A STUDY OF THE REPEATER

in the Elementary Schools of

Kansas City, Missouri

by

Marie B. Westerfield, A. B.

Submitted to the Department of Sociology and the Faculty of the Graduate School of the University of Kansas in partial fulfillment of the requirements for the degree of Master of Arts.

Approved By: Manuel C. Elmer

Department of Sociology.

1919

FOREWORD.

This study was suggested by years of experience with repeaters in the schoolroom, and by the desire to know more of the child whom we meet daily in the class as a failing pupil. His previous life, school history, physical condition, home, family, and social contacts are known to us, if at all, only in part. The desire to follow him out of his school groups, and, by learning something definite of these unknown factors in his life, to gain a clearer understanding of the causes of his failure has led to the present survey.

We gratefully acknowledge the inspiration and guidance of Dr. Frank W. Blackmar, Dean of the Graduate School, Kansas State University and Head of the Department of Sociology; Professor Manuel C. Elmer of the Department of Sociology; Mr. I. I. Cammack, Superintendent of the Public Schools, Kansas City, Missouri; Mr. George Melcher, Director of the Bureau of Research and Efficiency in the Kansas City Schools. We also extend our sincere appreciation for their assistance and hearty cooperation to the Principals and Teachers of the schools in which the survey was made, and to Dr. Luella Z. Rummel who made the physical examinations, and to the school nurses under her supervision.

M. B. W.

C O N T E N T S.

B I B L I O G R A P H Y.

Ayres, L. P. Laggards in Our Schools.

Cornell, W. S. Mentally Defective Children in the Public Schools.

Cornell, W. S. Health and Medical Inspection of School Children.

Dewey, J. The School and Society.

Dewey, J. The Schools of Tomorrow.

Holmes, A. Conservation of the Child.

King, I. Education for Social Efficiency.

Mellville, N. Testing Juvenile Mentality.

Rapeer, L. School Health Administration.

Terman, L. M. Measurement of Intelligence.

Tredgold, A. F. Mental Deficiency.

Whipple, G. M. Manual of Mental and Physical Tests.

CHAPTER ONE. THE PROBLEM.

SECTION 1. The Problem Defined.

SECTION 2. Its Reaction upon the Individual and the Community.

SECTION 3. Outline of the Method of Investigation.

CHAPTER I. THE PROBLEM.

Section 1. The Problem Defined.

The efficiency of our present day institutions is being sharply called into question as more scientific methods are applied to educational processes and educational products are subjected to more accurate measurements. One of the most practical problems in the conservation of energy and the elimination of waste is that of the repeater in the elementary schools. This is not only because of the social waste thus entailed but because of the financial expenditure to the community at large. No commercial or industrial plant, it is pointed out, would for a moment be considered efficient if a great per cent of its output was of necessity turned back for a second or even third process. On the other hand it has been aptly shown that the material in the case of the educational institution is in no way comparable to that of the shop or factory, that variability is the law of human development, and uniformity of output is not to be expected.

To determine between these viewpoints is quite aside from our present purpose. The aim of this investigation has been to determine so far as may be in a limited field, what are the causes of this condition, in what field they lie, what changes in method of instruction, institutional management, adjustment of social environment may make for the elimination of this army of repeaters or at least a diminution in their numbers. What causes the repeater; what can prevent the necessity of his non-promotion, is our thesis.

Section 2. The Reaction upon the Individual and the Community.

To gain an adequate idea of the scope of the problem in the schools of Kansas City, Missouri, the following figures are presented. They were taken from the Annual Report of these schools for the year ending June, 1917, and from the statistics given by the Bureau of Research and Efficiency.

There were belonging at the close of the year 32532 pupils. Of these, 2688 or 8% of the number belonging were not promoted. These 2688 children will be repeaters in the following year but they will by no means represent ALL the repeaters for that year. In the first place, many children near the close of the school year, realizing that their promotion is impossible, drop out of school and so do not appear upon the records as non-promotions nor are they counted in the number belonging. These children re-enter the next school year and repeat the grade in which they failed. A greater number yet are promoted on trial. The large proportion of these being weak at the year's end are not improved by a three months vacation and are soon (often at the request of their parents) returned to a lower grade and persevere as repeaters the rest of the year, or term, as the case may be. From these two sources the number of repeaters is

Section 2. (Continued)

greatly increased; at a conservative estimate from one third to one half. This would approximate then, for the year, from 3500 to 4000 repeaters. The financial loss to the individual can in no way be satisfactorily estimated but it is easy to calculate it for the school system, which means the expense to the community supporting the schools. Referring again to the Annual Report of the Kansas City Schools, we find that the cost of maintenance per capita for the year 1917 was estimated to be on the average $43.50. Counting 4000 as the number taking the work a second time, the expense of repeating the instruction for these children at the average per capita cost totaled $174,000. That these figures are conservative will be seen from a subsequent report made in December, 1918, by the Bureau of Research and Efficiency. It shows 4423 repeaters, and the per capita cost for that year $57.00. Hence the cost to the district would total $252,111 for the year 1918-19. Add to this the fact that some children take the work a third time. It will be seen then, that from the point of expense, the problem merits consideration and careful investigation with a view to its possible solution.

When we come to consider that phase of the problem which has to do with its significance to the individual, we cannot count the cost with the same numerical accuracy. There is no saying what may be his loss in opportunity from these wasted years. With the increasing demand in every field of industrial, commercial and professional activity for young men and women, and the heavy discount put upon those of advancing years, it behooves us to conserve with care the early years of childhood.

If by reason of his native endowment, or the lack of it, he must progress slowly even in the most favorable environment, may it not be questioned whether schools that are adapted to the average child are the most profitable place for his slower development? In case he is more abundantly endowed, above the average, and the educational facilities seem to satisfy his every need, may not other conditions of vital importance to his welfare be responsible for his failure to make normal progress? If so, then these conditions should at once be called into question and become the subject of careful study by the investigator.

Section 3. Outline of the Method of Investigation Followed.

The method of study in this survey has been purely that of investigation and research. The investigation followed no line laid down by preconceived theory but sought to reveal conditions as they existed in the school, home, and social environment for each of the two hundred and fifteen cases studied.

Four schools were chosen which differed in social and economic conditions. School A was located in a prosperous residence section of the city where nearly all the patrons owned their own homes and

Section 3. (Continued)

had a generous margin above life necessities. School B was in a residence district, once first class, but now suffering the invasion of the apartment and boarding house; still respectable middle class. School C was in a much poorer neighborhood, the people being largely mechanics and laborers who live in poorer houses or apartments. School D was distinctly a down town school within the hotel district. Here we find the transients and the followers of seasonable occupations who live in crowded quarters for the most part, who today are and tomorrow are not a part of the community. The four schools afford a very good cross section of life in Kansas City. In none of those chosen was the foreign element sufficiently numerous to claim consideration. This omission was intentional as the handicap of a foreign language is obvious enough. What we are seeking is the cause of repeating in a normal American school by native English speaking children. From these schools thirty-nine rooms were surveyed totaling about twelve hundred and fifty children. Work in one of the schools, the one designated C, was of necessity discontinued and the survey left incomplete.

The first step in the gathering of data was to select the cumulative cards of all children who were then in the fall term of 1917 repeating their grade work. This cumulative card system was installed in 1914 and gives the child's school history from the time he entered the system. Of course in the case of children who entered school before 1914 the school history was not recorded and was obtained as fully as possible from other sources. The grades chosen for study were third to seventh inclusive. After these data had been entered on the record sheet an interview with both teacher and principal afforded much additional information. Next the child himself was engaged in conversation on some such pretext as reading or merely to help in filling out his cumulative card which was incomplete. In every case the child was found very responsive and easily lead to talk about himself freely, about his school and home and personal problems in his studies. When teacher, principal or school nurse could afford definite information as to the home it was accepted. In other cases calls were made by the investigator in the child's home to get as clear an understanding as possible of his social and economic environment. Each child was given a thorough physical examination by a competent medical inspector and his present condition as well as his history of contagious diseases entered on the record sheet. Lastly, pedagogical and psychological tests were given. Of the former the Trabue Language Scale was used and the Courtis Silent Reading Test No. 2. These were chosen from many possible tests as correlating most closely with general intelligence. The psychological tests given were the ones furnished by the Kansas State University Labratory; in cases where the reaction was peculiar or unsatisfactory, the Binet-Simon was employed as an individual test. Each of the above lines of research will be described at length in the following chapters.

A specimen of the record sheet or questionnaire upon which the data were entered is given below. The results of the Psychological tests were recorded elsewhere.

No.
Name Address Nat.
School Grade No. of years in school
Age entered reg. school Years in grade 1 2 3 4 5 6 7
Date of birth age Age for grade A N B
Mental age (B. S.) Retardation IQ

Attendence Reg. Irreg. Interrupted Cause
When
Conduct E G M P VP Health E G M P VP (Teacher's Estimate)
Moral Capacities
Obedience
Truthfulness
Honesty
Habits

Proficiency in school subjects
Inf.
Expr.
Math.
Man.

Subjects failed in:
Causes of failure given by teachers
parents
child

Reading - Index of comp. Speed

Home-
Language spoken
Nativity Father Mother
Care E G M P VP Discipline E G M P VP
Father living dead stepfather
Mother living dead stepmother
Older children living dead
Younger children living dead
Condition of home
Amusements provided
Social distractions
Facilities for home study
Quiet place
Reference books
Work required of child Encouragement
Physical Condition:
Height standing Sitting Weight
Sight Hearing
Oral cavity
Nasal obstruction
Anemia Malnutrition
Skin Nervous system
Circulatory Respiration
Orthopedic
Speech defects
Diease history: Chronic
Acute

CHAPTER TWO. SCHOOL HISTORY.

SECTION 1. Over-ageness, and Age at Entrance.

SECTION 2. Change in Schools.

SECTION 3. Time Lost by Non-promotion.

SECTION 4. Character of Attendance and Causes of Irregular Attendance.

SECTION 5. Grade Distribution of Failures.

SECTION 6. Subjects Failed in.

SECTION 7. Causes of Failure as Recorded in School Records.

SECTION 8. Home Study Requirements.

CHAPTER II. SCHOOL HISTORY.

Section 1. Over-ageness and Age at Entrance.

This survey was limited to a study of the pupils in grades 3 to 7 inclusive who were, in the fall term of 1917, actually repeating work done in the Kansas City schools the preceding term. There were other repeaters in these classes but they were not considered as the number was limited by taking only those who were at the time repeating. Two hundred and fifteen pupils who came under this head were found in the four schools. The following schedule presents the normal age for pupils in the Kansas City Schools.

Grade 1, 6 to 8 years.
Grade 2, 7 to 9 years.
Grade 3, 8 to 10 years.
Grade 4, 9 to 11 years.
Grade 5, 10 to 12 years.
Grade 6, 11 to 13 years.
Grade 7, 12 to 14 years.

To age six, the legal age for enrollment in grade 1, is added one year for each succeeding grade, a leeway of one year being allowed for difference in age at entrance.

The over-age pupil is one who is older than the normal age for his grade. The retarded pupil has not made normal progress in the years he has been in school. Both these types will be found in the repeating group. In the case of the younger pupils who entered grade 1 in Kansas City we have the direct evidence of the cumulative card. In all other cases the information was obtained from the child and his parents. One hundred and thirty-three, or approximately 62% of the repeaters, were found to be above normal age for their grade. An examination was then made to see how far late entrance would account for this condition. Eight children were found to have entered grade 1 at the age of five years; one hundred and sixty-nine, at the age of six years; thirty-five, at seven years; and three, at eight years. Thus only in three cases could over-ageness be attributed to late entrance. The remainder failed to make normal progress with one exception. In this instance the child was taken to Canada and in two years there attended school but three months.

Section 2. Change in Schools and School Systems.

Another irregularity has been the frequency of change in schools and school systems. We find that only ninety-three of the two hundred and fifteen repeaters have remained in the Kansas City school where they first entered grade 1, having made no changes. The changes made by the remaining one hundred and twenty-two are thus distributed.

Section 2. (Continued)

Pupils	Schools Attended
17	2
39	3
22	4
15	5
8	6
8	7
4	8
4	9
2	10
1	13
2	14

The nature of these changes may be further interpreted. Of these one hundred and twenty-two pupils who gave a history of change in schools, ninety-three had made all their changes from one Kansas City school to another. Seven had come in from country schools. Eleven from other city schools (three from Kansas City, Kansas). Eleven from Parochial schools in Kansas City, Missouri. The non-promotions for each group at the end of their first term in Kansas City schools are as follows:

Entered from other city schools	11	Failures	6
From Parochial schools	11	Failures	8
From country schools	7	Failures	2
From other Kansas City schools	93	Failures	7

The above facts would suggest that these changes have had some significance in the history of the repeater. Care was taken to place the child coming from an eight year system in a corresponding grade in the Kansas City schools which have seven years in their elementary system. It was the generally expressed opinion of the teachers that the failure of outside systems to articulate was a serious handicap. To illustrate: Many schools have no writing in their first grades. Others have no Grammar in their sixth, some none in their seventh. Some teach long division in the third, others in the fourth grade. These seem unsurmountable obstacles to the average child who enters a strange school where the work has been taken up in advance of the system he left.

Section 3. Time Lost by Non-promotion.

Until two years ago the Kansas City schools divided each grade into three terms, having A, B, and C classes in each grade. At the present the year is divided into two, an A and a B term. Because of this change it seems simpler to compute the time lost by each child from non-promotion rather than to list the times he failed of promotion. Below is the tabulation of the time lost by the two hundred and fifteen repeating pupils:

Section 3. (Continued)

Pupils	Time Lost.
8	1/2 year
87	1 year
63	2 years
38	3 years
15	4 years
4	5 years

It may be of interest to note especially the cases of those losing five years. The following data were revealed by examination.

Case 1. Boy, age 15. Entered a Kansas City, Missouri, school at age 7. Has transferred twice. Spent five years in the first grade. Is now in the fourth and has failed of promotion the second time in the fourth. His physical condition is reported by the examiner as excellent. His mental age (Binet-Simon) is 9.5; IQ, 63.

Case 2. Girl, age 15. Entered grade 1 at age 6 in a Kansas school. Appearance stunted, head large, joints enlarged. Father a circus man, mother a snake charmer. Child given intensive athletic training at early age. Failed in grade four and was placed in the ungraded room. Was married before the end of the school year.

Case 3. Boy, age 14 years 9 months. Entered Kansas City, Missouri, schools at age 6. Attendance very irregular. Domestic difficulties incident to his father's re-marriage reacted very unfavorably upon the boy. The moral atmosphere is very poor and he is often kept at home to work.

Case 4. Girl, age 15 years 6 months. Entered country school at age 6. Parents separated. Lives with aged grandmother. Moral environment the worst. Has enlarged thyroid and gives a history of meningitis. Teachers consider her dull mentally if not sub-normal.

From the above table we see the persistence of failure. One non-promotion, and a habit of failure is instituted. To lose two years is to fail of promotion four times. We have all ready estimated the expense to the community of the repeater. It is even more clearly demonstrated when we consider the individual case. For instance, the child in the fourth grade who has spent nine years in school has had more than twice his allotment financiallly. It is extremely doubtful if he has receive double benefit.

Section 4. Character of Attendance.

Of our 215 repeaters 133 or 61.8% show an irregular or interrupted attendance for the year in which they failed. By regular attendance is understood an attendance of from 180 to 200 days, there being

Section 4. (Continued)

20 days in the Kansas City school year. Below that, attendance is either irregular or interrupted. If the days absent are consecutive, the attendance is interrupted. If distributed through a considerable period, irregular. The latter is considered especially detrimental as it results in a lowering of the quality of all the work, loss of interest and nothing learned well. No well grounded habits can be formed under such conditions. the table below shows the character of the attendance for the four schools.

Schools	A	B	C	D	Total.
Regular	17	19	20	26	82 pupils
Irregular	5	21	10	13	49 pupils
Interrupted	14	36	13	21	84 pupils
			Grand Total		215 pupils

Going into the causes of the irregular and interrupted attendance, we find five main causes under which the cases may be grouped.

Schools	A	B	C	D	Total
Contagious diseases	5	24	3	8	40
Other physical disability	7	17	5	8	37
Home conditions	5	11	7	7	30
Moving about	2	5	4	6	17
Stopping to work	0	0	4	5	9
			Grand Total		133

These causes will be more fully discussed under their special chapters, Physical tests and home conditions. There can be little difference of opinion as to the dependence of school work upon punctuality and regular attendance. Irregularity of attendance is one of the outstanding causes of non-promotion; tho of course, it can not be expected to cover all cases of failure.

Section 5. Grade Distribution of Failures.

The distribution of repeaters in the grades was as follows.

Schools	Grade III	Grade IV	Grade V	Grade VI	Grade VII	Total
A	8	10	10	7	1	36
B	12	18	15	22	9	76
C	9	8	23	3	0	43
D	15	28	15	2	0	60

The great proportion will be seen to fall in grades 4 and 5. The small per cent in the seventh is marked, being but 4.8%

Various reasons were given by the teachers interviewed for the small number in the seventh grade. One was that greater care was taken

Section 5. (Continued)

in promoting into the seventh grade, only well prepared pupils being addmitted. Another was that children who would fail to graduate at the end of the year dropped out before the end and so were not listed as failures. Next year they do not return to school but start to work. A third reason given was that more definite and intensive teaching is given these children as they are the "show class" of the school. A fourth suggestion was that by the law of survival only the fit progressed so far and by means of their superior mental quality presented fewer failures. However it may be, the fourth and fifth grades remain the banner grades for the number of repeaters. Professor Kelly, Dean of the School of Education in the Kansas State University, has made the statement that there has been less definite normal instruction for teachers in these grades than has been provided for the Primary and the more advanced work, and that the standard of attainment on the part of the pupils has been very vague. It would seem that the numerous scales of measurement in Hand-writing, Arithmetic, Spelling, and Reading, coming so rapidly into use, might in the near future do much to add definiteness to intermediate grade instruction. A decided variation from the characteristic increase in grade five may be noted in school D. Here the economic situation shortens the school period. Many who are not especially successful in their school work get permits and go to work. Others are compelled to do this by force of circumstance.

Section 6. Subjects Failed in.

The school records showed no one of these repeaters to have failed of promotion because of failure in one subject except in the third grade, where a failure in reading made promotion to the next class futile. In the fourth, fifth, sixth, and seventh grades, the failures were in 75% of the cases recorded as general; i. e., two or three essential subjects showing failing grades and the others so low as to make a general average much below the passing mark. In the 25% remaining, two essential tool subjects were named. Arithmetic, Language, Geography, History and Reading were regarded as essentials.

Section 7. Causes of Failure as Shown in School Records.

The table below represents the causes of non-promotion as given in the school records.

Schools	A	B	C	D	Total
1. Mental Deficiency	5	8	4	9	26
2. Mental Dullness	9	18	4	7	38
3. Attendance	4	8	3	13	28
4. Poor Conduct	0	2	5	2	9
5. Immature	4	1	1	1	7
6. Indifferent or Lazy	3	6	2	3	14
7. Change of School System	4	4	4	4	16
8. Poor Health	0	4	1	3	8
9. Foreign Language	0	1.	0	1	2
10. Poor Home Control	0	12	1	6	19
11. From Other K. C. Schools	0	3	2	2	7
12. No Arithmetic Sense	1	1	1	2	5
13. No Attention	4	3	2	2	11
14. Economic Struggle	0	2	3	3	8
15. Nervous	1	1	3	2	7
16. At Request of Parent	0	1	1	0	2
17. Inability to Read	0	1	0	0	1
18. No Cause Assigned	0	0	3	0	3
19. Social Distraction	0	0	2	0	2
20. Previous Preparation Poor	0	0	2	0	2

These causes could have been consolidated and given under fewer heads but there would have been a loss in accuracy. In all these cases the teacher or principal, usualy both, were asked to give the causes and they appear in the table as they were given. Nearly all showed careful consideration. We note that while attendance has been assigned as cause in only 28 cases, other causes given, such as "lack of home control" or "poor health", have militated against promotion by means of attendance.

Section 8. Home Study Requirements.

Beginning with the fourth grade, all the schools required more or less home study. The nature and amount depended largely upon the individual teacher. Spelling was a favorite subject for home preparation. By many teachers a special effort was being made to form the habit of some reading at home every day. While in grades below the seventh, spelling with perhaps the partial preparation of one other subject was required, in the seventh grade the preparation of one entire lesson was assigned as home work. In two schools the subject was History, in another Grammar, or Language and Composition, and in a fourth, Arithmetic. In many homes the opportunity for quiet uninterrupted study was not to be had. A family of five in two small rooms can have little quiet or privacy. In other families a special room for the child or a library afforded the quiet needed.

CHAPTER THREE. MENTAL TESTS.

SECTION 1. Introduction; Selection of Tests.

SECTION 2. The Trabue Language Test.

SECTION 3. The Silent Reading Test.

SECTION 4. Group Psychological Tests.
Illustrative Cases of Low Scores.

SECTION 5. A Discussion of the Reactions in the Tests.

SECTION 6. The Binet-Simon Tests.
Illustrative Cases of Special Tests.

CHAPTER III. MENTAL TESTS.

Section 1. Introduction; Selection of Tests.

The Bureau of Research and Efficiency has employed numerous tests with a view to "reducing the waste in the school system, increasing the number of promotions, reducing eliminations and failures of pupils, and improving the quality of school work". A scale has been completed for measuring handwriting, word lists prepared for spelling and a concerted effort made to reach some standard in the spelling required in each grade. Courtis Tests have been extensively employed in the fundamentals of arithmetic. Silent Reading tests have been especially emphasized, and the Trabue Language Scale has been used from time to time.

From among these mentioned the Trabue and the Reading tests have been chosen for examination in this survey, the purpose being to measure rather the general intelligence and native ability of the child not the quality of training he has received. It is not possible in most tests to dissociate the two as reading of necessity is involved in the test and reading is largely a matter of training and instruction. However there is a closer correlation with intelligence in the Trabue and Silent Reading than in Spelling, Writing, and Arithmetic Fundamentals, proficiency in which are directly commensurate with drill.

Section 2. The Trabue Language Test.

The Trabue Language Scale E was given in schools A, B, and D from grade 3 to 7 inclusive. The test was given to thirty-one rooms or about 1250 children and all the papers graded by the investigator so that there would be no lack of uniformity in the standard of credit. The results when tabulated were a surprise in that the three schools ran so uniformly in their median scores for each grade.

TABLE I. Trabue Median Results by Grades.

School	Grade III.	Grade IV.	Grade V.	Grade VI.	Grade VII.
A	10	12	12	14	16
B	10	12	12--14	14	16
D	10	12	12	14	16

In only one instance were they not identical. This was in school B where one of the fifth grade rooms was fifth advanced and so came up in its median score with the sixth grade. From each of the thirty-one rooms the papers of the repeaters were compared with the median scores made by the other pupils in the room, each child being thus measured by the standard set by his own class. The results are shown in the table below.

Section 2. (Continued)

T A B L E II.

G R A D E III

Score	Schools A	B	D	Total
18				
16	2			2
14			1	1
12	2	1	4	7
10	1	2	4	7
8	2	4	1	7
6	1	2	4	7
4		2	1	3
2		1		1
Total	8	12	15	35

G R A D E IV

Score	Schools A	B	D	Total
18				
16				
14			2	2
12	1	4	1	6
10	2	4	9	15
8	2	3	3	8
6	3	3	12	18
4	2	3	4	9
2		1	2	3
Total	10	18	33	61

G R A D E V

Score	Schools A	B	D	Total
18				
16			3	3
14	2	2	1	5
12	2	5	5	12
10	2	1	3	6
8	2	1	2	5
6	1	2	1	4
4	1	3		4
2				
Total	10	14	15	39

G R A D E VI

Score	Schools A	B	D	Total
18		2		2
16		6		6
14	1	2		3
12	4	3	1	8
10	1	4	1	6
8	1	2		3
6		2		2
4		1		1
2				
Total	7	22	2	31

G R A D E VII

Score	Schools A	B	D	Total
18				
16	1	4		5
14		2		2
12		2		2
10		1		1
8				
6				
4				
2				
Total	1	9		10

Repeaters Above Class Median 28
Repeaters On Class Median 33
Repeaters Below Class Median 115
Total 176

Therefore 115 out of the 176 or 65.3% were below the class median.

N. B. Class Medians between lines.

Section 3. The Silent Reading Test.

The next test was the Courtis Silent Reading Test No. 2. which was given in May to the second, third, fourth, and fifth grades throughout the city. After these papers had been scored and returned to the Superintendent's office by the respective schools, those of the three schools were taken out for study. The median for each room was found as in the previous test, then the median by grades found. It was discovered that the median for the grades varied much more than in the case of the Trabue which in fact had not varied for all rooms in each grade. Below are the results in table form.

TABLE III. Silent Reading Median Results by Grades.

Grade	School A	School B	School D
3	91. 94.	79. 92.	90. 91.
4	95. 96. 97.	92. 95. 97.	95. 95.
5	96. 96. 98.	93. 95.	95.

It will be seen that the different rooms of the same grade did not always return the same median. This would indicate that the rooms were not of equal ability. In the third grade for school B we see the median 79 for a room composed almost almost entirely of one time repeaters, and as we would expect, find there the lowest score. In the table following each child has been measured up with the median made by his own room.

T A B L E IV.

G R A D E III

	A	B	D	Total
Above	2	6	7	15
Median	1	1	0	2
Below	5	5	8	18
Total	8	12	15	35

G R A D E IV

	A	B	D	Total
Above	2	7	5	14
Median	0	1	1	2
Below	8	10	22	40
Total	10	18	28	56

G R A D E V

	A	B	D	Total
Above	4		2	6
Median	0		1	1
Below	6		8	14
Total	10		11	21

Above Class Median	35
On Class Median	5
Below Class Median	72
Total	112

This shows 72 out of the 112 or 64.3% were below the class median.

It will be noted that the test in reading was not so complete some pupils not appearing at all in this test. The third grade remained intact but the fourth had lost some by transfer or withdrawal. The fifth grade is very poorly represented. This is explained by the fact that in many rooms at the middle of the year the classes changed their grade e.g. 5A pupils became 6B and hence were not given the test which was for grades 2 to 5 inclusive.

Section 3. (Continued)

Comparing then the results of the two tests we find that of the 72 who ranked below the median made by their classmates in the Reading 49 were also below the median in the Trabue test. Of the 35 above the class median in Reading, 25 were also superior in the Trabue. These findings show that while part of these children are able to keep up with the class score the greater number are inferior in spite of the fact that they have the advantage of a repetition of the work.

Section 4. Group Psychological Tests.

The tests used were group tests from the Psychological Laboratory of the University of Kansas.
They include;
The Word Building Test
Cancellation
Symbol Digit
Opposites
Free Association
Memory Span
Vocabulary
Trabue Language
Comprehension
(The Trabue was omitted from the group as it had been already given.)

The instructions were to find the sum of the scores for each child and upon this to establish the mental age. The fact that these tests as a group have not yet been standardized makes such application a little uncertain in results so it was decided to follow the method employed in the Trabue and Reading test i.e. establish a median from the tests of children in the same school who were no repeaters. In these tests we no longer find medians by classes but group the pupils by their chronological ages. We are endeavoring to measure the capacity and native endowment rather than the knowledge acquired from his previous instruction as does the Psychological Test. Because of the special significance, of each test, the results were tabulated separately before summing up the totals. The results of the unit tests follow.

Age	Range of Scores Nonrepeater	Range of Scores Repeater	Median Scores Nonrepeater	Median Scores Repeater	Comparison of Repeaters with Median of Nonrepeaters Above	On	Below	I.N.F.
		Test 1. Word Building Test.						
8-9	40--120	0-- 80	60	40	1	2	19	1
10	50--120	20--100	80	40	3	1	17	
11	40--140	10--120	100	60	1		26	
12	60--220	0--140	90	60	4	2	24	
13	110--230	10--170	130	70	1	1	28	
14	70--160	10--140	80	80	7	3	10	
15		20-- 90		60	1		6	
		Test 2. Cancellation Test.						
8-9	54-- 90	48-- 72	64	64	3	2	15	
10	58--106	38-- 82	80	56	1	1	19	
11	52-- 98	24-- 94	76	66	6	1	20	
12	58--102	51--106	80	74	11	1	20	
13	62--116	50--132	98	76	3	1	26	
14	72--122	48--114	98	82	2		16	2
15		50--116		74	1	1	5	
		Test 3. Symbol Digit Test.						
8-9	100—158	78—166	150	110	1		19	2
10	130—234	0—174	174	106		1	20	
11	146—200	80—200	180	140	3		26	
12	140—258	52—206	176	150	5		27	
13	178—278	0—230	252	170			29	
14	120—244	60—270	234	182	2	1	16	
15		112—244		188	2		4	
		Test 4. Opposites Test.						
8-9	60--120	30-- 90	90	60	1		19	1
10	50—140	30—130	100	60	3	1	17	
11	71—140	10—150	100	70	6		22	
12	100—200	0—150	140	90	2	2	25	
13	150—200	10—200	180	100	1		29	
14	100—190	0—180	180	120		1	18	
15		60—180		100		1	6	
		Test 5. Free Association Test.						
8-9	250—409	210—470	350	320	2		18	
10	290—450	160—440	400	260	2	1	18	
11	270—570	100—620	450	310	5		23	
12	380—640	40—640	560	390	2	1	29	
13	310—690	130—650	540	370	2		28	
14	310—760	20—560	480	400	4	2	13	
15		110—480		380		1	6	

Age	Range of Scores Nonrepeater	Repeater	Median Scores Nonrepeater	Repeater	Comparison of Repeaters with Median of Nonrepeaters Above	On	Below	I.N.F.
		Test 6. Memory Span Test.						
8-9	40—60	40—60	50	50	2	4	18	
10	40—60	20—60	50	40	1	3	17	
11	40—70	20—60	60	40		5	23	
12	40—70	30—70	60	40	1	2	28	
13	40—70	30—90	60	40	1	2	27	
14	40—60	30—50	60	40			19	
15		40—50		50			7	
		Test 7. Vocabulary Test.						
8-9	10—52	4—40	22	22	2	2	3	
10	18—44	2—34	32	18	1		14	
11	20—44	4—38	30	18	1		20	
12	24—52	0—46	44	32	2	1	18	
13	28—56	2—60	44	32	1		10	
14	24—52	6—46	40	32	2		9	
15		22—28		24			6	
		Test 8. Comprehension Test.						
8-9	12—52	16—36	28	20	1	2	4	
10	16—52	8—36	36	12		1	12	
11	32—60	8—48	40	18	1		19	
12	24—80	0—52	48	28	1	1	20	
13	40—60	8—48	48	32		1	10	
14	28—72	0—56	48	36	2		9	
15		20—48		40		2	6	
		Totals, Sum of 8 Tests.						
8-9	640— 960	512— 760	804	676			5	
10	724—1216	480— 922	934	608			13	
11	760—1202	474—1132	1038	692	1		20	
12	808—1446	173—1300	1188	907	2		21	
13	1060—1578	394—1314	1364	778			11	
14	880—1470	196—1280	1194	1029	2		9	
15								

By Sum of Tests is meant the sum of all the scores made by each child on the eight tests.

I.N.F. Instructions not followed.

Age 15 has been compared with the 14 year median as no 15 year olds were in the nonrepeating group.

Section 4. (Continued)

The following table shows the comparison of the Repeater with the median score made in each test by the nonrepeating group, ages 8 to 15 years inclusive.

Test	Repeaters			Per cent of Repeaters
	Above	On	Below	Below Median
Word Building	18	9	130	82.8%
Cancellation	27	7	123	78.3%
Symbol Digit	13	2	143	91.0%
Opposites	13	5	136	88.3%
Free Association	17	5	135	86.0%
Memory Span	5	16	139	85.6%
Vocabulary	9	3	80	88.8%
Comprehension	5	7	80	91.5%
Totals	5	0	79	94.0%

It will be seen that the number taking the tests varies, some pupils having missed part of them and only 84 having taken all the tests in the group. This is because they were not all given on the same day and a few were absent. In the case of the vocabulary and comprehension tests, the decrease in number is accounted for by the fact that they were given late in the year and the classes, especially in school D, had suffered numerous withdrawals and transfers.

It seems pertinent here to give a brief account of the five who were able to make totals above the median.

(1) Girl, age 11 years, Grade 5. Repeated the grade because she missed six weeks at the end of the previous term, sick with smallpox. Her parents did not wish her "to work too hard" and so requested the repetition of the grade.

(2) Boy, age 12 years, Grade 5. Failed of promotion because of a severe illness (scarlet fever) and a prolonged absence the previous term. He has always been considered bright in school and was doing excellent work in the fifth grade.

(3) Girl, age 12 years, Grade 6. Considered capable by both teacher and principal. Failed because of two absences the previous year caused by smallpox and measles. Making fair progress this term but attendance is irregular. Home is blamed for this condition.

(4) Girl, age 14 years, Grade 6. Reported as doing good work this term her failure being explained by extremely irregular attendance. She accompanied her father, a traveling man, upon numerous trips thus losing much time. She appears in the attendance table as having attended 13 schools.

Section 4. (Continued)

(5) Girl, age 12 years, Grade 5. Is doing excellent work this term. Failure due to a long absence, an operation for appendicitis. The above data show that these five children may be termed accidental repeaters. No one of them has EVER BEFORE repeated a term. Their failure has been due not to inferior mentality but to physical disability.

Section 5. A Discussion of the Reactions in the Tests.

The aim of the above tests is to measure the uncultured intelligence of the child, but as Norbert Melville points out, the intellectual faculty seems independent, not only of instruction, but of the faculty of learning at school i.e. the ability to assimilate school instruction. Other things besides intelligence contribute to success in studies. Qualities of attention, will, character, regularity of habits, and continuity of effort are absolute essentials. Now, these tests do not measure the ordinary power of attention because their novelty to the child holds him for the time being. The individual mental test may reveal much more that the group test does not touch upon for it affords the opportunity for a close study of the subject and a subtle analysis of his mental peculiarities not permitted in a group performance. On the other hand the group test has its advantages for it gives an excellent opportunity for a study of the repeater from the very angle we most desire. The test being given to all alike at the same time with no possibility of difference in conditions, enables us to compare the repeaters with their classmates as to their efficiency in the performance of a task new to both. Thus under identical conditions we may compare their reactions. In the measurement of these reactions, no definite standard has been fixed by which the mental age has been computed or the retardation measured. The norm employed is the median score made by the other children of the same chronological age, who are making good in their classes.

From a study of these results as shown in the table above, we may make the following deductions;

(1) The tests give us the reaction of both groups to a new situation and, by comparison with the adopted norm, we see that the attack and performance of the repeating group is, in the majority of cases, greatly inferior to the normal average established by the performance of the nonrepeating group.

(2) A study of the range from the lowest to the highest scores made by the two groups in each test brings us to two conclusions.
(a) The lowest scores for the repeating group run much lower than do those for nonrepeating group with one exception found in Test 6, Memory Span. Here a child, a girl age nine, made her lowest score identical with the lowest score of the other group. It may be well to add that the pupil standing next to her in order of scores was ten points

Section 5. (Continued)

lower than she. So the exception may be regarded as negligible in its bearing on our present comparison, interesting as the variation may be in the case of the individual child.
(b) The highest scores made by each group show the nonrepeaters decidedly superior. There are but seven exceptions to this. These are individual cases of variation and no one of them was able to bring his total of all the tests up to the normal average adopted as the norm. The general inference would be then, since these children as a whole have been found less ready to adapt themselves to a new situation and respond with less efficiency than the average who are able to keep up with their classes, that they are less fortunate in their native endowment, and inferior in those mental qualities that make for efficiency and aptitude in scholarship.

Section 6. The Binet-Simon Tests.

Out of the 112 repeaters in schools A and B thirty-five were chosen for individual mental tests. Those pupils were chosen who were suggested by the teachers as possibly sub-normal in intelligence; others were chosen because their performance in group tests had been unsatisfactory. More of these tests would have been given had time allowed. School D was omitted as the school year came to an end before it was reached. After the thirty-five above mentioned were tested a number from those doing satisfactory work in their classes were also tested and we found them in every instance giving most satisfactory scores, every one showing a mental age practically identical with his life age. This was evidence that the tests were not unfair to the repeater. Some time was allowed to elapse between the group test and the individual test. The Binet-Simon and the Yerkes Point were used, besides this the Goddard Form Board.
The results of the thirty-five tests follow.

Binet-Simon Tests.

	Subject	Chronological Age	Binet Age	Intelligence Quotient
1.	Girl	13 yrs. 6 mo.	13.0 yrs.	96
2.	Boy	12 yrs. 2 mo.	12.0 yrs.	98
3.	Boy	11 yrs. 5 mo.	11.0 yrs.	96
4.	Boy	9 yrs. 3 mo.	8.0 yrs.	86
5.	Girl	12 yrs. 6 mo.	11.0 yrs.	88
6.	Boy	11 yrs. 5 mo.	10.0 yrs.	87
7.	Boy	14 yrs. 3 mo.	13.1 yrs.	91
8.	Boy	10 yrs. 10 mo.	9.6 yrs.	88
9.	Girl	11 yrs. 6 mo.	10.3 yrs.	89
10.	Boy	14 yrs. 9 mo.	12.9 yrs.	87
11.	Boy	13 yrs. 8 mo.	12.6 yrs.	92
12.	Boy	12 yrs. 3 mo.	11.1 yrs.	90
13.	Girl	11 yrs. 1 mo.	10.0 yrs.	90

Section 6. (Continued)

	Subject	Chronological Age	Binet Age	Intelligence Quotient
14.	Girl	9 yrs. 8 mo.	8.0 yrs.	82
15.	Girl	10 yrs. 9 mo.	9.1 yrs.	84
16.	Girl	12 yrs	10.0 yrs.	83
17.	Boy	14 yrs. 1 mo.	12.0 yrs.	81
18.	Girl	13 yrs.	11.0 yrs.	84
19.	Boy	12 yrs. 7 mo.	10.0 yrs.	80
20.	Girl	13 yrs. 9 mo.	11.2 yrs.	81
21.	Girl	10 yrs. 11 mo.	8.6 yrs.	78
22.	Boy	13 yrs. 6 mo.	11.0 yrs.	81
23.	Boy	14 yrs.	11.2 yrs.	80
24.	Boy	13 yrs.	11.0 yrs.	84
25.	Girl	13 yrs. 10 mo.	11.6 yrs.	84
26.	Boy	9 yrs. 6 mo.	7.5 yrs.	79
27.	Boy	12 yrs. 7 mo.	10.7 yrs.	85
28.	Girl	12 yrs. 8 mo.	9.9 yrs.	78
29.	Girl	12 yrs. 6 mo.	10.0 yrs.	80
30.	Girl	14 yrs. 6 mo.	11.0 yrs.	76
31.	Boy	14 yrs. 6 mo.	10.8 yrs.	74
32.	Girl	11 yrs. 8 mo.	7.6 yrs.	65
33.	Girl	11 yrs. 5 mo.	8.0 yrs.	69
34.	Girl	14 yrs. 10 mo.	10.4 yrs.	70
35.	Boy	14 yrs. 7 mo.	9.7 yrs.	67

Professor Lewis Treman interprets the Intelligence Quotient as follows:

90 – 110	Average, or normal intelligence
80 – 90	Dull
70 – 80	Border line deficiency, sometimes classed as dullness often as feeble mindedness
Below 70	Definite feeble mindedness

The I.Q. of the thirty-five cases tested were distributed as follows:

I. Q.	Pupils	
90 – 98	7	Average (low in scale as av.= 90–110)
80 – 90	19	Dull
70 – 80	6	Border line
60 – 70	3	Defective

A brief summary of the findings in the last six cases on the table follows:

Case 30. Girl, age 14 years, 6 months. Binet-Simon age, 11 years. Retarded 3.5 years. I.Q. 76. Neurotic and unstable emotionally. Follows the slightest suggestion, wavers continually, seeks a cue for her response in test. She is poor in an auditory situation and fails utterly in analysis. Absurdities are accepted without hesitation.

Section 6. (Continued)

In Free Association words have no logical connection, are weak and shallow abounding in prepositions and conjunctions, expressing no thought. The words are uttered hurriedly then long pauses occur, a neurotic earmark. Opposites are responded to at random, sometimes with synonyms. She appears to have little power to hold attention and sustain it, is nervous and restless in manner.

Case 31. Boy, age 14 years, 6 months. Binet-Simon age 10.8 years. Retardation 3.5 years. I.Q. 74. Is in the fourth grade but cannot read. Neither interprets the page nor pronounces the words. He talked so continually that it was difficult to get responses to the test. Narrated many personal experiences in a boastful manner and asked many personal questions. Responded poorly to auditory tests but the medical examiner reported his hearing excellent. Showed extreme restlessness during the test, in almost constant motion, at times getting up and running to the window. Reacts unerringly to the practical situation, can run a car and gave excellent service as errand boy in the Red Cross drive. Is spoiled, petted, egotistical and uncontrolled in the home. Parents accept his inability to read as a peculiarity of no especial significance and urge his promotion.

Case 32. Girl, age 11 years, 8 months. Binet-Simon age 7.6 years. Retarded 4.1 years. I.Q. 65. Is in the third grade at school, doing failing work. Sight and hearing defective, nasal obstruction, anemic. Says she is a somnambulist. Keeps all the fingers of her left hand in her mouth and mumbles her words in speaking. When told to remove her fingers from her mouth does so promptly but soon has them back again. Fails in kinaesthetic sensitivity, is slow and inaccurate in the form board performance. Fails absolutely in invention and discrimination. Would seem to be of very low grade intelligence, defective mentally and physically.

Case 33. Girl, age 11 years, 5 months. Binet-Simon age 8 years. Retardation 3.6 years. I.Q. 69. No discernible defect in visual or auditory mechanism but of defective mental grasp. Can read very little, mumbles and does not interpret except the simplest primer stories. Invention and discrimination nihil above age 7. In free association the words were few and babyish as "papa, mama, baby, dolly, etc". Form board performance slow and faulty showing lack of coordination. Is fair in mechanical arithmetic hence her ability to move on at all so far. Is in the third grade. Fails in reading, spelling, and language.

Case 34. Girl, age 14 years, 10 months. Binet-Simon age 10.4 years. Retardation 4.4 years. I.Q. 70. Teacher reports inability to spell, no grasp of sentence structure, and no mathematical sense. Very talkative and narrates experiences at times very intelligently at times becomes quite incoherent. Her manner is bright and animated and she

Section 6. (Continued)

seems to understand directions readily but is inaccurate and often fails altogether in their execution. She bites her nails but shows no other earmark of nervousness. She says she cannot learn and wishes she could but seems not to worry in the least over it. Says she "just loves housework" and is sure she can do it "better than lots of girls". The medical examiner reports extreme eye defect but she refuses to wear glasses. "They don't feel good and she can see better without them". Her mother was criminally insane attempting to kill her baby. She died in a hospital for the insane. Girl is in the fifth grade at school and gives no trouble but does not learn.

Case 35. Boy, age 14 years, 7 months. Binet-Simon age 9.7 years. Retardation 5 years. I. Q. 67. In the fourth grade at school, inattentive, inclined to be mischievous but not ugly, has not yet learned long division. Test proves weakness in association either analytic or synthetic, very poor response to auditory stimulus. No nerve signs, manner pleasant and interested, with no anxiety and no consciousness of failure. Was kept in another school five years in the first grade with no special benefit. Since then he has been put on to make up time tho his failure this year is certain. His father has never been successful in business, the family receiving help from the father's brothers and sisters. The mother is slovenly and careless, the home receiving little care and the children being neglected.

The six cases just cited as extremely backward three of them deficient mentally, comprise 5.3% of the repeaters in schools A and B. The findings then of the individual tests merely corroborate the evidence already given by the pedagogical and group psychological tests. They have the advantage of being standardized and enable us to measure definitely the degree of retardation with as much accuracy as may be. On the whole they add little else to our general conclusion that there is a significant inferiority in the ability of the repeater. This is clearly shown in all the tests no one of them suggesting the contrary conclusion or requiring us to qualify it in any way.

CHAPTER FOUR. PHYSICAL EXAMINATIONS.

SECTION 1. Relation of Physical Defect to Mental Progress.

SECTION 2. Health Inspection in Kansas City, Missouri.

SECTION 3. General Results of this Examination.

SECTION 4. Defects.

SECTION 5. Chronic Disease Conditions.

SECTION 6. Functional Nervous Disorders.

SECTION 7. Contagious and Infectious Diseases.

SECTION 8. Tabulation of All Examination Results.

CHAPTER IV. PHYSICAL EXAMINATIONS.

Section 1. Relation of Physical Defect to Mental Progress.

It has long been an accepted fact that extreme mental backwardness and mental dullness may be caused by pathological conditions. Mental slowness may be directly conditioned by physical and sensory defects. Their discovery and removal, may entirely clear up the mental deficiency, or work an improvement in the mental state. Feeble and ineffective brain action is many times the result of poor physical condition; anemia, malnutrition, poor circulation, which react upon the brain, starving it and diminishing its activity. Defects of the special senses, or disease and improper functioning of the ductless glands may be the direct cause of mental immaturity. Just to what extent physical condition affects school progress has not as yet been fully determined. Dr. Ayres in his "Laggards In Our Schools" discusses the findings of a survey in Philadelphia, Camden, and New York along these lines. After a careful study of the defects of children and a further study as to the possible relation of these defects to their retardation, he makes the following summary;

(1) That physical defects decrease with age; that age is the important factor and must be taken into consideration in all investigations dealing with defectiveness and school progress.

(2) It has been shown that vision does not follow the same rules as do the other defects.

(3) The examinations conducted in New York have showed higher percentages of enlarged glands, defective breathing, hypertrophied tonsils and adenoids among dull children than among bright children.

(4) It has been demonstrated that physical defectiveness has an important bearing on the progress of children.

Since it is so generally understood that the relation between school progress and physical defect is of decided significance, a physical examination followed the Mental Tests discussed in the foregoing chapter. In our problem the satisfactory thing would have been the examination of all the children in the schools surveyed, then a comparison of the repeaters with the nonrepeaters as to physical condition. Owing to local conditions, this was not possible. For such a comparison we must look to the findings of others in this field. To quote again from the New York investigation, "In general, children suffering from physical defects are found to make 8.8% less progress than do children having no physical defects. Children suffering from enlarged glands and adenoids are retarded most".

To obtain any examination whatever was difficult as there has never been a thorough, effective well organized system of "Medical

Section 2. (Continued)

Examination" in the schools of Kansas City, Missouri. No records uniform throughout the city exist. Some schools have cards that are the relics of some one of the transient systems that at one time held, but even in these schools the records are not complete as they do not include all the children nor do they give by any means a complete record of the few who are thus represented. There is nowhere, on file, a record card kept up to date of health and physical condition that would correspond to the cumulative card employed by the schools to record scholarship and attendance. The cumulative card just referred to, has also a space for the estimate of the child's health each term. This is made out by the teacher and, in most cases, is of necessity based solely upon her limited observation of him. The frequent discrepancies between these reports and those turned in by the Medical Examiner were, to say the least, interesting in many cases. This is not to be interpreted as a reflection upon the intelligence or capability of the teacher. She is not expected to be an expert in Anatomy, Pathology, etc., and the more significant defects that react most seriously upon the child's mentality are not easily discernible to the untrained observer. Many times, it may be added, they have escaped the attention of the medical man who has received no special training in the physical examination of school children.

In the fall term of school 1917, at the time this material was being collected, a philanthropist donated $15,000 to be used for Medical School Inspection. Five physicians were employed for half time, ten nurses for whole time, and five clinics were established. By the courtesy of one of these physicians who had a special interest and experience in this work, we were able to obtain examinations for the repeaters in schools A, B, and D. All the repeaters still enrolled in the spring term when the examination was made were examined. In school C fifteen of the cases were examined by the regular clinic doctor. The examiner was severely handicapped by exigency of time and by the utter lack of equipment. In only one school were there scales to be had, and in none any apparatus for measurement. The clinics were too crowded with emergency cases to permit of their use. Notwithstanding these difficulties, 164 of the repeaters were examined carefully and their record cards made out. Care was taken to learn all available of the personal and family history of each. The fact that the same doctor examined other children and came regularly to the school freed the repeaters from any suspicion that they were receiving special attention.

Section 3. General Results of This Examination.

Of the 164 repeaters examined four were found who were practically without defect or disease and were pronounced physically fit. Eighty-one presented a pathological condition, in some cases a defect in other cases a combination of defects that must, in the opinion

Section 3. (Continued)

of the examiner, react unfavorably upon the present mental efficiency and the subsequent mental development. The remaining 79 were each possessed of some defect or disease condition with varing degrees of significance. The fact of any abnormality has its significance, for unless remedied, or, as may chance in some cases, outgrown, its persistence is bound to be deleterious to mental growth.

Section 4. Defects.

The sense of sight is the most important of all the senses educationally as in most individuals the visual memory is the strongest and develops first. Sixty-one children were found to have defective sight, forty of them being astigmatic.

AUDITORY DEFECTS.

Auditory defects numbered fifteen. Two of these cases of auditory defect may be of interest as they are typical of such cases,

(1) Boy, age nine in grade 3. Reported by the teacher as extremely inattentive but in her opinion possessed of a good mind. His reaction to the Group Psychological tests was very unsatisfactory as in four out of eight he failed to follow instructions. When some time later he was given the individual Binet-Simon test he showed no retardation. This seemed difficult to explain until the Physical Examiner reported that in the right ear six inches was the greatest distance at which he could detect the watch tick. The hearing of the left was also below normal. His tonsils had been removed a year previous to this examination but he still breathed thru his mouth. He was extremely restless and neurotic.

(2) Girl, age thirteen in grade 4. Teacher reports her absolute failure and considers her sub-normal in intelligence. Physical examiner reports hearing much impaired in both ears, the left having a chronic discharge. Tonsils and adenoids had been removed; the palate was deformed. In the above cases the effect upon school progress is beyond question.

SPEECH DEFECTS.

Three stammerers and one who is unable to articulate many of the sounds were found in the group. All were more or less nervous in behavior and two suffered from self consciousness to a noticeable degree. Three were reported by the teachers as very poor spellers. That they were poor in reading is to be expected, especially in any oral performance.

DEFECTIVE TEETH.

Defective second teeth were found in sixty. The effects of decayed teeth are too well understood to need any discussion here.

Section 4. (Continued)

They may be summarized as contributing to a predisposition to infectious disease and a general lowering of the tone of the health and vitality.

ORTHOPEDIC DEFECTS.

Only those who presented marked defects were reported. Many, including nearly all adenoid cases, were stoop shouldered and flat chested. Nine presented serious orthopedic defects as follows: Seven spinal curvatures and two lameness, the one in the hip necessitating the use of a crutch, the result of a neglected injury, the other a disease of the knee joint that made walking slow and painful.

Section 5. Chronic Disease Conditions.

First among these we will mention the Nasal Obstructions and Hypertrophied tonsils as they have a certain relation to defects and may in one sense be considered as such for they are usually the result of poor heredity or malformation of the oral and nasal cavity. Sixty-four cases of enlarged tonsils besides 43 who suffered other nasal obstruction, the result of a defective palate or adenoid growths were found. Thirty-three had submitted to operations and in some cases were showing improvement. Many were still mouth breathers. Fifty-seven were in decided need of immediate treatment for hypertrophied tonsils or nasal obstruction due to adenoids. Out of the 164 there were 74 who were not affected by any nasal obstruction.

Other Chronic pathological conditions were as follows:

Anemia	29
Skin Disease	14
Lungs Affected (ralls)	5
Heart Murmurs	11
Enlarged Glands	13
Defective Thyroid	2
Hernia	2
Rheumatism	13
Kidneys Affected	3
Sore Eyes	1
Discharging Ears	6
Appendicitis	3
Hemorrhoids	1
Persistent Nasal Catarrh	2

The above were all children who had suffered frequent irregularities of school attendance as a result of illness.

Section 6. Functional Nervous Disorders.

In a separate group we may consider those functional nervous disorders that are especially significant of nerve tension as well as

Section 6. (Continued)

habits that would indicate nervousness. Six gave a history of Chorea, three having been out of school a year or more because of severe attacks. One case of incipient Epilepsy it may be added that he was unable to finish the school year because of his physical condition. Two cases of extreme mental depression were called to our notice by the teachers. The evidence of the child and the parent in each case gave further proof that such attacks were periodic and of long standing. Seventeen complained of severe headaches, which in nine cases were periodic. Two of these children volunteered the information that they were somambulists. One case of occasional hysteria was reported by both teacher and parent who recognized the condition. Fifty-three gave silent physical evidence of habitual nail-biting. Masturbation was in but two cases a certainity tho it was suspected in many. The examination was not of such a character as to give absolute proof of this habit. The two reported were so apparent as to have been detected by the teacher in the school room. All of the above manifestations of nervous disorder and lack of emotional control are well known earmarks of the neurotic child. His emotional instability manifests itself often in the school room in failure to concentrate the attention and in habitual listlessness, often, in the motile type, in mischievous and disorderly conduct.

Section 7. Contagious Diseases.

The contagious disease records were of interest, in the first place, because of the frequency with which they were charged with being the chief cause of the child's failure; this, by reason of his interrupted attendance, was given in thirty instances as the primary cause of non-promotion.

The effect of these contagious and infectious diseases upon the subsequent physical and mental development of the child is one open as yet to controversy. So able an authority as W. S. Cornell may be quoted among those who disclaim any permanent ill effects from the minor diseases as he styles the common diseases of childhood. They have, in his estimation, no significance except as they operate to exclude the child from school for a long period or have a medical significance. "Measles and chicken-pox are incidental to the life of the child and have no after effect" is the final conclusion he gives us in his book, "Health and Medical Inspection of School Children".

The other theory is that any disease accompanied by fever leaves an indelible mark upon the growing organism. The toxic poison in all such febrile conditions has a peculiar affinity for the undeveloped nerve cell which it destroys. Thus by a diminution in the number of nerve cells and a reduction in the vitality of those that may survive, the apparently innocent childish contagions (of which measles is an example) deplete the nervous system and forever render

Section 7. (Continued)

impossible its full development. The cortical area suffers especially an irreparable loss. If we accept the latter theory, the facts given in the following tables have a most sinister significance.

NUMBER OF CONTAGIOUS DISEASE CASES IN SCHOOLS A. B. D.

School	A.	B.	D.	Totals
Measles	29	61	47	137
Mumps	19	48	28	95
Pertussis	13	53	23	89
Chicken-pox	19	41	25	85
Scarlet Fever	8	25	13	46
Small-pox	0	13	10	23
Diphtheria	1	10	5	16
Meningitis	1	1	2	4
Typhoid	1	1	2	4
Pneumonia	1	8	5	14
Infantile Paralysis	0	2	1	3

The tabulation below shows how many contagious diseases each child in the group has had. It gives in other words, the per capita of these diseases. The evidence of the child was relied upon as there was no permanent record of them. The number having none may be questioned, small tho it is. One of these children was known to come from a family whose cult does not recognize the existence of disease as a reality.

Children in School	A	B	D	No. Diseases Reported (Contagious)
	1	0	2	0
	4	3	5	1
	7	9	13	2
	13	20	20	3
	5	22	14	4
	4	13	3	5
	0	5	0	6
	0	1	0	7

Summing up of the Above Contagions

One Child had	Seven
Five Children had	Six
Twenty Children had	Five
Forty-one Children had	Four
Fifty-three Children had	Three
Twenty-nine Children had	Two
Twelve Children had	One
Three Children had	none (?)

Section 7. (Continued)

The frequency of contagion and accompanying quarentine here shown cannot, to say the least, have contributed to regularity of school attendance and physical fitness. The question very naturally arises, "To what extent would scientific Medical Inspection have been able to prevent their prevalence?" We should have had, at all events, a reliable record of the history of each and not have been compelled to turn to family tradition for evidence. To afford a comparison of conditions in the respective schools we will close the report with a table of the distribution of all the Defects and Chronic Diseases among the schools visited.

Section 8. Tabulation of All Examination Results.

Report of Special Physical Examination of 164 Repeaters in Schools A. B. and D.
Number examined in each school,
A. 34 B. 73 D. 57

The distribution of the cases already discussed follows:

DEFECTS.

	School A	School B	School D	Total
Sight Defective	16	27	18	61
Hearing Defective	1	8	6	15
Speech Defect	0	2	2	4
Teeth Defective	13	27	20	60
Serious Orthopedic	3	1	5	9
NASAL OBSTRUCTION.				
Tonsils Hypertrophied	12	32	20	64
Other Nasal Obstruction	3	24	16	43
Already Operated Upon for Nasal Obstruction	5	16	12	33
Needing Treatment	12	27	18	57
CHRONIC DISEASE CONDITIONS.				
Anemia	8	14	7	29
Skin Diseases	3	9	2	14
Lungs (ralls)	1	2	2	5
Heart Murmurs	0	6	5	11
Enlarged Glands	1	5	7	13
Defective Thyroid	0	0	2	2
Hernia	0	1	1	2
Rheumatism	4	6	3	13
Kidneys Affected	0	2	1	3

Section 8. (Continued)

	School A	School B	School D	Total
Sore Eyes	1	0	0	1
Discharging Ears	0	4	2	6
Appendicitis	0	3	0	3
Hemorrhoids	1	0	0	1
Persistent Nasal Catarrh	0	1	0	1
NERVOUS DISORDERS. Symptomatic of Nerve Tension.				
Chorea	1	2	3	6
Epilepsy (incipient)	1	0	0	1
Mental Depression	0	1	1	2
Severe Headaches	4	11	2	17
Hysteria	0	1	0	1
Nail-biting	8	20	25	53

In conclusion, tho we have not the data from a corresponding examination of the nonrepeaters for a comparative study of the prevalence of defect chronic disease, nervous disorders, and contagious disease interruptions, we can note the extreme frequency of physical handicap among the 164 repeaters. Further comment upon physical condition as a factor in failure and non-promotion is reserved until the social environment has been taken up in the next chapter.

CHAPTER FIVE. SOCIOLOGICAL RELATIONS AND THE HOME ENVIRONMENT.

SECTION 1. Introductory.

SECTION 2. Striking Cases of Poor Environment in the Four Schools.

SECTION 3. Economic Conditions.

SECTION 4. Parents and Parental Control.

SECTION 5. Size of the Family.

SECTION 6. The Moral Environment.

SECTION 7. Literacy.

SECTION 8. Summary and Comparison with Mental and Physical Test Results.

CHAPTER FIVE. SOCIOLOGICAL RELATIONS AND THE HOME ENVIRONMENT.

Section 1. Introductory.

Poor environment is a cause of poor mental development and retardation in school progress. It may operate in different ways.
(1) Through lack of proper stimulus.
(2) Through unhygienic conditions, either the result of poverty or of over indulgence in the wealthy home.
(3) Through lack of control and discipline.
Each stratum of society presents its own peculiar problem as does each individual home in the various strata. As an introduction to a more general discussion of home conditions revealed by our investigation, a few of the more striking examples of adverse home environment may be given in outline. Being taken from these four schools they may very well illustrate the different social problems existing in the school system of any city.

Section 2. Striking Cases of Poor Environment in the Four Schools.

Case 1. A.---J.---. Girl, age 10 years and 5 months. Grade 3. Home a basement, extreme poverty evident. Father has been unable to work for a year and a half because of an injury, was crushed by a box car. Mother cleans cars; two older children work. Three younger children in the family, hence the earnings are inadequate. A. is very anemic; has defective teeth; is sway backed with shoulder wings; is very nervous, lisps, sucks her thumb continually in school; is a chronic masturbator. She has had six contagious diseases including scarlet fever, and pneumonia. Her mother refuses absolutely to permit a thorough examination or any special treatment. She is untidy, not clean, poorly clothed and often hungry; has no chance of promotion this turn.

Cases 2, 3, 4. These are grouped as they are all from the same family. Father a Bohemian, an excessive drinker, after brutal conduct and neglect deserted. His whereabouts are unknown and the mother is trying to get a divorce. Mother worked in factory till taken to hospital (charity) for an operation, now washes some at home when able. Older brother and sister work at Loose Wiles Biscuit Factory, small pay as they are unskilled. A younger child is also in school. As for the three children;
J---. Boy, age 12 years. Grade 3. Anemic, has speech defect, very low grade physical as well as mental. Cannot learn, so the teachers report, is idle, and bad tempered. No chance of promotion.
F---s. Boy, age 11 years. Grade 3. Anemic, has ralls in left lung, left ear has a chronic discharge. Fails utterly to concentrate, and to sustain attention. Promotion very unlikely.
N---e. Girl, age 9 years and 6 months. Grade 3. Anemic with enlarged glands. Is brighter than the boys and could learn if her attendance were regular. All of these children have very irregular attendance.

Section 2. (Continued)

Case 5. F---H---. Boy, age 11 years and 2 months. Grade 3. Economic condition of home very poor. Father a bookkeeper works only occasionally; drinks. Mother dresses well, does not work and her moral character questionable. Two younger children in the home and their teachers report failing work. F. is idle, careless, steals, and has written his own excuses on several occasions when truant. Smokes continually and is entirely out from under home control. Physical condition is anemic, has chronic rheumatism, a tumultuous heart, and periodic headaches. Eyes are very astigmatic and have never been properly fitted with glasses.

Case 6. M---W---. Girl, age 10 years. Grade 3. Home comfortable, father a janitor and mother seems capable. Of two older children, a brother is epileptic and cannot attend school. A sister who is very dull is failing in the sixth grade. M. is willful and difficult to control, sulks when reproved; is poor in all her studies, is undersized and mentally slow; has hypertrophied tonsils and is partially deaf in left ear. A gland that was thought tubercular was removed in infancy. She will not be promoted.

Case 7. N---J---. Girl, age 15 years. Grade 5. Parents separated, lives with grandmother, father, and older sister. Economic condition comfortable but the moral atmosphere the worst possible, the girl herself thought to be involved. Rides frequently in auto with men. N. is very dull, does not learn at school. Has enlarged thyroid and gives history of scarlet fever and meningitis. Promotion very doubtful.

Case 8. G---G---. Girl, age 12 years and 4 months. Grade 5. Extreme poverty; father, G., and younger sister live in one basement room. Father drinks and is at times brutal to the children. Mother died six years before with tuberculosis. G. is the home keeper and keeps herself and little sister neat, clothes being donated by society (charitable). She makes good progress when present but is often absent owing to home conditions. Has attended seven schools in two years, the result of continual moving. Is anemic and has hypertrophied tonsils.

Case 9. E---R---. Girl, age 13 years and 2 months. Grade 6. Extreme poverty; the father a paralytic, lives in south with relatives. Mother works in laundry at six dollars a week. Two older sisters work in Ten Cent Store. E. and two younger children attend school as the mother is very anxious to give them an education. E. is neat and obedient but learns slowly, is weak physically, often absent because sick; had a severe mastoid operation last year and is very anemic.

Case 10. A---M---. Girl, age 11 years and 4 months. Grade 6. Economic condition of home poor, father tubercular and cannot work; mother works in tailor shop. A. an only child, is neatly dressed and has music lessons at the expense of nourishment. Is anemic and undersized. Often comes to school hungry.

Section 2. (Continued)

Case 11. C---D---. Girl, age 12 years. Grade 6. Economic condition of home good, both parents living, father a contractor. The older brother is an imbecile. Two older sisters died recently of diabetes. There are three younger children apparently normal. C. has been pushed in school by the mother until she developed diabetes last term, since then her attendance has been irregular. Like the two sisters who died, she learns very slowly. Poor heredity is apparent.

Case 12. H---N---. Boy, age 11 year and 4 months. Grade 5. Parents living and circumstance comfortable. Three children in the family, an older brother who could not learn the multiplication table so stopped in the fourth grade, and a twin sister who has been trained to wait upon and carry H. through all difficulties. This included lessons and so he developed no independence. The teacher to stop this promoted the sister and held H. who is having great difficulty relying on himself. He has been so spoiled that it is very hard to develop any sense of responsibility in him. He fails utterly in hand work and in arithmetic, both of which his twin sister does well.

Case 13. Z---R---. Boy, age 12 years and 7 months. Grade 6. Economic condition of home good, both parents living. Three older children are much older, the one next to Z. is twelve years his senior. He is very much spoiled and complains that his failure last term was the fault of the teacher who did not understand him. Teacher reports him as well intentioned but spoiled and babyish. He is well nourished but has slightly enlarged tonsils, is slightly astigmatic. He is inclined to be irritable and fussy in school. Will probably be promoted unless attendance should be very irregular.

Case 14. M---C---. Girl, age 13 years and 1 month. Grade 6. Circumstances moderate, father dead. Three older, and one younger child in the family. Home carelessly kept, no method in management. Mother does not want to be bothered by reports and conferences with the teacher about the child. "You are paid to teach her, don't bother me about it." is her response when she is consulted with a view to better cooperation. She is inclined to uphold the child when any complaint is made. Expresses herself as indifferent as to the girl's completing Elementary School. "She can do as she likes." M's. promotion is doubtful. She too is indifferent. Her,health is good, defective teeth being the only item on the Physical Examination report.

Case 15. D---M---. Boy, age 15 years. Grade 7. Father has deserted but mother is employed in an office and earns a salary that supports both, satisfactorily, there being no other children. Owing to her absence D. has more freedom than is best and tho not absolutely proved, the moral atmosphere is thought to be bad in the home. D. uses tobacco freely, and has little interest in his school work. He is poor in all his studies and is slow to learn; of stubborn disposition. Physical

Section 2. (Continued)

examination gave no serious defects. The tonsils were only slightly enlarged and his skin was unhealthy, acne. As he is old for the grade and has been over the work before he will probably be promoted.

Case 16. Q---H---. Boy, age 11 years and 7 months. Grade 5. Comfortable circumstances. Father dead, one other child a brother two years older. Mother gives history of extreme nervousness and temporary mental aberration during pregnancy. The boy is alternately indulged and severely punished. He is a kleptomaniac and on one occasion in January whe he refused to confess his theft, his mother stripped him and locked him naked in the cellar as punishment. This is given as an example of her efforts at discipline. In the school room he learns nothing, giving little trouble as he dreams and plays with his hands. He gives much trouble on the grounds and is constantly thieving. He becomes hysterical when reproved severely or not indulged in some whim. Has defective teeth, a spinal curvature and is developing petit mal. Was taken out of school before its close because of the last mentioned condition. Had been giving out circulars and helping at a picture theater for which he was allowed to attend a show every night.

Case 17. L---R---. Girl, age 10 years and 7 months. Grade 4. Circumstances good, parents both living, three other children. Home carelessly kept, no system and no control of the children. They are indulged in all their whims. Are permitted to stay out of school if they wish, to sleep late, to stay home, to attend a matinee and are often returned to school with the excuse, "I wanted to take her downtown". The mother insists that L. is nervous tho she does not manifest it to any great extent at school. Her physical condition was on the whole reported as good; had been operated upon for tonsils; had a few defective teeth. Her failure was ascribed on the school records to "extremely irregular attendance".

Case 18. P---L---. Boy, age 13 years and 8 months. Grade 5. Circumstances good, father a traveling man, two older and one younger child in the family. No order or discipline whatever. Children are allowed their own way as father is away and the mother lacks the ability to control them. P. attends movies every night and stays home from school when he feels like it. He is a well disposed child and has taken no great advantage as yet of this slackness. It has so far been chiefly his school attendance and preparation of home work that have suffered. The older sister is already noted in the neighborhood for her frequent auto rides with young men tho but sixteen years old. P's. failure was due to irregular attendance, result of poor home discipline. He is slightly anemic. This mother, it may be added, has society aspirations.

The foregoing cases were chosen as typical of the school in which they occurred. The struggle against poverty, brutality and drunkenness in the home, desertion by the parent, necessary absence of

Section 2. (Continued)

one or both parents through industrial necessity, poor heredity both mental and physical, carelessness and poor home organization, over indulgence, social distraction, indifference and ignorance-- all are found singly or in combination as we study the individual homes. There are of course the well ordered homes, free from economic pressure, where the child is trained wisely and given the proper stimuli for his mental development, but such present no unsolved problems and hence do not concern us in our investigation. It is interesting and necessary to note to what extent such homes contribute repeaters but there our discussion of them ends. We will now take up in a very general way the more important factors in the home environment.

Section 3. Economic Condition.

The economic condition of the homes was estimated and classified as follows:

Good. Those providing all necessities with a generous margin for luxuries.

Medium. This included those who were provided with the necessities of life with no great margin for luxuries, the occupation of the bread winner affording a regular income.

Poor. Here the income was irregular and inadequate for the provision of necessities, allowing no margin for future emergency, and at times failing all together.

Extreme Poverty. A lack of the bare necessities, a state of want relieved by charity. For example several families were found who were given left overs from the trays of a down town restaurant; others were relieved by charitable organizations.

None of the repeaters could be classified as wealthy though there were families of wealth represented in these schools. The distribution among the four schools follows:

Economic Condition	A	B	C	D	Total
Wealthy	0	0	0	0	0
Good	25	36	10	10	81
Medium	6	20	14	15	55
Poor	5	16	12	14	47
Extreme Poverty	0	6	10	16	32

Summarizing, 81 or 37.6%, were in good circumstances, 55 or 25.7% were in medium circumstances, while 79 or 36.7%, nearly one third, suffered poverty in varying degrees.

Section 4. Parents and Parental Control.

One hundred and forty of these two hundred and fifteen had both parents in the home. This would mean that in 65% the presence of

Section 4. (Continued)

both parents would favor normal conditions of control. The remaining 35% were as follows:
29 had parents separated or divorced. In 10 cases the mother was the only parent in the home, in 7 cases the father was the only parent or guardian in the home. 20 had stepfathers, 14 had stepmothers and 1 lived with foster parents having been legally adopted.

School	A	B	C	D	Total
Both parents in home	27	60	30	23	140
Parents separated	2	5	6	16	29
Mother alone	2	2	2	4	10
Father alone	0	3	1	3	7
Stepmother	2	2	4	6	14
Stepfather	3	2	3	12	20
Child adopted	1	0	0	0	1

For data as to home discipline we were largely dependent upon the observation of the school principal and teachers. One hundred and twenty seemed to be fairly well controlled in the home by the parents. In the case of fifty-nine there was no doubt as to the laxity of discipline. Thirty-six were literally their own (if not their parents') masters and lived their lives for the most part in the streets.

Control by Parents					
School	A	B	C	D	Total
Good	25	41	29	25	120=55%
Poor	8	25	9	17	59)
None	4	10	4	18	36)=45%

The increase in the number lacking control in schools lower in the economic scale may be very well explained, in part at least, by the greater number of divided homes and the absence of both parents because of their employment. 45% then lacked firm parental guidance. Query: Would this same per cent hold had the investigation included all the children in these schools?

Section 5. Size of the Family.

The size of the families and their distribution among the schools may be of interest, hence the families represented by the repeaters are tabulated below.

School	A	B	C	D	Total
One child in the family	18	20	19	14	71
Two children in the family	3	18	4	17	42
Three " " " "	4	12	8	13	37
Four " " " "	3	10	6	5	24
Five " " " "	1	5	3	3	12

Section 5. (Continued)

School	A	B	C	D	Total
Six children in the family	4	4	1	1	10
Seven " " " "	1	2	1	0	4
Eight " " " "	0	7	0	0	7
Nine " " " "	0	1	0	0	1
Ten " " " "	0	2	0	0	2

It may be of passing interest to note that not school A, highest socially and economically, or school D, the lowest in these respects, holds the banner in the fight against race suicide. It may also be encouraging to know that none of these very large families (seven to ten) are among those suffering extreme poverty. 33 1/43% of the repeaters are seen to be the only child in the family; 19 1/2% from family of 2; 17.2% from family of 3. Totaling 70% from small families.

Section 6. Moral Environment.

No single visit, unless in a very flagrant case, could give sufficient evidence to convict of bad moral environment, nor could it establish beyond doubt the proof of excellent conditions, the latter of course being the more easily apparent. We learned much from the teachers and the principal, who were in a position to have a very good knowledge of the families in the neighborhood. After a child has progressed several terms the information of his various teachers and the teachers of his brothers and sisters give us a pretty definite idea as to the moral and social status of the family. In schools C and D especially, we found that from frequent interviews and visits in the home the teacher had a very intelligent, often intimate, acquaintance with the family history. In the case of fifteen of our subjects the moral surroundings were considered as extremely questionable. In twenty-one instances the moral conditions were the worst that could be. In one case, already referred to in another connection, the girl herself, a child of fifteen was thought to be engaged in immoral conduct.

Section 7. Literacy.

It was surprising to find so large a proportion as 5 per cent coming from homes actually illiterate, where for instance the excuse for absence can be written by neither parent. From twenty-one other homes the excuses reveal a state of ignorance that the following lines may illustrate as they may be considered typical. "deer teacher i want mary hoam iam sic in bed." Eighty-five homes contained few books and magazines and no quiet place for preparation of home work. Thirty of these same homes where ignorance is so marked, show intense anxiety as to the child's progress at school.

Section 8. Summary and Comparison with Mental and Physical Test Results.

Summing up we may say that in the majority of cases the repeater was unfortunate in his home environment. Checking out of our list of 215 those whose homes were in every way favorable (that is to say reasonable so, we do not expect perfection) we have but 65 or 30%. The other 70% suffered either poverty, illiteracy, immorality, lack of parental control, due in some cases to over indulgence, in others to divided homes, absence of parents during the day, to wrong ideals, ignorance and lack of equipment and incentive to study. To the child who is hungry, who is surrounded by an atmosphere of strife and brutality, the street and the gang are far more alluring than the study hour. Far more alluring also the social distractions and the varied amusements that beset the child in the higher social level, unless some influence outside himself has called into being a love for study. In homes where there is no intellectual tradition, no quiet room for study, no attractive books and magazines, study for study's sake has a slim chance with the boy or girl of the age we are studying.

Tho our social investigation was limited to the repeaters themselves we may arrive at some general conclusions.

(1) Of the eighty reported by the Physical examiner as having a defect or combination of defects that militated against mental and physical development, of these 80, 71 came from homes that suffered the pinch of poverty or marked parental neglect.

(2) Of the 115 who fell below the class median in the Trabue Language test, 85 were from unfavorable home environment.

(3) Of the 35 who were singled out for the Binet-Simon test 32 had the same handicap.

(4) Those who presented the fewest physical defects as well as those who scored the highest in the Mental tests came, in 90% of the cases, from homes of more or less culture and refinement.

CHAPTER VI. CONCLUSIONS.

SECTION 1. Introductory.

SECTION 2. Physical Condition as a Factor.

SECTION 3. Mentality as a Factor.

SECTION 4. The Environmental Factor.

SECTION 5. The School as a Factor.

SECTION 6. Conclusion.

CHAPTER SIX. SUMMARY AND CONCLUSION.

Section 1. Introductory.

Our foregoing study of the causes that have produced the repeater has been undertaken with the purpose of finding the means by which he may be eliminated. This end has been sought by every conscientious teacher and so far her efforts, tho reinforced by Superintendent, Supervisors, and Educational Experts, have been only partially successful. The reports of the last two years show a decided diminution in repeaters in Kansas City, Missouri, but they are by no means near elimination, or, what is perphaps a more probable end to be realized, reduced sufficiently to make us comfortable as to the results we are achieving. So far such efforts have been directed to activities within the schoolroom. By more intensive teaching, by special help, by discipline, by moral suasion, and what not, the teacher has labored to lengthen the mentally short and give added weight to him who has been weighed and found wanting. Her pedagogy has been to "hammer away at the dunce" with faith that the rest of the class will arrive automatically by their own initiative. We might digress at this point to call the attention of the strenuous teacher to the fact that she may hammer away at the dunce to the neglect and stultification of the mentally alert who are present in the average group in a per cent about equal to that of the weaker brother. Poor teaching cannot account altogether for the non-promotions. Slack teaching undoubtedly is to be found in many schools but at the end of the term the entire class have suffered the same slackness. All were measured by the same low standard, some survived, others fell by the wayside. Why? The introduction of the standardized test has done much to give accuracy and uniformity to standards for promotion. It has given a guide, too, for minimum essentials but, with all that can be done, a large number fail to measure up in these essentials. It has been taken for granted that, except in a negligible number of cases, the causes lay within the school room and upon this hypothesis all remedial activities have been directed.

It will now be our purpose to call attention to some of the outstanding causes of failure that lie wholly outside the schoolroom and to consider what corrective measures may be practical. Let us begin as far as possible from the traditional point of attack, which was the school, and start with the child himself. Let us consider then the following:

(1) Poor Physical Condition.
(2) Low Grade Mentality.
(3) Unfavorable Social Environment.
(4) a. Lack of Uniformity in the Schools of the United States.
    b. Insufficient Provision for Children Who are by Nature or Nurture Unable to Progress with the Majority.

Section 2. Poor Physical Condition.

Acknowledging as fundamental the priority of the child's physical needs, we base our first conclusion on the data in chapter four. We recall that 48.7% of the repeaters examined suffered physical handicaps sufficient to interfere materially with school progress. School records gave illness as the primary cause of 11% of the non-promotions in the group we are considering. Fifty-six per cent of the children in the same group classed by the teachers as mentally dull or deficient were below par physically.

As a start toward improved health conditions among school children we make the following recommendation:
A proper Physical Education to be made as essential in the curriculum as Arithmetic. There should be
(1) The regular school doctor who is especially trained for such diagnostic work.
(2) The physical instructor who gives to each child, following the diagnosis, corrective and developing exercises to meet his individual needs.
(3) The school nurse, trained in follow-up work, who has the tact, intelligence, and patience to go into the homes where poverty, ignorance or indifference, or all three have resulted in a failure to carry out instructions.
(4) The teacher of personal hygiene, who does not merely teach the children about hygiene, but by actual drill makes habits of personal care as much a matter of automatic reaction as the combinations of addition. Such an organization is not to be found in the schools surveyed. Physical education, training and instruction in hygiene (for the most part), detection and treatment of bodily defects, all have been left to the parents who have, as experience has showed in the majority of cases, proved inadequate to the task imposed.

Section 3. Low Grade Mentality.

The general results of the mental test as shown in chapter three went to show the repeaters intellectually inferior to the non-repeaters. The Trabue showed 65% inferior, The Silent Reading 64.3% inferior, The Group Psychology 85% inferior. The Binet-Simon which were given to those scoring very low in the other tests gave 62.9% as very inferior and 5 cases of probable mental defect. These three comparisons taken from a variety of tests give conclusive evidence of the mental inferiority of the majority of these children. Included in the minority who scored with the normal average we find the accidental repeater, the child who by reason of some emergency and by no means because of mental lack, has failed to make his grade. The repeaters naturally fall into three classes:
(1) The accidental repeater just referred to.
(2) The slow or mentally dull who are able by taking double time to make their grade.

Section 3. (Continued)

(3) The very inferior who, tho repeating each term, never make the required standard of promotion and are put on merely because of years of service and the utter hopelessness of their ever making it by their own efforts.

It is the children of the last two groups that concern us here. In regard to them we come to the following conclusion - Tho we may not unreservedly accept Dr. Terman's thesis that the Intelligence Quotient is constant thru life, we must admit the possibility of a temporary classification along the lines of present mental ability. We therefore recommend that trained Psychologists, equipped with a Psychological Laboratory, should determine the mental caliber of these children, and group them in accordance with their mental ability. Then will a needless stress and strain be removed from the child of meager mental endowment. Freed from daily humiliation and failure at a task out of all proportion to his ability, he will be given work adapted to his powers of assimulation. When not hopelessly outdistanced by his superiors, he may learn the joy of emulation and success and gain a strength and self-respect that he could never acquire in the class where he always ranked as a failure. As to the really defective, even he can profit by education if it be scientifically planned for him.

These children of inferior intelligence are a mill stone about the neck of any class and so far as any profit to them arising from the association they may be said to be starving intellectually in the midst of plenty. The rules of pedagogical procedure for such children differ essentially from those applicable in the case of normal and superior children. No teacher can for this reason instruct successfully at the same time such dissimilar groups. One of the more apparent results of her failure has been the repeater. The damage done the bright child is less definitely known. When a teacher is given a class of fairly homogeneous mental capacity, then and not until then, can she or, for that matter the children themselves, be held entirely responsible for failures.

Section 4. Unfavorable Social Environment.

Our conclusion from the home survey was that 70% of the repeaters were from an unfavorable home environment. Society has effected many organizations for the uplift of those suffering from poverty, sickness, ignorance, or immorality in the home. The social settlement, the day nursery, the free lunch, the open air school, the free dispensary, and various social centers may be mentioned as examples. All these movements are in their beginning stages, still lax in organization, lacking in coordination, and very much handicapped by insufficient financial support. The fact that they have been able to accomplish as much as they have is evidence of their intrinsic value. Some of these activities have been taken over by individual schools chiefly

Section 4. (Continued)

in down town districts. In some individual cases we find a teacher who has been in the home of every pupil in her class and, as a result, has a very intimate and intelligent knowledge of his special needs. But these are very exceptional cases. Not every school has the equipment for such work. Very few teachers have the training or personality to make them effective in such delicate and diplomatic social service. On the whole it must be admitted, the school has stood apart from such activities, leaving them to charitable and religious organizations, and to the social settlement. The school can come into its own and do really effective work only when it cooperates with these organizations. The school cannot educate the whole child and continue to maintain its former aloofness from the home and neighborhood from which he comes and of which he is an inseparable part. To educate the whole child we must follow him into the home itself and strike at the roots of its inefficiency.

To participate in this broader field the school of tomorrow must be a very different institution from the average school of today. It must be, in the first place, a social center participating in all the interests of the community to which it ministers. In the second place the teachers must be as carefully instructed in Sociology as they have been in Pedagogy. In the third place, each school should have a specialized social worker whose whole time and effort is directed toward the closer articulation of the school and the specific needs of the neighborhood. This does not apply to the down town school alone. The school represented in our survey by school A has its problems which are more difficult of adjustment than those in schools of the type D requiring even more tact and diplomacy in their management. Tho free for the most part from economic pressure, we found neglect and indifference upon the part of the parents, as well as poor home control. Tho these problems occur in a different setting, and must be reached by a different point of attack, they are no less vital and make even more severe demands upon the school. The help here is not material but consists rather in the building up of ideals, and bringing about a realization of the significance of habits of application and self-control acquired in childhood. Sociology does not claim to have solved all the problems of society but it has brought us to realize the necessity of the coordination of all its parts into the unity that it realy is. It points the way to a far better order of things in the future.

Section 5. The School.

A significant item in the results gained from the school records was the loss of time incident to a change of schools. 27 failures were attributed to a change of school and to no other cause. Two children gave a history of having attended 14 schools. With our present industrial conditions we can look for more rather than less moving in the future. Why then, permit a lack of uniformity in the schools

Section 5. (Continued)

when it has been shown to cause such serious inconvenience? Our schools in the United States have always been local in their organization, the township or the school district being the school unit. The idea that each school should be especially fitted to serve the needs of its own locality is not to be disputed. Hence has arisen the infinite variety of curricula and courses of study, a source of joy to the pedagogue, but it is a variety purchased at the expense of the efficiency of the entire system. Are there not some underlying essentials that might remain constant underneath this adaptability to local needs? While admitting the desirability of adapting the school to its environment, we do urge and demand a uniformity in essential subjects and a set program for the time of their appearance in the course. What is to be gained by teaching Writing in one city in Grade One, and relegating it to Grade Two in another? It would seem perfectly sane and reasonable to suggest that Reading, Writing, Spelling, Arithmetic, Geography, and History have a uniform place for their appearance in every course of study. Further, that certain minimum essentials be agreed upon for each of these subjects. Granted that Boston may desire more technical Grammar than Neodasha, let them settle their differences upon a neutral ground of minimum essentials so that a child may make the transfer without loss of time required in repeating. In this we would also include the Parochial schools and all other private schools giving instruction in elementary branches.

Our second indictment against the schools, i. e. that they do not provide for those children who are, by nature, unable to derive benefit from instruction given in the Public Schools, has already been touched upon in the discussion of mental deficiency. We recommended a reclassification so that children of similar needs will be associated and given instruction adjusted to their peculiar type of mind. This is already on its way, beginnings are being made, and results are justifying its introduction. The introduction into the cabinet of a representative of our schools will probably solve the problems just discussed and result in closer federation and more specialization than the present system is capable of.

So much for the causes of failure as they presented themselves to us in our survey of 1650 children in four schools in Kansas City, Missouri. We have confined ourselves entirely to the causes lying outside the class room. This was not from any desire to shield the class room teacher from criticism, but because these others seemed to be the real outstanding causes of failure that could be generally applied. The elimination of poor class room teaching seems much nearer a solution and hence a less important cause of failure than the ones given consideration. In fact it seems to have been the only phase of the question that has received much attention on the part of school systems. More is being demanded in the way of education from teachers every year. In Kansas City, as in many other cities, a system of supervision

Section 5. (Continued)

and definite measurement and comparison of results has done much to raise the level of teaching. The standard requirements for promotion in the four schools, were in all essentials uniform, tho they were in such widely different environment. Of course we say this making reasonable allowance for local conditions. We saw teaching that varied in its degree of excellence as we visited the school rooms, but we also observed this: that the quality of teaching was receiving attention. As evidence of the fact that the quality of teaching is carefully measured we give this incident. In one of the schools was a room with an unusal number of repeaters. In explanation the Principal said, "These children had very poor teaching last year and I have held them back because of it. Only the brightest ones were strong enough to go on". The teacher who made this failure is this year taking a business course. The present teacher, one of the strongest in the school, has that load of repeaters to bring up to par.

Section 6. Conclusion.

In conclusion it has been the neglected causes, that seemed to us the essential ones, that we have striven to give prominence in this summary. When all we have recommended, and much more that we have not, has been brought to pass it is very probable that the repeater will not have become extinct, for we have always the personal equation to grapple with. We can, however, look forward to the time when he will be of a species much more rare than he is today.