinquent children from the very beginning has engaged the attention and the best efforts of the leading researches, comparatively little effort has been made until very recently to solve the problem of the orphaned dependent child.

THE NATURE OF AN INTELLIGENCE TEST.

To ascertain the intellectual abilities of the many special and selected groups in our population, many tests or examinations have been employed. Any test which calls into use the higher faculties for its successful operation, can be made a fair test to ascertain the intelligence of an individual. When knowledge is possessed of the manner in which the normal unselected individual handles the test a criterion for comparison is established. The establishment of such a norm is

Since these subjects are the only ones of a
general intelligence and therefore the only ones
the first-class test for the movement, there are some
which necessarily involve in solution the degree of in-
telligence measured by previous classes of problems
groups of people. The subject, the test, the subject,
subject, the foreign test, the subject, and the subject
have all been the subject of some investigation. While
the study of intelligence is not the only subject of
intelligence, the study of intelligence is the study of the
intelligence, especially in the study of the intelligence
very recently in the study of the intelligence, and
intelligence.

THE INTELLIGENCE TEST.

To measure the intelligence of the subject
subject and subject is the subject, and the subject
intelligence is the subject, and the subject is the
and the subject is the subject, and the subject is the
and a test is the subject, and the subject is the
subject, and the subject is the subject, and the subject
subject, and the subject is the subject, and the subject
subject is the subject, and the subject is the subject.

known as "standardizing."

It is the usual thing to standardize a test on unselected children of school age. By comparing the score of an individual with the median score of the unselected group of children a fair idea of the subject's deviation from normality can be gleaned.

Many tests have been used in surveys of orphan and children's homes. The Binet is perhaps more widely used than any other. There have been many revisions of this test; formerly Goddard's revision was the accepted form but now that of Terman of Stanford University is supreme in the field. But other tests beside these are used, among them being: the Yerkes-Bridges Point Scale, the Herring Revision, and the Proteus Maze Scale, and others. Performance scales for the manipulation of concrete objects are also used. Among the following are the Pintner-Patterson Performance Scale, the Army Performance Scale, the Stenquist Mechanical Test, and the Ferguson Form Board. Group tests are also extensively used.

DEPENDENCE.

Most of the children tested are those cared for in orphan asylums and children's homes. It is worth remembering that the term "orphan" as applied to such children is very misleading. Orphan means strictly a child both of whose parents are dead. As a matter of fact only a small percentage

of the cases in the homes are orphans in this sense. A great many have only one parent living and some both living. The presence of the children in a home indicates therefore a breakdown on the part of the family either because of some unfortunate occurrence or else because of incapacity or lack of moral stamina on the part of the parents to support a child. The very fact that so many of the children have both parents living would lead one to suspect that in frequent cases the trouble lies in intelligence or character defects on the part of one or both parents, leading to an inability to compete with others in the ordinary course of life. This would lead us to suspect, therefore, a greater amount of deficiency among such children than would be found in unselected school children.

RESULTS FOUND IN A SURVEY OF DEPENDENT
CHILDREN BY STENQUIST, THORN-
DIKE AND TRABUE (15).

The following is a quotation from a report made on the results of the survey. "Dependent children as a group are much below ordinary children of corresponding ages in the sort of abilities tested by the Binet, Completion and Reading

of the cases in the house are subject to this action. A
great many have only one parent living and some both living.
The purpose of the children is a very interesting one.
a provision on the part of the family which becomes in some
instances necessary as a consequence of the death of one
of the parents on the part of the parents to support a
child. The very fact that so many of the children have both
parents living would lead one to suppose that in the past
years the people live in intelligence or otherwise support
as the fact of the death of one parent is an indication
to support the child in the best way possible of life. This
which leads one to suppose, however, a certain amount of
history would show children that would be found in connection
with children.

SECTION FOUR IN A HISTORY OF THE
CHILDREN OF THE
THEY ARE THE CHILDREN (1911)

The following is a summary from a report made by the
Council of the House. The purpose of the children is a group for
which some history would be necessary to show in the
fact of children raised by the state, adoption and family

Tests. They differ, of course, among themselves. We find one child of much promise, forty-nine of nearly average ability or better, while forty-eight are four years or more behind and the remaining three-fifths are from half a year to four years behind.

"The median underageness of the children when measured by the Mechanical Test was 1.3 for nine and ten year children; 2 for eleven and twelve year old children; and 1.6 for thirteen and fourteen year children and 1.7 for fifteen and sixteen year old children.

"It can be seen that in the Mechanical Tests the dependent children are notably inferior, though not so much as in the more abstract ability, such as in tested in the Binet Scale. On the average they are about $1\frac{3}{4}$ years behind."

DR. PINTNER'S SURVEY OF 106
DEPENDENT CHILDREN (17)

In an examination of 106 dependent children Dr. R. Pintner concluded the following: "The chief charistic of dependent children is their general backwardness."

years. They differ, of course, among themselves. To find
one child of such precocity, forty-nine of nearly average
ability at least, while forty-eight are four years or more
behind and the remaining three-fifths are four and a year
or four years behind.

The median intelligence of the children was measured
by the Binet-Simon Test and 1.5 for nine and ten year children;
1.5 for eleven and twelve year old children; and 1.5 for
thirteen and fourteen year children and 1.5 for fifteen and
sixteen year old children.

It can be seen that in the Binet-Simon Test the low
bright children are notably inferior, though not so much
as in the wide spectrum ability, which is in accord with the
first results of the various tests and about 15 years behind.

DR. FREDERICK C. LLOYD, JR.
DEPARTMENT OF EDUCATION (17)

is an examination of the dependent children of 15.

Results contained the following: The child capabilities of
dependent children is their general intelligence.

DR. PINTNER'S RESULTS.

A Diagnostic table of the 106 subjects follows.

| | |
|---------------|------|
| Very bright | 7.5% |
| Bright | 13.2 |
| Normal | 35. |
| Backward | 27. |
| Feeble-minded | 22. |

Note. The system of rating is shown in Part II.

The Ohio Bureau of Juvenile Research.

1603 County Home children and three special children's homes were given tests by the Ohio Bureau of Juvenile Research. The diagnostic distribution of the 1603 children examined is as follows:

| | |
|-------------------------|----------|
| Feeble-minded | 33.75 % |
| Potential feeble-minded | 10.04 |
| Deferred diagnosis | 36.56 |
| Border line | 2.35 |
| Inferior | 1.68 |
| Normal | 13.85 |
| Bright | 1.67 |
| | <hr/> |
| | 100.00 % |

Mr. J. H. ...

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The following is a quotation from the Bulletin by the Bureau:

"The high percentage of feeble-minded in these homes seems startling. It is even more startling if the potential feeble-minded are grouped with them. Our experience in this work has made us believe without a doubt that a large percentage of these children are at least "socially feeble-minded."

"The condition found in the various homes as indicated by percentage of feeble-mindedness is highly variable. The percentage of the actually feeble-minded varies in the thirty-four homes from 4.6% to 51.6%."

THE MISSISSIPPI MENTAL DEFICIENCY
SURVEY.

Two large orphanages were surveyed under the direction of Dr. T. H. Haines (19). In one of these homes there were 140 children. Fifty-eight of these children were given individual examinations. Twenty of them were diagnosed as feeble-minded. Three of these had I.Q.'s of less than .50, ten others of less than .60, the remaining from .60 to .69. Six others were classed as border line cases.

The following is a quotation from the Bulletin of

the Bureau:

"The high percentage of female-headed families in these areas is noteworthy. It is even more noteworthy in the percentage of female-headed families with children. Our experience in this work has been to believe without a doubt that a large percentage of these children are female-headed families."

The condition found in the various areas is highly variable. The percentage of female-headed families in the various areas is as follows: 40 to 50, 50 to 60, 60 to 70, 70 to 80, 80 to 90, 90 to 100.

THE FEMALE-HEADED FAMILIES

Two large agencies were contacted under the direction of Mr. J. H. Jones (1937). In one of these areas there were 100 families. Fifty percent of these children were given individual examinations. Twenty of these were diagnosed as female-headed. There is about 10% of the remaining 80, for a total of about 10% of the remaining 80 to 90. The above was checked in detail and found to be correct.

The other orphanage surveyed had a population of about 130 children. Twenty-one of these had I.Q.'s from .42 to .63. Two others were classed as border liners, I.Q. of .64 and .67. Seventeen per cent. of the children of this orphan home were feeble-minded.

SURVEY OF THE NEW YORK STATE
BOARD OF CHARITIES.

^[17]
Hall of the New York State Board of Charities reported a test of the orphan asylums of New York and found on the whole that this class of children were somewhat inferior to the public school children ~~had~~ were tested with the same test.

REPORT OF THE NEW HAMPSHIRE CHILDREN'S
COMMISSION.

L. C. Streeter in his report on the Children's homes of New Hampshire gives the following summary: "The Binet Test was used in getting the mental rating of 1248 children. These tests show 49% normal, 30% backward and 21% feeble-minded. There is a much larger percentage of feeble-mindedness among the delinquents than among the dependents.

The other agencies reported that a population of
about 150 children, mostly male, is housed in the
at St. Louis. The children were placed in several
of the city and St. Louis. The children are housed in the
of this agency were also located.

REPORT OF THE NEW YORK STATE
BOARD OF CHARITIES.

(17)
Hall of the New York State Board of Charities
reported a list of the children of New York and
found on the whole that there is a general
with interest in the health and education of these
children with the same.

REPORT OF THE NEW YORK STATE BOARD OF
CHARITIES.

In 1910, however, in the report of the children's
board of the Department gives the following summary: The
that year was used in getting the number of 1910
children. These were about 150 children. The children
and all families. There is a very large percentage
of families which are in the same condition as the
the children.

PINTNER'S SUMMARY.

The following table is a summary given by
Pintner of the results found by the best workers in the
field, in Pintner's "Intelligence Testing."

| <u>Institution.</u> | <u>Author.</u> | <u>No Exam.</u> | <u>F.M.</u> | <u>Backward.</u> | <u>Normal</u> | <u>Above Normal.</u> |
|---------------------------------|--------------------|-----------------|-------------|------------------|---------------|----------------------|
| County Home | Stenquist | 256 | 18.5 | 62 | 19 | .5 |
| County Home | Pintner | 106 | 5.7 | 46.2 | 34.9 | 13.2 |
| 23 Institu- tions. | Hall | 21.42 | 6.7 | 0 | 0 | 0 |
| 4 Homes | Williams | 150 | 6.0 | 32.5 | 49.5 | 12.0 |
| Orphanages | Carlisle | 141 | 7.8 | .... | .... | .... |
| House of Good Shep- herd. | ..... | 117 | 9.4 | ..... | .... | .... |
| Orphanage | Terman & Wagner | 68 | 6.0 | 29. | 53 | 12 |
| Orphanage | Haines | 270 | 17.0 | .... | .... | .... |
| 34 County homes | Mateer | 16.3 | 33.7 | 39 | 12.8 | .6 |

STANDARD REPORT

The following table is a summary given by
 of the results found by the test persons in the
 field, in "Intelligence Testing."

| Intelligence | Person | Age | Sex | Education | Occupation | Score | Remarks |
|--------------|--------|-----|-----|-------------|------------|-------|---------|
| 100 | John | 25 | M | High School | Farmer | 100 | |
| 95 | John | 25 | M | High School | Farmer | 95 | |
| 90 | John | 25 | M | High School | Farmer | 90 | |
| 85 | John | 25 | M | High School | Farmer | 85 | |
| 80 | John | 25 | M | High School | Farmer | 80 | |
| 75 | John | 25 | M | High School | Farmer | 75 | |
| 70 | John | 25 | M | High School | Farmer | 70 | |
| 65 | John | 25 | M | High School | Farmer | 65 | |
| 60 | John | 25 | M | High School | Farmer | 60 | |
| 55 | John | 25 | M | High School | Farmer | 55 | |
| 50 | John | 25 | M | High School | Farmer | 50 | |
| 45 | John | 25 | M | High School | Farmer | 45 | |
| 40 | John | 25 | M | High School | Farmer | 40 | |
| 35 | John | 25 | M | High School | Farmer | 35 | |
| 30 | John | 25 | M | High School | Farmer | 30 | |
| 25 | John | 25 | M | High School | Farmer | 25 | |
| 20 | John | 25 | M | High School | Farmer | 20 | |
| 15 | John | 25 | M | High School | Farmer | 15 | |
| 10 | John | 25 | M | High School | Farmer | 10 | |
| 5 | John | 25 | M | High School | Farmer | 5 | |
| 0 | John | 25 | M | High School | Farmer | 0 | |

Part II

A STUDY OF THE MENTAL CAPACITY OF
DEPENDENT CHILDREN IN THE CHAR-
LOTTESVILLE CHILDREN'S HOME, CHARLOTTE-
VILLE, VIRGINIA.

- P -

THE CHARLOTTESVILLE CHILDREN'S
HOME.

The Charlottesville Children's Home was founded in April, 1919, for the purpose of protecting, maintaining and providing a home for the orphan and destitute children of Albemarle County and the City of Charlottesville, Virginia. It is situated on a large lot at the extreme eastern end of the city. A board of trustees and lady managers appointed from the several churches of the city govern the institution. The children are not committed by the courts but are placed therein by their unfortunate parents (or parent) or by other persons interested in the child's welfare (with, of course, the consent of the parent or parents). It is usually to be found that there is at least one surviving parent. In some few cases both survive but are not living together. It is specifically stipulated that no delinquent children be retained in the home. The official ages of eligibility is from two to twelve; though actually both limits are exceeded. There are several instances of infants being left on the doorsteps of the home by unfortunate mothers.

No child has ever been adopted from the home, though there is no law prohibiting such adoption. The parents would have to be consulted if adoption were ever attempted and if the child be a complete orphan the consent of the Board would

THE CHARITABLE CHILDREN'S HOME,
NEW YORK.

The Charitable Children's Home was founded in April, 1853, for the purpose of receiving, maintaining and providing a home for the orphan and destitute children of Albany County and the City of Saratoga Springs. It is situated on a large lot at the corner of Broadway and the City. A board of trustees and lady managers are elected from the several churches of the city to govern the institution. The children are not committed by the courts but are placed therein by their natural parents (or parents) or by other persons interested in the child's welfare (such as the mother, the father or the grandparent). It is usually so found that there is no need of removing the child from the home. The children are not living for- ever. In some few cases the mother and father are living together. It is especially stipulated that no delinquent children be received in the home. The children are of all ages from two to twelve, though occasionally some infants are accepted. There are several instances of infants being left on the doorstep of the home by natural parents. No child has ever been adopted from the home, though there is no law prohibiting such adoption. The parents would have to be connected in adoption with the child and it is the child's right to return to the home at the home.

have to be obtained.

THE SURVEY.

A mental survey of this institution was undertaken for the purpose of ascertaining the average level of intelligence attained to by children dependent on charity. The home is typical of many others scattered throughout the country and the results obtained from this one institution would be indicative to a large extent of the mentality of dependent and orphan children in other institutions.

METHODS EMPLOYED.

A stanford-Binet examination was given to each of the thirty children of the Charlottesville Children's Home. To insure perfect alertness and sustained interest on the part of the examiner only three tests were given each day.

The room in which all testing was done was a small reception hall comfortably but barely furnished. All other details prescribed by Dr. Terman in "The Measurement of Intelligence" were carefully followed.

After becoming acquainted with the children and atmosphere of the school, a very complete "rapport" was established. All the subjects were eager for the experience of being tested and singularly interested in the proceedings when examined. This was, of course, conducive to their best efforts and re-

moved all possibility of misjudgment due to a child's timidity and reticence in responding; two things most detrimental to successful results with the Binet examination.

FERGUSON FORM BOARD.

After completing the Binet test and having determined the Mental Ages of the children by this, a language or literary type test having been thought insufficient it was thought advisable to check the Binet test by another of a different type, one that involved manual rather than verbal manipulations. For this purpose the Ferguson Form Board was chosen.

A DESCRIPTION OF THE FERGUSON FORM BOARD.

The Ferguson Form Board consists of a series of six boards which increase in difficulty of manipulation from Board No. 1 to Board No. 6. The object of the test is to replace the blocks (six in the first board and twelve in each of the other five) in their proper places in the board as quickly as possible. Each board has in it six holes of different shapes and designs into which can be placed only the proper blocks. Instructions are given the subjects and the blocks are removed from the board, but remain covered with a sheet

need all possibilities of development due to a child's plasticity
and resources in responding; for this reason, the child should be
encouraged to use his own imagination.

RECOMMENDATIONS

After completing the first test and having completed
the second part of the children by this, a language of
literary form test having been thought of, it was
thought advisable to make the first test by means of a dis-
tinct type, one that has been used before and varied
multiplication. For this purpose the Ferguson test board was
chosen.

A DESCRIPTION OF THE TEST
BOARD

The Ferguson test board consists of a series of six boards
which increase in difficulty of multiplication from board No. 1
to board No. 6. The object of the test is to replace the
board (also in the first board) and review in each of the
other five to make certain progress in the board as quickly
as possible. Each board has 12 in the order of difficulty
shape and design like water and is placed only the proper
board. Instructions are given the children and the board
and review from the board, and review covered with a cloth

of pasteboard until the signal ready is given. Time is recorded when subject starts and again when last block has been replaced. The interval is the time taken for the board's manipulation and determines the subject's score on that board. When No. 1 is completed No. 2 -- a more difficult board than the former -- is given and the procedure is carried through as before. Then No. 3 and on until time for all six boards has been recorded. The increase in difficulty is accomplished by the very ingenious method of combining intricate form, tongues and grooves, and beveled edges in an ever increasing complexity. A maximum of five minutes is allowed for each board. The number of seconds taken for each is transmuted into scores ranging from one to five. The total of these separate board scores constitutes the final form board score, from which the mental age of the subject may be computed. This mental age has been found by Dr. Ferguson to be roughly the same as the total score made on the six boards. A score of ~~six~~, for example, indicates the subject is roughly six years old mentally.

of postoperative until the subject is given. This is
repeated when subject starts and again when last block has
been repeated. The interval is two days for the
second's manipulation and determines the subject's score on
that board. Then No. 1 is completed No. 2 -- a new third-
and board then the subject -- is given and the procedure is
repeated through as before. Then No. 3 and so until the first
all six boards has been completed. The interval is six days
is completed by the very legitimate method of completing
interval from board and previous, and repeated again in
an ever increasing complexity. A number of five minutes
is allowed for each board. The number of seconds taken for
each is recorded into notes during this time as is five.
The total of these seconds board scores constitutes the
final time board score. From which the mental age of the
subject can be determined. This mental age has been found to
be important to be roughly the same as the total score made
on the five boards. A score of 100 for example, indicates
the subject is roughly six years old mentally.

RESULTS OF THE STANFORD-BINET TEST.

The results of the Binet test are shown in Table No. 1.

Table No. 1.

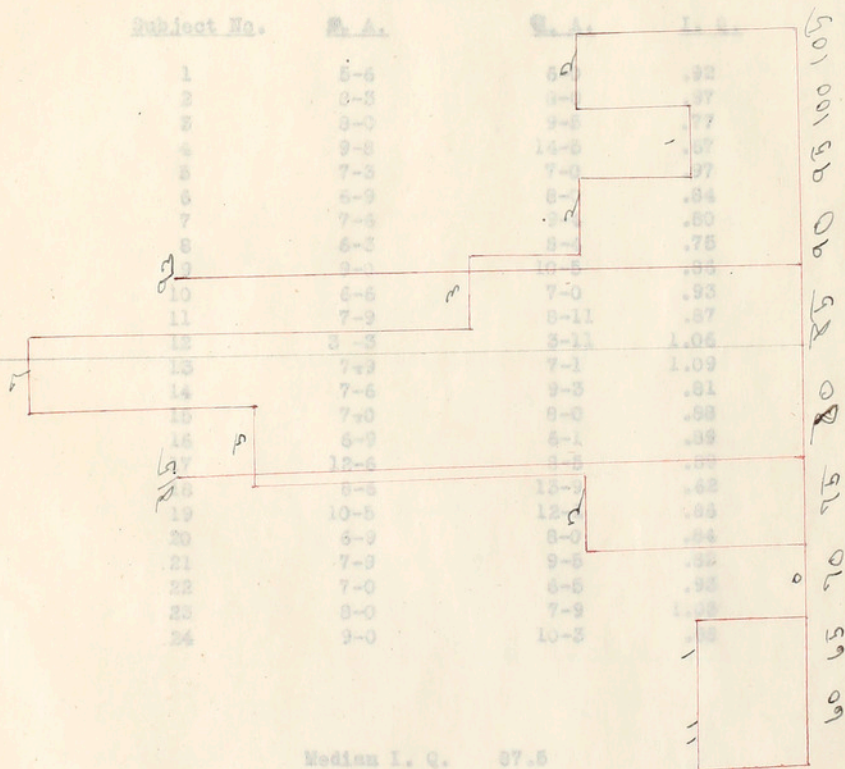
| Subject No. | M. A. | Q. A. | I. Q. |
|-------------|-------|-------|-------|
| 1 | 5-6 | 5-5 | .92 |
| 2 | 3-3 | 3-3 | .97 |
| 3 | 3-0 | 3-0 | .77 |
| 4 | 3-8 | 14-8 | .97 |
| 5 | 7-3 | 7-0 | .97 |
| 6 | 6-9 | 6-1 | .84 |
| 7 | 7-4 | 7-2 | .80 |
| 8 | 6-2 | 5-1 | .75 |
| 9 | 3-3 | 10-3 | .93 |
| 10 | 6-6 | 7-0 | .93 |
| 11 | 7-9 | 8-11 | .87 |
| 12 | 3-3 | 3-11 | 1.06 |
| 13 | 7-9 | 7-1 | 1.09 |
| 14 | 7-6 | 9-3 | .81 |
| 15 | 7-0 | 8-0 | .88 |
| 16 | 6-9 | 6-1 | .89 |
| 17 | 12-6 | 12-3 | .88 |
| 18 | 8-3 | 12-3 | .62 |
| 19 | 10-5 | 12-3 | .86 |
| 20 | 6-9 | 8-0 | .84 |
| 21 | 7-9 | 9-5 | .82 |
| 22 | 7-0 | 6-5 | .92 |
| 23 | 8-0 | 7-9 | 1.02 |
| 24 | 9-0 | 10-3 | 1.02 |

Median I. Q. 87.5

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DISTRIBUTION of I.Q.'s
IN
BINET EXAMINATION

87.5



RESULTS OF THE STANFORD-BINET TEST.

The results of the Binet test are shown in
Table No. 1.

Table No. 1.

| <u>Subject No.</u> | <u>M. A.</u> | <u>C. A.</u> | <u>I. Q.</u> |
|--------------------|--------------|--------------|--------------|
| 1 | 5-6 | 6-0 | .92 |
| 2 | 8-3 | 8-0 | .97 |
| 3 | 8-0 | 9-5 | .77 |
| 4 | 9-8 | 14-5 | .67 |
| 5 | 7-3 | 7-0 | .97 |
| 6 | 6-9 | 8-0 | .84 |
| 7 | 7-6 | 9-4 | .80 |
| 8 | 6-3 | 8-4 | .75 |
| 9 | 9-0 | 10-5 | .86 |
| 10 | 6-6 | 7-0 | .93 |
| 11 | 7-9 | 8-11 | .87 |
| 12 | 3-3 | 3-11 | 1.06 |
| 13 | 7-9 | 7-1 | 1.09 |
| 14 | 7-6 | 9-3 | .81 |
| 15 | 7-0 | 8-0 | .88 |
| 16 | 6-9 | 6-1 | .89 |
| 17 | 12-6 | 8-5 | .89 |
| 18 | 8-6 | 13-9 | .62 |
| 19 | 10-5 | 12-1 | .86 |
| 20 | 6-9 | 8-0 | .84 |
| 21 | 7-9 | 9-5 | .82 |
| 22 | 7-0 | 6-5 | .93 |
| 23 | 8-0 | 7-9 | 1.03 |
| 24 | 9-0 | 10-3 | .88 |

Median I. Q. 87.5

RESULTS OF THE RESEARCHES

The results of the above tests are shown in

Table No. 1.

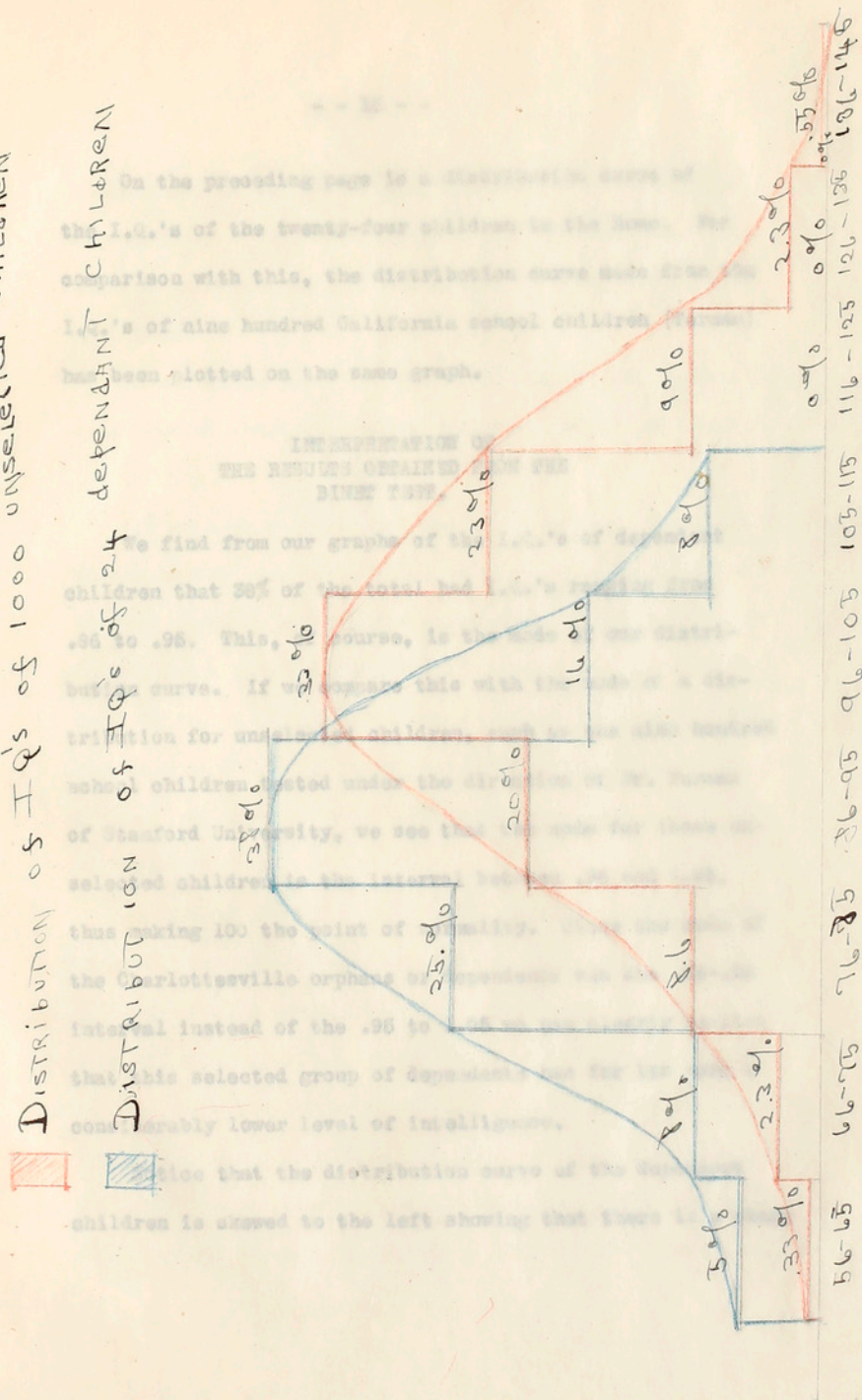
Table No. 1.

| Project No. | Q.A. | Q.A. | Q.A. |
|-------------|------|------|------|
| 1 | 5-5 | 5-5 | 5-5 |
| 2 | 5-5 | 5-5 | 5-5 |
| 3 | 5-5 | 5-5 | 5-5 |
| 4 | 5-5 | 5-5 | 5-5 |
| 5 | 5-5 | 5-5 | 5-5 |
| 6 | 5-5 | 5-5 | 5-5 |
| 7 | 5-5 | 5-5 | 5-5 |
| 8 | 5-5 | 5-5 | 5-5 |
| 9 | 5-5 | 5-5 | 5-5 |
| 10 | 5-5 | 5-5 | 5-5 |
| 11 | 5-5 | 5-5 | 5-5 |
| 12 | 5-5 | 5-5 | 5-5 |
| 13 | 5-5 | 5-5 | 5-5 |
| 14 | 5-5 | 5-5 | 5-5 |
| 15 | 5-5 | 5-5 | 5-5 |
| 16 | 5-5 | 5-5 | 5-5 |
| 17 | 5-5 | 5-5 | 5-5 |
| 18 | 5-5 | 5-5 | 5-5 |
| 19 | 5-5 | 5-5 | 5-5 |
| 20 | 5-5 | 5-5 | 5-5 |
| 21 | 5-5 | 5-5 | 5-5 |
| 22 | 5-5 | 5-5 | 5-5 |
| 23 | 5-5 | 5-5 | 5-5 |
| 24 | 5-5 | 5-5 | 5-5 |

Table No. 1.

Distribution of IQ's of 1000 unselected children

Distribution of IQ's of 24 dependent children



On the preceding page is a distribution curve of the I.Q.'s of the twenty-four children in the Home. For comparison with this, the distribution curve made from the I.Q.'s of nine hundred California school children (Terman) has been plotted on the same graph.

INTERPRETATION OF
THE RESULTS OBTAINED FROM THE
BINET TEST.

We find from our graphs of the I.Q.'s of dependent children that 38% of the total had I.Q.'s ranging from .86 to .95. This, of course, is the mode of our distribution curve. If we compare this with the mode of a distribution for unselected children, such as the nine hundred school children tested under the direction of Dr. Terman of Stanford University, we see that the mode for these unselected children is the interval between .96 and 1.05, thus making 100 the point of normality. Since the mode of the Charlottesville orphans or dependents was the .86-.95 interval instead of the .95 to 1.05 we can clearly realize that this selected group of dependents has for its norm a considerably lower level of intelligence.

Notice that the distribution curve of the dependent children is skewed to the left showing that there is a sharp

falling off in the percentage of high I.Q.'s. There are no superiors to be found and only two who have I.Q.'s one hundred or above, and of course none who could be classed as gifted.

On the other hand, 13% had I.Q.'s below .75. Among the nine hundred unselected school children only 2.63% fell below .75 I.Q.

Let us look at the other end of the scale. Here we are struck by the great difference between the average independent American child guarded and cared for by provident parents, and the unfortunate public charge. Terman found that among his unselected American school children 11.95% had I.Q.'s of 1.16 or above, while from the ranks of the dependent children in this survey come none with I.Q.'s even as high as 1.10.

At the beginning of this paper the number of children in the Children's Home was spoken of as thirty while from the graphs and tables a record is found for only twenty-four. This discrepancy of six is due to the presence of children of the matrons at the Home who can not be counted as orphans. Though they have no place in a paper on dependent children it is interesting to compare their mentality with that of the twenty-four dependent children, because since the environment

falling off in the percentage of high I.Q.'s. There are
no reports to be found and only one has I.Q.'s over
100, and it seems that who could be classified
as gifted.
On the other hand, I.Q. had I.Q.'s below 75. Among the
also included unclassified children only 1.0% fell be-
low 75 I.Q.
Let us look at the other end of the scale. Here we are
concerned by the great difference between the average in-
tellect of a normal child and that of a child who is
retarded, and the relationship between the two. It is
not hard to understand that the average child is
and I.Q.'s of 1.0% or above, while from the ranks of the re-
tarded children to this category there were only 1.0% even
as high as 1.0%.
At the beginning of this paper the number of children
in the United States was given as an thirty million four
the groups and individuals. It is found for only twenty-four.
This discrepancy of nine is due to the presence of children
of the average at the time the data was counted as reported.
Though they have no place in a group of retarded children it
is interesting to compare their mental ability with that of the
twenty-four dependent children, because also the environment

of all was the same any existing differences can be attributed to hereditary alone. These six matron's children presented themselves for examination with the rest of the inmates of the Home, and it was only by chance information that their identity as non-orphans was discovered, and had it not been discovered the error in the statistics would have been great.

Of the twenty-four dependents there were none with I.Q.'s of 1.15 or more, while from the 6 independent children there were 4 with I.Q.'s of 1.15 or more, 66% against 0% of dependent children. In fact, only three of the dependent children rated I.Q.'s above 1.00, the best of these being only 1.09. Only one of the 6 independent children fell below 1.00 (.97). So it can be seen that the difference between the two groups is very great, and an argument is advanced on the side of heredity.

The absence of any gifted children may be due in part to the extremely small number tested. But in a survey of children's homes in Ohio, where 1,603 children were tested, only 1.67% were diagnosed as bright. With this knowledge in mind we can hardly expect to find many gifted children out of a total of 24 subjects.

AN INQUIRY INTO THE HEREDITY
OF DEPENDENT CHILDREN HAVING I.Q.'S
ABOVE 100.

As mentioned above there were only three of the 24 children in the Home who had I.Q.'s of 100 or above. An inquiry into the heredity of the children revealed the following: No. 23 who had an I.Q. of 1.03 has a father living who is paying his entire expenses and upkeep while in the Home. Nos. 13 and 14 with I.Q.'s of 1.09 and 1.06, respectively, were first cousins. The father of the former pays his daughter's entire expenses and the latter's parents, though not paying at present, has declared his intention of doing so in the near future.

These are the only instances in the Home of parents defraying their children's expenses, and it is noteworthy that the children of these parents are the only ones in the entire institution who are gifted with I.Q.'s of 1.00 or above.

COMPARISON WITH PINTNER'S
RESULTS.

The following table compares the results found herein
with those obtained by Pintner in his examination of 106
dependent children:

| <u>Classification.</u> | <u>I.Q. Range.</u> | <u>Wise.</u> | <u>Pintner.</u> |
|------------------------|--------------------|--------------|-----------------|
| | | <u>%</u> | <u>%</u> |
| Very bright | 1.25 -above | 0 | 7.5 |
| Bright | 1.10 -1.25 | 0 | 13.2 |
| Normal | 0.90 -1.10 | 33.3 | 35.1 |
| Backward | .75 - .90 | 54.2 | 27.2 |
| Feeble-minded | .75-below | 12.5 | 22.0 |

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CONSTITUTION OF THE UNITED STATES

The following table compares the results found herein with those obtained by Pearson in his examination of 100 dependent children:

| Classification | Percentage | Mean | Standard Deviation |
|---------------------|------------|------|--------------------|
| Very bright | 1.00-2.00 | 9 | 1.0 |
| Bright | 2.00-4.00 | 10 | 1.0 |
| Normal | 4.00-6.00 | 11 | 1.0 |
| Subnormal | 6.00-8.00 | 12 | 1.0 |
| Definitely retarded | 8.00-10.00 | 13 | 1.0 |

RESULTS OF THE FERGUSON FORM BOARD TEST.

Table 2 gives the subject No., form board score, and chronological ages of each of the 24 dependent children at the Charlottesville Children's Home.

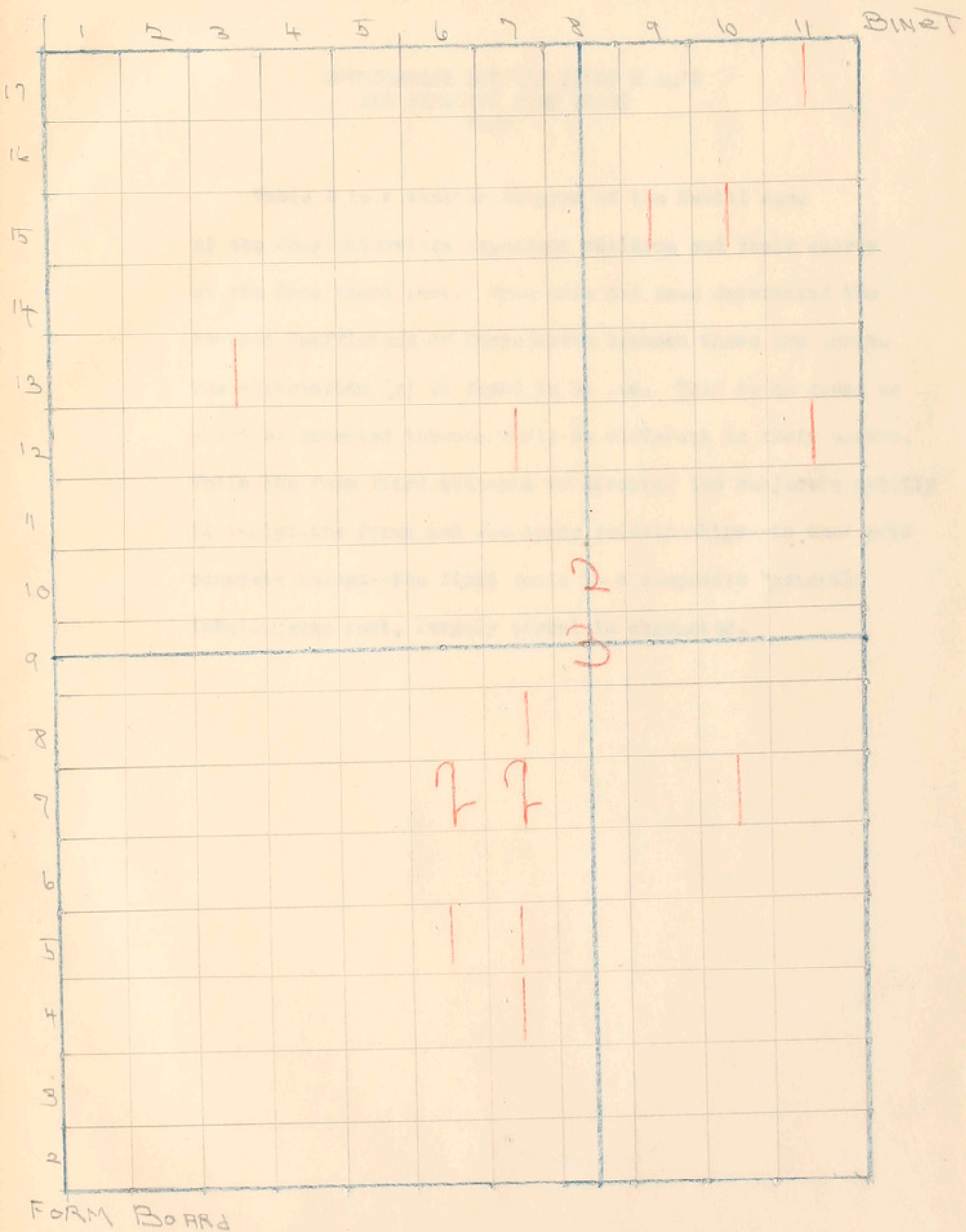
Table 2.

| <u>Subject No.</u> | <u>Form Board Score.</u> | <u>C.A.</u> |
|--------------------|--------------------------|-------------|
| 1 | 7 | 6-0 |
| 2 | 13 | 8-0 |
| 3 | 10 | 10-5 |
| 4 | 7 | 14-5 |
| 5 | 2 | 7-0 |
| 6 | 4 | 8-0 |
| 7 | 9 | 9-4 |
| 8 | 7 | 8-4 |
| 9 | 9 | 10-5 |
| 10 | 5 | 7-0 |
| 11 | 10 | 8-11 |
| 12 | 0 | 0-0 |
| 13 | 9 | 7-1 |
| 14 | 7 | 9-3 |
| 15 | 8 | 8-0 |
| 16 | 0 | 0-0 |
| 17 | 8 | 8-5 |
| 18 | 12 | 13-9 |
| 19 | 15 | 12-1 |
| 20 | 5 | 8-0 |
| 21 | 13 | 9-5 |
| 22 | 12 | 7-0 |
| 23 | 15 | 7-9 |
| 24 | 15 | 9-3 |

TABLE 1. — Board scores, and chronological ages of each of the 24 as-
signed children of the Knoxville Children's Home.

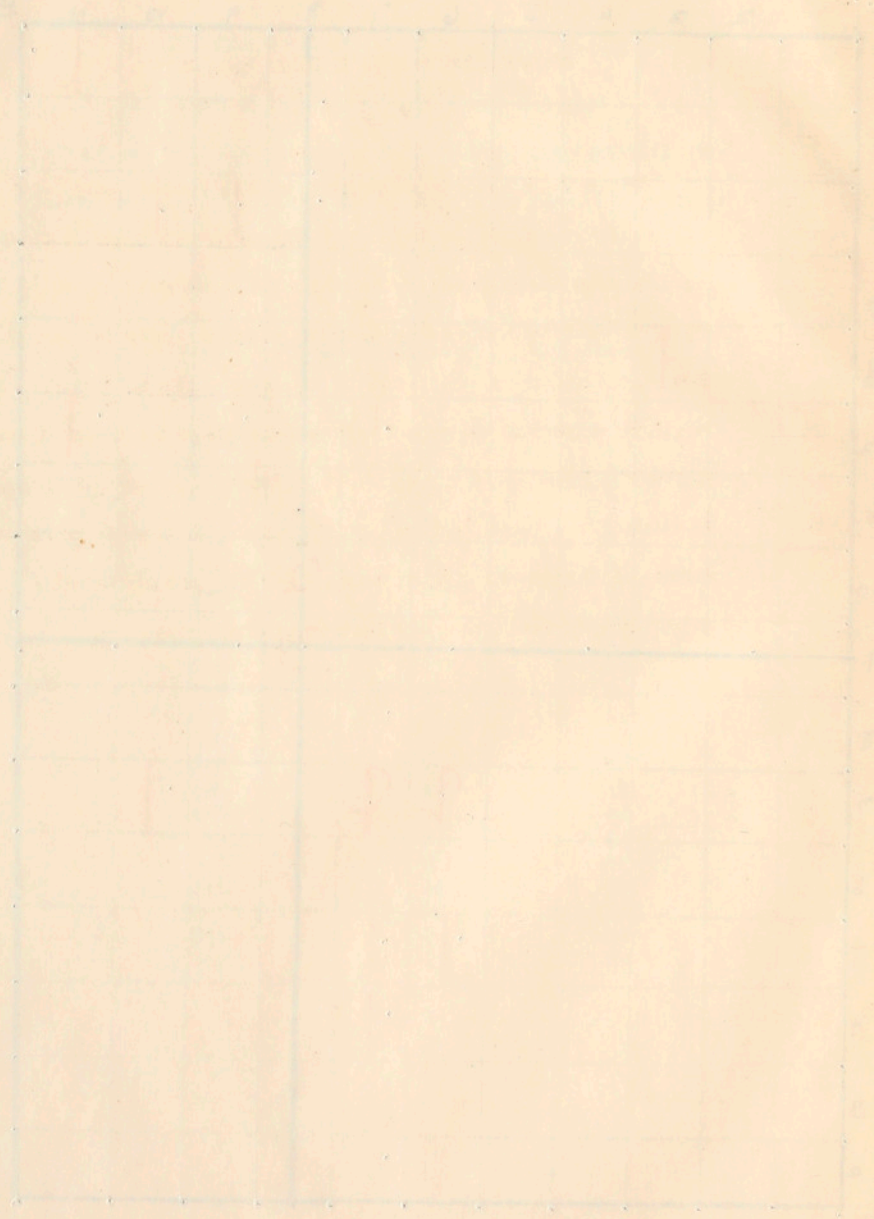
| Chronological age | Board score | Chronological age | Board score |
|-------------------|-------------|-------------------|-------------|
| 1 | 7 | 12 | 15 |
| 2 | 10 | 13 | 16 |
| 3 | 12 | 14 | 17 |
| 4 | 14 | 15 | 18 |
| 5 | 16 | 16 | 19 |
| 6 | 18 | 17 | 20 |
| 7 | 20 | 18 | 21 |
| 8 | 22 | 19 | 22 |
| 9 | 24 | 20 | 23 |
| 10 | 26 | 21 | 24 |
| 11 | 28 | 22 | 25 |
| 12 | 30 | 23 | 26 |
| 13 | 32 | 24 | 27 |
| 14 | 34 | 25 | 28 |
| 15 | 36 | 26 | 29 |
| 16 | 38 | 27 | 30 |
| 17 | 40 | 28 | 31 |
| 18 | 42 | 29 | 32 |
| 19 | 44 | 30 | 33 |
| 20 | 46 | 31 | 34 |
| 21 | 48 | 32 | 35 |
| 22 | 50 | 33 | 36 |
| 23 | 52 | 34 | 37 |
| 24 | 54 | 35 | 38 |

Table - 2 -
 DIAGRAM Showing CORRELATION
 between BINET and FORM BOARD MENTAL AGES



Page - 2 -

Between Point and Point
Showing Correction



CORRELATION BETWEEN BINET M.A.'S
AND FERGUSON FORM BOARD
TEST.

Table 2 is a scatter diagram of the Mental Ages of the Charlottesville dependent children and their scores on the form board test. From this has been determined the Pearson Coefficient of Correlation between these two tests. The correlation (r) is found to be .44. This is as close as could be expected between tests so different in their nature. While the Form Board attempts to discover the subject's ability to manipulate forms and see space relationships--to deal with concrete things--the Binet scale is a composite "general" intelligence test, largely verbal in character.

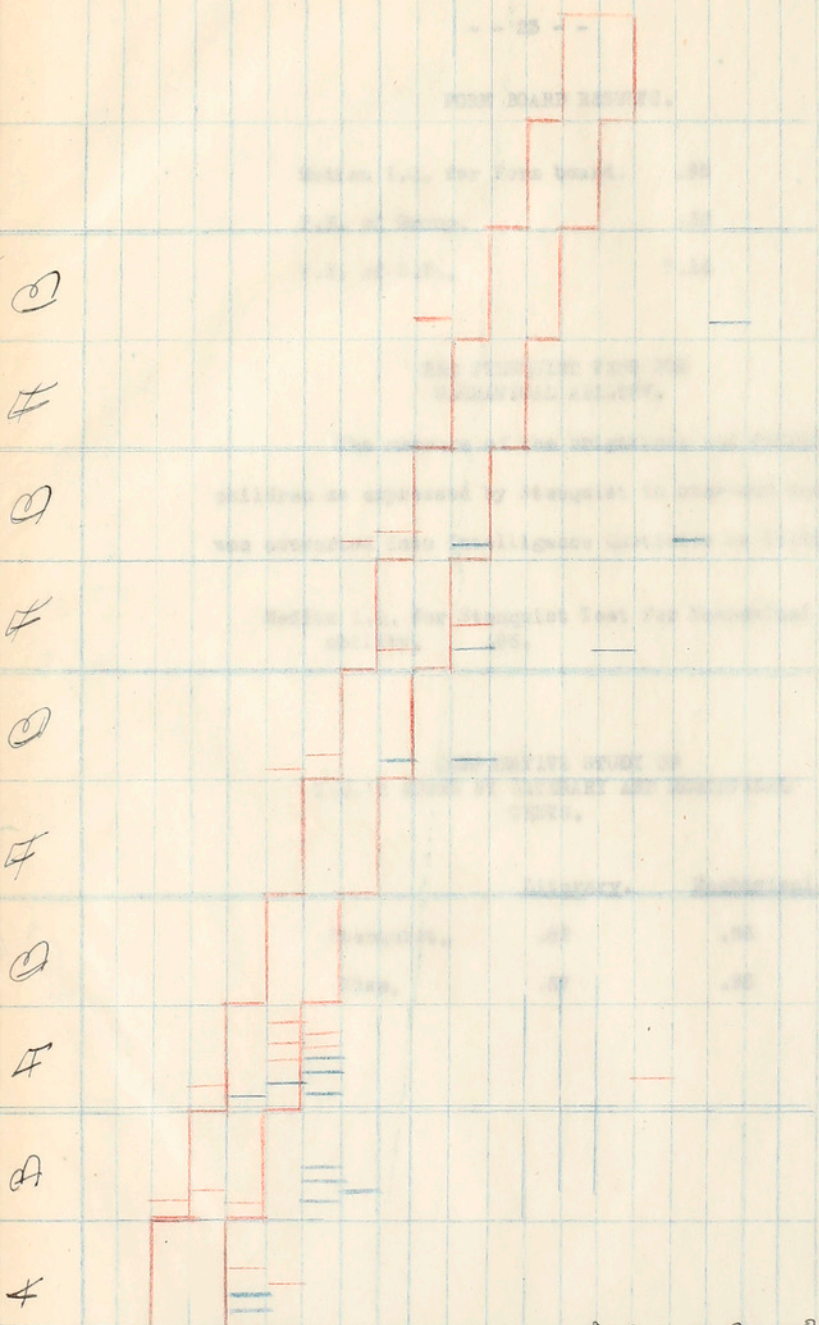
COMPARISON OF THE DATA
AND THEORETICAL
VALUES

Table 2 is a summary diagram of the data
of the characteristic frequencies and their
of the two bands. From this data has been determined the
theoretical frequencies of vibration between these two bands.
The correlation (a) is found to be .95. This is as close as
could be expected between results so different in their nature.
While the two bands attempt to illustrate the subject's ability
to maintain a low and high frequency simultaneously, it is
evident that the two bands are in a constant "balance".
Intelligence test, largely verbal in character.

A TABLE SHOWING FOR EACH CHILD

1. C.A.
2. Binet M.A.
3. Binet I.Q.
4. Seconds required for each form board.
5. Score on each of the six form boards.
6. Total score on all six boards.

| Subject No. | Binet | | | Time Board. | | | | | | Score Board | | | | | | Total |
|----------------|-------|------|------|-------------|-----|-----|-----|-----|-----|-------------|---|---|---|---|---|-------|
| | C.A. | M.A. | I.Q. | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 2 | 3 | 4 | 5 | 6 | |
| 1 | 5-6 | 6-0 | .92 | 120 | 70 | 147 | 303 | 303 | 303 | 2 | 3 | 2 | 0 | 0 | 0 | 7 |
| 2 | 8-3 | 8-0 | .97 | 30 | 55 | 52 | 280 | Ex | Ex | 4 | 4 | 4 | 1 | 0 | 0 | 13 |
| 3 | 8-0 | 9-5 | .77 | 41 | 57 | 135 | Ex. | Ex. | Ex. | 4 | 4 | 2 | 0 | 0 | 0 | 10 |
| 4 | 9-8 | 14-5 | .67 | 60 | 82 | 228 | Ex. | Ex. | Ex. | 3 | 3 | 1 | 0 | 0 | 0 | 7 |
| 5 | 7-3 | 7-0 | .97 | Ex. | 215 | 208 | Ex. | Ex. | Ex. | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| 6 | 6-9 | 8-0 | .84 | Ex. | 102 | 142 | Ex. | Ex. | Ex. | 0 | 2 | 2 | 0 | 0 | 0 | 4 |
| 7 | 7-6 | 9-4 | .80 | 77 | 65 | 108 | 170 | Ex. | Ex. | 3 | 3 | 2 | 1 | 0 | 0 | 9 |
| 8 | 6-3 | 8-4 | .75 | 45 | 136 | 180 | Ex. | Ex. | Ex. | 4 | 2 | 1 | 0 | 0 | 0 | 7 |
| 9 | 9-0 | 10-5 | .85 | 50 | 50 | 193 | Ex. | Ex. | Ex. | 4 | 4 | 1 | 0 | 0 | 0 | 9 |
| 10 | 6-6 | 7-0 | .93 | 120 | 127 | 165 | Ex. | Ex. | Ex. | 2 | 2 | 1 | 0 | 0 | 0 | 5 |
| 11 | 7-9 | 8-11 | .87 | 31 | 64 | 183 | 205 | 169 | Ex. | 4 | 3 | 1 | 1 | 1 | 0 | 10 |
| 12 | 3-3 | 3-11 | 1.06 | 44 | Ex. | Ex. | Ex. | Ex. | Ex. | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| 13 | 7-9 | 7-1 | 1.09 | 49 | 55 | Ex. | 293 | Ex. | Ex. | 4 | 4 | 0 | 1 | 0 | 0 | 9 |
| 14 | 7-6 | 9-3 | .81 | 52 | 114 | Ex. | 263 | Ex. | Ex. | 4 | 2 | 0 | 1 | 0 | 0 | 7 |
| 15 | 7-0 | 8-0 | .88 | 53 | 99 | 197 | Ex. | Ex. | Ex. | 4 | 3 | 1 | 0 | 0 | 0 | 8 |
| 16 | 6-9 | 6-1 | .89 | Ex. | 222 | Ex. | Ex. | Ex. | Ex. | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 17 | 12-6 | 8-8 | .89 | 125 | 54 | 146 | Ex. | Ex. | Ex. | 2 | 4 | 2 | 0 | 0 | 0 | 8 |
| 18 | 8-6 | 13-9 | .62 | 24 | 42 | 94 | Ex. | Ex. | Ex. | 5 | 4 | 3 | 0 | 0 | 0 | 12 |
| 19 | 10-5 | 12-1 | .86 | 28 | 31 | 92 | 274 | 184 | 290 | 5 | 4 | 3 | 1 | 1 | 1 | 15 |
| 20 | 6-9 | 8-0 | .84 | 50 | 165 | Ex. | Ex. | Ex. | Ex. | 4 | 1 | 0 | 0 | 0 | 0 | 5 |
| 21 | 7-9 | 9-5 | .82 | 34 | 81 | 107 | 97 | 241 | Ex. | 4 | 3 | 2 | 3 | 1 | 0 | 13 |
| 22 | 7-0 | 6-5 | .93 | 25 | 81 | 104 | 114 | Ex. | Ex. | 5 | 3 | 2 | 2 | 0 | 0 | 12 |
| 23 | 8-0 | 7-9 | 1.03 | 29 | 57 | 57 | 218 | 240 | Ex. | 5 | 4 | 4 | 1 | 1 | 0 | 15 |
| 24 | 9-0 | 10-3 | .88 | 34 | 51 | 55 | 115 | Ex | 152 | 4 | 4 | 4 | 2 | 0 | 0 | 15 |



LOCATION OF CHILDREN
IN
SCHOOL BY

MENTAL AGES

CHRONOLOGICAL AGES

10 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10

22077 1421001010108402

222 F JHTV9/M

[illegible]

MA 9761113. 20 1101TH000

FORM BOARD RESULTS.

| | |
|-----------------------------|------|
| Median I.Q. for Form board. | .95 |
| P.E. of Group. | .32 |
| P.E. of C.T., | 7.14 |

THE STENQUIST TEST FOR
MECHANICAL ABILITY.

The measure of the brightness and dullness of children as expressed by Stenquist in over-and under-agedness was converted into Intelligence Quotients as follows:

Median I.Q. for Stenquist Test for Mechanical ability, .86.

COMPARATIVE STUDY OF
I.Q.'S FOUND BY LITERARY AND MECHANICAL
TESTS.

| | <u>Literary.</u> | <u>Mechanical.</u> |
|------------|------------------|--------------------|
| Stenquist, | .82 | .86 |
| Wise, | .87 | .95 |

NEW SPANISH NUMBERS

| | |
|-----|---------------------|
| 30. | Million 100,000,000 |
| 31. | 100,000,000 |
| 32. | 100,000,000 |

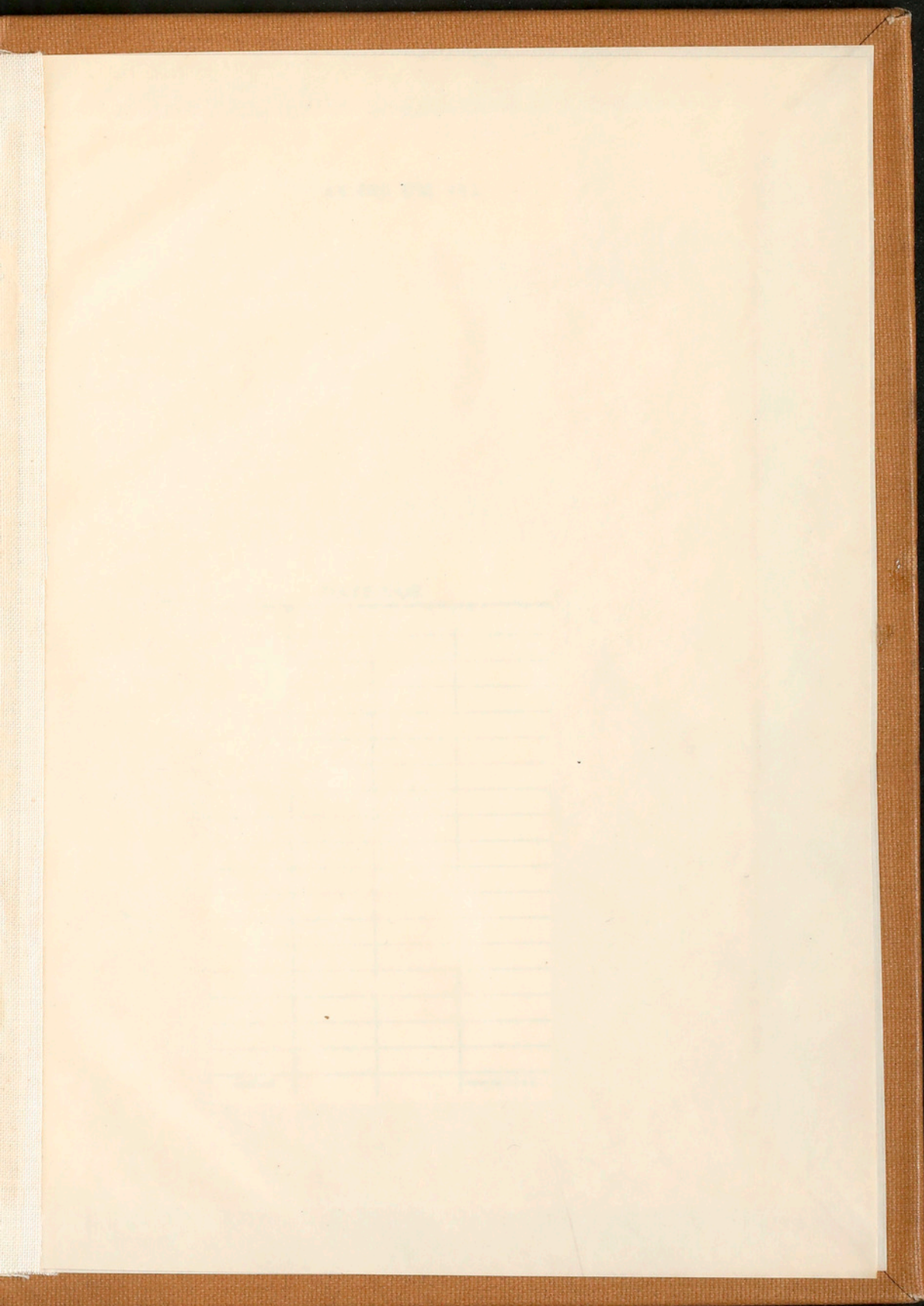
NEW SPANISH NUMBERS

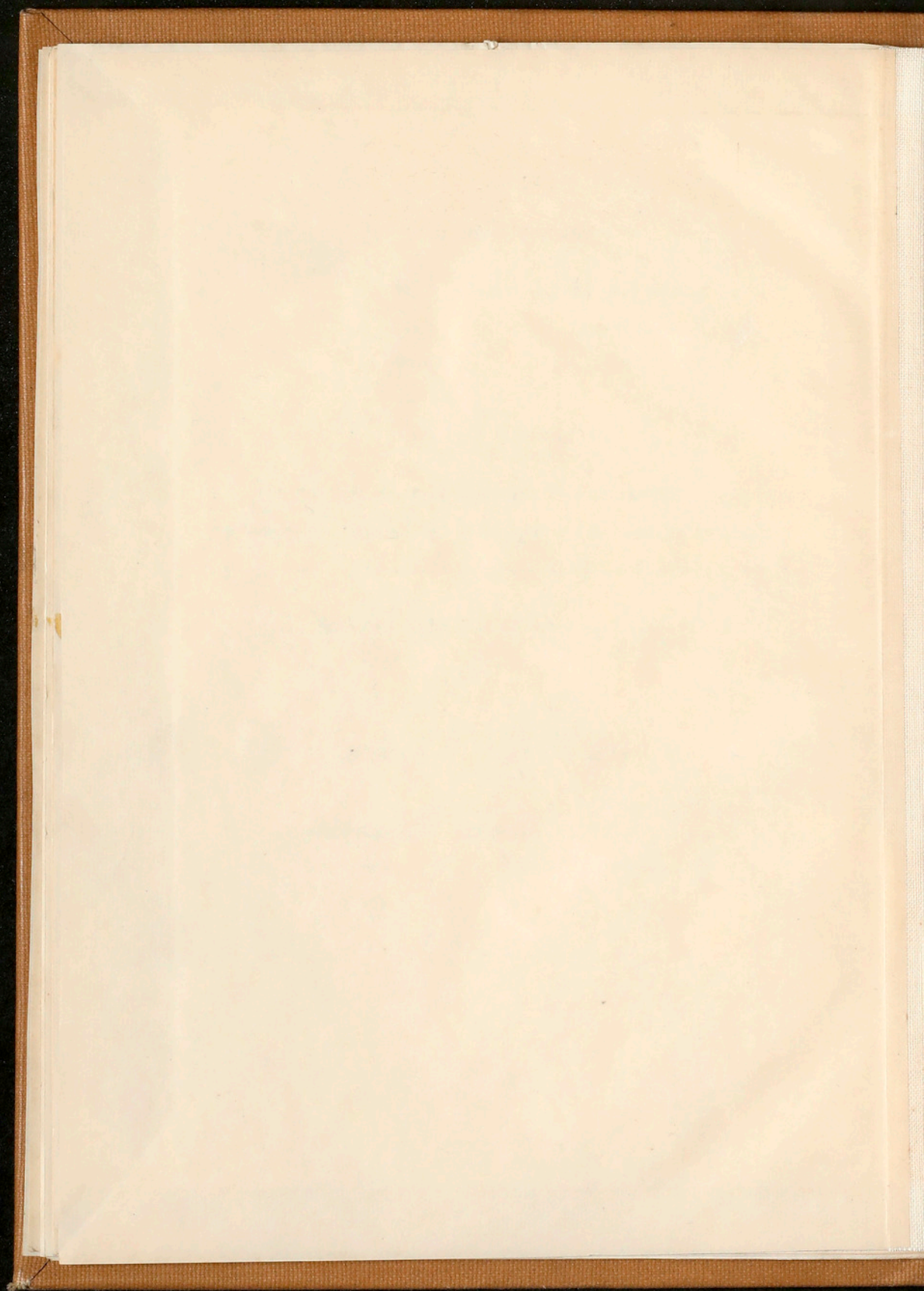
The names of the numbers and names of children as expressed by Spanish in over- and under-ages was observed into investigation results as follows:

Million 100,000,000 for children
 100,000,000

NEW SPANISH NUMBERS

| 100,000,000 | 100,000,000 | 100,000,000 |
|-------------|-------------|-------------|
| 30. | 30. | 30. |
| 31. | 31. | 31. |





DX 000 098 441

[illegible]

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