A SUMMARY OF THE CLINICAL INVESTIGATIONS OF THE UNIVERSITY OF KANSAS

by

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CHAPTER I.

INTRODUCTION

The Clinic in Educational Psychology at the University of Kansas, was established by Professor Raymond A. Schwegler in 1912; it has a twofold purpose: (1) to train selected graduate students to assemble and interpret psychological and educational data relative to the special need of school children; (2) to provide educational diagnosis and psychological service for the schools of Lawrence, Kansas, and certain neighboring communities.

This study is concerned chiefly with the work of the clinic during the school years 1924 to 1928, inclusive, during which time Professor Paul A. Witty has been the director. In the course of its development the clinic has undergone numerous changes, but the procedure outlined herein has been utilized during the years designated.[1]

"The students admitted to the clinic training course are graduate students in the University. They enroll for 3 to 5 hours credit for one semester's work (18 weeks.) Seven students only are accepted each year, as clinical facilities limit enrolment. These students are selected in accord with the estimated likelihood of their success in this type of endeavor. The class meets for lecture, laboratory and demonstration work from 1:30 P.M. to 4:30 P.M. Monday, Wednesday, and Friday of each week. During the first six weeks, three demonstrations are given weekly by the instructor who explains and follows the technique to be used subsequently by the students themselves. The students learn verbatim the directions to be used in the various examinations. Complete verbal mastery of the technique is re-

quired of the student by the end of the sixth week of the semester.

"The following twelve weeks are devoted to examination of cases by the students. Three or four children are referred to the clinic at each meeting. They arrive at 1:30 P.M. and remain until 4:30 P.M. Fatigue is avoided by frequent change and by the provision of periods of rest. Certain cases appear to be unduly fatigued after an hour or two spent in the clinic. These are dismissed; they return two days later to complete the examination.

"Each child is sent to the clinic upon request of a teacher in the Lawrence schools or neighboring community. Every child is a problem case sent for one of the following reasons:

"(a) Failure in one or more subjects.

"(b) Candidacy for special class.

"(c) Recent entry to school (problem of classification.)

"(d) Disciplinary difficulties.

"(e) Nervous instability.

"(f) Delinquency.

"(g) Problem of proper classification of special promotion.

"Identification data are furnished by the teacher upon each case including:

"(a) Name--Age--Grade--Nationality of child and of parent.

"(b) Reason for examination.

"(c) Scholarship.

"(d) Home and environmental conditions.

"Especial attention is directed toward securing the maximum response from the child. Effort is made to maintain a cheerful, informal atmosphere during the observation. Each child is examined in a separate room, especially constructed to eliminate distracting and

and conflicting influences. The following types of data are secured during the three hour observation: (a) physical, (b) mental, (c) educational, (d) emotional.

"(a) Physical. Vision and hearing are examined and the condition is recorded. The customary method of scoring, recording, and interpreting the condition of the eyes is employed, i.e. 20/20 vision is normal, etc. Auditory acuity is gauged by the whisper test. Standing height, sitting height, and weight are obtained; these indices are compared with the Baldwin-Wood standards and diagnosis of the child's condition follows. The throat is examined and recommendations for medical attention prescribed when diseased tonsil or throat is exhibited. During these physical tests, the examiner notes and records any unusual condition of the skin or postural irregularity.

"The purpose of this part of the observation is to discern physical limitations which may handicap the child in his school work. Conspicuous weaknesses or anomalies are referred to the school physician for complete diagnosis and treatment.

"The examiner is particularly zealous to identify sensory defects which obliterate or distort the imagery of the child. The writer has observed occasional children who displayed a special disability in certain school subjects (notably reading); children whose intelligence was normal or superior but whose vision or hearing was decidedly impaired. In such cases, it is essential, of course, that the sensory defects be identified and corrected before remedial work in reading can be successful.

"(b) Mental. To gauge the mental ability of the child, the Stanford Revision of the Binet Test of Intelligence is employed.

The Porteus Test or motor coordination, prudence, and forethought is often given also to supplement the Binet results. All children who have language handicaps, speech defects, or defective vision or hearing are given the Pintner-Patterson Performance Tests of Intelligence. Data obtained from the socalled intelligence tests are not considered final estimates of the child's ability. They furnish a point of departure for further study of the child."

Educational Attainment. All children are given special educational tests when specific inabilities are reported or observed. For this purpose, the following tests are used most frequently:

(1) Stanford Achievement

Test 2 - Reading - Sentence Meaning.

Test 3 - Reading - Vocabulary.

Test 4 - Arithmetic Computation.

(2) Spelling

Buckingham Revision of Ayers List or 7 S Spelling Scale.

(3) Monroe Standard Silent Reading Test for Rate and Comprehension.

"(d) Nervous Stability. Tendencies toward nervous instability are revealed through observation of the child during the examination. As a prerequisite to admittance to the clinic training, a special course, The Non-Typical Child, is required of each student. In the course, especial attention is devoted to the unstable child, whose difficulties are occasioned largely by malfunctioning of mentality rather than by variation in the quantitative amount of ability. The most pertinent literature in reference to diagnosis and remedial treatment of unstable children is studied. The students who enroll in the clinic courses are familiar already with the major symptoms and treatment of mental instability

but they are again reviewed and evaluated.

"During the various examinations, the student identifies and records any conspicuous tendencies toward instability displayed by the child. These tendencies are revealed both through the symptomatic responses to the various examinations and through the general behavior of the child under observation. The following are examples of such symptoms: range upon Binet, bizarreness of response, tendency toward perseveration, flightiness, automatic or sound reactions, general nervousness, excessive giggling, etc.

"The data in regard to the physical, mental, educational, and emotional development of the child are recorded upon a clinic form report. These data afford the basis for an interpretative account of the status and needs of the child. This account is designated to be of maximum aid to the teacher and supervisor. The end of this work is to secure a more satisfactory adjustment of the child to the school. Three copies are made of the form report as well as the interpretative account. One copy is sent to the superintendent, one to the school supervisor, and one is filed in the Clinic."

Examples of interpretative reports are included in the Appendix.

CHAPTER II

LITERATURE RELATED TO THIS STUDY

There is abundant literature in regard to the development, methods, and findings of clinical psychology. Such material, however, comes almost exclusively from medical or psychoanalytical clinics, or from clinics functioning for the study of delinquents, court offenders, and the like. Almost no literature is available in regard to psycho-educational clinics comparable to that of the University of Kansas.

In 1921 Hollingworth[2] made a report of her survey of psychological clinics then existing in the United States. A number of clinics listed by her were established in connection with the departments of education in various colleges and universities. No attempt is made to make a comparison of their clinical methods and results.

Baldwin and Stecher[3] report a series of three years' observation and experiments on normal and superior children from ages 2 to 6 in the pre-school laboratories of the Iowa Child Welfare Research Station. It is the report of a laboratory nursery school rather than of a clinic for general educational service.

The Yale Psycho-Clinic,[4] established in 1911 and now under the direction of Dr. Arnold Gessell and associates, is engaged in a study of pre-school age children only.

In their current catalogues the following institutions mention clinical service of a kind apparently comparable to that available at the University of Kansas: University of Pennsylvania,[5] University of

Washington,[6] Teachers College.[7] The Child Guidance Clinic of the University of Minnesota[8] specializes in abnormal or disciplinary cases. The Iowa Child Research Station at the University of Iowa has,[9] in addition to the work of the pre-school laboratories, an apartment equipped for study of normal children of school age.

No reports of the general findings of these clinics are available.

The writer has summarized only the reports which bear most closely upon clinical methods in use at Lawrence.

A. THE HARVARD PSYCHO-EDUCATIONAL CLINIC.

"Work of the Harvard Psycho-Educational Clinic"--School and Society, May 22, 1926, pp. 662-4.

The subjects are sent upon recommendation of principal or superintendent upon grounds of unsatisfactory scholarship, unsatisfactory behaviour, or a combination of the two. They are given the Stanford Binet examination and often a performance test. Conferences with teacher and principal supplement the information thus gained.

The study summarizes the recommendations made in 300 clinic cases on the basis of their findings. They were as follows:

1. Vocational or prevocational work was advised for 135 or 40.8 per cent. These cases were over 10 years in chronological age and at least 7 years in mental age. I.Q. ranged usually from 50 to 70.

2. In 58 or 17.5 per cent of the cases of 50-70 I.Q. and not more than 10 years chronological age special classes with a minimum of academic training were recommended.

3. 64 or 19.4 per cent of normal or superior I.Q. and without psychopathic tendencies were advised to continue regularly in grade.

4. Thirty-four or 10.3 per cent with I.Q. below 50 were referred to the clinic at the school for feebleminded.

5. Fourteen or 4.2 per cent, who were observed to have tendencies toward instability were referred to a psychiatrist for examination.

6. Eleven or 3.3 per cent, usually of I.Q. 80-90, were advised to repeat the grade.

7. Special coaching was recommended in 6 or 1.8 per cent of the cases.

B. MENTAL DIFFERENCE IN CHILDREN REFERRED TO A PSYCHOLOGICAL CLINIC.

Merrill (Journal of Applied Psychology. December, 1926.)

This is a report of the psychological clinic of the Santa Clara County Health Center in California. The subjects included (1) behaviour problems, (2) those reported by local physicians, (3) children brought to court for commitment to institutions, (4) children brought by parents. They are for the most part the children of foreigners from Southern Europe. The median I.Q. of the 467 cases reported was 77.1 with a range of 10 to 130. Because of the methods of selection the clinic is devoted chiefly to delinquents.

CHAPTER III

PROBLEM, DATA, AND METHOD

In this study an attempt will be made to indicate the type of educational service which is being rendered by the clinic of the University of Kansas, and to point out certain factors which may operate as a cause of lack of adjustment in the school situation. Although there is evidence of the existence of a number of similar clinics, there is a distinct dearth of reports summarizing their respective findings.

In order to indicate the various respects in which the clinic group differ from an unselected group, the following analyses are made:

A. MENTAL STATUS

(1) The median, standard deviation, and range of I.Q. as measured by the Stanford Binet test are computed for boys and girls and for the group as a whole.

(2) The median, standard deviation, and range of mental age in the Porteus test are compared with the corresponding measures of chronological age.

B. EDUCATIONAL STATUS

(1) The chronological age grade progress and the mental age grade progress of the clinic group serve as an indication of the number of subjects mentally and chronologically at grade.

(2) The results of 338 attainment tests are presented as evidence of the existence of special difficulties in certain school subjects.

(3) An analysis is made of those parts of the interpretative reports designed to effect better educational adjustment for individuals sent to the clinic for examination.

C. PHYSICAL STATUS.

The visual and auditory acuity of the clinic groups are compared with similar data for unselected groups. The reports of the examiner in regard to height and weight of clinic subjects are summarized.

D. EMOTIONAL STATUS.

The presence of emotional instability is indicated from an analysis of those parts of the interpretative reports recording: (1) the presence of "slight" or "marked" tendency to instability; (2) special behaviour responses during the examination.

D A T A

The General Clinic Group 1924-1928.

The subjects of the main part of this study were sent to the clinic from the schools of Lawrence, Kansas, or the neighboring community during the school years 1924-1925, 1925-1926, 1926-1927, 1927-1928. Since the type of data secured in each case varied according to the reason for examination, the number of tests made for the entire clinic group is not the same for the various tests.

During the four years included, there reported to the clinic 219 subjects, including three who were retested and five who reported for conference but were apparently given no tests. The data for the remaining 211 subjects consist of the following numbers of tests:

(1) 211 - Stanford Revision of the Binet Test of Intelligence.

(2) 145 - Porteus Test of Motor Coordination, Prudence, and Forethought.

(3) 125 - Tests of vision.

(4) 93 - Tests of hearing.

(5) 124 - Measurements of height and weight.

(6) Educational tests including:

(a) 92 - Stanford Achievement Test 2 - Sentence Meaning.

(b) 27 - Stanford Achievement Test 3 - Word Meaning.

(c) 25 - Stanford Achievement Test 4 - Arithmetic Computation.

(d) 110 - Buckingham Revision of Ayres Spelling Scale.

(e) 42 - Monroe Standard Silent Reading Test - Comprehension.

(f) 42 - Monroe Standard Silent Reading Test - Rate.

The study does not include the following tests, none given to more than ten subjects: Gray Oral Reading, Gray Silent Reading, Compass Diagnostic Arithmetic, Pressey Word Recognition, Pressey Sentence Recognition, Stanford Achievement: 1, Paragraph Meaning; 5, Arithmetic Reasoning; 7, History and Literature; 8, Language Usage.

In addition to these objective tests the interpretative reports of the examiners were a source of information in regard to diagnosis of psychopathic tendencies and in regard to the recommendations made by the clinic on the basis of the findings of the examiner.

The Clinic Group from 1918 - 1924.

In 1926 a study was made by Miss Jennie Faidley of 578 problem cases sent from the Lawrence Public Schools to the psychological clinic

of the University of Kansas. The results of the present study have been

added to the results of this earlier study wherever possible, and a comparison made in regard to their respective findings.

Special Studies Made by the Clinic. 1924 - 1928.

Two special studies made in the clinic are included as sub-reports: (1) a summary of 258 complete records of the Pre-school clinic, which was established in April, 1926, continuing its work through May, and repeated in April and May, 1927;[11] (2) a summary of the records of fifty children of I.Q. 140 or above.[12]

This study, therefore, deals with 518 cases examined during the period from 1924 - 1928.

The present study does not include approximately 200 records of clinical examinations made personally by Professor Witty during his directorship of the clinic.

E. LIMITATIONS OF THE STUDY.

(1) The data are incomplete in respect to the criteria of selection of the various types of problem cases sent to the clinic. Children are sent to the clinic for such widely differing reasons as candidacy for special promotion, failure in a particular subject, disciplinary difficulties. A study of the various groups is not possible, since the reasons for the subject's presence in the clinic is seldom recorded in the record.

(2) Some of the tests were made in too small numbers to yield significant results.

PRESENTATION OF DATA

The data will be presented and interpreted under four main division heads: (a) Mental; (b) Educational; (c) Physical; (d) Emotional.

Table No. 1

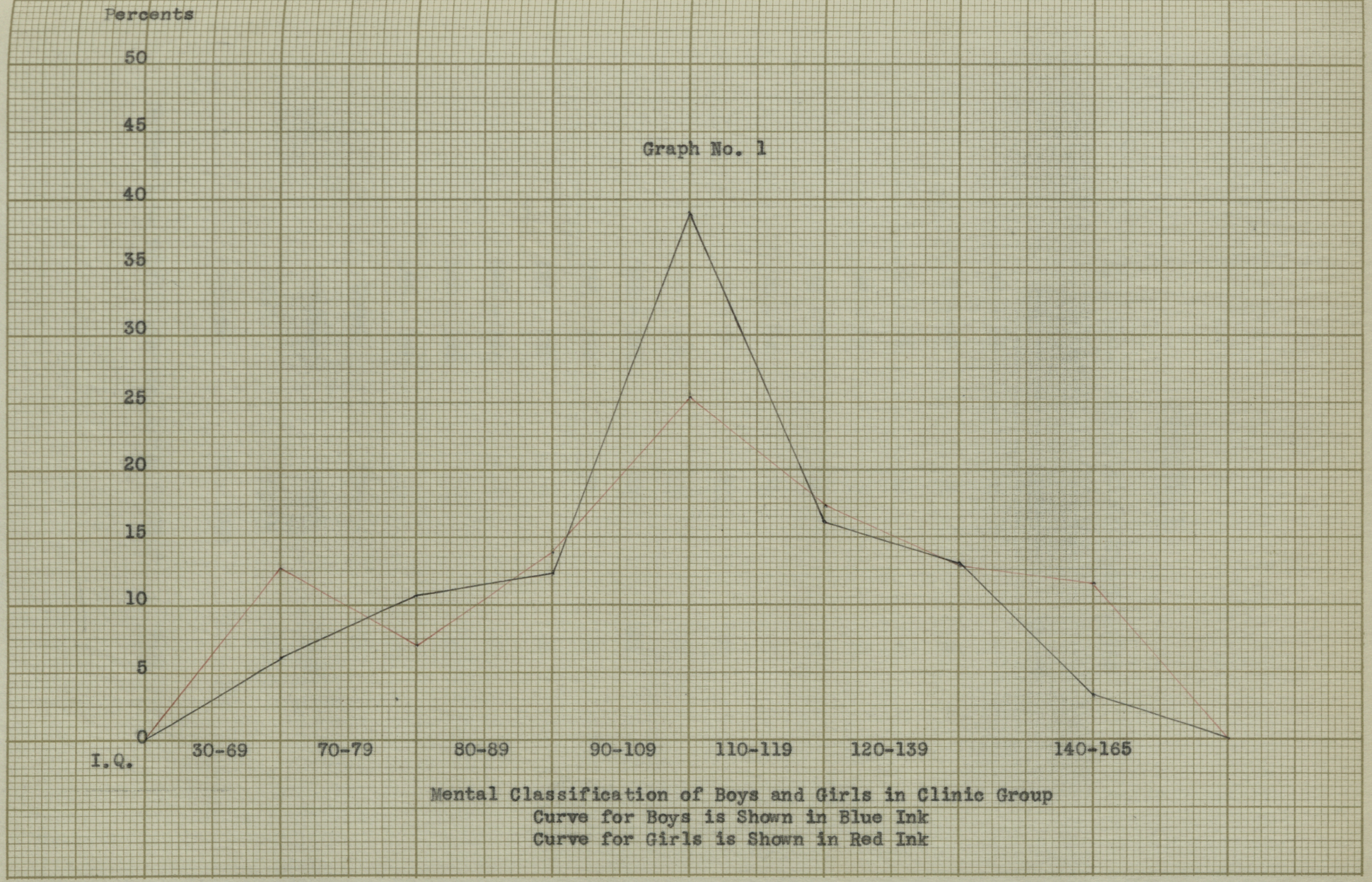
Table showing the race and sex distributions of the clinic group.

211 Cases			
124 Boys		87 Girls	
119 Whites	5 Negroes	80 Whites	7 Negroes

Table No. 2

Mental Age Distribution of the Boys and Girls Constituting the Clinic Group

M.A. in Months	Boys	Girls
20 - 39	0	1
40 - 59	3	5
60 - 79	6	5
80 - 89	18	11
100 - 119	39	30
120 - 139	27	21
140 - 159	15	5
160 - 179	9	5
180 - 199	3	2
200 - 219	2	1
220 - 239	2	1
Total	124	87
Median	118.2 months	114.7 months
S.D.	33.9	34.8
Range	52 - 232	28 - 225



Graph No. 1

Mental Classification of Boys and Girls in Clinic Group
Curve for Boys is Shown in Blue Ink
Curve for Girls is Shown in Red Ink

Table No. 3

I.Q. Distribution of 211 Clinic Cases

I.Q.	Boys	Girls
26 - 35	1	0
36 - 45	1	3
46 - 55	2	3
56 - 65	2	3
66 - 75	10	7
76 - 85	13	7
86 - 95	25	15
96 - 105	20	11
106 - 115	24	11
116 - 125	16	9
126 - 135	4	6
136 - 145	2	6
146 - 155	1	5
156 - 165	3	1
Total	124	87
Median	100.5	101.5
S.D.	22.35	28.24
Range	32 - 165	37 - 164

Median I.Q. of 211 boys and girls = 100.5 S.D. = 25.

Table No. 4

Mental Classification of 211 Clinic Cases Compared with 1,000 Unselected School Children Studied by Terman.

I.Q. Interval	Clinic Group		Terman Group
	Number	Percentage	Percentage
0 - 69	19	9	1
70 - 79	19	9	4
80 - 89	27	12.8	15
90 - 109	70	33.2	60
110 - 119	35	16.6	15
120 - 139	27	12.8	4.4
140 -	14	6.6	.6
Median		100.4	100.5
S.D.		25	13

(For the sake of accuracy medians and standard deviations are based on the distributions recorded in Table No. 3.)

Table No. 5

Mental Age Classification of 145 Clinic Cases According to Scores on Porteus Test.

Mental Age in Years	Girls	Boys
13	3	8
12.5	2	3
12	9	4
11.5	2	10
11	5	11
10.5	4	6
10	11	7
9.5	2	5
9	6	10
8.5	1	0
8	6	5
7.5	0	3
7	5	4
6.5	1	
6	1	
5.5		
5	2	2
4.5		
4	1	1
3.5		
3	2	1
2.5		
2		
1.5		
1		
0	2	—
Total	65	80
Range (on Test)	0 - 13	3 - 13
Median	10 yrs. or 130 months	10.5 or 126 months
S.D.	2.87 years	2.12 years
C.A. Median	9.8 years	10.5 years
S.D.	2.04	2.18
Range (C.A.	73-175 months or 6.06-14.58 yrs.	46-192 months or 3.8-16 years

CHAPTER IV.

MENTAL STATUS OF CLINIC GROUP

Table I shows the race and sex distribution of the clinic group. The subjects ranged in chronological age from 48 to 210 months, and in mental age from 28 to 232 months.

A. STANFORD - BINET TEST RESULTS

The 211 cases reported to the clinic ranged from very inferior to very superior mentality as gaged by the Stanford Revision of the Binet Test of Intelligence. (See Table No. 3.) The median I.Q. of the 87 girls, 101.5 with S.D., 28.24, and the median I.Q. of the 124 boys, 100.5 with S.D., 22.35, indicate that on an average the clinic cases are mentally normal for their age.

Table No. 4 shows the mental classification of the clinic cases and 1000 unselected school children studied by Terman. In order to facilitate comparisons, Terman's social classification based on the I.Q. has been used in the distribution. This classification is as follows:

I. Q.	
0 - 69	= Feebleminded.
70 - 79	= Borderline.
80 - 89	= Slow, Dull.
90 - 109	= Normal.
110 - 119	= Superior.
120 - 139	= Very Superior.
140 -	= Genius.

The medians do not indicate the difference in the grouping, which lies in the fact that in the clinic group there are 26.8 per cent fewer normal subjects than in the Terman group, the proportion of children of high and low I.Q. being accordingly greater.

The differences can easily be observed from the condensed table below:

I.Q.	CLINIC GROUP Percentage	TERMAN GROUP Percentage
0-89	30.8	20
90-109	33.2	60
110-	36	21

The differences in the Terman group and in the clinic group may be explained by the fact that the children below average in intelligence and those superior in intelligence seem to experience difficulty in effecting educational adjustment. They belong in part to that group sent for examination to solve the problem of proper classification.

B. THE PORTEUS TESTS.

Eighty boys and sixty-five girls were given the Porteus Test of motor coordination, prudence and forethought. The general results of this examination are presented in Table No. 5. They do not include several maximum scores of 13 years, where the examiner indicated that the test was too easy to record the true ability of the subject.

Two zero scores recorded for girls account for some of the difference in the S.D. for the boys and girls. The median chronological

age of this same group of boys was 125.5 months with S.D. of 26.15. For the girls the median chronological age was 117.6 months with S.D. of 24.5. The boys, therefore, are approximately at age in the Porteus test, while the girls are slightly above normal for their age.

The following condensed table shows the relative rating of boys and girls on the Porteus tests.

	NUMBER	MEDIAN C.A.	MEDIAN PORTEUS TEST M.A.
Boys	80	125.5	126
Girls	65	117.6	120

The correlation between mental age on the Porteus test and mental age as determined by the Stanford Binet scale was determined for the 80 boys and 65 girls given both tests. The correlations were as follows:

	R	r
Boys	.422	.642 ± .04
Girls	.549	.782 ± .018

C. THE NEGROES OF THE CLINIC GROUP.

Only twelve negroes, seven girls and five boys, were referred to the clinic. This number cannot furnish significant data in regard to race differences. The twelve cases included ranged in I.Q. from 78 to 126, neither the very high nor yet the very low grades of intelligence being found in their group.

The following table is a summary of the intelligence ratings of the negro group.

SEX	NUMBER	I.Q. MEDIAN	M.A. MEDIAN	C.A. MEDIAN	M.A. PORTEUS MEDIAN	SCHOOL GRADE MEDIAN
Boys	5	91	122	139	9 1/2 yr.	4A
Girls	7	91	106	114	8 yr.	3B

D. SEX DIFFERENCES.

The number of boys sent to the clinic group is noticeably greater than the number of girls. Of the 211 cases, 124 or 58.8% are boys while 87 or 41.2% are girls. Since there is no available information in regard to the reason for each individual's being sent for examination, it is impossible to determine the cause of the preponderance of boys. Since girls usually adapt themselves more readily to school routine, it may be conjectured that the group of discipline cases contains fewer girls.

There are no marked sex differences in mentality as gaged by either the Stanford Binet or the Porteus test. There is greater variability in I.Q. on the part of the girls, a S.D. of 28.24 as compared with a S.D. for the boys of 22.35. The median I.Q.'s are 100.5 and 101.5 for the boys and girls, respectively. (See Table No. 2.)

The finding of a negligible difference between the sexes in mentality as measured by the tests is in harmony with the general results of previous investigations.[12]

The greater variability in I.Q. on the part of the girls is in disagreement with the results recorded by Cummins,[13] the Institute of Educational Research at Teachers College,[14] Graber,[15] Thorndike.[16] Hollingworth[17] finds that the greater variability of males in anatomical traits is not established and that, even if it were established it would not prove that men are more variable in mental traits also. Pyle[18] found

that in his tests of card sorting and substitution the actual variability was about the same for boys and girls.

On the Porteus test the record of the girls is slightly superior to that of the boys.

The median chronological age of the boys is 126.4 months and of the girls 117 months. The boys of this group are on the average older than the girls.

Graph No. 1 gives the mental classification of the boys and girls in the clinic group.

Table No. 6

Distribution of Clinic Cases by School Grades

Grade	Number
Kindergarten	3
First	17
Second	25
Third	24
Fourth	33
Fifth	41
Sixth	39
Seventh	1
Eighth	0
Ungraded	3
High School	6
University	2
Undesignated	17

Median Scale Grade = Fifth

Range = Kindergarten to University

Table No. 7

Schools Represented in the Clinic Group

School	Number of Pupils Sent to Clinic
Cordley	6
Lincoln (colored)	7
McAlister	30
New York	29
Penfield	1
Pinckney	84
Quincy	11
Woodlawn	12
Junior High School	1
High School	1
Kansas University	2
Outside of Lawrence	4
Not Designated	23
Total	211

Chart No. 1

Chronological Age, Grade Progress of 180 Clinic Cases.

	School Grades								
C.A.	1	2	3	4	5	6	7	8	Total
5									
6	1								1
7	13	8	2	1					24
8	1	5	7	2					15
9	1	10	9	10	1	1			32
10	1		4	7	8	4			24
11		2		9	20	11			42
12			1		7	14			22
13				2	2	6			10
14			1	1	2	2			6
15				1		1			2
16					1				1
17							1		1
Total	17	25	24	33	41	39	1	0	180

(5 years = 54 to 65 months, 6 years = 66 - 77 months, etc.)

Chart No. 2

Mental Age Grade Progress of 180 Clinic Cases

M.A.	School Grades 1	2	3	4	5	6	7	8	Total
5	1	1							2
6	3		1						4
7	7	7	1						15
8	3	6	4	3	2				18
9	3	7	9	12	7	2	1		41
10		4	6	6	11	6			33
11			3	8	12	6			29
12				1	2	5			8
13				2	3	10			15
14				1	1	7			9
15						1			1
16					1	2			3
17					1				1
18									
19					1				1
Total	17	25	24	33	41	39	1	0	180

Table No. 8

Chronological Age Grade Progress

(Summary of Chart I)

	Overage 1 year	2 years	3 years	4 years	5 years or more
Boys	28	3	5	2	1
Girls	9	1	4	1	2
Total	37	4	9	3	3
Percent of 180 Cases	20.5	2.2	5	1.7	1.7

	Underage 1 year	2 years	3 years	4 years	5 years or more
Boys	22	4	1	0	0
Girls	23	5	1	0	0
Total	45	9	2	0	0
Percent of 180 Cases	25	5	1.1	0	0

Overage

23.3% of the girls are overage.

34.6% of the boys are overage.

31.1% of the entire clinic group are overage.

Underage

25.2% of the boys are underage.

39.7% of the girls are underage.

31.1% of the entire clinic group are underage.

37.7% of the group are chronologically at grade.

Table No. 9

Mental Age Grade Progress

(Summary of Chart 2.)

	Overage 1 year	2 years	3 years	4 years	5 years or more
Boys	24	11	1	1	2
Girls	12	10	3	2	1
Total	36	21	4	3	3
Percent of Group	20	11.7	2.2	1.7	1.7

	Underage 1 year	2 years	3 years	4 years	5 years or more
Boys	24	10	4	1	0
Girls	19	8	2	0	0
Total	43	18	6	1	0
Percent of Group	23.9	10	3.3	.6	0

Overage

36.4% of the boys are overage.

38.4% of the girls are overage.

37.3% of the group are overage.

Underage

36.4% of the boys are underage.

39.8% of the girls are underage.

37.8% of the clinic group are underage.

25% of the group are mentally at grade.

Table No. 10

Scores on Buckingham Revision of Ayers Spelling Scale

(+ = grade placement in advance of subject attainment and vice versa for -)

Class Interval I.Q.	At Grade	Accelerated Slightly	Moderately	Markedly	Very Markedly	Total Number	Retarded Slightly	Moderately	Markedly	Very Markedly	Total	Total Number Tested
140-169	1	0	1			1	1		2	2	5	7
110-139	6	1	4	3	4	12		4	4	3	11	29
90-109	7	1	8	11	13	33		2	1		3	43
70-89	5	2	3	5	12	22					0	27
0-69	1		2	1		3					0	4
Total	20	4	18	20	29	71	1	6	7	5	19	110

Scores on Stanford Achievement Test 2 - Sentence Meaning

140-169									2	1	3	3
110-139	3	4	2	2		8	1		8		9	20
90-109	10	2	4	4	6	16	7	2	2		11	37
70-89	3	4	2	11	6	23					0	26
0-69	1		1	3	1	5					0	6
Total	17	10	8	20	13	52	8	2	12	1	23	92

Note:

At Grade= ±.2

Accelerated Slightly = +.3 to .5
" Moderately = +.6 to 1 yr.
" Markedly = +1.1 to 2 yr.
" Very Markedly = +2.1 to 4 yr.

Retarded Slightly = -.3 to .5
" Moderately = -.6 to 1 yr.
" Markedly = -1.1 to 2 yr.
" Very Markedly = -2.1 to 4 yr.

Table No. 10 (Con't.)

Scores on Monroe Standard Silent Reading Test - (Comprehension)

Class Interval I.Q.	At Grade	Accelerated			Total Number	Retarded				Total	Total Number Tested
		Slightly	Moderately	Markedly	Very Markedly		Slightly	Moderately	Markedly	Very Markedly		
140-169	1				0				2	2	4	5
110-139	1		3	1	4	3			1	4	8	13
90-109	5	1	4	3	1	9			1	1	2	16
70-89	0		1	4	3	8						8
0-69	-					-				-		0
Total	7	1	8	8	4	21	3		4	7	14	42

Scores on Monroe Standard Silent Reading Test - (Rate)

140-169	2					0			1	1	2	4
110-139	0		2	1		3	3		2	4	9	12
90-109	1	2	3	7	2	14			1	2	3	18
70-89	1			4	3	7						8
0-69	-					-					-	
Total	4	2	5	12	5	24	3		4	7	14	42

Table No. 10 (Con't.)

Scores on Stanford Achievement Test 3 - Word Meaning.

Class Interval I.Q.	At Grade	Accelerated			Very Markedly	Total Number	Retarded			Very Markedly	Total	Total Number Tested
		Slightly	Moderately	Markedly			Slightly	Moderately	Markedly			
140-169									1		1	1
110-139							2	1	1		4	4
90-109	2		1	1	1	3	4	1	1		6	11
70-89	1	1	1	4		6	1				1	8
0-69	0	1			1	2	1				1	3
Total	3	2	2	5	2	11	8	2	3		13	27

Scores on Stanford Achievement Test 4 - Arithmetic Computation

140-169	1					0					0	1
110-139	1		1			1	1		2		3	5
90-109	4	1		4		5	1		1		2	11
70-89	2		1	3		4		1			1	7
0-69	0				1	1						1
Total	8	1	2	7	1	11	2	1	3		6	25

Table No. 11

Ratings on Buckingham Ayers Spelling Scale
Compared with Grade Placement

I.Q. Interval	At Grade		Accelerated		Retarded		Number of Tests Given
	Number	Percent	Number	Percent	Number	Percent	
140-169	1	14.3	1	14.3	5	71.4	7
110-139	6	20.7	12	41.4	11	37.9	29
90-109	7	16.3	33	76.7	3	7	43
70-89	5	18.5	22	81.5	0		27
0-69	1	25	3	75	0		4
Total	20		71		19		110
Percent	18.2		64.5		17.3		

"Accelerated" = grade placement in advancement of attainment in spelling.

"Retarded" = grade placement below attainment in spelling.

Table No. 12

Ratings on Stanford Achievement Test 2 Compared with Grade Placement.

I.Q. Interval	At Grade		Accelerated*		Retarded*		Number of Tests Given
	Number	Percent	Number	Percent	Number	Percent	
140-169					3	100	3
110-139	3	15	8	40	9	45	20
90-109	10	27	16	43.2	11	29.7	37
70-89	3	11.5	23	88.5	0		26
0-69	1	16.7	5	83.3	0		6
Total	17		52		23		92
Percent	18.5		56.5		25		

(*For definition, see Table No. 11)

Table No. 13

Summary of Relative Scores on 338 Educational Tests

I.Q. Interval	At Grade	Accelerated .3 to 1 yr.	Accelerated 1.1 to 4 yr.	Retarded .3 to 1 yr.	Retarded .7.1 to 4	Number of Tests Given
140-169	5	1	0	1	14	21
110-139	11	17	11	15	29	83
90-109	29	27	53	17	10	136
70-89	12	15	55	2	0	84
0-69	2	4	7	1	0	14
Total	59	64	126	36	53	338
Percents	17.5	18.9	37.3	10.6	15.7	

17.5% of the tests were rated "at grade"

56.2% of the tests were rated "accelerated"

26.3% of the tests were rated "retarded"

(For definition of Terms, see Table No. 11)

Table No. 14

Summary of Recommendations Made by Examiners

	I.Q. 140-169	%	110-139	%	90-109	%	70-89	%	30-69	%	Total	Percent of Entire Group
Number in Group	14		62		70		46		19		211	
Physical Exam. Care of Physician	0	0	7	11.3	10	14.3	12	26	10	52.6	39	18.5
Vocabulary Drill	0	0	7	11.3	20	28.6	15	32.6	4	21	46	21.8
Remedial Work in Reading	1	7.7	7	11.3	24	34.3	15	32.6	2	10.5	49	23.2
Remedial Work in Arithmetic	0	0	1	1.6	5	7.1	0	0	0	0	6	2.8
Remedial Work in Spelling	1	7.7	5	8	14	20.	6	13.	2	10.5	28	13.2
Working Below Capacity	0	0	6	9.7	3	4.3	2	4.4	0	0	11	5.2
"Readjust. Expectation"	0	0	0	0	2	2.9	13	28.2	2	10.5	17	8
Non-Promotion or repeat Grade	0	0	1	1.6	4	5.7	3	6.5	0	0	8	3.8

CHAPTER V.

EDUCATIONAL STATUS OF CLINIC GROUP

Three types of information in regard to the educational status of the clinic group are presented:

A. Grade placement of 107 boys and 73 girls according to chronological and mental ages. (This excludes three subjects in ungraded classes, eight subjects above elementary school grade, three subjects in kindergarten, seventeen of undesignated grade.)

B. The results of 338 subject tests in spelling, arithmetic and reading.

C. That part of the interpretative report designed to effect better school adjustment for each individual.

A. 1. CHRONOLOGICAL AGE GRADE PROGRESS.

Chart 1 shows the chronological age grade progress of the clinic group. The standards used are those of Strayer[19] with the alteration suggested by Terman.[20] The standard mental age for Grade I is approximately 7 years (78 to 89 months), for Grade II approximately 8 years (90-101 months) etc. Table No. 8 summarizes the results for the 180 subjects of Grades I to VIII whose grade placement was recorded in data available. Only 37.7 per cent are at grade, with 31.1 per cent overage and 31.1 per cent underage. Strayer after a canvas of 318 cities found 57 per cent of normal chronological age, 33.5 per cent overage, and 4.25 per cent underage. The clinic group, therefore, has 26.85 per cent more pupils underage chronologically than the schools reported by Strayer.

The boys more than the girls account for the per cent of the group who are chronologically overage. The girls rather than the boys account for the per cent of the group chronologically underage.

2. MENTAL AGE GRADE PROGRESS. Chart No. 2 shows the mental age grade progress of the clinic group. The standards used are the same as those for chronological age, since, according to Terman, "children who are in grades corresponding to these standards are in the large majority of cases found doing work of average quality."

Table 6 summarizes these results. Of the entire clinic group 37.3 per cent are overage mentally, 37.8 per cent are underage, while only 25 per cent of unselected school pupils are located in the grade corresponding to mental age. Ideally, of course, a much larger per cent would be placed in the grade corresponding to mental age. The fact that only one fourth of the clinic group is mentally at grade is probably an important factor in any existing maladjustment, and explains the selection of a large number of the cases for clinical diagnosis.

B. SUBJECT TESTS.

The following special subject tests were given to the number of subjects indicated:

Stanford achievement Test 2 - Sentence meaning - 92

Stanford achievement Test 3 - Word meaning - 27

Stanford achievement Test 4 - Arithmetic computation - 25

Buckingham Revision of Ayres Spelling tests - 110

Monroe Standard Silent Reading - Comprehension - 42

Monroe Standard Silent Reading - Rate - 42

As explained in the introduction, some tests administered to fewer than ten subjects are not included in the study.

The school grade placement month and year was compared with the score on the test, month and year. Thus a pupil of Grade V who rated 6.6 on May 1 in the test in question was said to be .8 school year retarded - that is, his grade placement was .8 year in arrears of his attainment in reading. "At grade" includes .2 year accelerated or retarded. "Slightly" accelerated or retarded = .3 to .5 year accelerated or retarded; moderately = .6 to 1 year; markedly = 1.1 to 2 years.

In Table No. 10 is recorded the relative grade placement for the five tests most frequently employed. There are 338 tests. The spelling and the sentence meaning tests were given in sufficient number to warrant separate analysis as well.

BUCKINGHAM REVISION OF AYRES SPELLING TESTS.

Table No. 11 gives a summary of the ratings of various groups on the Buckingham Ayres spelling scale. In each case the score in spelling was compared with the subject's grade placement.

The number of the 110 individuals given this test who were referred to the clinic because of special disability in spelling is not

stated in the records of the clinic, but for 64.5 per cent of this group attainment in spelling was below the standard of actual grade placement.

Those whose attainment was above their respective grade norms were for the most part in the groups of I.Q. 110 or above.

STANFORD ACHIEVEMENT TEST 2 - SENTENCE MEANING.

Table No. 12 summarizes the ratings of 92 subjects in reading, sentence meaning, when compared with grade placement. The per cent whose attainment in spelling is below grade placement is 56.5 - less than in the case of spelling. Those of I.Q. below 90 account for the amount of acceleration more than do the group of I.Q. above 90.

SUMMARY OF EDUCATIONAL TESTS.

Table 13 summarizes the amount of acceleration and retardation in grade placement for the entire group of 338 tests. 56.2 per cent of the test ratings showed the subject to be accelerated in grade placement above his educational attainment while 26.3 per cent showed him to be retarded.

C. RECOMMENDATIONS OF EXAMINERS.

The interpretative reports of the examiner included suggestions in regard to possible means of increasing the educational achievement of the subjects. A summary of the most frequent recommendations is given in Table 14.

Recommendation 1, "physical examination or care of physician," is really a part of the physical data, except that physical health

probably operates as an important factor in school success. Included therein are children decidedly underweight, those with very defective vision, those with tubercular tendencies, spinal curvature, or other marked physical handicaps. Of 39 subjects in this group, the largest number is included in the interval of I.Q. 30-69, where ten in the entire group, or 52.6 per cent, have this handicap in addition to that of low intelligence. The next largest number is in the group of I.Q. 70-89, with 26 per cent. None of the 14 subjects of I.Q. 140-169 is mentioned in this group.

Recommendations 2, 3, 4 and 5 are for remedial work in vocabulary, reading, arithmetic and spelling, respectively. The small number of recommendations for remedial work in arithmetic is probably due to the fact that only 25 tests in this subject were given. This in turn was, however, due partly to the fact that fewer cases of special disability in arithmetic were reported, inasmuch as all children were given special tests when specific inabilities were reported or observed. Failure in arithmetic was apparently not an important factor in any lack of adjustment on the part of cases reported to the clinic.

Forty-six cases were in need of vocabulary drill, and 49 required remedial work in reading. These recommendations may have been based, partially at least, upon the Stanford Binet intelligence examination, which is verbal in character, and probably tests these elements more than others. (The results on the Stanford Achievement tests of reading were presented above.)

Of the 14 cases from 140-169 I.Q., two were functioning below capacity, one in reading and one in spelling.

There is a relatively small number of educational recommendations for the 19 subjects of I.Q. 30-69, doubtless because five of this group were designated as "institution cases" and three were considered candidates for a special class.

Of the subjects designated by the examiners as "working below capacity" the largest per cent were in the group of I.Q. 110 to 139.

The school was expecting too much of those in the group of I.Q. 70 to 89, who are just below the level of ability to achieve school success.

The remaining recommendations, while valuable to the individuals in question, are too few in number to warrant any generalization.

The differences in the per cent of groups of various intelligence requiring remedial work in a special subject is least marked in the case of spelling.

In addition to the special recommendations tabulated above, certain other recommendations were made as a matter of course to those subjects ranking low in intelligence, according to the Stanford Binet examination.

In the group of I.Q. 70-89, seven or 15.2 per cent were designated as subjects for special or ungraded classes and one or 2.1 per cent was considered an institution rather than a school charge.

In the group of I.Q. 30-69, three or 15.8 per cent were designated as subjects for special or ungraded classes and five or 26.3 per cent as "institution cases."

Certain general recommendations were likewise made in the case of subjects of high general intelligence.

In the group of I.Q. 110-139, seven or 11.3 per cent required enrichment in their school courses, and 3 or 4.8 per cent merited special promotion.

In the group of I.Q. 140-169, "enrichment" was recommended for seven or 50 per cent, and five or 35.7 per cent were said to merit special promotion.

D. SCHOOL AND GRADE PLACEMENT.

Tables 6 and 7 give the distribution of the clinic cases by grade and school respectively. The largest number of subjects came from the Pinckney School. The median grade was the fifth. The range in grade was from kindergarten to university.

Table No. 15

VISUAL ACUITY OF 125 CLINIC SUBJECTS

I.Q. Interval	Normal	Slightly Defective	Moderately Defective	Very Defective	Number Tested
0-69	2	2	2	0	6
70-89	8	20	1	2	31
90-109	12	28	6	1	47
110-139	8	25	3	0	36
140-169	1	4	0	0	5
Total	31	79	12	3	125
Percent	24.8	63.2	9.6	2.4	

AUDITORY ACUITY OF 93 CLINIC SUBJECTS

I.Q. Interval	Normal	Slightly Defective	Moderately Defective	Very Defective	Number Tested
0-69	4	1			5
70-89	25	1			26
90-109	29	5	1		35
110-139	25				25
140-169	2	—	—		2
Total	85	7	1		93
Percent	91.4	7.6	1		

Table No. 16

HEIGHT AND WEIGHT OF 58 CLINIC GIRLS AND 66 CLINIC BOYS

WEIGHT

	Normal		Over		Under	
	Number	Percent	Number	Percent	Number	Percent
Boys	40	60.6	8	12.1	18	27.2
Girls	34	58.6	2	3.4	22	37.9
Total	74	59.7	10	8	40	32.3

HEIGHT

	Normal		Over		Under	
	Number	Percent	Number	Percent	Number	Percent
Boys	64	97	1	1.5	1	1.5
Girls	55	94.8	2	3.4	1	1.8
Total	119	95.9	3	2.4	2	1.6

CHAPTER VI

PHYSICAL STATUS OF CLINIC GROUP

The method of physical examination has been described in the introduction. The total results for vision and hearing are recorded in Table No. 15.

A. VISION

Tests of vision were made in 125 cases. Only 24.8 per cent were found to have normal vision with 63.2 per cent slightly defective, 9.6 moderately defective, and 2.4 per cent very defective. Since "slightly defective" includes slightly defective in one or both eyes, the standards used were very high, and the defect of this group would probably not be a serious handicap in school. Conceivably only the 12 per cent included in the moderately and very defective class would be actually handicapped.

After a study of health surveys made in various cities, Newmayer[21] states that these reports vary from ten to ninety per cent in their estimate of the number of unselected children possessing defective vision. Such differences are due to variability in methods of examination and in definitions of "defective."

The tabulation below shows per cents of defective vision when large numbers of school children were examined in 1922:

CITY	NUMBER DEFECTIVE	PER CENT OF EXAMINED
New York	33,400	11
Chicago	18,086	14
Philadelphia	21,500	9.3

Newmayer concludes from these and additional data that in an unselected group of school children, 12 per cent have defective vision. This agrees with the finding of the clinic in regard to moderately and very defective vision. If, however, the 63.2 per cent of the clinic group designated as slightly defective should be included, the per cent with defective vision is notably greater than that in an unselected group.

Divergence of standards, therefore, renders the evidence inconclusive.

B. HEARING.

There is less variation in results of tests of hearing. After a survey of seventy physicians performing school inspections, the author quoted above[21] found the percent of defective hearing to vary from .2 to 1.5 per cent with .5 per cent as his estimate of the probable average per cent.

According to this standard the 93 clinic cases included a greater per cent of those with defective hearing than an unselected group. The clinic records show 7.6 per cent with slightly defective hearing, 1 per cent with moderately defective hearing, and 0 per cent with very defective hearing. Variation in method and standard may again account for some of this difference.

C. HEIGHT AND WEIGHT.

The 124 examinations of height and weight include 58 boys and 66 girls.[22] In each case the examiner used Baldwin's norms in gaging the physical status of the subject. The actual measurements are not always recorded. Table No. 16 shows the number of boys and girls of

various levels of intelligence who were reported by the examiner as normal, above or below normal in height and weight.

Since at least some of the subjects tested were selected for the examination because they appeared not to be normal in size, the results are not indicative of the physical status of the clinic group.

The number of examinations for various groups of intelligence is too small to warrant comparison of the results. Of the 124 cases 95.9 per cent are normal in height and 59.7 per cent are of normal weight for their age and height.

Table No. 17

EXAMINER'S REPORT OF PSYCHOPATHIC TENDENCIES

I.Q.	Total Number in Group	Slight Tendency		Marked Tendency		Total	
		Number	Percent	Number	Percent	Number	Percent
140-169	14	0	0	0	0	0	0
110-139	62	1	1.6	2	3.2	3	4.8
90-109	70	9	1.3	5	7.1	14	8.4
70-89	46	5	10.9	4	8.7	9	19.6
0-69	19	5	26.3	4	21	9	47.3
Total	211	20		15		35	

35 or 16.6 percent of the entire group exhibited psychopathic tendencies of slight or marked degree.

Table No. 18

EXAMINER'S REPORT OF SUBJECT'S BEHAVIOR DURING EXAMINATION

I.A. Interval	Number in Group	Nervous		Embarrassed		Slow in Response		Very Talkative	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
140-169	14	1	7.7	0	0	0	0	0	0
110-139	62	6	9.7	4	6.5	8	12.9	2	
90-109	70	13	18.6	3	4.3	15	21.4	2	
70-89	46	7	15.2	4	8.7	15	32.6	0	
30-69	19	1	5.3	1	5.3	4	21	1	
Total	211	28		11		42		5	

CHAPTER VII.

EMOTIONAL STATUS OF THE CLINIC GROUP

The interpretative reports of the graduate students who give the examinations in the clinic are the source for the emotional data here presented. Three such reports on three widely divergent types of subjects are included in the appendix of this study. These reports record special or unusual responses in the behaviour of the subject. They are too individualistic and subjective in character to be summarized in all details, but an effort has been made to interpret: (a) the report on nervous stability and (b) special behaviour responses during examination.

A. NERVOUS STABILITY

Since, as explained in the introduction, the examiners are familiar with the ten points of psychopathy as defined by Mateer,[23] their judgment is relied upon in determining psychopathic tendencies, and no further delineation is made herewith of the Stanford Binet test to discover bizarreness of response, range, etc.

In Table No. 17 "slight tendency" includes notations such as: "predisposition," "some evidences," "a few indications," and the like. "Marked tendency" includes: "very unstable," "marked instability," and the like.

Table No. 17 shows the I.Q. distribution of the 20 subjects with "slight tendency" to instability, and of the 15 subjects of "marked tendency" to instability. The largest per cent of psychopathic tendency

is in the group of I.Q. 30-69, where 9 in a group of 19, or 47.3 per cent, were thus affected. No such cases are recorded in the group of highest intelligence, 140-169 I.Q., with the next smallest per cent in the group of I.Q. 110-139.

Thirty-five of the entire group of 211, or 16.6 per cent, showed tendencies to instability. The National Committee for Mental Hygiene[24] estimate that 3.5 per cent of the school population is psychopathic. According to this estimate there are almost five times as many psychopaths in the clinic group as in an unselected group.

B. SUBJECT'S BEHAVIOUR DURING EXAMINATION.

This material, which is presented in Table 18, represents the subjective judgment of the examiner. There is no well defined meaning for "nervous," "slow," "embarrassed," etc. In some cases the judgment of the examiner may have been influenced by his knowledge of the subject's mental status. These observations supplement, however, the general findings in regard to nervous stability.

Those above normal and those below normal in intelligence exhibited nervousness in an almost equal per cent of instances.

Slowness of response is found most often in the group of I.Q. 70-89. This is in accordance with Terman's characterization of the 70-79 group as "borderline," and the 80-89 as "slow and dull."

The few cases of "embarrassment" reported are distributed without difference in intelligence.

Only one undesirable response is recorded for the group of I.Q. 140-169. This may be accounted for, as suggested above, by the fact that the examiner was prejudiced in favor of the gifted child.

CHAPTER VIII

SUMMARY

1. There are 211 clinic cases of whom 124 or 58.8 per cent are boys, and 87 or 41.2 per cent are girls. Of this number, twelve or 5.7 per cent are negroes.

2. The I.Q. of the clinic cases ranged from 32 to 165. The median I.Q. of the girls is 101.5 with S.D. of 28.24. The median I.Q. of the boys is 100.5 with S.D. of 22.35. For Terman's group of unselected children the median I.Q. is 100.5 with S.D. of 13. The clinic cases are on the average equal or superior to the unselected group, but the variability of the clinic group is notably greater.

3. The median mental age of 80 boys on the Porteus Test is 10.5 years with S.D. of 2.12. The median chronological age of the same group of boys is 10.46 years with S.D. of 2.18. The median of 65 girls on the Porteus test is 10 years with S.D. of 2.87. The median chronological age of the same group of girls is 9.8 years with S.D. of 2.04. Both boys and girls rank slightly above normal on the Porteus Test.

4. The correlations between Porteus mental age and Stanford-Binet mental age for 80 boys and 65 girls are respectively .642 $-^{\pm}$.04 and .782 $-^{\pm}$.018.

5. The number of negroes in the clinic group is too small to yield significant results in regard to race differences.

6. In mental tests the girls rank slightly higher than the boys, but the differences are not marked. The variability in I.Q. is greater for the girls than for the boys.

7. The subjects are from all the school grades, with the fifth as a median. The range is from kindergarten to university. The range in chronological age is from 4 to 17 years.

8. 37.7 per cent of the subjects are chronologically at grade. 25 per cent are mentally at grade. Approximately equal numbers are over-age and under-age both mentally and chronologically.

9. Subjects requiring physical examination or medical care were found chiefly in the group of I.Q. 30-69.

10. Remedial work was recommended more often in reading than in any other subjects.

11. Of 338 subject tests, 17.5 per cent are rated at grade, 52.2 per cent accelerated in grade placement, and 26.3 per cent retarded.

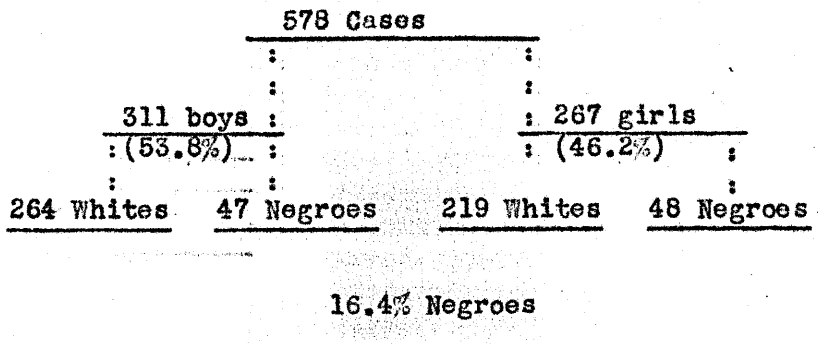
12. 16.6 per cent of the group exhibited slight or marked psychopathic tendencies.

13. Slowness of response during the examination was reported most often for those of I.Q. 70-89.

14. The data in regard to physical status are meager and inconclusive. 95.9 per cent are normal in height; 59.7 per cent are normal in weight. 91.4 per cent of 93 cases have normal hearing. 24.8 per cent of 125 cases are rated as normal in vision.

Table No. 19

Race and Sex Distribution of the Clinic Group



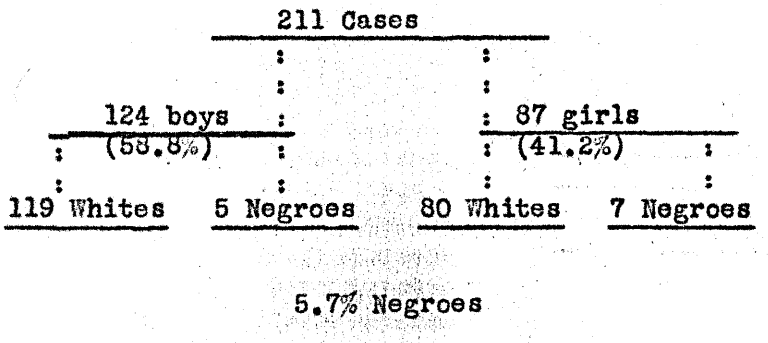


Table No. 20

Mental Classification--Clinic Boys and Girls Compared with 905 Unselected School Children Studied by Terman

I.Q. Interval	Boys		Girls		Total		Terman Group	
	No.	%	No.	%	No.	%	No.	%
26-35	1	.2			1	.13	0	
36-45	1	.2	3	.8	4	.5	0	
46-55	4	.9	6	1.7	10	1.3	0	
56-65	12	2.8	14	3.9	26	3.3	2	.33
66-75	37	8.5	30	8.5	67	8.5	21	2.3
76-85	67	15.4	39	11	106	13.4	78	8.6
86-95	88	20.2	68	19.2	156	19.6	182	20.1
96-105	87	20	61	17.2	148	18.8	306	33.9
106-115	63	14.5	52	14.7	115	14.6	209	23.1
116-125	51	11.7	35	9.9	86	10.9	81	9
126-135	11	2.5	24	6.8	35	4.4	21	2.3
136-145	7	1.6	14	4	21	2.7	5	.56
146-155	3	.7	7	2	10	1.3	0	
156-165	3	.7	1	.28	4	.5	0	
Total	435		354		789		905	
Median	96.9		98.8		99.7		100.5	
S.D.	23.7		24.14		21.05		13	

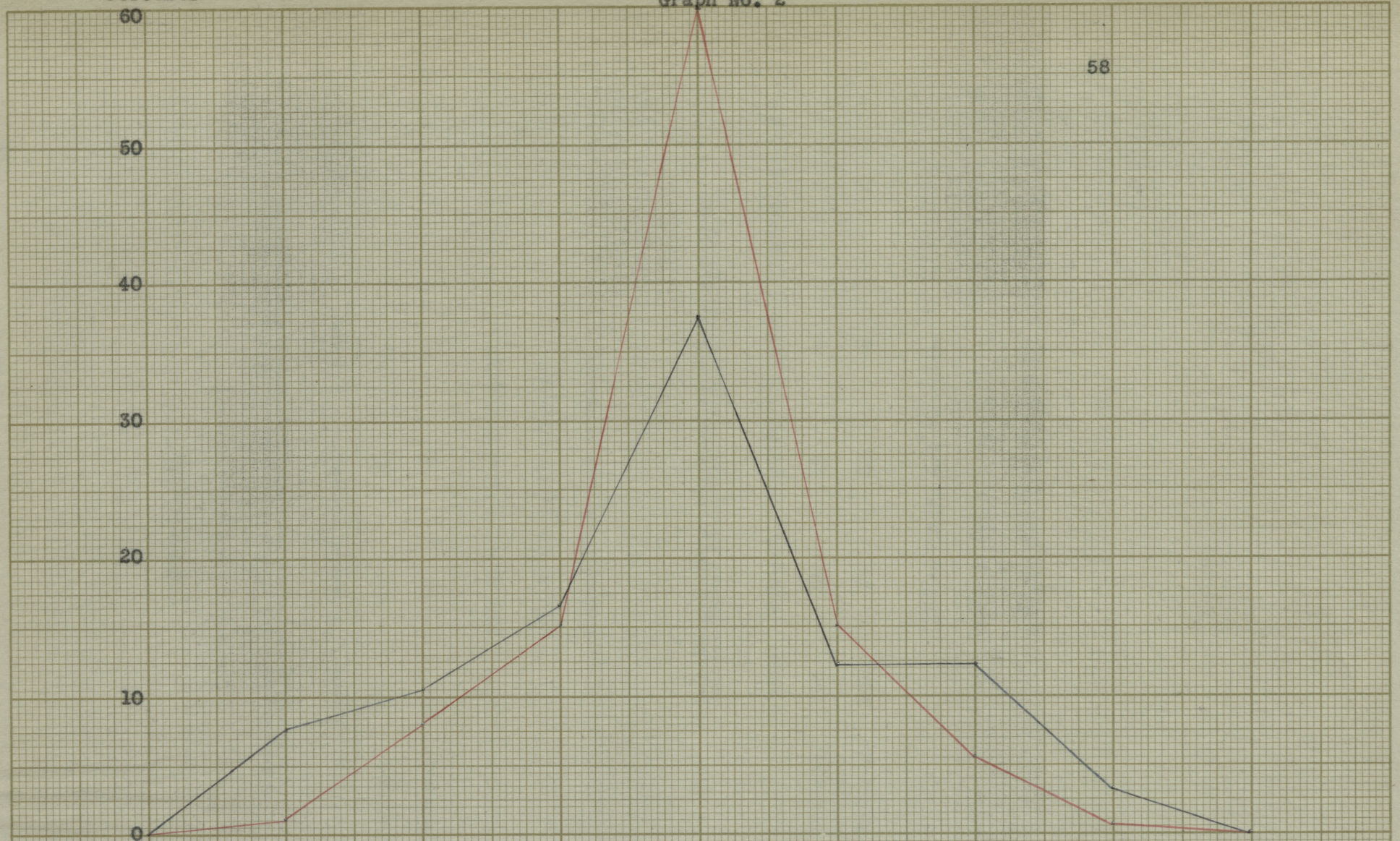
Table No. 21

Mental Classification of 789 Clinic Cases Compared With 1000 School Children Studied by Terman

I.Q. Interval	Clinic Group Number	Clinic Group Percent	Terman Group Number	Terman Group Percent
0-69	59	7.5	10	1
70-79	83	10.5	40	4
80-89	133	16.9	150	15
90-109	295	37.4	600	60
110-119	96	12.2	150	15
120-139	97	12.2	44	5.4
140-	26	3.3	6	.6
Median	97.7		100.5	
S.D.	21.05		13	

(For the sake of accuracy medians and standard deviations are based upon Table No. 20)

Graph No. 2



Mental Classification of 789 Cases Compared with that of 1000 Unselected School Children Studied by Terman. The curve for the Terman Group is Shown in Red Ink. The Curve for the Clinic Group is Shown in Blue Ink.

Table No. 22

(Summary of Charts 3 and 4)

Chronological Age Grade Progress of 751 Clinic Cases

	1 year	2 years	3 years	4 years	5 years or more
Average	126	60	24	11	10
Underage	216	45	6		1

252 or 33.5% are at grade

231 or 30.8% are overage

268 or 35.7% are underage

Mental Age Grade Progress of 751 Clinic Cases

	1 year	2 years	3 years	4 years	5 years or more
Overage	119	65	17	6	4
Underage	205	95	36	6	1

197 or 26.3% are at grade

211 or 28% are overage

343 or 45.7% are underage

Chart No. 3

Chronological Age Grade Progress of Combined Clinic Groups -- 751 Cases

C.A.	School Grades 1	2	3	4	5	6	7	8	Total
5									
6	19	3							22
7	29	27	7	1					64
8	8	28	25	5			1		67
9	4	16	27	30	3	1			81
10	2	6	13	23	32	12	3		91
11		3	4	20	48	35	10	1	121
12	2		2	9	18	49	33	5	118
13		1	2	6	7	14	33	15	78
14			4	4	5	11	32	15	71
15				2	2	3	15	5	27
16						1	3	4	8
17					1		1	1	3
Totals	64	84	84	100	116	126	131	46	751

Chart No. 4

Mental Age Grade Progress of 751 Clinic Cases

M.A.	School Grades 1	2	3	4	5	6	7	8	Total
5	4	1							5
6	22	7	1						30
7	20	23	4						47
8	13	33	23	10	5	1			85
9	4	14	18	40	21	12	5	1	125
10	1	6	17	27	33	17	10		111
11			11	11	33	26	25	7	113
12				8	9	24	29	7	77
13				3	7	22	20	9	61
14				1	3	18	28	12	62
15					2	2	7	5	16
16					1	3	7	4	15
17					1	1		1	3
18									
19					1				1
Total	64	84	84	100	116	126	131	46	751

CHAPTER IX

CLINIC CASES FROM 1918 TO 1924

In 1926 a study was made by Faidley [10] of "Problem Cases Sent From the Lawrence Public Schools to the Psychological Clinic of the University of Kansas" during the five school years from 1918 to 1924, inclusive. The purpose of the study was to determine, as far as possible, the way in which the clinic group of 578 boys and girls deviated from an unselected group.

Each subject was given the Stanford Revision of the Binet Test of Intelligence and the Seguin form board test. The physical tests included: Measurements of height and weight; lung capacity measured by the wet spirometer; auditory acuity measured by the whisper test; vision measured by the Snellen chart; inspection of tonsils, adenoids and teeth; observation of speech defects and nerve signs. No educational tests were given.

In combining and comparing the results of the Faidley study with the present study the former and earlier study will be referred to as Clinic Group I and the latter as Clinic Group II. The method of selection in the two groups is essentially the same.

A. Mental Status.

Table No. 19 shows the race and sex distribution of the 578 subjects of Group I, of the 211 subjects of Group II, and of the 789 of Groups I and II combined. The only marked difference is the greater per cent of negroes in Group I.

Table No. 20 presents the sex distribution of I.Q. in the two groups. The median I.Q.'s of the boys and girls of Group II are greater than those of Group I. Group II has a larger per cent of superior and a smaller per cent of inferior subjects than has Group I. The variability of both boys and girls is greater in Group II.

The girls evinced a slight superiority in both groups, the difference being more marked in the case of Group I, in which the median of the girls is 98.3 as compared with 95.9 for the boys. In both groups there is greater variability in the intelligence of the girls.

As compared with the Terman Group of 1,000 unselected school children, the 789 clinic cases (Table No. 21) are on the average only slightly inferior. The median I.Q. of the clinic group is 97.7 with S.D. of 21.05, while that of the unselected group is 100.5 with S.D. of 13. When the negroes of the clinic group are excluded, the median of the 682 white subjects remaining is 99.7 with S.D. of 21.4. The negroes more than the whites, therefore, account for the slight inferiority of the clinic group.

B. EDUCATIONAL STATUS.

No educational tests were given in Group I, but the Faidley study presents the chronological age, grade progress and the mental age grade progress of the subjects, according to Strayer's Standards.

Charts 1 and 2 give the C.A. grade progress and the M.A. grade progress respectively of 180 subjects of Group II.

Group II has 30.2 per cent chronologically overage, 37.5 per cent at normal grade, and 32.2 per cent underage as compared with Group I,

which had 31.1 per cent overage, 37.7 per cent at grade and 31.1 per cent underage. It will be observed that the respective per cents are almost identical.

When the groups are combined as in Chart No. 3, the percentages become: overage, 30.8%; normal age, 33.5%; underage 35.7%. Approximately one third of the 751 clinic cases is of normal chronological age for grade placement. Those overage are slightly in excess of the number underage. (Kindergarten subjects are not included.) These results agree substantially with the distribution of I.Q.'s.

Group II has 24.7 per cent overage mentally for grade placement, 31.2 normal age, and 43.9 per cent underage, as compared with Group I with 37.3 per cent, 25 per cent and 37.8 per cent respectively.

Group II has 13.4 per cent more subjects overage, 6.1 per cent fewer underage. Since 25 per cent of Group II and 31.2 per cent of Group I are mentally at grade, the former is apparently not so well adjusted in school as the latter.

In Group I the mentally underage more than those overage account for the small number mentally at grade.

On Group II the mentally underage and the mentally overage are equally responsible for the small per cent mentally at grade.

In Groups I and II combined 26.3 per cent are mentally at grade, 28 per cent are overage, and 45.7 per cent are underage. In the groups as a whole, the fact that only a little more than one fourth of the clinic cases are mentally at grade is perhaps the greatest single factor contributory to lack of adjustment.

C. PHYSICAL STATUS.

HEIGHT AND WEIGHT. The 267 clinic cases of ages 7, 8, 9, 10, 11 and 12 were compared in respect to height and weight with the norms given by Baldwin. Because of differences in methods of measurement, exact comparisons were not possible, but the results indicated in general that "physical retardation was not a factor in the production of maladjustment in the clinic group."

Since the data of Groups I and II are not in comparable form, no general summary in regard to height and weight can be made for the clinic subjects.

VISION. Seventy per cent of the subjects of Group I were said to be defective in vision. Inasmuch as the extent of the defect is not indicated, the results cannot be compared with those of Group II.

HEARING. Clinic Group I had 66 2/3 per cent with defective hearing, as compared with 8.6 per cent for Group II. The fact that an old machine was used for the testing invalidates the results of Group I.

D. EMOTIONAL STATUS.

Since the data of Group I included no interpretative reports, no direct information is available in regard to the nervous stability of the group. Faidley's analysis of the Stanford Binet and Seguin form board test results yielded "meager and conflicting evidences" in regard to the existence of instability among the clinic subjects.

CHAPTER X

SUMMARY

1. The 789 clinic cases referred to the clinic from 1918 to 1928, include 435 boys and 354 girls.

2. The median I.Q. of the 435 boys is 96.9 S.D. = 23.7

The median I.Q. of the 354 girls is 98.8 S.D. = 24.14

The median I.Q. of 789 clinic cases is 97.7 S.D. = 21.05

3. Group I (1918-1924) is in the average slightly inferior in intelligence to Group II. The larger per cent of negroes in Group I accounts for some of this difference. The variability of Group II is the greater.

4. The range in I.Q. is greater in Group II than in Group I, 32-165 as compared with 46-154.

5. As compared with Terman's Group of 1000 unselected children, the 789 clinic cases include 6.5 per cent more feebleminded, 4.4 per cent more very superior, and 2.7 per cent more subjects of genius rank than the unselected group. The unselected group has 23.6% more normal subjects than the clinic group.

6. Approximately one-third of all the clinic cases are chronologically at grade. Those overage slightly exceed in number those underage. The per cents in Group I and II are almost identical.

7. Mentally 26.3 per cent are at grade. The number mentally at grade is slightly greater in Group I than in Group II.

8. Differences in standards invalidate the results of the physical examination.

9. The data in regard to the emotional status of Group I are meager and conflicting.

10. No interpretative reports and no educational tests are included in the clinical records of Group I.

CONCLUSIONS

1. The psychological clinic of the University of Kansas is offering an almost unique educational service in that its efforts are not concentrated upon feebleminded or delinquent subjects.

2. During the school years from 1918 to 1928 inclusive, the clinic group consisted of subjects who were on the average approximately normal in intelligence. The negroes of the clinic group were found to rank lower than the white subjects upon the Stanford-Binet test.

3. The I.Q.'s of the clinic group are not concentrated about the measure of central tendency as are the I.Q.'s of an unselected group. Children of high and low intelligence are referred to the clinic for educational diagnosis.

4. The fact that only one fourth of the clinic cases are mentally at grade appears to be the most important single factor in any existing maladjustment.

5. Approximately one fifth of the educational tests showed the clinic cases to be at grade in educational attainment in the school subject in question.

6. The percentage of unstable children is probably greater than in an unselected group.

7. A statement explaining the reason for each child's presence in the clinic would give added significance to the findings of the clinic.

SUB-REPORTS

SUB-REPORT A

11

THE PRE-SCHOOL CLINIC

In Lawrence, Kansas, a clinic was established in April, 1926, the work of the clinic continuing through the months of April and May, and repeated in April and May, 1927.

"Usual developmental histories and physical test records were secured. Each child between the ages of three to five was examined mentally. The Stanford Revision of the Binet-Simon Intelligence Test was employed for gauging the verbal intelligence of the children.

"There were in all, 258 complete records obtained from 132 boys and 126 girls. The range in chronological age was from 3 years to 5 years, 11 months; the mental ages ranged from 3 years to 7 years, 11 months; the intelligence quotients from 56 to 153."

A. The Relationship Between Mental Ability and the Occupational Status of the Parent.

A substantial positive relationship was found to exist between the occupational level of the parent and the mental ability of the child. The U.S. Government Census Reports and the Barr Scale were used in assigning ratings of occupations and professions.

B. The Relation Between Mental Ability and Sex.

On the Stanford Binet Test, the girls had a greater range of scores than did the boys, and seventy per cent of the girls reach or exceed the median performance of the boys. The superiority of the girls may be accounted for by the fact that the percentage of girls with fathers in the professional group was greater than that of boys.

C. The Relation Between Mental Ability and Physical Traits.

The height and weight of each child was recorded and compared with the Baldwin-Word norms. "Collectively these data disclose a positive correlation between certain indices of physical development and mental ability. The relationship though positive, is almost negligible."

D. Difficulty of the Stanford-Binet Test.

"The difficulty of the various items of the Stanford Revision of the Binet Test of Intelligence was ascertained by analysis of the responses of the pre-school children." The results indicated that some of the test items are unsuitable while others require regrading which would place them in other age levels. "On the whole, the Stanford-Binet Examination does not serve adequately in testing pre-school children."

SUB-REPORT B

GIFTED CHILDREN

Students trained in the Educational Clinic of the University of Kansas made a study[25] of representative superior children (I.Q. 140 or above) from a study of the following data assembled for each child.

1. National Intelligence Test.
2. Stanford Revision Binet-Simon Intelligence Test.
3. Porteus Test of Motor Intelligence.
4. Monroe Reading Test.
5. Ayers Spelling Test.
6. Stanford Achievement Test.
   - Arithmetic Computation
   - Arithmetic Reasoning
   - History and Literature
   - Language Usage
7. Overstatement Tests (Devised)
8. A Test of versatility of play interests.
   - Lehman Play Quiz.
9. Physical measurement of height and weight and record of physical development.
10. Extensive home information including data furnished by parents.
11. Extensive school information including school records and ratings by teachers.

Of the fifty children first studied in 1924, forty-one were selected from Grades III to VIII in the public schools in Kansas City, Missouri, and nine from Lawrence, Kansas, and vicinity. There are now available data in regard to fifty additional superior children who have been studied by the clinic but whose records are not here presented.

From the information and test data assembled, the following specific problems were studied.

1. Heredity. Near and far ancestry were studied in regard to nationality, education, occupation, and interests.

2. Physical development as compared with unselected children.

3. Intelligence as measured by the Binet and Porteus Tests.

4. Educational attainment, including acceleration and extent to which their attainment was commensurate with their ability.

5. Social and moral traits.

A. Heredity and Social Status.

A study of the parents of the gifted children revealed the following social origins:

English	26 per cent
Scotch	14 per cent
German	14 per cent
Jewish	10 per cent

A very low proportion were found to be of Dutch, Bohemian, Polish, and Swedish ancestry. Ninety-eight per cent of the parents were American born.

The general social status of the parents is indicated by the occupation of the fathers, of whom sixty-two per cent were business men, thirty-two percent professional men, and two per cent agriculturalists. A second type of evidence in regard to social status was found in the wide range of interests, hobbies, and occomplishments listed by parents and grandparents. They included: mathematics, music, home and children, reading, travel, inventinns, religious activities, sports, politics, dramatics, clubs, and lodges. Many of the parents of the gifted children were holding positions of honor, and many of them were found to be in the direct line of descent of noted men. The general social status was further defined by the fact that fifty per cent of the parents were college trained.

B. Physical Characteristics.

1. Birth and early infancy. The median age of the parents at the birth of the children was 30.83 years for the fathers and 27.41 years for the mothers. Twenty per cent of the children were classed as an "only child", the average number of children in the family being 2.32. Fifty-three per cent of the gifted children were first born. In the families from which they came, the percentage of deaths under the age of five years is compared with other studies of mortality. (Table I)

Table I

RATE OF INFANT MORTALITY. PERCENTAGE DISTRIBUTION

Group	Boys	Girls
50 Gifted Children	3	1.8
Terman's Group	1.90	5.5
General Population	17.03	14.65

Ninety per cent of the children had markedly superior health during the first year of infancy. Apparently they were slightly earlier than the average child in cutting the first tooth, in learning to walk, and in learning to talk. (Exact data are included in the original study.)

2. Physical defects. The frequency of existence of certain physical defects is given in Table II. Adenoids and diseased tonsils were found with comparative frequency.

Table II

PREVALENCE OF ADENOIDS AND DISEASED TONSILS. PERCENTAGE DISTRIBUTION

Condition	Boys	Girls
Adenoids Removed	53.5	37.5
Adenoids Present	0	12.5
Tonsils Removed	57.1	50
Diseased Tonsils Present	15.3	8.3

Tests of hearing showed 92 per cent of the group with good or excellent hearing, 8 per cent with fair hearing, and 0 per cent with poor hearing.

The group was relatively free from colds, headaches, digestive disorders, and organic diseases of heart, kidneys, or lungs.

There was also relative freedom from nervous disorders, 65.3 per cent of the boys and 58.3 per cent of the girls being entirely free from all nervous symptoms such as marked tendency to weep, marked fears, nervous and muscular twitchings.

C. Intelligence.

The intelligence quotients of the group of fifty children ranged from 140 to 183, although it is possible that the upper limit may be too low, since only three subjects failed on all of the eighteen year tests. Two boys passed the entire superior adult test, and hence, were unmeasured. Table III shows the distribution of the I.Q.'s.

Table III

DISTRIBUTION OF I.Q.'S OF 50 SUPERIOR CHILDREN

Binet Simon Scores	Boys	Girls	Total
140 - 144.9	6	3	9
145 - 149.9	6	4	10
150 - 154.9	4	10	14
155 - 159.9	3	2	5
160 - 164.9	3	1	4
165 - 169.9	3*	0	3
170 - 174.9	1*	2	3
175 - 179.9	0	0	0
180 - 184	0	2	2
Total	26	24	50

(*One in the group passed all the year XVIII)

The median for the entire group is 152.32.

The results suggest that superior children may have a tendency to succeed over a wide range of years. The median range for the entire group is 5.66 years, with the possibility of an even greater true range since 47 of the children scored in the XVIII year level.

The high scores on the test represent only inadequately the superior nature of the responses as demonstrated by the richness of association on the vocabulary test, the ability to define abstract terms, the quickness of responses to all types of the test material.

The Porteus Graded Maze Test for determining the development of motor intelligence was given the children in this study. Contrary to the popular belief that children mentally superior are lacking in motor development, the children tended to score higher than warranted by their chronological ages. The test was inadequate, however, for the higher chronological ages.

Table IV

PORTEUS TEST RESULTS - BY AGE GROUPS

C.A. Months	No. Cases	Mean Porteus M.A. (Months)
96-107	3	123.6
108-119	13	142.6
120-131	17	142.8
132-143	4	147
144-155	7	151.2
155-162	1	144

D. Educational Test Data.

Educational attainment as measured by the educational tests listed above was compared with chronological and mental age respectively. The most superior educational attainment of the group as a whole was shown in silent reading, all age groups exceeding the norm for Grade XII in rate, and all except the eight year old group exceeding the Grade XII norm in comprehension.

The study of general educational attainment revealed an unjustifiable retardation in grade placement for all ages in the group. The typical member of the group was accelerated only 14.9 per cent of his age beyond the norm for Kansas City, Missouri, school children, although the median I.Q. was found to be 152.3.

It was found that the typical child in the group did not repeat a grade nor did he skip more than four half grades. No significant difference was found between the accomplishment quotient of the accelerates and that for the entire group. The results indicate that acceleration in the group did not decrease educational attainment in terms of capacity. There were no appreciable differences in the physical measurements or present health status of the accelerated as compared with the unaccelerated.

E. Social and Moral Traits.

Significant data were obtained from the results of the Overstatement Test, the first form of which consisted of the titles of fifty books, twenty of them "faked". The children were instructed to check titles of books they had read. Any fictitious title checked was considered an overstatement. The results for the selected group were compared with those for an unselected group of one hundred and fifty children in Grades V and VI in the Lawrence schools. For the selected group four per cent of the book titles were overstated, and for the unselected group sixteen per cent.

The second form of the test is composed of eighty informational questions, each of which the child is instructed to mark 2, 1, or 0, according to whether he knows it very well, fairly well, or not at all,

respectively. He is later given a multiple choice examination composed of eighty statements corresponding to the same eighty informational questions. The amount of overstatement was determined by the number of 2's, 1's, and 0's that were answered correctly or incorrectly in the multiple choice check-up test.

Eighty-five per cent of the gifted and fifty-nine per cent of the unselected answered correctly the statements previously marked "2". Sixty-one per cent of the gifted and thirty-five per cent of the unselected answered correctly statements previously marked "1".

An objective test of honesty was administered by instructing the subjects to close their eyes and draw a line connecting five crosses arranged in a circular form three inches apart upon a page. Since the task is virtually impossible, the degree of accuracy indicated whether or not the child cheated by opening his eyes. Ten per cent of the gifted group and forty-eight per cent of the unselected group cheated by opening their eyes.

The school information blank furnished subjective data concerning certain social and moral traits. The teachers were asked to give judgment in regard to the amount gifted children played with other children, the degree of emotional stability, their response to discipline, and the extent of their participation in school activities. According to these judgments the superior children were developing desirably in these regards.

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Professor Harvey Lehman, then of the University of Kansas, secured special information by giving to the group his play quiz which is devised for children in Grades III and above. The children are asked

to indicate among a comprehensive and catholic list of 200 activities only those in which they have participated during the preceding week. They are later asked to rank in order of merit the three activities most enjoyed, and to designate the one which during the preceding week, consumed the greatest amount of their time.

Gifted children in their play seem to demonstrate greater vitality of interest than average children, intensified and prolonged effort characterizing their play. In spite of this greater vitality of interest they were found to engage in as many activities as normal children.

CONCLUSIONS

In summarizing the results of the clinic's study of gifted children, Professor Witty concludes that the physical, mental, and social traits which characterize the superior child justify greater intensity in educational endeavour. The unjustifiable educational retardation shows the inadequacy of the present school organization in taxing the superior mental capacity of such a child.

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APPENDIX

CLINIC REPORTS

The following case studies indicate the nature of the diagnoses made in the clinic:

Case I

Name: J. Grade 4A. C.A. 10 years, (126 months)
M.A. 132 months I.Q. 105

J. is a rather superior child whose ability probably is not adequately represented in the I.Q. obtained from the Binet test, since he so nearly passed several tests which must be graded failures. He is quiet, serious, and very cooperative. The physical tests showed J. to be normal in every regard.

On the Stanford-Binet Test J. displayed a ten year vocabulary, which is normal for his age. However, he failed in the ten year reading test. He made more errors than are allowed for success in oral reading and his rate of reading was decidedly slow. It was obvious that many of the failures in the entire Binet test were due to faulty reading habits.

The feeling that restricted reading ability prevented an adequate display of mental ability was corroborated by J's scores upon performance tests. On the Porteus Test for motor coordination, prudence, and forethought, J. secured a rating of 13 years, the maximum performance possible upon this test. His median mental age upon the Pintner-Patterson Test was 12 years, 6 months. One may conclude therefore that J. is mentally a superior child, seriously handicapped by faulty reading habits.

The Stanford Achievement Test yielded the following ages: Paragraph meaning, 8 years, 2 months; Sentence Meaning, 9 years, 1 month; Word Meaning, 9 years, 4 months.

J. Succeeded moderately well when dealing with vocabulary tests or with sentence meaning tests. When the test unit was larger than the sentence, he was unable to cope successfully with the situation. Particularly noticeable was the fact that J. is a word reader. He is capable of interpreting paragraphs only as does an average second grade child. It is desirable therefore that attention be directed toward developing habits of attacking the paragraph as a whole. The analytic-synthetic method of teaching reading might well be used in correcting the weakness. Individual remedial work is of course essential. The technique suggested by Buswell and Wheeler might be utilized in remedial endeavor. Coordinate development of vocabulary too is essential if optimum results are to be secured. (A graduate student is now devoting 30 minutes daily to J. in an attempt to establish correct reading habits. The remedial work is proving unusually successful.)

Case II

Name: H Grade 6A C.A. 10 years, 9 months
M.A. 184 months I.Q. 143

H. is a pleasant, attractive child of superior mental development. She was entirely at ease and cooperative throughout the test. Her interest, effort, and attention were well sustained. She gave no evidence of nervousness and seemed emotionally well balanced.

The physical examination showed that H's general physical condition was good. Her tonsils were moderately enlarged and should have attention. Her vision was slightly defective but it is probable that she does not need glasses.

H. earned a mental age of 184 months on the Binet test; her chronological age is 129 months. The resultant I.Q. is 143-. This places her in the group of gifted children according to Terman's classification. Her Porteus age was 12 1/2 years. One should expect of such a child uniformly excellent performance in school. Her memory and reasoning capacity were excellent. H did not quite reach the 12 year level on the vocabulary test. This is inferior to what would be expected of a child with her ability.

H. is a child of very superior ability and should be given an enrichment of subject matter. It is recommended that a wide variety of reading material be provided for her, in order to enrich her vocabulary and broaden her background of experience. It is also recommended that she be given vocabulary drill employing the Thorndike word list.

Case III

Name V. Grade 6A M.A. 113 months
C.A. 176 months I.Q. 64.

V., 14 years, 8 months of age, has a mental age of 9 years, 5 months, and a resultant intelligence quotient of 64, which classifies him as potentially feeble-minded. His amiable disposition and willingness to attempt a task makes his mental deficiency less noticeable at first. His responses to the Binet-Simon tests were uniformly slow, labored, and inadequate. He showed no desire to criticize his achievement, accompanying most of his replies with a perfunctory question as to their correctness. His lack of ability to associate ideas was particulary marked on the free association test, in which he named but twenty-nine words in three minutes, (standard for 10 years is 60 in three minutes). Only visible objects were named.

V's age on the Porteus Maze Test of motor coordination was the same as that furnished by the Binet test, 9 years. In reading, V's achievement was that of the fourth grade child in rate, but reached only third grade quality in comprehension. His composite score on the Stanford Achievement Test, Form A was that which one would expect of a fourth grade child at the beginning of the academic year. There was a general inferiority displayed on all parts of the examination.

This child is unable to do average school work. His inability to comprehend reading material makes his present classification (sixth grade) difficult for him and for his teacher. He might well be placed in a special class and given work suited to his mental ability. As stated at the first of this report, V's disposition to try, and his

tendency to be happy and satisfied, probably make his handicap less noticeable, but his limited capacity and educational attainment do not justify his present grade classification.

RECORDING BLANK, EDUCATIONAL CLINIC

General Information:

Name _____ Date of Birth _____

Age in Months _____ Name of School _____ Grade _____

Name of Parent or Guardian _____

Post Office Address _____ Date of Examination _____

Examiner _____

Record of Examinations:

Physical Examination--

Height _____ Weight _____ Lung Capacity _____

Skin-- 0-normal 1-slight eruptions 2x-moderate eruptions 3x-marked eruptions

Anemia-- 0-normal color 1-slightly pale 2x-moderately pale 3x - very pale

Thyroids-- 0-normal 1-slightly enlarged 2x-moderately enlarged 3x-greatly enlarged

Tonsils-- 00-removed 0-normal 1-slightly enlarged 2x-moderately enlarged 3x-very large

Orthopedic Condition--

normal scoliosis (lateral curvature) lordosis (inward curvature) kyphosis (outward curvature)

1-slight _____

2x-moderate _____

3x-marked _____

Vision-- 0-normal 20/20 1-slightly defective 20/30 2x-moderately defective 20/40 3x-cannot read at 80/40

Vision with Glasses------ 00-normal 00/1-slightly defective 00/2x-moderately defective 00/3x-very defective

Date of first Glasses

Color Blindness _____ Handedness _____

Hearing-- 0-normal 1-slightly defective 2x-moderately defective 3x-greatly defective

Intelligence Examinations--

Motor Intelligence (Porteus Graded Maze Test)

Tests 3 4 5 6 7 8 9 10 11 12 13

Trials

1st _____

2nd _____

3rd _____

Linguistic Intelligence (Binet Test, Stanford Revision)

Chronological Age in Months _____ Mental Age in Months _____

Intelligence Quotient _____ Character of Answers:

Educational Achievement-Silent Reading Vocabulary Spelling

Title of Test Score