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Social Determinants of Grades of South High School Boys

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SOCIAL DETERMINANTS OF GRADES
OF
SOUTH HIGH SCHOOL BOYS

INTRODUCTION

In this study we attempt to compare the actual grades received by South High School boys with certain social factors found outside the class room in an effort to find what relations exist between them. The sample chosen represented 1086 boys who were enrolled in this school during the year 1931 and pursued their high school studies for a full four year period. When this type of questionnaire was adopted in 1931, it was filled out by all the students from seniors to freshmen. In the case of seniors, juniors, and sophomores, many of the grades were earned prior to 1931. The freshmen secured their grades during 1931 and the three years following.

We attempt to show that these social factors react favorably, or unfavorably toward the attainment of the goal or standards as set up by our present educational system. These are the results of many determining factors but this study is confined to only a few carefully chosen factors that appear to be more readily classified as social determinants.

This study is based primarily on a questionnaire or personnel card filled out by South High School students together with the cumulative official school

record card of each boy.

This research parallels a study conducted by Mr. L. R. Hill¹ which deals with a study of the grades of over one thousand high school girls in relation to certain social factors. The same institution was chosen for this study of boys as effort was made to select students that would have similar backgrounds and would be pursuing courses of like nature. Since the high school studied is largely trade and commercial, the girls and boys frequently selected courses that were very much different. The same period of years was selected for the same reason of making the studies as near parallel with each other as possible. These students were followed the full four years in high school and all grade listing and analysis are for the four year period.

Our problem in this study is to analyze the grades of the boys of the sample chosen and to evaluate them in relation to various background social factors. Since background and contemporary social factors have been found by sociologists² and writers³ in education to play

1 Hill, L. R., A Study of One Thousand Twenty-five Girls of Omaha, South High School, showing Relation of Certain Social Factors to Grades, Master's Thesis, Municipal University of Omaha, 1935.

2. Sullenger, T. Earl, Social Determinants in Juvenile Delinquency, Wiley and Son, 1936, p. 21.

3. Glueck, Sheldon and Eleanor, Five Hundred Criminal Careers, Knopf, New York, 1930, p. 269.

an important place in determining the behavior interests, ambitions, and attitudes of children of different sexes and even members of the same family, this study is an effort to determine the extent of such differences as they are expressed in the grades of high school boys. The research was conducted on the assumption that such differences exist. A summary of our findings in this respect will be listed and compared with the study of girls of the same institution previously mentioned. A second aspect of our problem is to determine as far as possible the relation of these social factors to vocational outlook of the boys. Since over 75% of the cases studied were of foreign born parentage, effort was made to determine the extent of persistence of culture patterns as they effect the grades and plans for vocational career. The other social factors are more or less dependent upon this basic factor.

We have divided this study into two parts:

In part one we outline the methodology or procedures used in compiling the information, and give most of the material upon which the findings are based.

The social factors that we will consider in this study are nationality; occupation of the boy's father; loss of parent or parents; size of family and position in family; divorce, separation and remarriage of parents; previous schooling, plans for schooling, course chosen or followed; extra-curricular and leisure time activities.

In part two we attempt to show what relations exist between these various factors and the grade of work done by the students of this school.

To secure the information desired from the students, a questionnaire form was used, as shown in Appendix I. Personal interviews with the individual students and their parents were made in nearly half of the cases as an aid in verifying the validity of the answers on the questionnaires.

Part I

Methodology and Findings

The personnel cards used in this study were first filled out in 1931 by the pupils of the Omaha South High School.¹ These were filled out in the class rooms by the pupils, with but few instructions. The cards contained blanks to be filled out by the pupils and asked questions covering these points: name; date of entrance; date and place of birth; age; race; nationality; language spoken at home; father living; father's occupation; mother living; parents divorced, separated or remarried; other children in family, older; other children younger; leisure time; and course of study pursued. His or her plan to finish high school; plan to go to college; extra-curricular activities; and the last grade school attended.

These personnel cards or questionnaires were not checked by the class room teacher as to accuracy nor as to whether they were completely filled out in all details. On inspection it was found that many of the pupils failed to answer all the questions. This will account for the differences in the total number of pupils shown on the various tables, which appear later in the study. While practically all these pupils were born in this country, in answering the question as to nationality, most of them gave as their nationality that of their foreign born parents or grandparents. Others gave their nationality as "American" which means that their ancestors,

1. Personnel Cards, see Appendix Number I.

for one or more generations, were born in this country. While this is not a scientific classification as to nationality it is perhaps a popular conception close enough for the purpose of this study, and the possible error that might develop is relatively small.

From these questionnaires, 1086 of those filled out by the high school boys were used. These were taken from the files in alphabetical order and the results recorded on large master charts.² This set the information up in such a form as to make it possible to compile the various tables that were found necessary in making this study. After the information from the personnel card or questionnaire mentioned above had been recorded on the master charts, the cumulative official school record cards of these boys were obtained. In the spring of 1936, the total grades, made by these boys up to that time, were recorded on the master charts opposite their names.

The pupils of South High School are marked on a five point scale using marks of "1", "2", "3", "4", and "5". The highest grade is "1" and "5" is the failing mark. In marking the pupils, teachers are required to follow the "Normal Curve of Distribution" distributing the marks as follows: "1's" and "5's" to 7%, "2's" and "4's" to 24%, and "3's" to 30% of each class. Variation from this rule is allowed only after consultation with the principal,

2. See Appendix Number II.

and where some reason for this is shown. This however, is granted whenever a good reason is shown for so doing. For example, if it were shown that more than the average number of the better students (as denoted by their previous grades) were bunched in some one class, the teacher would be allowed to give grades of "1" to more than 7% of the class. This makes it possible for all pupils to be properly graded and prevents some deserving pupils from receiving lower grades than they might have had to accept, had this provision not been made.³

Odell⁴ recommends that on the whole, a system that employs only five or six letters or other symbols is most satisfactory, and the distribution of marks according to these symbols should follow the normal curve somewhat closely for groups of several hundred.

In this study the highest grades are the small numbers.

These were recorded on the large master charts in the following manner. The total number of "1" grades as shown on the boy's permanent record card was ascertained and recorded in one column. The "2" grades were then counted and recorded in another column. In like manner the "3", "4", and "5" grades were counted and recorded

3. An extensive explanation of the grading system used in the school studied is given in order to aid the reader in interpreting the data that follow.

4. Odell, C. W., Educational Measurement in High School, The Century Co., N. Y., 1930, p. 469.

in separate columns on the large charts, referred to above. These grades were then given "weighted" credit corresponding to the number of the grade itself, and the average of these grades determined. This was determined by taking the number of "1" grades and adding to this sum the number of "2" grades multiplied by 2. To this sum was added the number of "3" grades multiplied by 3. The number of "4" grades multiplied by 4, and the number of "5" grades multiplied by 5. After these amounts were all added together, the total sum was divided by the total number of all grades shown on the pupil's record card. By this method, we obtained the "average" grade for each individual boy.

The weighted credit or mean is justified by Bogardus⁵ who says, "It is presumable that the weighted average is more accurate than an unweighted one."

Bogardus also recommends the arithmetic average by saying, "The arithmetic mean has the merit of being easy to find, gives equal weight to all the items, and affords a general idea of the objective nature of a type."

In this study the "arithmetic mean" was used in determining the average grade. Harlan C. Hines⁶ defends this method in his book on educational measurements. In

5. Bogardus, Emory S., Making Social Science Studies, Press of Jesse Ray Miller, 1925, pp. 61-64.

6. Hines, H. C., A Guide to Educational Measurements, Houghton Mifflin Co., 1923, p. 15.

discussing the advantages and disadvantages of the mean he says,

The arithmetic mean has the advantage of being easily calculated, comprehended, and interpreted, and in educational research, ordinarily shows a smaller probable error than the median or mode.

The "I.Q." may be used with considerable accuracy in predicting the rating of students in academic work but when applied to forecasting the ability of students in industrial, vocational or commercial work it has proven less accurate.⁷

A student's progress in school and in later life depends, not alone upon his native ability or intelligence, but rather on his ability to use this equipment, or to impress others favorably. Therefore, the actual grades received in school may be a better criteria than the I. Q., for predicting a student's future success or failure. In the field of vocational or commercial work, a student's grades may often vary widely from those made in academic subjects.

In a study made in 1937 by Irene Dunn Lange⁸, on "The value of Otis Self-Administering Test on Mental Ability as a Means of Predicting the success of Pupils in Junior High School" she finds that,

7. Rinehardt, James, Social Psychology, J. B. Lippincott Co., 1938, p. 293.

8. Bulletin, #24, of the Department of Secondary School Principles of the N. E. A., Jan. 1939, pp. 65-69.

The correlation between the I.Q.'s of the pupils and their subject matter varies from .603 for English and .811 for Social Studies down through the various subjects to .005 for Typewriting. She concludes that The Otis Self-Administering Test of mental ability is fairly reliable and useful in determining the intelligence of pupils, but that it appears to have practically no value for the prediction of success in such subjects as typewriting, mechanical drawing, penmanship, and physical training. The low degree of correlation found indicates that there are other factors as potent as intelligence that determine success of pupils in these subjects.

There is some correlation between the intelligence quotient and high school grades especially in the grades earned in academic subjects, but in some of the commercial and industrial subjects this correlation becomes almost negligible.

This view is upheld by Alfred C. Senour⁹ in his study of "The Relation Between Intelligence and the Success of 205 Pupils in the Junior High School." He states that,

Intelligence had some influence in determining the degrees of scholarship with which work was done. Correlations found between I.Q.'s and semester indices of scholarships for the pupils of the city as a whole, varied from .23 to .38. These correlations are not especially marked and considerably lower than correlations usually found between intelligence and scholarship. They indicate some relationship but suggest that scholarship has been materially influenced by other factors.

In this study the "intelligence quotient" is not used as one of the factors, due to the fact that it was not available for the entire group. Had this been avail-

9. Senour, Alfred C., "The Relation Between the Intelligence and the Success of 205 Pupils in the Junior High School of East Chicago." Bulletin of Department of Secondary School Principles of the N. E. A., Sept. 1927, p. 36.

able the writer realizes that this study would show a more complete relationship between the social factors and high school grades if it were possible to consider the intelligence quotient in connection with both the social factors and grades being studied.

Since interest may be a strong factor in the success or failure of the student, certain social factors may be responsible for the attitude toward a subject or the interest shown toward school work. The author in his desire to determine, if possible, the relation of certain social factors to the actual grades made by high school boys, has compiled the work to follow; and hopes it may be of value to others who may attempt further studies.

In many schools a study of this type might show wide variance because of the methods used in grading. However, we believe that the law of averages prevails, that if enough grades are selected from a sufficient number of teachers we will have a fairly good picture of the actual amount of work accomplished by the student, or at least a fairly close estimate of the student's ability to get along in a society organized on the present basis.

Some have argued that school marks should be abolished, but C. W. Odell¹⁰ in his book Educational Measurement in High School, says,

There appear to be valid reasons why they should be retained and made as accurate as possible. As

10. Odell, C. W., op. cit., pp. 468-469.

actually employed, their chief fault is their subjectivity and consequent unreliability due to the fact that different teachers base them upon many different things and have various standards in mind in giving them. This should, in so far as possible, be corrected by agreement among teachers in a department, a school or a school system, upon the significance and basis of the marks employed and the drawing up of sets of specifications to govern them.

The writer realizes that he is taking some liberty when he groups the Negro along with the various nationalities, shown later in Table I, but he wishes to compare the grades of the colored boys with the nationality groups.

In introducing Table I, where we speak of the relation existing between the various races or nationalities we are not using the terms "race" and "nationality" synonymously, but rather to enable us to include the Negro group and the Jewish group in the nationality table without raising the question as to whether these groups are a race or nationality.

The terms "race" or "nation" however, are often used synonymously, but the writer agrees with Dr. Griffith Taylor¹¹, University of Chicago, who says,

The present writer strongly objects to the word "nation" being taken as synonymous with "race" or "stock". Often enough common ancestry, common language, and common institutions are involved in a given nation; but exceptions to one or the other of these factors are extremely common.

South High School is recognized as a "comprehensive" school in that it offers a wide variety of courses of

11. Taylor, Griffith, "Environment and Nation" The American Journal of Sociology, Chicago, 1934, XL, p. 21.

study. Table IX shows the boys of this study, enrolled in fifteen of these courses, with about 6 4/5% of them in the stenographic course. It is a demotic and democratic type of school. Nearly all nationalities are represented by the student body. Students are allowed the greatest possible freedom, with student control wherever possible outside of regular class rooms.

We will now proceed to give the material as found and compiled in this study.

1. Nationality

In order to determine the relative positions on the grading scale reached by students of different nationalities the following procedure was adopted: the original chart (illustrated in Appendix II) was checked for the average grades made by all students listed under one nationality. The results were then recorded in chart form as shown in Appendix IV.

When this group was completed, the original chart was checked again for all those listed under another nationality and so on until all were relisted on this nationality chart. In order to save space on both charts, each nationality was given a number for identification purposes only.¹²

Marks were recorded on this chart, so the position

12. See Appendix III.

of the mark between the vertical lines indicated its relative value. A number ending in 5 would be recorded by placing a mark near the center of the square while a number ending in 1 would be placed near the left of the square and a number ending in 9 would be recorded by marking closer to the right side.

From this chart we were then able to pick out the highest and lowest average grade in each nationality grouping and by totaling the individual average grades and dividing by the number of grades we secured an "average" grade¹³ for each group. The individual high and low score for each group was selected and the number of students in each group totaled. This material was tabulated, as found, in the proper columns on Table I a. A sample of Table I a is shown below.

Table I a. Preliminary Nationality Chart.

Nationality	No.	Totals		Av.	Student's Average Grade					
		High	Low		100	110	120	etc.	480	490
1	109	1.48	4.76	2.99						
2	3	3.13	3.42	3.26						
3	3	1.91	3.85	3.85						

In the numbers used at the top of columns marked Student's Average Grade the decimal point is omitted for brevity.

On completion of this preliminary chart the material was rearranged in order to bring out the comparative

13. Hines, H. C., op. cit., p. 15.

standing of the groups as shown in Table I on page 16. Those groups having the highest average grade were listed first and the others arranged in order of decreasing value. The names of the nationalities replace the numbers previously used.

The total number of students for the entire group, highest and lowest individual averages and the average for the entire group were found and given here for the benefit of any who might be interested in comparing individual nationality groups with the entire group.

The average for the entire group was obtained by finding the average of all nationality group averages.

TABLE I
AVERAGE GRADES OF HIGH SCHOOL BOYS GROUPED
ACCORDING TO NATIONALITY

<u>Nationality</u> <u>(or Race)</u>	No. Of Pupils	Highest Grade	Lowest Grade	Average Grade
Scotch	1	1.33	1.33	1.33
English	13	1.35	4.10	2.30
Syrian	1	2.49	2.49	2.49
Jewish	13	1.60	3.33	2.52
Norwegian	5	2.59	2.94	2.62
Swedish	10	1.60	3.40	2.63
Czech-Slavic	5	2.34	3.33	2.82
Roumanian	9	2.20	4.55	2.85
Belgian	3	1.91	3.85	2.85
Greek	3	2.85	2.99	2.94
Danish	10	2.09	3.71	2.94
American	169	1.48	4.76	2.99
Bohemian	112	1.69	5.00	3.04
German	63	1.39	4.61	3.04
Croatian	11	2.17	4.40	3.07
Lithuanian	24	1.71	4.55	3.12
Negro	16	2.10	4.17	3.22
Italian	3	2.42	3.99	3.23
Serbian	6	2.82	3.85	3.25
Austrian	3	3.13	3.42	3.26
Irish	52	2.25	4.40	3.27
Polish	81	1.30	4.70	3.30
Russian	4	2.85	3.72	3.69
Hungarian	5	2.33	4.20	3.70
	622	1.39	5.00	3.07

MIXED NATIONALITY

Bohemian-Croatian	1	1.82	1.82	1.82
French-Norwegian	1	2.09	2.09	2.09
American-Bohemian	2	1.32	3.08	2.15
American-Italian	1	2.22	2.22	2.22
Polish-Welsh	1	2.41	2.41	2.41
American-Roumanian	2	1.46	3.58	2.52
Irish-Swedish	3	2.70	3.15	2.52
American-French	2	1.78	3.28	2.53
German-Swedish	2	2.22	2.92	2.57
English-German	3	1.33	3.55	2.59
American-German	4	2.21	2.97	2.65

(continued)

TABLE I c
(continued)MIXED NATIONALITY (continued)

Croatian-German	2	2.47	2.87	2.67
American-Dutch	1	2.76	2.76	2.76
Swedish-Bohemian	3	2.48	3.07	2.80
Danish-German	3	2.54	2.35	2.86
Polish-Russian	2	2.85	2.95	2.90
American-Hungarian	2	2.59	3.22	2.91
English-French	3	2.53	3.65	2.93
Irish-Scotch	8	1.85	3.90	3.05
German-Irish	14	1.93	4.22	3.07
English-Irish	2	2.19	4.00	3.09
American-Irish	5	2.08	3.74	3.27
American-Danish	1	3.42	3.42	3.42
Belgian-French	1	3.44	3.44	3.44
German-Hungarian	1	3.52	3.52	3.52
Croatian-Polish	1	3.59	3.59	3.59
German-Polish	3	3.01	4.19	3.64
Irish-Welsh	1	3.70	3.70	3.70
English-French-Irish	1	3.72	3.72	3.72
Bohemian-German	6	1.92	2.77	3.76
	82	1.22	4.22	2.97

We were able to use but 704 of the 1086 questionnaires selected for this study because of various difficulties encountered such as not answering the question on the questionnaire, dropping school before a sufficient number of grades were recorded, etc.

The average of all group averages for both the single and mixed "nationality" groups was found to be 3.06, a figure very close to the median in the normal curve of distribution.

The largest group were those who called themselves "Americans", 169 in number or about 24% of the total. Their average grade was 2.99 which comes very close to the theoretical average grade of 3.00.

The "nationality" group having the highest average

grade 1.32, was Scotch, but as only one boy was listed this might or might not, hold true in larger numbers.

In groups listing 10 or more students, we find the highest average grade made by those of the English nationality group, with an average of 2.30. Ranking second were the Jewish, with an average of 2.52; and third, the Swedish 2.63; followed in order by fourth, the Danish 2.94; fifth, the American 2.99; sixth, the Bohemian 3.04; seventh, the German 3.04; eighth, the Croatian 3.07; ninth, the Lithuanian 3.12; tenth, the Negro 3.22; eleventh, the Irish 3.27; twelfth, the Polish 3.30.

In the mixed nationality groups only one listed more than ten students, the German-Irish whose average grade of 3.07 tied with that made by the Croatian group.

The lowest average grade made by any single nationality group was made by the group of five Hungarian boys with an average of 3.70. While the group of four Russian boys followed closely with an average of 3.69.

In the larger groups, those containing ten or more, the Polish group with eighty-one boys made an average of 3.30, which gives them the lowest place, followed closely by the Irish with fifty-two boys, making an average for the group of 3.27.

An examination of this table shows that as a rule the boys whose parents were from countries in northwestern

Europe made better averages than those boys whose parents were from countries in southeastern Europe. This agrees with the findings of G. S. Counts¹⁴ as shown in his study, "The Selective Character of American Secondary Education," published in 1923. He says, "On the whole the people from the north and west of Europe make a better showing than those from the south and east."

Irene Dunn Lange¹⁵ found the same thing to be true in her study made in the Franklin Junior High School at Racine, Wisconsin. She says that "In this district a greater percentage of the native born children of Northern European parentage are found in the superior group."

An exception to this will be noted in the case of the 52 Irish boys whose average of 3.27 was below that of the group average.

The colored boys (2.3%) with a grade of 3.22 did not make the lowest grade but it was below average. A possible explanation might be found for their poor showing in a study of the culture pattern of the race.

According to Jennie D. Porter¹⁶ in "The Problem of Negro Education in Northern and Border Cities."

14. Counts, G. S., The School Review and the Elementary Journal, May, 1923, p. 108.

15. Lange, Irene Dunn, op. cit., pp. 66-69.

16. Porter, Jennie D., Abstracts of Graduate Theses in Education. Teachers College, University of Cincinnati, 1927-31, pp. 184-190.

The negro has been branded as inferior mentally, the result of many psychological tests. Many believe this apparent difference due to dissimilar educational opportunities, training, and social and economic conditions while others think there is a fixed native difference between the two races. The high percentage of over age-ness said to be in the Harriet Beecher Stowe School in Cincinnati, is influenced by such factors as late entrance, irregular attendance and poor home conditions, all of which might be due in part to economic pressure, lack of incentive, and mental retardation.

According to Mary Agnes Roberts Crowley¹⁷, the mean intelligence quotient of the Cincinnati negro school children studied was 95, which falls close to the median for American white children.

In the second part of the table, we show the grades made by the mixed nationality groups.¹⁸

Many of the mixed nationality groups were too small to furnish reliable data, but in most of the cases shown the average grade for the mixed group was higher than the average made by either one of the nationalities making up the mixed group. An example of this would be the group of three boys of Swedish and Irish parentage with an average of 2.52, which is higher than the average of 2.63 made by the Swedish boys and the average of 3.27

17. Crowley, Mary Agnes Roberts, "A Comparative Study of Cincinnati Negroes in Segregated and Mixed Schools", 1931. Abstracts of Graduate Theses in Education. Teacher's College, University of Cincinnati. 1927-31. pp. 64-97.

18. Supra, p. 16.

made by the Irish boys. This however, is not always true as in the case of the six boys of German and Bohemian parentage whose average grade was 3.76 while the grades made by each nationality group averaged 3.04. Another exception was the average of 2.52 made by two boys of American-Roumanian parentage. The Roumanian group averaged 2.85 while the American group averaged 2.99.

Such a situation is explained in part by Ward.¹⁹ He advocated what he called the law of "Difference of Potential". "This difference," he said, "is often manifested in the crossing of cultures. The difference of potential which is caused by a crossing of strain is highly dynamic, resulting in unnumbered variations, and hence providing endless opportunities for progress."

In order to present a clearer picture of the relation of grades made by various "nationality" groups, of over 15 boys, graphs were prepared as shown in the Appendix No. V.

On the basis of the data thus presented we conclude that a boy has more chance to secure good grades in High School if he were born of Northern European parentage.

With a few exceptions a mixture of nationalities in the parents give him a still better chance. The Jewish boys would give him a good race for the higher grades.

19. Ward, L. F., "Ward's View of Social Telesis", quoted by Bogardus, E. S., in History of Social Thought, University Southern California Press, 1922, pp. 295-300.

If he were of parents born in the United States, he would have just an average chance and might receive grades anywhere from near the top to near the bottom of the class.

If he were of Irish, Polish or of Negro parentage, he would be very apt to secure grades near the lower end of the grading scale, unless he were an exceptional student.

Carl W. Ziegler²⁰ did not find that Nationality was important. He states that,

Children from homes of foreign born parents were conspicuously poorer than children from homes of American born parents in attendance, economic status, environment, accomplishment, ability and school progress. The difference in school marks was slight.

Flemming²¹ and Clark²² found that children of foreign born parents made higher average grades than children of native birth while Lloyd-Jones²³ found the place of birth of parents to have no effect.

20. Ziegler, Carl William, "School Attendance as a Factor in School Progress." Teacher's College Contributions to Education #297. Columbia University, N. Y., 1928, pp. 48-49.
21. Flemming, C. W. "A Detailed Analysis of Achievement in the High School." Teacher's College Contributions to Education, No. 196, 1925.
22. Clark, E. L. "Family Background and College Success." School and Society. 1927. 25, pp. 237-238.
23. Lloyd-Jones, E. McD., "Student Personnel Work at Northwestern University," N. Y., Harpers, 1929.

Clark²⁴ found that children of foreign born parents made the highest grades, while Lloyd and Jones²⁵ report that the parents' birthplace has no effect.

In studies made by Davies and Hughes²⁶ in England and Garrett²⁷ in the United States, the Jewish students were found superior, while Cohen²⁸ found the contrary to be true.

3. Occupation of Parents

In order to determine what relation exists between the occupation of the fathers and the grades made by their sons the following procedure was used.

The master charts (see Appendix II) were checked for the various occupations listed. A chart, illustrated in Appendix IV, was prepared on which the occupations were indicated by numbers in the order in which they appeared on the questionnaires. These occupations with their corresponding numbers are arranged alphabetically in the list given in the Appendix III. The weighted average grades for each boy were recorded in the proper location in the correct column, as explained on page 13 in the work relating to nationality. When this preliminary

24. Clark, E. L., Op. cit. p. 238.

25. Lloyd-Jones, op. cit.

26. Davies, M., and Hughes, A. G., "An Investigation into Comparative Intelligence and Attainments of Jewish and Non Jewish Children." British Journal of Psychology. 1929, 18, pp. 134-156.

27. Garrett, H. E., "Jews and Others. Some Group Differences in Personality, Intelligence, and College Achievement." Personnel Journal 1929, 7, pp. 341-348.

28. Cohen, I. L., "Intelligence of Jews as Compared with Non Jews." Contributions to Psychology #8, 1927, p. 43.

chart was completed, the grades for each occupational group were tabulated, and the average for each group determined. The number of pupils were counted and the high and low grades selected. This material was tabulated in the following form, II a.

Table II a PRELIMINARY OCCUPATIONAL CHART

Occupations Represented by Numbers	Highest Individual Average	Average Grades Average of Group	Lowest Individual Average	Size of Groups
1.	1.23	2.64	4.23	18
3.	1.24	2.53	4.10	62
7.	1.68	3.16	4.58	336
8.	2.66	3.44	4.24	38
9.	2.08	2.73	3.45	10
11.	3.21	3.43	3.65	4
12.	3.37	3.31	3.29	4
13.	1.52	3.15	4.25	16
14.	2.22	2.87	3.20	22
etc.				

In order to get the information into a more usable form it was re-arranged, combined and classified²⁹, into the following groups: Professional; commercial; superintendent or foreman; government employees; skilled workers; semi-skilled and unskilled labor and the unemployed.

Some questions may arise as to the particular classification of certain occupations selected. It is difficult to make any classification which would be without fault. The men employed in the various occupations will not always agree as to the degree of skill required in their own and

29. Cf. U. S. Census 1930 and T. Earl Sullenger, Social Determinants in Juvenile Delinquency, 1936, p. 197.

other occupations. Any classification selected represents a certain amount of overlapping.

The complete tabulation of this re-arranged material is given in Table II.

TABLE II
AVERAGE GRADES OF HIGH SCHOOL BOYS
GROUPED ACCORDING TO OCCUPATION OF FATHER

Occupation	No. of Pupils	Highest Grade	Lowest Grade	Average Grade
<u>Professional Group</u>				
Artist	2	2.88	2.92	2.90
Banker	4	2.94	3.34	3.14
Undertaker	2	3.30	3.42	3.36
Bondsman	2	3.43	3.50	3.46
Veterinarian	2	3.45	3.49	3.47
Musician	4	3.45	3.51	3.48
Total number of boys--16				
Highest individual average--2.88				
Lowest individual average-----3.51				
Average for this group-----3.30				
<u>Commercial Group</u>				
Bookkeeper	6	2.30	2.58	2.43
Shipping Clerk	4	2.26	2.72	2.49
Salesman	62	1.24	4.10	2.53
Accountant, Auditor	4	2.06	3.00	2.53
Collector	1	2.62	2.62	2.62
Clerk	42	1.91	3.48	2.69
Stock Dealer	12	1.85	3.11	2.75
Businessman	20	2.02	3.93	2.92
Agent	10	2.26	3.83	3.00
Insurance man	4	2.60	3.56	3.08
Commission man	4	2.84	3.30	3.08
Under writer	10	2.64	4.09	3.35
Time keeper	4	2.89	3.85	3.37
<u>Stenographer</u>	2	4.14	4.20	4.18
Total no. of boys=185				
Highest individual average--1.24				
Lowest individual average-----4.20				
Average for this group-----3.749				

<u>Superintendent</u>	6	1.98	2.77	2.50
Manager	2	2.64	2.68	2.68
Foreman	20	1.34	4.18	2.89
Total no. of boys---	28			
Highest individual average--		1.34		
Lowest individual average-----			4.18	
Average for this group-----				2.754

Government Employee

Mail Service	8	2.40	4.06	2.98
Police	14	2.47	3.85	3.08
Fire Dept.	14	2.44	4.17	3.17
Inspectors	22	1.72	4.44	3.31
Civil Service	4	2.92	3.71	3.31
Total no. of boys---	62			
Highest individual average--		1.72		
Lowest individual average-----			4.44	
Average for this group-----				3.184

Skilled Workers

Cooper	4	1.34	1.96	1.65
Draftsman	2	1.88	2.28	2.08
Plasterer	2	2.07	2.11	2.09
Harness maker	2	2.13	2.21	2.17
Cigar-Maker or Manu.	2	2.26	2.34	2.30
Engineer-Stationary or Locomotive	8	1.60	2.69	2.37
Druggist or Chemist	2	2.31	2.51	2.41
China Packer	4	2.26	2.72	2.49
Brick Mason	18	1.23	4.23	2.64
Boiler Maker	4	2.24	2.87	2.70
Tinner	10	2.08	3.45	2.73
Molder	4	2.76	2.83	2.74
Machinist	4	2.49	2.80	2.77
Electrician	6	1.78	3.78	2.79
Painter	10	2.12	3.56	2.80
Blacksmith	8	2.34	3.03	2.84
Interior Decorator	4	2.30	3.41	2.85
Carpenter	48	1.84	3.80	2.89
Telephone man	4	2.66	2.89	2.92
R. R. Employee	40	1.80	4.30	2.94
Plumber or Pipe Fitter	14	1.98	3.26	2.97
Mechanic	14	2.50	3.72	2.98
Tailor	6	2.84	3.14	2.99
Butcher	22	2.10	3.93	3.02
Toolsmith	2	3.01	3.17	3.09
Contractor	12	1.88	3.90	3.10
Printer	4	2.60	3.70	3.11
Baker	14	2.66	3.30	3.12
Mill Wright	6	2.87	3.58	3.18

P. B. X. Operator	4	3.27	3.31	3.29
Dressmaker	1	4.18	4.18	4.18
Total no. of boys--285				
Highest individual average--1.23				
Lowest individual average-----4.30				
Average of this group-----2.862				

Semi-Skilled

Garageman	4	2.12	2.25	2.15
Confectioner	3	2.21	2.25	2.23
Rubber Worker	2	2.30	2.48	2.39
Box Maker	2	2.50	2.54	2.52
Gasman	2	2.78	2.90	2.84
Grocer	22	2.22	3.20	2.87
Merchant	20	2.02	3.93	2.92
Farmer	20	2.09	3.72	2.92
Cleaning and Dyeing	4	2.70	3.17	2.93
Expressman	6	2.11	4.17	3.01
Shoe Maker	2	3.00	3.05	3.02
Carpet Weaver	2	3.02	3.16	3.09
Cook	4	3.07	3.14	3.10
Body Builder	2	3.10	3.20	3.15
Furnace Man	2	3.10	3.20	3.15
Yardman	16	1.52	4.26	3.15
Rancher	2	3.05	3.25	3.15
Bus Driver	4	3.09	3.31	3.20
Motorman St. R. R.	4	2.51	4.16	3.22
Miller	6	2.86	3.56	3.27
Janitor	38	2.66	4.24	3.44
Elevator Operator	4	2.80	4.08	3.44
Elevator Owner	2	3.51	3.91	3.71
Telephone Co. Employee	2	4.40	4.56	4.48
Total no. of boys--174				
Highest individual average--1.52				
Lowest individual average-----4.56				
Average for this group-----3.093				

Unskilled Labor

Stock Feeder	6	2.85	3.18	2.26
Scale Man	24	2.21	2.66	2.43
Oil Station Attendant	1	2.80	2.80	2.80
Floorwalker	12	2.42	3.02	2.92
Smelter Man	24	2.18	3.90	3.04
Laborer	236	1.68	4.58	3.16
Fruit Dealer	2	3.13	3.29	3.21
Ice man	8	2.51	4.16	3.22
Factory Hand	8	2.54	3.85	3.25
Restaurant Worker or Owner	8	2.60	4.22	3.33

Fireman	2	3.58	3.82	3.70
Bartender	4	3.60	4.40	4.00
Total no. of boys--335				
Highest individual average--1.68				
Lowest individual average-----4.58				
Average for this group-----3.094				

Unemployed

Pensioned	1	3.24	3.24	3.24
Total no. of boys-1086				
Highest group score-----2.24				
Lowest group score-----3.377				
Total average for all groups-----3.059				

The average grade for the boys in these groups was 3.059, ranging from the average 1.23 made by a brick-mason's son to 4.58 made by the son of a common laborer.

The highest group score was made by the unemployed or pensioned. This grade, 3.24, was an individual score and therefore hardly reliable for comparative purposes.

The next highest score was 3.749, made by sons of men employed in commercial work. This is more reliable as there were 185 boys in this group.

The lowest group score was made by sons of "Professional" fathers, with Government employee's sons next.

The semi-skilled labor group made a slightly higher score of 3.093 which was close to the average for the entire group of one thousand eighty six boys, whose average was found to be 3.059. This average was nearly the same as that for the boys of unskilled fathers, which was 3.094.

The occupation in itself appears to have very little effect on the grades of the sons.

This agrees with the findings of Edwin T. Sheppard³⁰ in, "A Study of the Records of Two-Hundred-Nine Unsatisfactory Students of a Freshman Class in the University of Chicago."

In this study completed in September 1927, he says, "A study of the occupations of the fathers gave little indication of a relationship between that factor and college success."

Crawford³¹ reports, "that sons of professional people do slightly better than the sons of business men, intelligence of the two groups being the same, but that otherwise parental occupation has no effect on grades." This is opposite to our findings.

Jones³² and Shuttleworth³³ in separate studies found no relation existing between parental occupation and grades made by school children.

Social heritage and environment might both be given as explaining the higher grades made by the sons of commercial men, superintendants, managers, and foremen.

30. Sheppard, Edwin T., Bulletin #24 of the Department of Secondary School Principals of the N. E. A., Jan. 1929, p. 33.
31. Crawford, A. B., "Forecasting Freshman Achievement." School and Society, 1930, 31, pp. 125-132.
32. Jones, E. S., "Studies from the office of personnel research," University of Buffalo Studies. 1930, 8, No. 1.
33. Shuttleworth, F. K., "The Measurement of Character and Environmental Factors Involved in Scholastic Success," University of Iowa Studies in Character, 1927, Vol. 1, No. 3.

According to the Behaviorist, the occupational income may provide better environmental surroundings. If we do not agree that environment is the controlling factor, but prefer the "Mental Set," "Brain Twist," or "Mental Pattern" theory, we might conclude that desire for security or desire for recognition was stronger in the boys of this group.

Crawford³⁴, Lloyd-Jones³⁵, and Spencer³⁶ support the theory that economic status is in inverse relation to grades.

The lower scores made by the sons of the unskilled group might be accounted for by citing the example set by the father "getting by" with only the minimum of educational requirements, while the slightly higher grades made by the sons of the semi-skilled group might be the result of the sons' determination to secure better educations than their fathers had.

Miss Houwink³⁷ found wealthier and better educated parents help their children more with their school work and poor children are much more conscious of the hard

34. Crawford, A. B., Incentives to Study. Yale University Press, 1929. p. 188.

35. Lloyd-Jones, op. cit.

36. Spencer, R. B., "Factors Related to College Achievement," Teacher's College Record, 1927-28-29, pp. 504-514.

37. Houwink, Eda. "A Study of the Home as Seen by the Child," Seminar on Personality, Washington University, St. Louis, Mo., St. Louis, Star-Times, June 13, 1934.

work done by their parents and have more desire to repay their parents.

3. Loss of Parents

In preparation for this phase of the study, a chart similar to I a was used, as follows:

Table III a. Preliminary Chart for Loss of Parents.

Parents	100	110	120	130	Average Grades etc.	480	490	500
No mother								
No father								
No mother or father								
Having both parents								

The master chart was checked and the grades recorded on this form as previously explained. These were then checked for individual high and low averages, the number of students in each group averaged and rearranged as in Table III. The totals were compiled and recorded as shown below.

Table III

Average Grades of High School Boys related to the loss of parents

Parents	No. of Pupils	Highest Grade	Lowest Grade	Average Grade
Both Parents Living	593	1.34	4.98	2.49
No Father or Mother	6	3.13	3.47	2.49
No Father	69	1.17	4.37	3.09

No Mother	34	2.12	4.62	3.13
Total no. of boys---	702			
Highest individual average---		1.92		
Lowest individual average-----			4.36	
Average for this group-----				2.80

From this table we find that the boys who had both parents living and those who had neither father nor mother made the highest grades. The loss of the mother seems to lower the boy's grades more than the loss of the father. This indicates that the mother has the greater influence upon the son than the father.

The student having both parents has, in the majority of cases, the best home environment.

The orphans have the same average. This may be due to the fact that they are in good foster homes. But the number of cases is too small to be a reliable figure.

Low grades are in direct relationship to a poor home environment according to Jones³⁸, Lloyd-Jones³⁹, May⁴⁰, Ohmann⁴¹, Remmers⁴², and Shuttleworth⁴³.

According to Jones⁴⁴ broken homes produce the most failures. This seems to be true where the child remains with one parent but in this study the loss of both parents seems to have a stimulating effect on students' grades.

38. Jones, E. S., op. cit.

39. Lloyd-Jones, E. McD., op. cit.

40. May, M. A., "Predicting Academic Success," *Journal of Educational Psychology*, 1923, 14, pp. 429-40.

41. Ohmann, O. A., "A Study of the Causes of Scholastic Deficiencies." *University of Iowa Studies in Education*, 1927, 3, No. 7.

42. Remers, H. H., "Diagnostic and Remedial Study of Potentially and Actually Failing Students," *Purdue University Bulletin*. 1928, 28, No. 12, p. 164.

43. Shuttleworth, F. K., op. cit.

44. Jones, E. S., op. cit.

The lower grades of boys who reported having no father are probably due to the mothers' over indulgence. In her desire to protect her offspring she helps him out of difficulties or takes his part too often, instead of allowing him to develop normally by fighting his own battles and solving his own problems as he would have to do if the mother's affections were divided between the father and son. This dependence on the mother becomes a handicap lasting often throughout life. In later life this dependence may be transferred to a wife or other person.

Students having neither father nor mother are often forced to solve their own problems and therefore develop a sense of responsibility early in life. Realization that they will be forced to depend entirely upon their own resources is probably responsible for their attitude toward school work which enables them to secure the higher grades.

Where a boy has no mother he is often allowed to be away from home, and to find his own companionship outside of the home; this is seldom the best.

Often where the father attempts to curb these outside activities, misunderstandings arise and result in unhappy situations, which may destroy the friendship and companionship which should exist between the father and son. In the normal family the mother often acts as arbitrator and secures the family solidarity so necessary

for a growing boy.

The unsatisfactory home situation is reflected in the lower grades received in school. This is especially true of those boys who come from homes of the higher income groups. This might be accounted for by the fact that there is more companionship between parents and children in the higher income groups. The child feels the loss of parents more and a surviving parent is more apt to "spoil" the child where they have more time together.

Miss Houwink⁴⁵, in her study, found that "Wealthier children have more recreation with their parents than poor children" and "Wealthier and better educated parents help their children more with their school work."

4. Family Discord

Another phase of domestic relations studied was the effect of separation, divorce, or remarriage of parents, on the grades made by boys in high school.

As in the preceding studies a preliminary chart was prepared as in Table IV a, a sample to show the arrangement follows:-

45. Houwink, Eda, op. cit.

Table IV a. Preliminary Chart of Parental Status

Parental Status	Average Individual Grades					
	100	110	120	etc.	470	480 490 500
Parents living together						
One parent living alone after death of first spouse						
Parents divorced and not remarried						
Both parents remarried						
Parents divorced and one remarried						
Parent remarried after death of first spouse						

On this chart were recorded, as in the preceding studies, the individual average grades for the 512 boys who gave the proper information about their parents.

This chart was checked for the number of boys; the high and low individual averages and the average grade for each group, and the results tabulated in Table IV.

TABLE IV
 AVERAGE GRADES OF HIGH SCHOOL BOYS GROUPED
 ACCORDING TO STATUS OF PARENTS

Status of Parents	No. of Pupils	Highest Grade	Lowest Grade	Average Grade
Parents separated	19	1.63	3.91	2.87
Parents divorced and one remarried	2	1.85	3.93	2.89
Parent remarried after death of first spouse	16	1.34	3.93	2.92
Parents living together	444	1.35 ✓	4.92	3.02
One parent living alone after death of first spouse	9	1.95	3.85	3.12
Both parents remarried	20	2.65 ✓	4.88	3.18
Parents divorced not remarried	2	3.18	3.25	3.22

Total no. of boys--512
 Highest individual grade----1.35
 Lowest individual grade-----4.92
 Total average grade-----3.02

We find on examination of the above data that while both the highest and lowest individual scores were made by sons of parents living together, this group of boys averaged within .02 of the theoretical average grade of 3.

The highest group averages were made by boys whose parents were separated, not divorced.

The lowest averages appeared where the parents were divorced but not remarried or where both parents were remarried.

The death of one parent lowers the average grade more than the loss of one parent by divorce or separation. Remarriage of the remaining parent seems to have stimulated the student to make better grades. Grades tend to be lower where the remaining parent did not remarry.

In a study made by Miss Houwink⁴⁶ in the St. Louis schools, it was found that in the broken home situation, most children in the grades four to eight remain with the mother and that many more broken homes exist in the poorer groups.

In our study the loss of the mother lowers the boys' grades more than the loss of the father. This may be taken to indicate that the mother has the greater influence on the boy.

Thus we conclude that where marital relation is normal it has little or no effect on grades of high school boys. Other factors may be of more importance. Where the home was broken and the home situation was disturbed we find some evidence that grades were affected.

5. Position in the Family and Size of Family

The size of the immediate family and the relative position in the family was another phase of the home environment investigated and compared with the grades made by high school boys. The preliminary work as in previous paragraphs, consisted of checking the master

46. Houwink, Eda, Ibid.

chart, selecting and arranging this material in a form similar to Table V a.

Table V a. Preliminary Sibling Chart

Typical Grouping Position in Family	Average Grades					No. of Students
	100	110	etc.	470	480	
Only child						43
Group Total						43
Youngest-Small family (6 or less)						110
In between-small family						107
Oldest-Small family						143
Group Total						360
Youngest-Large family (7-9)						26
In between-Large family						164
Oldest-Large family						31
Group Total						221
Youngest-Extra large family (10 or more)						8
In between-Extra large family						63
Oldest-Extra Large family						3
Group Total						74
Total						698

The average grades were checked on the master chart and recorded as directed for chart I a, page 14.

The size of each group was selected as follows: the "only child" was a logical division, next the small family was first chosen on the basis of four, a figure used in

other studies, however, the results were so meager that this number was finally raised to six. In scanning the original chart it was easily seen that ten would be a satisfactory number to use as the basis for the extra large families so that the remaining families of seven to ten children were classified as in-between or "large" families.

As in previous charts the number of pupils in each group were counted and the high and low individual averages selected and recorded in Table V, in order to show the relation of the position held by the boy, in the family, with average grades.

TABLE V
AVERAGE GRADES OF HIGH SCHOOL BOYS GROUPE
ACCORDING TO POSITION IN FAMILY.

Position in Family	No. of Pupils	Highest Grade	Lowest Grade	Group Average Grade
Only child	43	1.18	4.98	2.83
Youngest in Large Family	26	1.61	3.78	2.86
Youngest in Small Family	110	1.38	4.58	2.90
"In Between" in Large Family	164	1.19	4.50	2.94
Oldest in Small Family	143	1.49	4.61	2.99
"In Between" in Small Family	107	1.23	4.76	3.07
Youngest in Extra Large Family	8	2.52	3.66	3.09
Oldest in Large Family	31	2.14	4.57	3.15
Oldest in Extra Large Family	3	2.46	3.63	3.15
"In Between" in Extra Large Family	63	1.82	4.90	3.26

Total Number-----698
 Group Range-----1.18 to 4.98
 Average for entire group-----2.995

From Table V we find that the "only child group made the highest average grade, 2.83. The next highest group average was made by the youngest children in large families.

The highest and lowest individual average fell in the only child group.

Averages of 2.99, 3.07 and 3.09 all very close to the theoretical average of 3, were found for the "oldest in a small family," "in-between in a small family" and the "youngest in a large family" respectively.

The lowest group average was found to be 3.26 for those grouped as "in-between in an extra large family."

This might be explained by the fact that the only child receives more attention and help from the parents while the youngest in a large family may be assisted by older brothers and sisters. This may also explain why the lowest grades were made by the "in-between" child in the extra large family. The "oldest" child having had the advantage of being the "only" child at first, gets a better start, and yet is not matured enough to be of assistance to the "in-between" child at the time when help is needed most. The "in-between" child is often neglected more by the parents because the younger children demand their attention.

The position among one's siblings seems to have no

effect according to Griffits⁴⁷ and Harris⁴⁸. Harris found that the only child made slightly lower average grades than the child having one sibling. This is opposite to our findings. He also found the lowest averages made by those belonging to families of from four to six children; we found the lowest averages made by those from families of ten or more. While boys from families of six or less made the second highest average found in this study.

Harris⁴⁹ also found that it made little or no difference as to sex. In this respect the following difference as to sex was indicated in Hill's⁵⁰ study of 1025 girls in the same high school. The highest individual average grade was made by the youngest girl in a family of four or less and not by an "only child" as with the case of the boys.

The lowest individual average went to a girl who was "in-between" in a small family (4 or less) instead of an "only child".

47. Griffits, C. H., "The Influence of Family on School Marks." School and Society, 1926, 24, pp. 713-718.

48. Harris, Daniel, "The Relation to College Grades of Some Factors Other Than Intelligence." Archives of Psychology #131. Columbia University, 1931.

49. Harris, Ibid.

50. Hill, L. R., "A Study of One Thousand and Twenty-five Girls of Omaha South High School." Unpublished Master's Thesis, Municipal University of Omaha, Omaha, Nebraska, 1935. pp. 15-16.

The "only child" group received the highest group average in both studies. The lowest group average for the girls was made by the oldest girl in families of ten or more; while for the boys the "in-between" in the family of ten or more seemed to have the hardest time to make his grade.

In other studies made along similar lines there seems to be little uniformity in the findings.

Cuff⁵¹ and Griffiths⁵² favor the only child in their studies. This is not confirmed by Mueller⁵³ or Shuttleworth⁵⁴ and the opposite is reported by Ellis⁵⁵, although he claims geniuses are more frequently either the oldest or youngest. Griffiths⁵⁶ reports no correlation between position in the family and grades.

In studies of college students Clark⁵⁷ reports the best grade made by the oldest child while Crawford⁵⁸ reports the opposite and Lloyd-Jones⁵⁹ reports they found

51. Cuff, N. B., "The Problem of Elimination From College," School and Society, 1929, 30, pp. 550-553.
52. Griffiths, C. H., op. cit., pp. 713-716.
53. Mueller, A. D., "A Vocational and Socio-educational Survey of Graduates and Non-graduates." Genet. Psychol. Monog., 1929, 6, No. 4.
54. Shuttleworth, F. K., op. cit., Vol. 1, No. 2.
55. Ellis, H., "A Study of British Genius," Bost. Hought., 1926.
56. Griffiths, C. H., op. cit., pp. 713-716.
57. Clark, E. L., op. cit., pp. 237-238.
58. Crawford, A. B., op. cit., p. 188.
59. Lloyd-Jones, E. McD., op. cit.

no difference when grades were correlated with position in the family. The size of the family is related to grades in Table VI.

TABLE VI
AVERAGE GRADES OF HIGH SCHOOL BOYS GROUPED
ACCORDING TO THE SIZE OF THE FAMILY

Size of Family	No. of Pupils	Highest Grade	Lowest Grade	Average Grade
Only child	43	1.18	4.98	2.83
Large Family (7 to 9)	221	1.18	4.57	2.96
Small Family (6 or less)	360	1.33	4.76	2.98
Extra Large Family (10 or more)	74	1.22	4.90	3.24

Total no. of boys---698
Highest individual average----1.18
Lowest individual average-----4.98
Average for entire group-----2.995

When we consider grades related to family size only, without regard to the position of the siblings in the group, we find the "only child" group again had the highest and lowest individual averages, and the highest group average.

There appeared little difference in the average or range of grades made by the "small family" and "large family" groups.

The lowest group average 3.24 was made by the "extra large family" group.

Here again heredity or environment may play a part. The differences noted are probably not due entirely to the size of the families. They may be due in part to the

fact that, as a rule, people with lower intelligence have the larger families, a lower income, and lower standards of living.

Dr. Counts⁶⁰ comes to the same conclusion in his study of high school children when he says, "The intelligence score also varies inversely with the size of the family. The explanation here is apparently to be found in the limitation of births among the more fore-sighted elements in the population."

He found one condition, however, that appeared to be different from our finding when he says, "Firstborn made records somewhat superior to the records of lastborn children."⁶¹ He explained this by saying that, "This is probably to be explained in terms of greater elimination and thus more rigid selection among the former."⁶² He, however, was speaking about intelligence rating, while we are comparing grades earned by the pupils.

The "firstborn" group might have more native ability yet because of more duties about the home that engage their time, they do not make as good grades as do their companions in the youngest child group, according to data shown in this study.

60. Counts, G. S., op. cit., p. 147.

61. Ibid.

62. Ibid.

6. Grade School Last Attended.

In his desire to determine some of the factors outside the home which might effect the grades of high school boys, effort has been made to determine if the grade school last attended had any apparent correlation with his high school grades.

In order to avoid too much repetition it was deemed best to omit the preliminary charts which were made in a manner similar to those prepared for the preceding correlations and to give only the final charts in this and the following phases of the work.

TABLE VII

AVERAGE GRADES OF HIGH SCHOOL BOYS GROUPED
ACCORDING TO THE GRADE SCHOOL LAST ATTENDED

Grade School Attended	Number of Pupils	Highest Individual Average	Lowest Individual Average	Group Average
Country or County	10	2.17	3.11	2.56
Lutheran Parochial	16	1.18	3.64	2.63
City, Public	458	1.33	4.09	2.91
Out of County (or state)	28	1.61	3.93	3.10
Catholic Parochial	386	1.88	4.45	3.16
	898	1.18	4.89	3.014

From the above table we found that the individual high score fell in the Lutheran Parochial group, while the individual low score fell in the city public school group.

We found that this sample group of 898 boys scored within .015 of the theoretical average grade of 3. We may therefore conclude that this is a normal group.

The highest group average 2.56 was made by the boys who attended the country or county schools and the lowest group average 3.16 was made by boys from the catholic parochial schools, while the city public schools and the "out of county" schools furnished the nearest average groups. However, it is recognized that the small number of boys reported from the county, Lutheran parochial and out-state are too small to furnish a basis for valid conclusions.

The grades for a number of students who left school did not appear in this study; if included they would have lowered the average for the catholic parochial group more than the other groups.

Luedke⁶³ in a study of Parochial and Public schools, found "the 'drops' to run from 3. to 7.9 percent higher for the students from parochial schools, while the chances to secure places of leaderships were sixteen to twenty-five in favor of the student from the public school."

Factors other than the school previously attended may be responsible for the different levels of achievement reached. For instance it was found that attendance was more irregular with those students who came from the parochial school. The view is also supported by Luedke⁶⁴ in his study.

63. Luedke, Howard Lewis, "A Study of Age, Attendance Records and Achievement Records of Parochial School Pupils Entering Certain Junior and Senior High Schools", 1930. Abstracts of Graduate Theses in Education, Teachers College, University of Cincinnati, 1927-31, pp. 334-336.

64. Ibid.

Cubberley⁶⁵ reports "irregular attendance is an important cause of retardation and ultimate elimination from school; the irregular pupil becomes a drag on the class; truancy and tardiness are bad habits which tend to undermine the discipline and morals of a school."

The same author⁶⁶ in another of his works points out that school attendance may be irregular because of the poverty of parents, sickness, and desire of parents to put children to work. The more frequent offenders are children of native born parents. He blames schools themselves for much irregularity because school work lacks interest and vitality, the companionship found in school and on the playground does not appeal, and the work is not well adapted to the pupils' needs.

Other authors supporting these views are Strayer-Engelhardt⁶⁷, Monroe⁶⁸, Gulick⁶⁹, Brooks⁷⁰, Heath⁷¹,

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65. Cubberley, Elwood P., "Public School Administration." Houghton Mifflin Co., 1916. p. 361.
66. Cubberley, Elwood P., "The Principal and His School." Houghton Mifflin Co., 1923. p. 247.
67. Strayer, Geo. D., and Engelhardt, N. L., "The Class Room Teacher," American Book Co., N. Y. 1920, p. 159.
68. Monroe, Paul, "Cyclopedia of Education," Vol. 1, The Macmillan Co., 1911, p. 281.
69. Gulick, Luther, "Why 259,000 Children Quit School." Worlds Work. Vol. 20, 13, pp. 285-13, 289
70. Brooks, S. D., "Causes of Withdrawal From School." Educational Review, Vol. 26, p. 362-393.
71. Heath, J. S., "The Truant Problem and the Parental School." U. S. Bureau of Education, Bulletin, 1915, pp. 1-35.

Reavis⁷², Keyes⁷³, and Odell⁷⁴.

Irregular attendance may be the result of poor physical health. Low grades have been associated with poor physical health by Chapin⁷⁵, Diehl⁷⁶, Freeman⁷⁷, Hoefler-Hardy⁷⁸, Malloy⁷⁹, May⁸⁰, Ohmann⁸¹, and Remmers⁸². Improved scores were correlated directly with improved physical condition by Hoefler and Hardy⁸³, Keal⁸⁴, and Nelson⁸⁵.

72. Reavis, Geo. H., "Factors Controlling Attendance in Rural Schools, Contributions to Education #108. Teachers College, Columbia University, N. Y. 1920. p. 17.
73. Keyes, C. H., "Progress Through the Grades." Contributions to Education #42. Teachers College. Columbia University, N. Y. 1920. pp. 23-62.
74. Odell, C. W., op. cit., pp. 468-469.
75. Chapin, F. S., "Extra-Curricular Activities of College Students." School and Society, 1926, 23, pp. 212-216.
76. Diehl, H. S., "Health and Scholastic Attainment." U. S. Public Health Reports. 1929, 44, pp. 3041-3050.
77. Freeman, F. S., "Elusive Factors Tending To Reduce Correlations Between Intelligence Test Ranks and College Grades." School and Society. 1929, 29, pp. 784-786.
78. Hoefler, C. and Hardy, M. C., "The Influence of Improvement in Physical Condition in Intelligence and Educational Achievement." 27th Year Book National Society for Study of Education, 1928. Part I, pp. 371-387.
79. Malloy, J. N., "Physical Defects: Their Relation to Achievement Scores and to Each Other." Peabody Journal of Education 1924, 2, pp. 147-152.
80. May, M. A., "Predicting Academic Success." Journal of Educational Psychology, 1923, 14, pp. 429-440.
81. Ohmann, O. A., "A Study of the Causes of Scholastic Deficiencies." University of Iowa Studies in Education 1927, 3, No. 7.
82. Remmers, H. H., op. cit., p. 164.
83. Hoefler, C. and Hardy, M. C., op. cit., pp. 380-85.
84. Keal, H. M., "Mental Ratings, Scholarship and Health." School and Society, 1928, 28, pp. 277-280.
85. Nelson, G. E., "Correction of Visual Defects and Improvement in College Studies." School and Society, 1928, 27, pp. 105-108.

Negative findings were reported by Gates⁸⁶, Gitting⁸⁷, Summerville⁸⁸, and Westenberger⁸⁹. Ellis⁹⁰ reported opposite findings, claiming "genius resulted from feeble or disabled." This view is also given by Adler⁹¹, who says "Organ inferiority leads to compensation in the way of scholarship or other achievement."

The different viewpoints of the authorities, shown by their selection of "essentials" taught and the "interest" stimulated in the student, may also be factors worthy of study.

The boys feel that there is not much opportunity for them at present in the industrial or vocational field, and remain in school longer than they otherwise would.

The range of grades is quite normal for all groups and shows little variation between the groups.

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86. Gates, A. I., "The Nature and Educational Significance of Physical Status and of Mental Physiological, Social, and Emotional Maturity." Journal of Educational Psychology, 1924, 15, pp. 329-358.
87. Gitting, I. E., "Correlation of Mental and Physical Traits in University of Arizona Women." American Physical Education Review. 1927, 32, pp. 569-583.
88. Summerville, R. C., "Physical, Sensory, and Motor Traits." Archives of Psychology, Lehigh University #75, 1924.
89. Westenberger, E. J., "A Study of the Influence of Physical Defects Upon Intelligence and Achievement." Catholic University of America, Educational Research Bulletin #9, 1927, 2.
90. Ellis, H., op. cit.
91. Adler, Alfred, Understanding Human Nature.

7. Plans for Educational Career.

A check of grades was made in an attempt to determine if the plans, goal or interest could be used as a determining factor.

It was found from checking 747 of the boys' average grades and comparing them with the replies made in the questionnaires that those planning not only to finish high school but to attend college made the highest group score.

A summary of this material appears in the following chart.

TABLE VIII

AVERAGE GRADES MADE BY HIGH SCHOOL BOYS GROUPED ACCORDING TO THE PLANS OR GOAL HELD BY THE STUDENT FOR HIS EDUCATIONAL CAREER.

Plan or Goal	No. of Pupils	Highest Average Grade	Lowest Average Grade	Group Average Grade
Plans to finish high school and go to college	221	1.33	4.58	2.95
Plans to finish high school only	468	1.21	4.98	3.04
Does not plan on finishing high school	58	1.99	4.88	3.51
Total no. of boys-----747				
Highest individual average----1.21				
Lowest individual average-----4.98				
Total group average-----3.05				

The above chart shows that only 7.76 percent of the boys do not plan to finish high school. This low percentage was probably due to the industrial situation then prevalent. The boys felt that there was not much opportunity for them in the industrial or vocational field.

The range of grades is quite normal for all three groups and shows little variation between the groups. Both the highest and lowest individual averages fell in the group of those planning to finish high school. The highest group average was made by those planning to go to college while the lowest group average was made by those who did not plan to finish high school. This appears quite a normal situation.

The amount of variation is too slight to be of much value as a determinant of grades.

8. Course of Study.

The course of study selected was next checked and related to the grades made by the boys. This work is summarized in Table IX.

TABLE IX

AVERAGE GRADES MADE BY HIGH SCHOOL BOYS GROUPED
ACCORDING TO THE COURSE OF STUDY SELECTED.

Course of Study	No. of Pupils	Highest Individual Average	Lowest Individual Average	Group Average
1. Drafting	53	1.65	4.17	2.73
2. College Prep.	95	1.33	4.22	2.82
3. Stenographic	38	1.34	3.90	2.84

TABLE IX Con't.

4. Bookkeeping	71	1.18	4.18	2.95
5. Woodwork	38	1.94	4.00	2.96
6. Music	4	2.88	3.24	3.09
7. Opportunity	11	1.92	4.45	3.11
8. Science	10	2.20	4.12	3.13
9. Sales	20	2.10	4.25	3.14
10. Auto Mechanics or Metal trades	101	1.74	4.76	3.17
11. Printing	99	1.24	4.58	3.24
12. Arts	12	2.08	4.15	3.38
13. Language	1	3.48	3.48	3.48
14. Electricity	1	3.51	3.51	3.51
15. Business Relations	1	3.51	3.51	3.51

Total no. of boys--555

Highest individual average-----1.18

Lowest individual average-----4.76

Total group average-----3.018

In all courses offered the English and History requirements are nearly equivalent.

The highest individual score was made by a boy who had selected the bookkeeping course, while the lowest was made by the one selecting the auto mechanics or metal trades course.

We note that there were three courses having only one student in each. All three fall at the bottom of our list as having the lowest group averages, although not the lowest individual averages.

The printing course shows the widest range of grades with the auto mechanics or metal trades course next in order.

A check of the subject matter required in each of these courses fails to disclose reasons for the number of boys in each course or why they should receive grades

averaging as they did. The requirements in the Drafting, College Preparatory, Woodwork, Science, Auto Mechanics or Metal Trades courses are equally difficult and are designed to permit a student to meet the requirements of several engineering schools. Should a student decide during the course that he will be able to attend a university, he may select a few additional credits in mathematics or science.

The Stenographic, Bookkeeping, Music, Opportunity, Sales, Printing and Arts courses give the student greater freedom in his choice of electives.

Of the last three, Language, Electricity, and Business Relations, the Language course would fall in the same category as the College Preparatory, while Electricity and Business Relations would fall in with the Stenographic and Bookkeeping.

It would seem that the choice of course made had little in common with the degree of success with which the student mastered the requirements of his course.

Harris⁹² in his study shows that, judged by academic standards, good students are more interested in intellectual and cultural things while poor students lean toward mechanical interests. He also states that, "absorption

92. Harris, Daniel, op. cit. p. 9.

in other than scholastic interests accounts for discrepancy between expected and actual grades."

Shuttleworth⁹³ agrees with Harris⁹⁴ regarding the choice of intellectual and cultural things as compared to mechanical interests while Kornhauser⁹⁵ found no consistent or reliable difference.

The idea, that "absorption in other than scholastic interests accounts for the discrepancy between expected and actual grades," is supported by Freeman⁹⁶, Laird⁹⁷ and Ohmann⁹⁸.

Howell⁹⁹ in a study of interests related to success in trade training found that "interests measured by the interest analysis blank developed by Hubbard in connection with the Minnesota Mechanical Abilities Project, can nowhere, in any group of boys be relied upon to predict mechanical ability." This might indicate that perhaps

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93. Shuttleworth, F. E., "Environmental and Character Factors Involved in Scholastic Success." 1926-27 Data. Journal of Educational Psychology 1929, 20, pp. 424-433.
94. Harris, op. cit.
95. Kornhauser, A. W., "Results from a Quantitative Questionnaire on Likes and Dislikes." Journal of Applied Psychology, 1927, 11, pp. 85-94.
96. Freeman, F. S., op. cit. pp. 784-788.
97. Laird, D. A., "A Study of Some Factors Causing a Disparity Between Intelligence and Scholarship. In College Students." School and Society, 1924, 19, pp. 290-2
98. Ohmann, O. A., op. cit.
99. Howell, Tillie, "The Relation of Interests to Success in Trade Training." Abstracts of Graduate Theses in Education. Teachers College, University of Cincinnati, 1927-1931. pp. 325-326.

interests are changed by the experience of success and failure.

9. Extra-Curricular Activities.

Does a boy who is active in extra-curricular activities make a higher or lower average?

In answer to the above question the author compiled the following figures.

Table X shows the average grades of boys belonging to sponsored school clubs. The boys were asked to give the name of the club or clubs to which he belonged.

The following clubs were listed, debating, music, dramatic art, history, commercial, philatelic, and manual arts.

TABLE X

AVERAGE GRADES MADE BY HIGH SCHOOL BOYS GROUPED ACCORDING TO THE EXTRA-CURRICULAR ACTIVITIES IN WHICH THEY PARTICIPATED.

Extra-Curricular Activity	No. of Pupils	Highest Individual Average	Lowest Individual Average	Group Average
Three or more	3	1.20	3.14	1.67
Two	12	1.25	3.18	2.44
One	146	1.35	4.08	2.65
None	312	1.75	4.62	3.02

Total no. of boys---473

Highest individual average-----1.20

Lowest individual average-----4.62

Average for this group-----2.885

We found that only about half of the boys answered this question in such a manner as to be of value. This was perhaps due to the questionnaire being too extensive and to a misunderstanding on the part of some boys interpreting the term "extra-curricular activities," to mean physical culture, or gymnasium work. From checking the group average we conclude that many of the lower grade students failed to answer this question.

On the whole the work of club members is of higher rank than that of non-club members. This is because students of higher intelligence are able to do their work in less time and have more time for club work, and that interest in the work of the school not only is shown by the higher grades but by activity in school affairs. The boy who has "outside" interests and takes no active part in club work is also the boy whose "outside" interests interfere with his ability to earn the better grades.

We are unable to show that joining these clubs has, in itself, improved their grades, and so conclude that the boys who do join these clubs are, as a rule, the better students and are able to keep their school work up while taking an active part in the work of these organizations.

Douglass¹⁰⁰ in a discussion of extra-curricular

100. Douglass, A. A., The American School System, Farrar and Rinehart Inc., N. Y. 1934, p. 408.

activities says,

Aside from membership upon athletic teams or in fraternities, where the findings have been more variable, the general result shows that reasonable and sometimes even excessive participation does not lower scholarship. Average marks of students engaged in extra-curricular affairs are as good as, or better than, the average marks of those not so engaged. Marks of the same students are evidently lowered slightly if at all by participation.

In general those boys who engaged in activities such as debating or publications ranked higher than those who engaged in sports, athletics or music.

These views are in agreement with those found by Shuttleworth¹⁰¹, Knox and Davis¹⁰², Freeman¹⁰³, Ohmann¹⁰⁴, and Laird¹⁰⁵.

There seems to be no general agreement among investigators in this field. Leadership, and participation in extra-curricular activities are associated with higher grades by Chapin¹⁰⁶, Crawford, A. B.¹⁰⁷, Knox-Davis¹⁰⁸,

101. Shuttleworth, F. K., op. cit.
 102. Knox, J. E., and Davis, R. A., "The Scholarship of University Students Participating in Extra-Curricular Activities." Educ. Admin. and Superv. 1929, 15, pp. 481-93.
 103. Freeman, F. S., op. cit. pp. 784-786.
 104. Ohmann, O. A., op. cit.
 105. Laird, D. A., op. cit. pp. 290-293.
 106. Chapin, F. S., op. cit. pp. 212-216.
 107. Crawford, A. B., "Extra-Curricular Activities and Academic Work." Personnel Journal 1928-29, 7, pp. 121-129.
 108. Knox and Davis, op. cit. pp. 481-93.

Sommers¹⁰⁹ and Evans¹¹⁰.

Lloyd-Jones¹¹¹ agrees with the above findings up to a certain degree after which they claim the reverse is found to be true.

Nickle, Clarence E.¹¹² in "A Statistical Study of the Relations of Extra-Curriculum Activities and Scholarship in High Schools," says:

The evidence contributed by the study indicates a triple relationship between extra-curriculum activities and scholarship. Four types of activities increase the possibility of success in scholarship, three appear to have no appreciable effect on it and two decrease it. The four types that increase success in scholarship are declamatory, forensic, stenographic, and publication.....The three types which show no appreciable effects upon scholarship are vocal music, instrumental music, and dramatics. The two types which decrease success in scholarship are athletics and administrative offices.

Activities were related to low grades by Freeman¹¹³, and Jones¹¹⁴.

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109. Sommers, G. H., "Pedagogical Prognosis." Teachers College Contributions to Education, No. 140, 1923.
110. Evans, E. E., "A Comparison of the Relations Between Activities and Scholarship of High School Pupils in and Urban Communities." Bulletin #24, Department of Secondary School Principles of the N. E. A., Jan. 1929, p. 35.
111. Lloyd-Jones, op. cit.
112. Nickle, Clarence E., "A Statistical Study of the Relations of Extra-Curriculum Activities and Scholarship in High Schools." Bulletin #24. Dept. of Secondary School Principals of the N. E. A. Jan. 1929, pp. 87-88.
113. Freeman, F. S., op. cit. pp. 784-786.
114. Jones, E. S., op. cit.

Negative results were reported by Beatty¹¹⁵, Bellingrath¹¹⁶, Cook and Thompson¹¹⁷, Monroe¹¹⁸, Muller¹¹⁹ and Turney¹²⁰. While Shuttleworth¹²¹ agrees with Nickle¹²² that some activities seem to go with higher grades and others with lower grades.

Knox and Davis¹²³ reported activities as a whole go with better grades, and ranked in descending order of grades are 1. publications, 2. administrative and executive, 3. self government, 4. athletics. This agrees in part with the work of Nickle¹²⁴ and Shuttleworth¹²⁵ cited above.

Sports were associated with low grades by Bear¹²⁶

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115. Beatty, J. D., and Cleeton, G. U., "Predicting Achievement in College and After Graduation." Personnel Journal. 1927-28, 6, pp. 344-351.
116. Bellingrath, G. C., "Qualities Associated with Leadership in Extra-Curricular Activities of the High School." Teachers College Contributions to Education #399, 1930.
117. Cook, W. A., and Thompson, M., "A Comparison of Letter Boys and Non-letter Boys in a City High School." School Review, 1929, 37, pp. 350-358.
118. Monroe, W. S., "The Effect of Participation in Extra-Curriculum Activities on Scholarship in High School." School Review. 1929, 37, pp. 745-752.
119. Mueller, A. D., op. cit.
120. Turney, A. H., "Factors Other Than Intelligence That Affect Success In High School." University of Minnesota Press. 1930, Minneapolis, Minn.
121. Shuttleworth, F. K., op. cit.
122. Nickle, C. E., op. cit. pp. 87-88.
123. Knox, J. E., and Davis, R. A., op. cit., pp. 481-493.
124. Nickle, C. E., op. cit., pp. 87-88.
125. Shuttleworth, F. K., op. cit.
126. Bear, R. M., "Factors Affecting the Success of College Freshmen." Journal of Applied Psychology, 1928, 12, pp. 517-523.

and Shuttleworth¹²⁷ but Savage¹²⁸ does not confirm their findings.

When intelligence scores are checked with grades by the following investigators, Crawford¹²⁹, Hall¹³⁰, Hindman¹³¹, Hutchinson¹³², and Ruble¹³³, the grades were found to be no lower than they should be for boys engaged in sports.

10. Leisure time and post-school employment.

The returns on this part of this survey were too scattered to be valuable in a tabulated form but from the material collected the following results appear.

The chief leisure time activities appear to be listening to the radio, movies, automobile driving, baseball and football. About 78% of the boys claim to work outside of school hours but less than 20% show regular employment such as carrying papers, working in a store, etc.

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127. Shuttleworth, F. K., op. cit.
 128. Savage, H. J. and Bently, H. W., McGovern, J. T. and Smiley, D. F., "American College Athletics." Carnegie Foundation for Advancement of Teaching. 1929. Bult. 23.
 129. Crawford, A. B., op. cit., pp. 121-129.
 130. Hall, R. T., "How Athletes and Non-Athletes Compare in Mental Ability and Educational Achievement." American Physical Education Review. 1928, 33, pp.388-389.
 131. Hindman, D. A., "Athletics and Scholarship at the Ohio State University." School and Society, 1929. 30, pp. 93-96.
 132. Hutchinson, M. E., "College Athletics and Scholarship." School and Society, 1929, 29, pp. 151-152.
 133. Ruble, V. V., "A Psychological Study of Athletics." Am. Physical Educ. Review. 1928, 33, pp. 319-334.

The lowest scores seemed to be made by boys who carry papers or caddy, although there is only a slight correlation between work and grades.

This agrees with finding reported by Harris¹³⁴ that;-

Mere engaging in work for pay outside of school does not in itself appear to have any relation to grades. The number of hours of work seems to have some relation to grades but there is no regular progression. The student's ability, his ambition, or attitude seems to play a large part in the correlation of work to grades.

Crawford¹³⁵ found the highest grades made by those who were self supporting and engaged in extra-curricular activities, while Flemming¹³⁶ found the opposite to be true.

Margaret C. Lusby¹³⁷ in a graduate thesis prepared for the University of Cincinnati reported;-

93.9 percent of the students had home duties, 20 percent work for pay, 25 percent study outside of school, 57.9 percent had vacations outside of the city, 100 percent attend movies while only 56.8 percent visit libraries and 23.3 percent were members of gangs. Informal recreation was found to be more popular than that which was organized.

134. Harris, Daniel, op. cit.
 135. Crawford, A. B., op. cit. Extra-Curricular Activities and Academic Work. p. 125.
 136. Flemming, C. W., op. cit.
 137. Lusby, Margaret C., "The Leisure Time of the City Adolescent." Abstracts of Graduate Theses in Education. Teachers College, Univ. of Cincinnati. 1927-31. pp. 337-340.

In comparison with Margaret Lusby's¹³⁸ report we found a lower percent of boys reporting home duties and working for pay. Only a very small percentage of South High boys reported home study (approximately 3%). Only 10% reported vacations outside of the city and this is probably not a very reliable figure. The percentages for movie attendance and library use were approximately the same for both studies. There was no check made in our study of the gang membership.

The following is a list of investigators all reporting that excessively low grades are associated with outside work, Crawford¹³⁹, Diehl¹⁴⁰, Freeman¹⁴¹, E. S. Jones¹⁴², L. Jones¹⁴³, Laird¹⁴⁴, Lloyd and E. M. Jones¹⁴⁵.

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138. Lusby, Margaret C., Ibid.
 139. Crawford, A. B., op. cit.
 140. Diehl, H. C., op. cit. pp. 3041-3050.
 141. Freeman, F. S., op. cit. p. 785.
 142. Jones, E. S., op. cit.
 143. Jones, L., "A Project in Student Personnel Service."
 University of Iowa Studies in Education, 1926, 5, No. 1.
 144. Laird, D. A., op. cit., pp. 290-292.
 145. Lloyd and Jones, E. McD., op. cit.

PART II

SUMMARY and GENERAL CONCLUSIONS

In summarizing the work of the preceding pages we find that no single social factor is outstanding in the determination of grades made by high school boys, but rather the combined influence of many factors.

Nationality plays some part. Boys born of parents from Scotch, English, Syrian or Jewish stock had better grades than those of Hungarian, Russian, Polish, Irish, Austrian, Serbian, Italian, or of Negro parentage. This might be accounted for by the social heritage of the race or group.

The occupation of the parent in itself has perhaps little if any influence on grades. Difference in home environment resulting from the type of occupation, has a direct influence. The boys whose fathers are employed in commercial work, as superintendents, managers or foremen in the skilled trades earn the highest grades. The lower grades were received by sons of unskilled and semi-skilled workmen, government employees, and men in various professions.

The loss of parents was found to have little effect when the boy had neither parent remaining; but when one parent was left, the grades were lower. The loss of the mother had greater effect than the loss of the father.

Family discord resulted in a lowering of grades

for high school boys when the parents were divorced and not remarried, or when they were divorced and both remarried. Higher scores were made by boys whose parents were separated, or where one parent had died and the other remarried. Normal scores were made by boys whose parents were living together.

Death of parents seemed to effect the grades of high school boys more than did family discord.

Family discord resulting in broken homes seems to have the effect of stimulating the student to better grades, where the parents were separated or only one was remarried; but to retard the student or result in lower grades where both parents were remarried or had been divorced and not remarried.

When the size of the family was studied, we found the only child making the highest score, with grades becoming lower as the size of the family increased. This is perhaps due to a lowering of economic, biological and social standards as the size of the family increases.

The relative position in the family was found to give the only child the best chances for high scores, followed closely by the youngest boy in families of seven to nine children. The oldest boys in the large and extra large families ranked lowest with the exception of one group. The boys classified as "in-between" in the extra large family of ten or more seemed to have the hardest time.

The boy who received his grade school education in the county or country school had a better chance to secure high grades in high school. When he was educated in the city public school or outside of the county or state, his grades were nearer the normal average. The boys who were educated in the Catholic parochial schools seemed to have a harder time to adjust themselves to the high school environment and made the lowest average grades. The boys from the Lutheran parochial schools were found to rank second highest.

Of the 747 boys who gave their plans for educational careers 29.62 percent planned to finish high school and go to college. This group received grades slightly above the average. 7.764 percent of the boys did not plan on finishing high school and were making the lowest average grades. The boys who planned to finish high school but did not anticipate a college course were average students.

The course of study selected by the student would seem to be very well adapted to the student's ability. Those courses having the most rigid requirements drew boys which were able to make the higher grades, while those courses having lower requirements seemed to draw the lower type students.

The boys who take the most active interest in extra-curricular activities other than athletics seem to make the highest averages. Those who take no interest in the

sponsored activities other than athletics were found to receive the lowest average grades.

The best athletes were found to have the lower averages. However the returns in this field were too unreliable to tabulate with any degree of satisfaction; from the answers given to this question it was impossible to determine the degree of participation. For example a boy might play an occasional game of "catch" or be a semi-professional baseball player on some neighborhood team, and both boys could have given the same answer on the questionnaire. It is obvious therefore, unless another survey were made in which more definite returns were secured, that the conclusions drawn in this field might prove erroneous.

If we were to picture a composite boy who would be likely to secure the highest score, we would have to describe him as: born of Scotch or English parentage preferably mixed. The father, if living, is employed in some commercial work such as a bookkeeper, shipping clerk or salesman, or in some skilled trade such as a cooper or draughtsman. Both parents may be dead; or, if living, they are separated. If only one parent has died the remaining parent has remarried. He would be the only child in this family and have received his grade school training in a county or country school. He has the desire to graduate from high school and go to college. He is not

greatly interested in athletics but takes an active part in three or more sponsored extra-curricular activities. He attends school regularly and may or may not be employed out of school hours. If employed, he is neither a caddy nor carries papers. He selects the drafting course in high school and meets college entrance requirements.

"Juke", the dullard, would be described in the composite picture as, born of Hungarian, Polish, or Bohemian-German parentage. The father is an unskilled worker, employed as a common laborer, or, if semi-skilled, employed by a telephone company. The mother is dead, and the boy is living with his father, or the parents are divorced and neither has remarried. He is one of the "in-betweens" in a family of ten or more children. His early training was received in a Catholic parochial school. He does not plan to finish high school, is greatly interested in athletics and may be outstanding in this field but does not participate in any other extra-curricular activity. He is very irregular in attendance, shows lack of interest in most forms of school work, probably selects the business relations or electrical course with some language or printing and meets only the minimum requirements of the course during his stay in the school.

The average grade for the 704 boys listed in the Nationality Table I, 3.06 is a little above the theoretic-

cal average grade of "3". This might be accounted for by the fact that some of the questionnaires were so incomplete that they were discarded. If these had been included, perhaps the average grade would have been lower. However, this grade is lower than the average grade of 2.67 reported by Mr. Hill¹⁴⁶ in his study of 963 girls of the same school.

When the average grades received by the boys of South High School are compared with those received by the girls during the same period, boys as a rule do not secure as high grades as girls.

Many authors have found no difference in intelligence, but girls are given the superior grade ratings in investigations made by such men as Crawford, C. C.¹⁴⁷, Cuff¹⁴⁸, Edgerton and Toops¹⁴⁹, Feingold, G. A.¹⁵⁰, Gowen, J. S., and Gooch, M.¹⁵¹, Hartson¹⁵², Turney¹⁵³,

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146. Hill, L. R., op. cit. p. 9.
 147. Crawford, C. C., "Some Comparisons of Freshman Boys and Girls." School and Society, 1926, 24, pp. 494-496.
 148. Cuff, N. M., op. cit., pp. 550-552.
 149. Edgerton, H. A., and Toops, H. A., Academic Progress. Ohio State University Press. 1929.
 150. Feingold, G. A., "Measurement of Effort Among High School Pupils." Educ. Admin. and Superv., 1924, 10, pp. 385-394.
 151. Gowen, J. W. and Gooch, M., "Age, Sex, and the Intercorrelations of Mental Attainments of College Students." Journal of Educational Psychology, 1926,
 152. Hartson, L. D., "Intelligence and Scholarship of Occupational Groups." Personnel Journal, 1928-1929, 7, pp. 281-285.
 153. Turney, A. H., op. cit.

Vogt¹⁵⁴. Clayton¹⁵⁵ claims girls study harder; Davidson-MacPhail¹⁵⁶ and Jones, E. S.¹⁵⁷ show a closer correlation of intelligence to grades for girls; while Lloyd-Jones¹⁵⁸ agree, they claim girls are poorer in minor subjects.

A. A. Jones¹⁵⁹, claims intelligence is "the most potent single factor in grades." The author grants that some degree of intelligence is absolutely necessary, but believes that the degree of correlation is not a perfect one.

L. M. Terman¹⁶⁰ gives the correlation of intelligence to grades as varying from .29 to .83, Roberts¹⁶¹, .31 to .60, McPhail¹⁶², .13 to .71 and the following

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154. Vogt, P. L., "Why Students Fail." School and Society, 1929, 30, pp. 847-848.
155. Clayton, F. T., "Home Conditions of Study and Pupils' Attitude Toward School Work." School and Society, 1923, 17, pp. 221-224.
156. Davidson, M. R. and MacPhail, A. H., "Psychological Testing in a Women's College." Personnel Journal, 1927, 6, pp. 266-275.
157. Jones, E. S., op. cit.
158. Lloyd, and Jones, E. McD., op. cit.
159. Jones, A. A., "The Prognostic Value of the Low Range Alpha Scores." Journal of Educational Psychology, 1929, 20, pp. 539-541.
160. Terman, L. M., "Intelligence Tests in Colleges and Universities." School and Society, 1921, 13, pp. 481-494.
161. Roberts, H. C., "Objective Measures of Intelligence in Relation to High School and College Administration," Education, Administration and Supervision, 1922, 8, pp. 530-540.
162. McPhail, A. H. "The Intelligence of College Students." 1924. Relation to College Grades of Some Factors Other Than Intelligence, (Archives of Psychology #131) Lehigh University, N. Y., 1931.

gave correlations varying from .08 to .82: Adams¹⁶³, Anderson¹⁶⁴, Beatty¹⁶⁵, Chambers¹⁶⁶, Gitting¹⁶⁷, Crauer¹⁶⁸, Pressey¹⁶⁹, Prosser¹⁷⁰, Sommers¹⁷¹, and Steers.¹⁷²

Comparison of scores on tests, with school marks made by Stuart Appleton Courtis¹⁷³ show that the general tendency is for girls as a group to receive appreciably higher marks than boys. In schools tested, in order to win a given mark boys had to have a higher absolute achievement than girls, the average difference ranging from 14 percent for a mark of one, to 78 percent for a mark of four.

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163. Adams, H. F., Furniss and DeBow, "Personality as Revealed by Mental Test Scores and by School Grades." Journal of Applied Psychology, 1938, 12, pp. 261-277.
164. Anderson, J. E., and Spencer, L. T., "Predictive Value of the Yale Classification Tests." School and Society, 1926, 24, pp. 305-312.
165. Beatty, J. D., op. cit.
166. Chambers, O. R., "Character Trait Test and Prognosis of College Achievement." Journal of Abnormal and Social Psychology, 1935, 20, pp. 303-311.
167. Gitting, I. E., op. cit., pp. 569-583.
168. Crauer, D., and Root, W. T., "The Thorndike Intelligence Tests and Academic Grades." Journal of Applied Psychology, 1927, 11, pp. 297-318.
169. Pressey, S. L., "An Attempt to Measure the Comparative Importance of General Intelligence and Certain Character Traits in Contribution to Success in School!"
170. Prosser, M. R., "A Study of the Scholastic Performance of Freshmen Women." University of Iowa Studies in Education, 1928, 5, No. 2.
171. Sommers, G. H., op. cit.
172. Steere, H. J., "The Effects of Character Traits on Scholastic Achievement." School and Society, 1929, 29, pp. 707-708.
173. Courtis, Stuart Appleton, "Why Children Succeed." 1925, p. 271.

We believe that there are perhaps several other factors which might influence the above average grades.

Some of the affects of attitude and interest on the work of high school children are covered in studies made by C. W. Flemming¹⁷⁴ in A Detailed Analysis of Achievement in High School; by Ohmann¹⁷⁵ in A Study of the Causes of Scholastic Deficiencies; and by Lloyd-Jones¹⁷⁶ in Student Personnel Work at Northwestern University.

No special correlation of attendance with grades was made, although reference was made to it in the study of schools previously attended. Charles W. Odell¹⁷⁷ gives us some definite figures on this subject. He attempts to show the correlation between attendance and grades. His conclusion is:-

The percent of time which a pupil attends school has a rather definite effect upon his powers of achievement at the end of a given period under consideration; that, on the whole, attendance appears to be a factor conditioning achievement, but there is no relation between the intelligence of children and their attendance.

This leads us to the question as to which is the cause and which is the effect. Is the matter of attendance responsible for the lower rating or is the lower

174. Flemming, C. W., op. cit.

175. Ohmann, O. A., op. cit.

176. Lloyd-Jones, E. McD., op. cit.

177. Odell, C. W., op. cit.

rating, possibly due in part to lack of interest, the cause of much of the poor attendance? This could be used as a complete study in itself and as justice could not be done to it in this study, the author has decided to omit it.

Carl W. Ziegler¹⁷⁸ writes that the teacher's personal influence has much to do with regularity of attendance and that those who attend regularly had higher grades.

Jennie D. Porter¹⁷⁹, in discussing retardation or over-ageness of the Negro student in the Harriet Beecher Stowe School of Cincinnati says it is "influenced by such factors as late entrance, irregular attendance and poor home conditions all of which might be due in part to economic pressure, lack of incentive and mental retardation."

We agree with Harry Jay Baker¹⁸⁰ in his investigation "Mental Tests as an Aid in the Analysis of Mental Constitution" that:-

178. Ziegler, C. W., op. cit., pp. 33-49.

179. Porter, Jennie D., op. cit., pp. 184-190.

180. Baker, Harry Jay, Abstracts of Dissertations and Thesis in Education, 1917-31 University of Michigan. p. 4.

1. Many of the exceptional deviations were frequently to be explained by lagging interest or by misinterpretation of the instructions.

2. Superior intelligence was not found to be an absolute guarantee of excellent scholarship, since lack of industry or personality maladjustment may affect educational effort.

3. Although home environment and early training have but negligible influence on mentality, they are essential to the furtherance of ideals and ambitions.

4. There is a woeful lack of information on the part of teachers in high school and university as to the possibilities and limitations of individual students and as to the probable relationship between special mental abilities or disabilities and educational progress.

In this study we have attempted to cover only a few of the factors affecting grades. Many other studies have been made covering such factors as attitude, study habits, irregular attendance, time spent in study, personality, character traits, industry, steadiness, courage, energy, initiative, joyfulness, leadership, optimism, poise, prudence, resistance to suggestibility, respect for authority, school attitude, sincerity, strength and control of attention, sympathy, trustworthiness, truthfulness and self-confidence.

Conclusions

We present herewith a list of specific conclusions stated in brief outline form. The average grade (3.00) is considered as norm in the ratings indicated.

I. Nationalities and Races.

1. Boys of Scotch and English descent made the highest grades.

2. Those of Hungarian, Russian, and Polish descent ranked the lowest of any of the boys of foreign born parentage.

3. The Jewish boys rated the second from the top, for groups of over 10 boys.

4. The Negroes rated 10th for groups of over 10 boys.

II. Occupation of fathers.

1. Occupation of the fathers have an indirect influence on the grades of these boys, expressed through the social and economic status of the family resulting from the occupation.

2. Sons of the fathers engaged in the professions received the lowest averages.

3. Boys whose fathers were stenographers were the lowest in the commercial group.

4. Sons of fathers who were employed in the various commercial occupations made the highest grades.

III. Marital Status of Parents.

1. Boys who had lost their mothers made lower grades than those who had no fathers.

2. Boys who had lost both parents rated on par with those whose parents were living.

3. Boys whose parents were separated made the highest group average of any of the broken family group studied.

4. Sons of divorced but not remarried parents rated the lowest.

5. When parents were divorced and only one remarried, the grades scored high, but when both parents had remarried the score ran low.

6. In cases of remarriage of a parent after the death of the other the group average was above normal.

IV. Position in Family.

1. The "only child" boy in the family ranked the highest.

2. The youngest boys as a group rated next.

3. The lowest group average was made by the "extra large family" group, especially in the case of the oldest boys.

V. Location of elementary school training.

1. Boys who received this elementary education in rural schools made higher grades than those from the Omaha grade schools. (The small number of cases furnishing data on this item lessens the validity of this conclusion.)

2. The lowest group average was made by the boys from Catholic parochial schools.

VI. Vocational Aspects.

1. Boys who planned to continue their academic training beyond the high school made the highest grades.

2. Boys interested in extra-curricular activities made higher grades than those who were not.

3. Drafting and college preparatory courses drew boys of high average grades while electricity and business relation courses attracted boys receiving lower general average grades.

A COMPARISON OF THE AVERAGE GRADES OF BOYS WITH THOSE OF GIRLS

The following is a comparison of the results found in this study of the grades received by the boys of South High School with the study of grades received by the girls, made by Mr. Hill. As previously indicated the studies are parallel, his dealing with over one thousand girls, and this one with about the same number of boys, in the same institution, for the same period of time. Since in many of these 2100 cases the boys and girls were from the same homes, obviously the social heritage background must be fundamentally the same.

1. NATIONALITIES

Comparing "Nationalities" with grades, the 963 girls made an average grade of 2.67 while the 704 boys made an average grade of 3.06.

The girl making the highest individual average, 1.11, was of Bohemian parents and the boy making the highest average, 1.22, was of American-Bohemian parents.

The girl making the lowest individual average, 4.80, was of German-Irish parents and the boy making the lowest average, 5.00, was of Bohemian parents.

The nationality group making the highest group average was listed as 1.82 for Scotch girls and 1.32 for Scotch boys. As there was only one boy listed in this group it would perhaps be better to use the next highest average, 2.30, made by the "English" group.

The nationality receiving the lowest group average was found as 3.31 for Negro girls and 3.76 for Bohemian-German boys.

When only groups listing 10 or more students were considered, the group making the highest average was found to be 2.31 for Jewish girls and 2.30 for English boys. The lowest average for girls remained the same, 3.31 for Negro girls; but was found as 3.30 for Polish boys.

II. OCCUPATION

In comparing the "Occupation" of parents with grades, the 886 girls averaged 2.66 while the 1086 boys made lower averages. The boys' group averaged 3.06.

The highest individual averages were made by a girl whose father was unemployed (retired) and by a boy whose father was a brick mason.

The lowest individual averages were made by a girl whose parent was listed as a cook or waiter and a boy whose father was a laborer.

The groups showing the highest group average were found, for girls, to be the daughters of teachers and for boys, the sons of coopers.

The lowest group averages were made by girls whose parents were cooks or waiters and by boys whose parents were telephone company employees.

When occupations were classified and grouped, the daughters of professional parents made the highest averages, but sons of pensioned or unemployed and those of the commercial group ranked highest.

III. LOSS OF PARENTS

When grades were checked to determine their relation to loss of parents, we found the highest individual averages made by both boys and girls who had lost their fathers. Girls who had lost their mothers made the lowest grades. Lowest averages for boys were received by those having both parents living.

IV. FAMILY DISCORD OR MARITAL STATUS OF PARENTS

In cases of family discord where parents are separated, divorced, or remarried, the highest individual score was made by a girl whose parent remarried after the death of the first spouse, and by a boy whose parents were living together.

The highest group averages were made by the girls whose parents were remarried after the death of the first spouse and by boys whose parents were separated.

The lowest group averages were made by girls whose parents were divorced and one remarried, and by boys whose parents were divorced and not remarried.

V. POSITION IN THE FAMILY AND SIZE OF FAMILY

When compared on the basis of sizes of family and position in the family, the girl making the highest individual score was the youngest in a small family (6 or less) and the boy making the highest individual score was an "only child".

Highest group averages were shown, by both studies, to be made by boys and girls who were the "only child" in the family.

Lowest individual scores were made by girls who were the oldest in a large family (7-9) and by boys who were the "only child".

Lowest group averages were found for the girls who were the oldest in a large family and for boys who were the "in-between" in extra large families (10 or more).

VI. THE GRADE SCHOOL ATTENDED

The girls who came to South High School from the city public schools made both the highest individual score and the highest group score but the boys who came from the County or Country schools made the highest group score and a boy from a Lutheran parochial school made the

highest individual score.

The lowest individual and group averages were scored by girls from Catholic parochial schools. A boy from the city public schools made the lowest individual score, although the lowest group average was found to be made by boys from the Catholic Parochial schools.

VII. PLANS FOR EDUCATIONAL CAREER

Highest individual and group scores were found to be made by both boys and girls who planned to finish high school and go to college.

Lowest individual as well as group scores were found to be received by boys and girls who did not plan to go to college.

VIII. COURSE OF STUDY

The highest individual as well as group scores were made by girls taking the college preparatory course. Boys in the drafting course score higher as a group, although the highest individual score was made by a boy who had chosen the college preparatory course.

Lowest scores were made by girls taking bookkeeping and accounting and by boys taking business relations or electricity. The boy making the lowest individual score had selected the auto mechanics course.

IX. EXTRA CURRICULAR ACTIVITIES

As a group, girls who are active in three or more clubs make the best grades and those who are active in

only one club make the lowest grades. Mr. Hill did not give figures comparing the grades of girls who were not active in any club.

The boys active in three or more clubs scored highest, and those not participating in any club or sponsored school activity made the lowest average grades.

X. LEISURE TIME AND POST SCHOOL ACTIVITIES

No figures were given for the girls comparing grades to leisure time or post school activities.

XI. VOCATIONAL ASPECTS

Boys--Those who planned to continue training after high school were interested in extra-curricular activities, and those who were interested in Drafting and College Preparatory courses made the best grades.

Girls--Those who planned to finish high school and college and those who were enrolled in college preparatory and scientific courses made the highest grades, while the lowest grades were made by the girls pursuing business training courses. The best grades were also made by girls interested in extra-curricular activities.

XII. Summarizing the above stated comparisons we conclude that the differences were rather insignificant in most of the items except in relation to nationality and occupation of parents, and the place where the elementary school work was taken.

POSSIBLE CONTRIBUTIONS OF THIS STUDY

1. A realization of a need for more scientific case studies of our high school students to aid in better understanding them, in order that the curriculum, counseling programs, extra-curricular activities, and the general educational plan might be adjusted to meet most of their needs.
2. A consciousness of the place that family and racial background play in determining the present achievements and future outlook of high school students.
3. A realization of the urgent need for a vocational guidance program in all public schools.
4. A better understanding of the place extra-curricular activities play in the development of interest in the entire school program.
5. A realization of the need for and value of social research as an important part of our educational system.
6. A consciousness on the part of secondary education administrators of the value of more emphasis on the teaching of sociology in the high schools.
7. The importance of studying the child as a whole and understanding him as he is a product of the total situation.

We realize that this study has not covered all of the many social determinants that influence to some degree the achievements and abilities of high school

boys. We trust, however, that the findings indicated in this report will be of some value as a guide for further studies in this field.

BIBLIOGRAPHY

BIBLIOGRAPHY

A. Books

- Abelson, Harold H., Art of Educational Research, World Book Co., 1933. (Director of Ed. Research Colo. State Teacher's College, Greeley, Colo.)
- Almack, John C. Ph. D., Research and Thesis Writing, Stanford University, Cal., Houghton Mifflin Co., Riverside Press, Cambridge, Mass., 1930.
- Bixler, H. H., Check Lists for Educational Research, Teacher's College, Columbia University, N. Y., 1928.
- Bogardus, E. S., History of Social Thought, University of Southern California Press, 1922.
- Bogardus, E. S., Making Social Studies, Press of Jesse Ray Miller, 3474 University Ave., Los Angeles, Calif. 1925.
- Bogardus, E. S., Making Social Sci. Studies, 3rd Edition, Press of Jesse Ray Miller, Los Angeles, Calif., 1925.
- Campbell, W. G., A Form Book for Thesis Writing, University of Southern Cal., Press, Los Angeles, Calif., 1933-34.
- Chapin, F. S., Extra-Curricular Activities at the University of Minnesota, Minneapolis, Minn. University of Minnesota press, 1929.
- Cincinnati University, Abstracts of Graduate Thesis in Education, Vol. I, Teacher's College, University of Cincinnati, 1927-31.
- Crawford, A. B., "Effect of Scholarship; A Study in Motovation." Journal of Personnel Research, 1925-26.
- Crawford, A. B., "Extra-Curricular Activities and Academic Work." Personnel Journal, 1928-29.
- Crawford, A. B., "Forecasting Freshman Achievement." School & Society, 1930.
- Crawford, Claude, C. Ph. D., Technique of Research in Ed. University of Southern California, Los Angeles. 1928.

- Cubberley, Elwood P., Public School Administration, Houghton Mifflin Co., 1916.
- Cubberley, Elwood P., The Principal and His School, Houghton Mifflin Co., 1923.
- Deam, Thomas M. and Bear, Olive M., Socializing the Pupil Through Extra-Curricular Activities, B. H. Sanborn & Co.
- Douglass, A. A., The American School System, Farrar and Rinehart Inc., New York, 1934.
- Douglass, Karl R., The Organization and Administration of Secondary Schools, Grinn & Co., 1932.
- Eaton, Allen, and Harrison, Selby M., A Bibliography of Social Surveys, Russell Sage Foundation, New York, 1930.
- Edgerton, H. A., and Toops, H. A., Academic Progress, Ohio State University Press, 1929.
- Ellis, H., "A Study of British Genius," Bost. Hought. 1926.
- Gulick, Luther, "Why 259,000 Children Quit School," Worlds Work, Vol. 20, 13.
- Hines, H. C., A Guide to Educational Measurements, Houghton Mifflin Co., The Riverside Press, Cambridge, Mass., 1923.
- Kelley, Truman Lee, Scientific Method- Its Function in Research and in Education, Ohio State University Press, Columbus, 1929.
- MacPhail, A. H., "The Intelligence of College Students." 1924. Relation to College Grades of Some Factors other than Intelligence. (Archives of Psychology #131) Lehigh University, N. Y., 1931.
- McKown, H. C., Extra-Curricular Activities, Macmillan Co., 1927.
- Monroe, Paul, Cyclopedia of Education, Vol. 1, Macmillan Co., 1911.
- Odell, C. W., Educational Measurement in High School, The Century Co., N. Y., 1930.

- Payne, E. George, Readings in Educational Sociology, Prentice Hall Inc., New York, 1933, Vol. I.
- Pound, Oliver, Extra-Curricular Activities of High School Girls, A. S. Barnes & Co. N. Y., 1931.
- Stayer, Geo. D., and Engelhardt, N. L., The Class Room Teacher, American Book Co., N. Y., 1930.
- Sullenger, T. Earl, Social Determinants in Juvenile Delinquency, John Wiley & Sons, 1936.
- Turney, A. H., Factors Other Than Intelligence That Affect Success in High School, Univ. of Minn. Press, 1930/
- Ward, L. F., "Ward's View of Social Telesis," History of Social Thought, by Bogardus, E. S., University of Southern California Press, 1928.
- Whitney, F. S., Methods in Educational Research, D. Appleton Co., 1931.

B. Periodicals

- Adams, H. F., Furniss and DeBow, "Personality as Revealed by Mental Test Scores and by School Grades." Journal of Applied Psychology, 1928, 12.
- Anderson, J. E., and Spencer, L. T., "Predictive Value of the Yale Classification Tests." School & Society, 1926, 24.
- Bear, R. M., "Factors Affecting the Success of College Freshmen." Journal of Applied Psychol., 1928, 12.
- Beatty, J. D., and Cleeton, G. U., "Predicting Achievement in College and after Graduation." Personnel Journal, 1927-28, 6.
- Brooks, S. D., "Causes of Withdrawal from School." Educational Review, Vol. 26.
- Brown, W. M., "Character Traits as Factors in Intelligence Test Performance." Archives of Psychology, Lehigh University, #65, 1924.
- Chambers, O. R., "Character Trait Test and Prognosis of College Achievement." Journal of Abnormal and Social Psychology, 1925, 20.
- Chapin, F. S., "Extra-Curricular Activities of College Students." School & Society, 1926, 23.

- Clark, E. L., "Family Background and College Success." School & Society, 1927, 25.
- Clayton, F. T., "Home Conditions of Study and Pupil Attitude Toward School Work." School & Society, 1923, 17.
- Cook, W. A., and Thompson, M., "A Comparison of Letter Boys and Non-letter Boys in a City High School." School Review, 1928, 36.
- Counts, G. S., "The Selective Character of American Secondary Education." The School Review and Elementary School Journal, May 1923.
- Crawford, A. B., "Incentives to Study," Yale University Press, 1929.
- Crawford, C. C., "Some Comparisons of Freshman boys and girls." School & Society, 1926, 24.
- Crawford, C. C., "Some Results of Teaching Students How to Study." School & Society, 1926, 23.
- Crider, B., "The Effect of Absences on Scholarship." School & Society, 1929, 30.
- Cuff, N. M. "The Problem of Elimination From College." School & Society, 1929, 30.
- Davidson, M. R., and MacPhale, A. H., "Psychological Testing in a Women's College." Personnel Journal, 1927, 6.
- Davies, M., and Hughes, A. G., "An Investigation into Comparative Intelligence and Attainments of Jewish and Non-Jewish Children," British Journal of Psychol., 1927, 18.
- Feingold, G. A., "Scholarships, Attendance and Department." School & Society, 1928, 28.
- Feingold, G. A., "Measurement of Effort among High School Pupils." Educ. Admin. & Superv., 1924, 10.
- Freeman, F. S., "Elusive Factors tending to reduce correlations between intelligence test ranks and college grades." School & Society, 1929, 29.
- Garrett, H. E., "Jews and Others, Some Group Difference in Personality, Intelligence and College Achievement," Personnel Journal, 1929, 7.

- Gates, A. I., "The Nature and Educational Significance of Physical Status and of Mental Physiological, Social and Emotional Maturity." Journal of Educ. Psychology, 1924, 15.
- Gitting, E. E., "Correlation of Mental and Physical Traits in University of Ariz. Freshman Women," American Physical Educ. Review, 1927, 32.
- Gowen, J. W., and Gooch, M. "Age, Sex and the inter-correlations of Mental Attainments of College Students." Journal of Educational Psychology, 1926, 17.
- Grauer, D., and Root, W. T., "The Thorndike Intelligence Tests and Academic Grades." Journal of Applied Psychology, 1927, 11.
- Griffits, C. H., "The Influence of Family on School Marks." School & Society, 1926, 24.
- Hall, R. T., "How Athletes and Non-Athletes Compare in Mental Ability and Educational Achievement." American Phys. Educ. Rev., 1928, 33.
- Hartson, L. D., "Intelligence and Scholarship of Occupational Groups." Personnel Journal, 1928, 29, 7.
- Hindman, D. A., "Athletics and Scholarship at the Ohio State University." School & Society, 1929, 30.
- Hoefler, C., and Hardy, M. C., "The Influence of Improvement in Physical Condition or Intelligence and Educational Achievement." 27th Year Book, National Soc. for Study of Educ., 1928. Part I.
- Hughes, W. H., "Personality Traits and the College Success of H. S. Graduates." Calif. Quarterly of Secondary Education, 1925-6, 1.
- Hughes, W. H., "Why Intelligence Scores Are Not More Highly Predictive of School Success." Education, Administration, and Supervision, 1926, 12.
- Hutchinson, M. E., "College Athletics and Scholarship." School & Society, 1929, 29.
- Jones, A. A., "The Prognostic Value of the Low Range Alpha Scores." Journal of Educational Psychology, 1929, 20.

- Jones, E. S., "Testing and Training the Inferior or Doubtful Freshman." Personnel Journal, 1937, 6.
- Keal, H. M., "Mental Ratings, Scholarship and Health." School & Society, 1928, 38.
- Kornhauser, A. W., "Results from a Quantitative Questionnaire on Likes and Dislikes." Journal of Applied Psychology, 1927, 11.
- Knox, J. E., and Davis, R. A., "The Scholarship of University Students Participating in Extra-Curricular Activities." Education, Administration and Supervision, 1929, 15.
- Laird, D. A., "A Study of Some Factors Causing a Disparity Between Intelligence and Scholarship in College Students." School & Society, 1924, 19.
- Lehman, H. C., and Whitty, Paul A., "Factors Which Influence the Child's Choice of Occupation." Elementary School Journal, Dec. 1930.
- Lloyd-Jones, E. McD., "Student Personnel Work at Northwestern University," N. Y., Harpers 1929.
- Lovejoy, Philip C., "Satisfied Parents, A Determining Factor in School Progress." Nations Schools, VI, Dec. 1930.
- Mallory, J. N., "Physical Defects: Their Relation to Achievement Scores and to Each Other." Peabody Journal of Educ., 1924, 3.
- May, M. A., "Predicting Academic Success." Journal of Educational Psychology, 1923, 14.
- Monroe, W. S., "The Effect of Participation in Extra-Curriculum Activities on Scholarship in High School." School Review, 1929, 37.
- Nelson, G. E., "Correction of Visual Defects and Improvement in College Studies." School & Society, 1928, 37.
- Oates, D. W., "An Experimental Study of Temperament." Brit. Journal of Psychology. Gen. Sect., 1928, 19.
- Ohlson, David, "School Marks vs. Intelligence Rating." Educational Administration and Supervision, XIII, Feb. 1927.

- Pierson, C. D. and Nettels, C. H., "A Study of High School Seniors to Determine Who Shall Be Admitted to College." School & Society, 1928, 28.
- Pinney, Martha, "Influence of Home and School in Choice of a Vocation." Journal of Educational Research, XXV, Apr. and May 1932.
- Pressey, S. L., "An Attempt to Measure the Comparative Importance of General Intelligence and Certain Character Traits in Contribution to Success in School." Elem. School Journal, 1920, 31.
- Pyle, W. W., "Relation of Ability to Achievement." School & Society, 1925, 22.
- Roberts, H. C., "Objective Measures of Intelligence in Relation to High School and College Administration." Education, Administration & Supervision, 1922, 8.
- Roemer, Joseph, "Tendencies in the Development of Extra-Curriculum Activities." The School Review, Vol. XLI, Nov. 1933.
- Ruble, V. V., "A Psychological Study of Athletes," American Phys. Educ. Rev., 1928, 33.
- Shuttleworth, F. K., "Environmental and Character Factors Involved in Scholastic Success." 1926-27, data. Journal of Educ. Psychology, 1929, 20.
- Spence, R. B., "Factors Related to College Achievement." Teachers College Record, 1927-28, 29.
- Spencer, L. T., "College Achievement of Public and Private School Entrants." School & Society, 1927, 26.
- Stead, H. G., "Factors in Mental & Scholastic Ability". Brit. Journal of Psychology, Gen. Sect., 1926, 16.
- Steere, H. J., "The Effects of Character Traits on Scholastic Achievement." School & Society, 1929, 29.
- Stone, C. L., "Disparity Between Intelligence and Scholarship." Journal of Educ. Psychol., 1923, 13.
- Taylor, Griffith, "Environment and Nation." American Journal of Sociology, XL, 1934.
- Terman, L. M., "Intelligence Tests In Colleges and Universities." School and Society, 1921, 13.

- Thompson, W. H., "Intelligence Tests in American Colleges." School & Society, Vol. 39, June 1934.
- Thompson, W. H., "Should Increases in Grades Follow Increases in Intelligence Test Scores?" School & Society Vol., 39, Sept. 1934.
- Turner, F. H., "A Study in the Relation of Class Attendance to Scholastic Attainment." School & Society, 1927, 26.
- Vogt, P. L., "Why Students Fail," School & Society, 1929, 30.
- Wetzel, W. A., "Characteristics of Pupil Leaders." School Review, XII, Sept. 1932.
- C. Dissertations, Theses, Bulletins
and Miscellaneous Articles
- Abrahamson, Ada, "The Relation of the Pattern of the High School Student's Course to His Success in College." Bulletin #47, Dept. of Secondary School Principals of the N. E. A., May 1933.
- Baker, Harry Jay, "Mental Tests as An Aid in Analysis of Mental Constitution." Abstracts of Dissertations and Theses in Education, 1917-31. University of Michigan.
- Bellingrath, G. C., "Qualities Associated with Leadership in Extra-Curricular Activities of the High School." Teacher's College Contributions to Education, #399, 1930.
- Brandt, Carl R., "A Study of Relationship Between Mental and Educational Status and the Size of Family." Temple University-Masters-Thesis for 1932.
- Card Index-Municipal University of Omaha, Library, Omaha, Nebr.
- Cohen, I. L., "Intelligence of Jews as Compared with Non-Jews." Ohio State University, Contributions in Psychology, #8, 1927.
- Courtis, Stewart Appleton, "Why Children Succeed." 1925, Abstracts of Dissertations and Theses in Education, 1917-31, University of Michigan.
- Crowley, Mary Agnes Roberts, "A Comparative Study of Cincinnati Negroes in Segregated and Mixed Schools." Abstracts of Graduate Theses in Education, Teachers College, University of Cincinnati, 1927-31.
- Diehl, H. S., "Health and Scholastic Attainment." U. S. Pub. Health Reports, 1929, 44.

- Evans, Evan E., "A Comparison of the Relations Between Activities and Scholarship of High School Pupils in Rural and Urban Communities." Bulletin #34, Dept. of Secondary School Principles of the N. E. A., Jan. 1929.
- Flemming, C. W., "A Detailed Analysis of Achievement in the High School." Teacher's College Contributions to Education, No. 196, 1935.
- Franzen, R., "The Accomplishment Ratio." Teacher's College Contributions to Educ., No. 25, 1923.
- Harris, Daniel, "The Relation to College Grades of Some Factors Other Than Intelligence." Archives of Psychology, #131, Columbia University, 1931.
- Heath, J. S., "The Truant Problem and the Parental School." U. S. Bureau of Education Bulletin, 1915.
- Herriott, M. E., "Attitudes as Factors of Scholastic Success." University of Illinois, Bulletin, 1929, 27, No. 2.
- Hill, L. R., "A Study of One Thousand and Twenty-five Girls of Omaha, South High School." Unpublished Masters Thesis Bureau of Social Research Municipal University of Omaha, Omaha, Nebr. 1935.
- Houwink, Eda, "A Study of the Home as Seen by the Child." Seminar on Personality, Washington University, St. Louis, Mo., St. Louis Star-Times, June 13, 1934.
- Howell, Tillie, "The Relation of Interests to Success in Trade Training." Abstracts of Graduate Theses in Education. Teacher's College, University of Cincinnati, 1927-1931.
- Jones, E. S., "Studies from the office of personnel research." University of Buffalo Studies, 1930, 8, No. 1/
- Jones, L., "A Project in Student Personnel Service." Univ. of Iowa, Studies in Education, 1928, 5, No. 1.
- Keyes, C. H., Progress Through the Grades., Teacher's College, Columbia University Contributions to Education, #42, 1920.

- Lange, Irene Dunn, "The Value of the Otis Self-Administering Test on Mental Ability as a Means of Predicting the Success of Pupils in Junior High School." Bulletin #24, Department of Secondary School Principles of the N. E. A., Jan. 1929.
- Luedeke, Howard Louis, "A Study of Age, Attendance Records, and Achievement Records of Parochial School Pupils Entering Certain Junior and Senior High Schools. 1930." Abstracts of Graduate Theses in Education, Teacher's College, University of Cincinnati, 1927-31.
- Lusby, Margaret C., "The Leisure Time of the City Adolescent." Abstracts of Graduate Theses in Education. Teacher's College, University of Cincinnati, 1927-31.
- Mueller, A. D., "A Vocational and Socio-educational survey of graduates and non-graduates." Genet. Psychol. Monog., 1929, 6, No. 4.
- Nickle, Clarence E., "A Statistical Study of the Relations of Extra-curriculum Activities and Scholarship in High Schools." Bulletin #24 Dept. of Secondary School Principals of the N. E. A., Jan. 1929.
- Odell, C. W., "Effect of Attendance upon School Achievement." Educational Research Circular, #16. University of Illinois, Urbana, Ill. 1923.
- Ohmann, O. A., "A Study of the Causes of Scholastic Deficiencies." University of Iowa Studies in Education, 1927, 3, No. 7.
- Personnel Cards: filled out by boys of South High School on file at the office of Dean of Boys at South High School, Omaha, Nebr.
- Porter, Jennie D., "The Problem of Negro Education in Northern and Border Cities," 1928, Abstracts of Graduate Theses in Education, Teacher's College, University of Cincinnati, 1927-31.
- Prosser, M. R., "A Study of the Scholastic Performance of Freshman Women." University of Iowa Studies in Education, 1928, 5, No. 2.
- Reavis, Geo. H., "Factors Controlling Attendance in Rural Schools." Contributions to Education, #103. Teacher's College, Columbia University, N. Y., 1920.

- Record Cards, The official permanent record of grades made by students of South High School, on file in the office of the Principal, South High School, Omaha, Nebr.
- Remmers, H. H., "Diagnostic and Remedial Study of Potentially and Actually Failing Students." Purdue Univ. Bulletin, 1928, 28, No. 12.
- Savage, H. J., Bently, H. W., McGovern, J. T., and Simley, D. F., "American College Athletics." Carnegie Foundation for Advancement of Teaching. 1929, Bul. 23.
- Senour, Alfred C., "The Relation between the Intelligence and the Success of 205 Pupils in the Junior High School of East Chicago," Dept. of Secondary School Principles of N. E. A., Sept. 1927.
- Sheppard, Edwin T., "A Study of the Records of Two-Hundred Nine Unsatisfactory Students of a Freshman Class in the University of Chicago." Bulletin #24, Department of Secondary School Principles of the N. E. A., Jan. 1929.
- Shuttleworth, F. K., "The Measurement of Character and Environmental Factors Involved in Scholastic Success." University of Iowa Studies in Character, 1927, Vol. 1, No. 2.
- Somers, G. H., "Pedagogical Prognosis." Teacher's College Contributions to Educ., No. 140, 1923.
- Sommerville, R. C., "Physical, Sensory, and Motor Traits." Archives of Psychology, Lehigh University, #75, 1924.
- Sullenger, T. Earl, "Studies in Urban Sociology," Bureau of Social Research, Municipal University of Omaha.
- Westenberger, E. J., "A Study of the Influence of Physical Defects upon Intelligence and Achievement." Catholic University of America Educational Research Bulletin, #9, 1927.
- Ziegler, Carl William, "School Attendance as a Factor in School Progress." Teacher's College Contributions to Education #297. Columbia University, N. Y. 1928.

APPENDIX

APPENDIX I

PERSONNEL CARD

NAME (LAST) (MIDDLE) (FIRST) ----- DATE OF ENTRANCE To South High -----
 BIRTH { DATE -----
 PLACE -----
 RACE ----- NATIONALITY -----
 LANGUAGE SPOKEN AT HOME -----

FATHER (LAST NAME) (MIDDLE) (FIRST)	GRADE IN SCHOOL			
	FRESHMAN	SOPHMORE	JUNIOR	SENIOR
LIVING	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
CITIZEN	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
SPEAKS ENGLISH	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
WRITES ENGLISH	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
MOTHER (LAST NAME) (MIDDLE) (FIRST)				
LIVING	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
CITIZEN	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
SPEAKS ENGLISH	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
WRITES ENGLISH	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
PARENTS				
DIVORCED	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
SEPARATED	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
FATHER REMARRIED	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
MOTHER REMARRIED	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
FATHER'S OCCUPATION				
MOTHER'S OCCUPATION				
CHILDREN IN FAMILY (NUMBER)				
OLDER				
YOUNGER				
TIME SPENT IN HOME STUDY				
WHERE DO YOU STUDY				
DO YOU PLAN TO FINISH HIGH SCHOOL				
DO YOU PLAN TO GO TO COLLEGE				
WHAT ARE YOUR VOCATIONAL PLANS				
EXTRA-CURRICULAR ACTIVITIES (CLUBS ETC.)				
SCHOOL ACTIVITIES (BAND, DEBATE, GLEE, ATHLETICS, DRAMATICS, etc.)				
WHAT DO YOU DO AFTER SCHOOL				
WHAT DO YOU DO DURING THE SUMMER				

KEY TO MARKINGS USED ON MASTER CHART

Race or Nationality		Miscellaneous Symbols	
W. White	14. Indian	X-----	Negative Answer
B. Negro	15. Irish		Positive Answer
1. American	16. Italian	M-----	Mother
2. Austrian	17. Japanese	F-----	Father
3. Belgian	18. Jewish	B-----	Both Mother and
4. Bohemian	19. Lithuanian		Father
5. Croatian	20. Norwegian	U-----	Uncle
6. Czech-Slavic	21. Polish	A-----	Aunt
7. Danish	22. Roumanian	G. P.--	Grandparents
8. Dutch	23. Russian	Bro.--	Brother
9. English	24. Scotch	S.----	Sister
10. French	25. Swedish	G.----	Guardian
11. German	26. Servian	I.----	Institution
12. Greek	27. Syrian		
13. Hungarian	28. Welsh		

Occupations, and numbers used to represent them.

Name of occupation	No.	Name of occupation	No.
Auditor	42	Civil Service	118
Accountant	42	Clerk	24
Agent	25	Collector	93
Airman	10	Commission Man	95
Artist	82	Comptometer op.	101
Baker	31	Confectioner	65
Banker	41	Contractor	32
Bar-tender	102	Cook	91
Barber	77	Cooper	76
Biologist	130	Dentist	87
Blacksmith	81	Dish Washer	126
Bodybuilder	73	Doctor	33
Boilermaker	36	Draftsman	23
Bondsman	97	Dressmaker	35
Bookkeeper	15	Druggist	80
Boxmaker	128	Electrician	38
Brick mason	1	Elevator op.	68
Business man	17	Elevator owner	40
Bus driver	72	Engineer (Civil)	27
Butcher	58	Engineer (Elect.)	27
Carpenter	29	Engineer (Mech.)	27
Cabinet-maker	29	Engineer (Steam)	48
Carpet weaver	107	Expressman	61
Cashier	37	Factory Hand	69
Chemist	80	Farmer	18
Cigar Mfg'r.	99	Fire Dept. Emp.	54
Cleaner-Dyer	50	Fireman	124
China Packer	98	Feeder	116

(Continued)

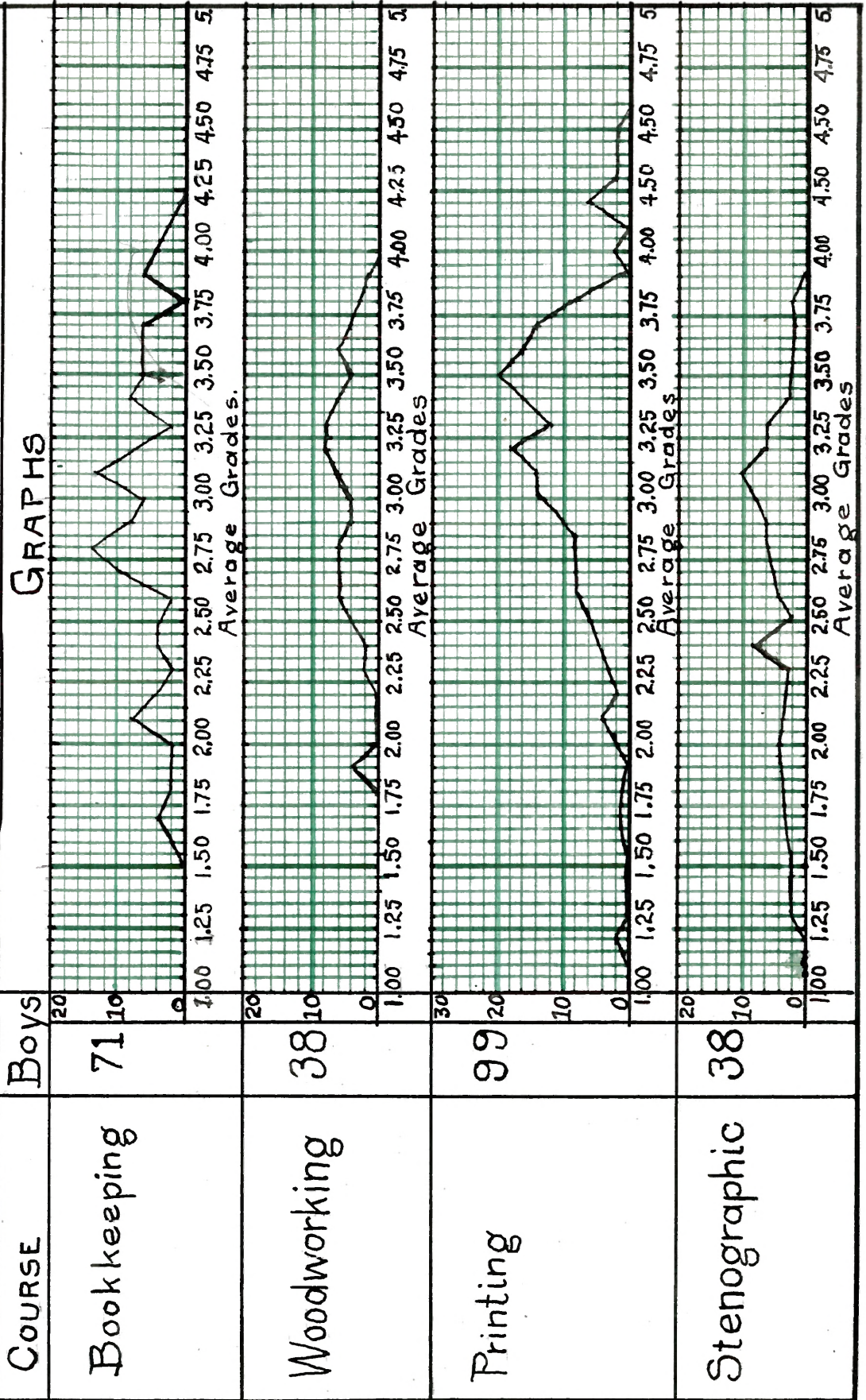
Occupations (Continued)

Name of occupation	No.	Name of occupation	No.
Floorwalker	117	Police	86
Foreman-Forelady	62	Poultry Business	70
Fruit Dealer	120	Priest	75
Furnace man	34	Principal	127
Garage Man	104	Printer	85
Gas Man	115	Radio Man	74
Grocer	14	Railroad Employee	30
Harnessmaker	59	Reporter	66
Housemaid (man)	4	Rancher	106
Housekeeper	2	Rubber Worker	112
Iceman	108	Restaurant Keeper	83
Inspector	78	Rooming House Prop.	46
Insurance Agent	88	Sailor	110
Interior Decorator	47	Scientist	52
Janitor	8	Sheet Metal Worker	55
Journalist	66	Shoemaker	132
Laborer	7	Sports	60
Laundry Worker	64	Steam Fitter	44
Lawyer	22	Seamstress	55
Library Worker	113	Smelter Man	96
Mail Service	105	Shipping Clerk	98
Manager	129	Scale Man	100
Machinist	49	Stage Hand	119
Mason	1	Stenographer	35
Matron	84	Stock Dealer	26
Meteorologist	109	Street Ry. Emp.	108
Mechanic	16	Superintendent	43
Merchant	17	Tailor	90
Milkman	131	Teacher	57
Miller	20	Time Keeper	92
Millwright	28	Tinner	9
Minister	6	Truck Driver	72
Moulder	51	Tool Smith	103
Motorman	11	Telephone Man	112
Musician	39	Telephone Oper.	111
Nurse	89	Truck Gardener	114
Oiler	79	Undertaker	121
Oil Station Att.	67	Underwriter	71
Painter	21	Veterinarian	19
P. B. X. Operator	12	Watchman	45
Pensioned	94	Welder	53
Pilot	5	Window Cleaner	56
Physician	33	Writer	63
Plasterer	122	Yardman	13
Plumber	44		
Promoter	123		

APPENDIX V

ACHIEVEMENT CURVES FOR PRINCIPLE NATIONALITY GROUPS			
No. of Boys		DISTRIBUTION OF BOYS	GRAPHIC CURVES
169	AMERICAN		<p>Average Grades</p>
112	BOHEMIAN		
81	POLISH		
63	GERMAN		
52	IRISH		
19	LITHUANIAN		

DISTRIBUTION OF GRADES IN VARIOUS COURSES OF STUDY.

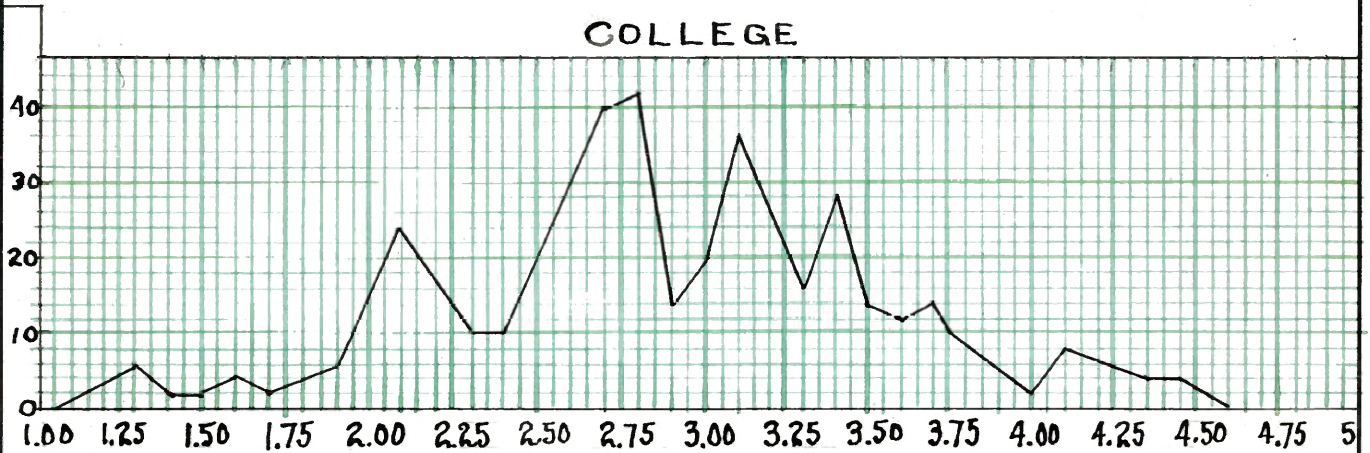


DISTRIBUTION OF GRADES IN VARIOUS COURSES OF STUDY.	
COURSE	Boys
College Prep.	95
Auto Mechanics	51
Drafting	53
Metal Working	50
Art	12

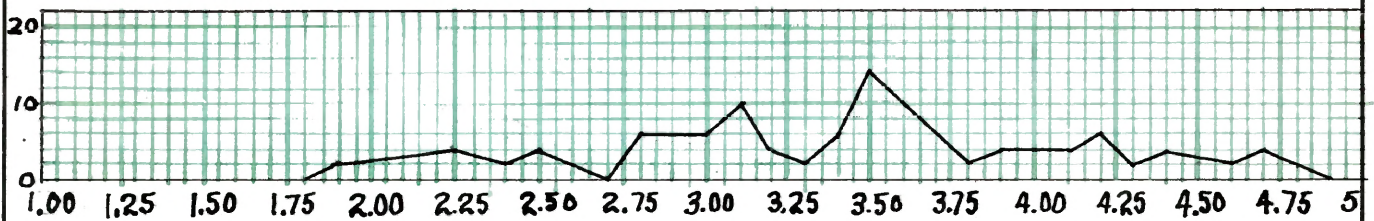
GRAPHS	
Average Grade	
Average Grade	
Average Grade	
Average Grade	
Average Grade	

DISTRIBUTION OF GRADES RELATED TO PLANS FOR EDUCATION

AVERAGE GRADES OF BOYS PLANNING TO FINISH HIGH SCHOOL AND COLLEGE



AVERAGE GRADES OF BOYS PLANNING NOT TO FINISH HIGH SCHOOL



AVERAGE GRADES OF BOYS PLANNING TO FINISH HIGH SCHOOL ONLY

