A STUDY OF 1617 SUPERIOR MICHIGAN HIGH SCHOOL GRADUATES OF 1945 TO DETERMINE FACTORS RELATED TO COLLEGE ATTENDANCE

By

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Chapter I

INTRODUCTION

The purpose of this thesis is to study the top third of the Michigan High School graduates of 1945 in order to identify certain factors which are related to college attendance, and to suggest a course of action in line with these findings. Its aim is to isolate the considerations deemed important by graduates in planning their post graduate activities, and compare those graduates planning to attend college with those selecting other activities. It proposes to locate the obstacles to advanced education and suggests ways and means for their removal.

In a study of the factors related to college attendance it should be recognized that education is an institution in all societies but that its purposes may not always be the same, and that the educational training appropriate during the past decade may not fit the years that lie immediately ahead. Present day culture is dynamic. A dynamic society can never rest on its laurels or place its faith solely in tradition. The nations educational program is experiencing very rapid expansion. During such periods of fast-moving development, leadership is of paramount importance. The question naturally arises then, are those best qualified for future leadership in a changing society being provided with optimum educational opportunity? It would seem imperative that objective studies be made of this problem, for there are too many significant factors involved to be left to mere assumption. In this period of college expansion the facts should be known before decisions are made.

Recent changes in world affairs also make this problem more important than in the past. The development of atomic energy and our acceptance of new international responsibilities, places in even wider

dimensions those policies which a generation ago were of but local concern. Man has outgrown the confines of his community and his decisions should now be made with international perspective. Man has reached a crossroads and may well decide his own salvation or his own doom, and that decision, in large measure, may depend upon the course of American education.

In a democratic society certain values are generally assumed to be important. Among these are a recognition of the inherent worth of the individual and a belief that equality of educational opportunity is fundamental, that an informed electorate is necessary and that society has a right to demand a social return from the distinctive capacity and talent of every individual. Since society does demand a return from every person, education is an investment and not an expense, and the State and National governments are obligated to furnish the means to provide optimum education for their citizenry. They cannot afford to do otherwise.

Recognition of these values in American life is reflected in certain beliefs regarding the most desirable post-graduate activities for high school students. For superior students it would seem that college attendance is the experience which they should have, and from which they would profit most. The leadership necessary to solve the many problems of the future may well come from this group of young people, hence it is important to know that they are being provided with the opportunity to develop their individual abilities. If barriers to college attendance exist, efforts should be made to remove them, but first it is necessary to identify the factors which intervene.

The need for a Michigan study of the factors related to college attendance- Major limitations have characterized many of the surveys of the factors which are related to college attendance. Quite generally the

findings have been of local significance and have not been of sufficient scope to warrant interschool comparisons. This is particularly true for Michigan where numerous follow-up studies have been made in local communities, but where no state-wide study has been reported. The present study attempts to meet this need.

What studies there are in Michigan are of a local nature and do not supply sufficient information to make generalizations with respect to state-wide reorganization. This is true at a time when the state is faced with the problem of locating more community colleges and/or of extending the secondary school program to include the 13th and 14th years. How to best provide educational opportunities for graduating high school pupils is one of the most pressing problems in higher education facing the state of Michigan today. The areas needing additional educational opportunities have not been sufficiently explored. The State does not know how many capable and worthy high school graduates are being deprived of the opportunity to attend college, nor how many additional graduates would avail themselves of advanced training in various parts of the state, because the factors which influence them in their planning are not known. Until areas of need have been located, remedies cannot be effectively prescribed. This study should lead the way in securing factual data for intelligent educational planning at the state level.

Other states have reported gross inequalities in income among the families of capable high school graduates, and a similar situation has been assumed in Michigan. Lack of finance has been accepted as one of the reasons that superior high school graduates do not attend college. Information in this thesis substantiates that point of view and also indicates where financial aid is most needed.

Large families and remoteness from college are other factors frequently

mentioned as affecting the likelihood of college attendance. These so-called common sense points of view regarding college attendance have been accepted in lieu of factual data.

Considered from the standpoint of society, the community, state and nation grow in stature through the contributions of their individual citizens. Education over a period of time pays dividends. The state prospers in proportion to the way in which it provides good educational opportunities for its talented young people. It has been more or less assumed in the past that the state of Michigan was providing equalized educational opportunities for its young people. No longer can this assumption be accepted at its face value. There is some question whether graduates who could be the best teachers, lawyers, doctors, accountants, engineers and statesmen, are financially able to attend colleges and universities to prepare themselves for professional work. There is reason to doubt that the state of Michigan is progressively upgrading the productive skills and management aptitudes of all its better young people. Even more important yet, there is reason to question whether the state of Michigan is developing those qualities of leadership necessary to enlightened citizenship in a democracy. Traditionally the state has assumed affirmative answers to these questions.

Finally, it is apparent that important new forces are disturbing the existing conceptions about the place of the college and university in society. Life in a highly complex civilization demands a broad educational background and more and more jobs require college training. If it be true as the President's Commission reports that "a minimum of 49 percent of the college age population of this country has the

ability to complete at least the first two years of college work, and at least 32 percent has the ability to complete additional years of education,[1] the adequacy of our present educational program is in need of re-examination.

To get a vision of what thinkers believe education should be like, one has only to examine such a publication as "The Unique Function of Education in the Post War Era".[2] In this report four goals of education are stressed: (1) Self realization, (2) Human relations, (3) Economic efficiency and (4) Civic responsibility. Obviously it is more difficult for these goals to be achieved if graduates do not go to college or make unwise decisions in their choice of a college to attend. Moreover it is more difficult for these goals to be met if young people cannot afford to attend college, if distance militates against attendance, or if other factors intervene to limit equality of educational opportunity.

For many years prominent thinkers have stressed the need for providing educational opportunity for all. How strongly they have leaned in this direction is indicated by the statement: "It is the responsibility of the community, at the local, state and national levels to guarantee that financial and other barriers do not prevent any able and otherwise qualified young person from receiving the opportunity for higher education."[3]

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[1] Higher Education for American Democracy, President's Commission on Higher Education, II, p.7, Washington, D.C., 1947.

[2] The Unique Function of Education in the Post War Era. Report of the Educational Policies Commission, Washington, D.C., 1947

[3] President's Commission report, op. cit., p.23.

The same report indicates how this may be accomplished in the following: "When resources are limited, local communities alone are unable to break the vicious cycle of poverty and low educational attainment. The community concept must be expanded so that citizens think of the United States as one great community having to share financial responsibility."[4]

Review of out-state studies and related research- Other states have taken the lead in surveying the factors which affect college attendance. Among these are Minnesota and Washington. Anderson and Berning[5] surveyed 91 percent of the graduates of Minnesota High Schools outside the Twin Cities and Duluth. They found that only 21 percent of the 15,600 students included in the study were enrolled in colleges and universities one year after high school graduation. Another 13 percent had enrolled in other kinds of schools, 40 percent were employed full time, 6 percent had part-time jobs, 12 percent were unemployed, and the whereabouts of the remaining 8 percent was not known. Of those graduates in the upper 30 percent in scholastic ability, two-thirds were not in college. High school principals stated that 33 percant of this high ability group did not attend college due to financial reasons.

The study summary indicated that the following factors were related to college attendance:

1. Financial resources
2. Scholastic achievement in high school

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[4] Ibid. p. 18

[5] G. Lester Anderson, and T. J. Berning, What Happens to High School Graduates? Studies of Higher Education Reprint, University of Minnesota, 1941.

3. Attractive job possibilities

4. Occupation of the Father

5. Size of the high school

6. College accessibility

7. Resident or non-resident status

Similar results were reported in a Washington study[6] where only 27.2 percent of the 15,277 youth who were graduated from high school in 1942 were enrolled in college six months after graduation. The second largest group of boys, 16.5 percent, was engaged in factory work and trades, while the second largest group of girls, 14.4 percent was in store and office work. At the time this survey was made only 5.2 percent of the boys were in the armed services. Landis did not account for 27.8 percent of all the graduates.

In his comparison of wartime graduates with those of prior years the author of the above research used the following factors:

1. Size of the school

2. Rural or urban status

3. Sex of the graduate

4. Employment possibilities

5. War and draft regulations

In a city-wide study of 1023 gifted student graduates of Milwaukee High Schools,[7] only 75 percent were fully utilizing their time.

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[6] Paul H. Landis, High School Graduates in the First War Years, Bulletin No. 438, Agricultural Experiment Station, Pullman, March 1944.

[7] Helen B. Goetsch, Parental Income and College Opportunity. Contribution to Education, No. 795, Teachers College, Columbia University, New York, 1940

Approximately 5 percent had part-time positions but were not in school, and about 6 percent were part-time students without jobs. A total of 13 percent were not in school and were not working. Over half of the high school graduates with an academic average of over 85 percent were not continuing as regular college students.

The author of this study found the following factors to be most important in determining which graduates would attend college:

1. Parental income.
2. Size of family.
3. Ethnic origin of the family.
4. High scholastic success.
5. Attractive job possibilities.

Very recently new light has been thrown on the problem of college attendance in the report of the President's Commission on Higher Education.[8] This report identifies certain barriers which prevent capable high school graduates from gaining advanced education. These barriers were listed in Volume II of the report as follows:

1. The economic barrier.
2. Racial discrimination.
3. Religious discrimination.
4. Arbitrary exclusions.

The Commission states that the "inadequacy of family income with all its attendant consequences is one of the primary factors limiting the opportunity of American youth to attend college". It supports this statement with the fact that the money incomes of nearly 50 percent of

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[8]President's Commission report, op. cit., pp.11,25,26.

American families in1945 were at or below $2500 in that year and that 75 percent of all the children under 18 years of age were from families whose total incomes were less than $3500 a year.

With reference to racial and religious discrimination the report indicates that "discrimination in the admission of college students because of the individual's race, creed, color, sex, national origin or ancestry is an anti-democratic practice which creates serious inequalities in the opportunity for higher education" and that "it requires no parade of statistics to show that the situation for young people of minority groups is today unsatisfactory, both in their opportunity to enter college and in the happiness of their college life".

College accessibility is stressed by the Commission since it found that "geographic barriers affect entire communities as well as specific groups". In New York State a higher proportion of youth went to college when within commuting distance, and "California's experience with a large number of local free tuition junior colleges indicates that as many as 65 percent of the high school graduates continue their education for at least two years".

The Commission further agrees with the conclusions reached in the Eight Year Study prepared for the Progressive Education Association that "no college can be justified in setting up requirements for admission which have been shown to be unnecessary in preparing students to do college work".[9] It likewise places importance on proper guidance work in keeping open the channels of education for those who demonstrably can profit from higher education.

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[9] President's Commission report, op. cit., pp.17, 18.

Almost identical barriers to higher education were uncovered in a recent state-wide survey in New York.[10] Conclusions from this report show that "a substantial number of youth are denied the opportunities for higher education by economic and other barriers including discrimination on account of race, creed, color or national origin."

The New York Commission reported that less than half of the graduates whose scholastic marks placed them among the highest fourth of their classes go on to college. "Most of the others in this quartile, as well as many other students qualified to benefit by college education do not have funds sufficient to enable them to attend college."[11] The Commission reported that high tuition fees kept many students from enrolling in college, but that an even greater barrier to the student living away from home was the extra cost of room and board. Summarizing the sentiments of this and other reports the Commission concluded that "this discrimination is repellent to the American spirit and must be eliminated."[12]

Statement and scope of the problem- The problem for study was the identification and clarification of the factors related to college attendance in the State of Michigan. The top third of the 1945 graduates was studied because of the customary practice of accepting

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[10] Report of the Temporary Commission on the Need for a State University, Legislative Document No. 30, State of New York, Albany, New York, 1948.

[11] Report of the New York Commission, op. cit., p.12

[12] Ibid., p. 13.

them for college admission without examination.[13] The graduates of 602 high schools of Michigan were subjects for this study. This represents all twelve grade college preparatory schools outside the city of Detroit.[14]

Related research pointed to the desirability of investigating the following eight factors:

1. Family income
2. Family size
3. Education of the parents
4. Occupation of the father
5. Parents' nationality
6. The influence of a scholarship
7. College accessibility
8. Scholastic rank and high school size

Plans and procedures necessary to the study of these factors are discussed in the chapter immediately following.

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[13] From High School to College, Research Bulletin of the National Education Association, XVI, No. 2, March 1938, Washington, D.C.

[14] Data for Detroit schools was not obtainable because of Board of Education policies. See Appendix B pp. 192-3

Chapter II

PRELIMINARY STEPS TO THE MAJOR INVESTIGATION

To clarify the methods and procedures used in the preliminary phases of this investigation the initial steps are explained in this chapter. The number and location of Michigan high schools is given as well as the total number of graduates for the year 1945. The following paragraphs indicate how the subjects were selected from among the high school graduates. The type of information and the preparation and use of the student questionnaire is discussed.

The geographical location of the schools contacted- The Michigan High School Athletic Directory for 1944 listed a grand total of 704 high schools, of all types, in Michigan. Several were designated as trade and technical high schools, some had only ten grades, while others were left unclassified. Another group of fifty-two schools were from Detroit, where student data were not available because of Board of Education regulations.[1] When these groups of schools were subtracted from the total, 602 twelve-grade college preparatory high schools were available for this survey. These schools were distributed geographically in every county throughout the state of Michigan. Table I indicates the high schools classified according to student membership.

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[1]See Appendix B, p. 193 for a statement of the Detroit Board of Education regulations.

TABLE I

Various Types of Michigan High Schools Asked to Send Lists of Graduates, (June, 1945)

	Class of School								
	A	B	C	D	Bu	Cu	Du	Eu	Total
All State Schools	59	91	234	240	14	18	19	29	704
No. of Schools Asked to Send Lists	37	77	207	204	14	18	16	29	602

Class A....800 or more membership as of Sept. 30, 1944.
Class B....325-799
Class C....125-324 (Lower Peninsula)
Class D....Less than 75

Class Bu...325 or more membership as of Sept. 30, 1944.
Class Cu...125-324
Class Du...75-124 (Upper Peninsula)
Class Eu...Less than 125

Distribution of the Michigan High School Graduates of 1945- Michigan's twelve-grade high schools graduated 39,311 students in 1945.[2] Of this number nearly one-third were from Detroit and Wayne County. Over half were graduated from high schools in the five most populous counties: Wayne, Oakland, Genesee, Kent and Ingham. Less than seven percent were from the fifteen counties in the Upper Peninsula. These facts are shown graphically in Figure 1. Detroit schools graduated 9,676 of the total. The remaining 29,635 were graduated from the 602 high schools listed above.

[2]State Child Accounting Records, Michigan Department of Public Instruction, Lansing 1945.

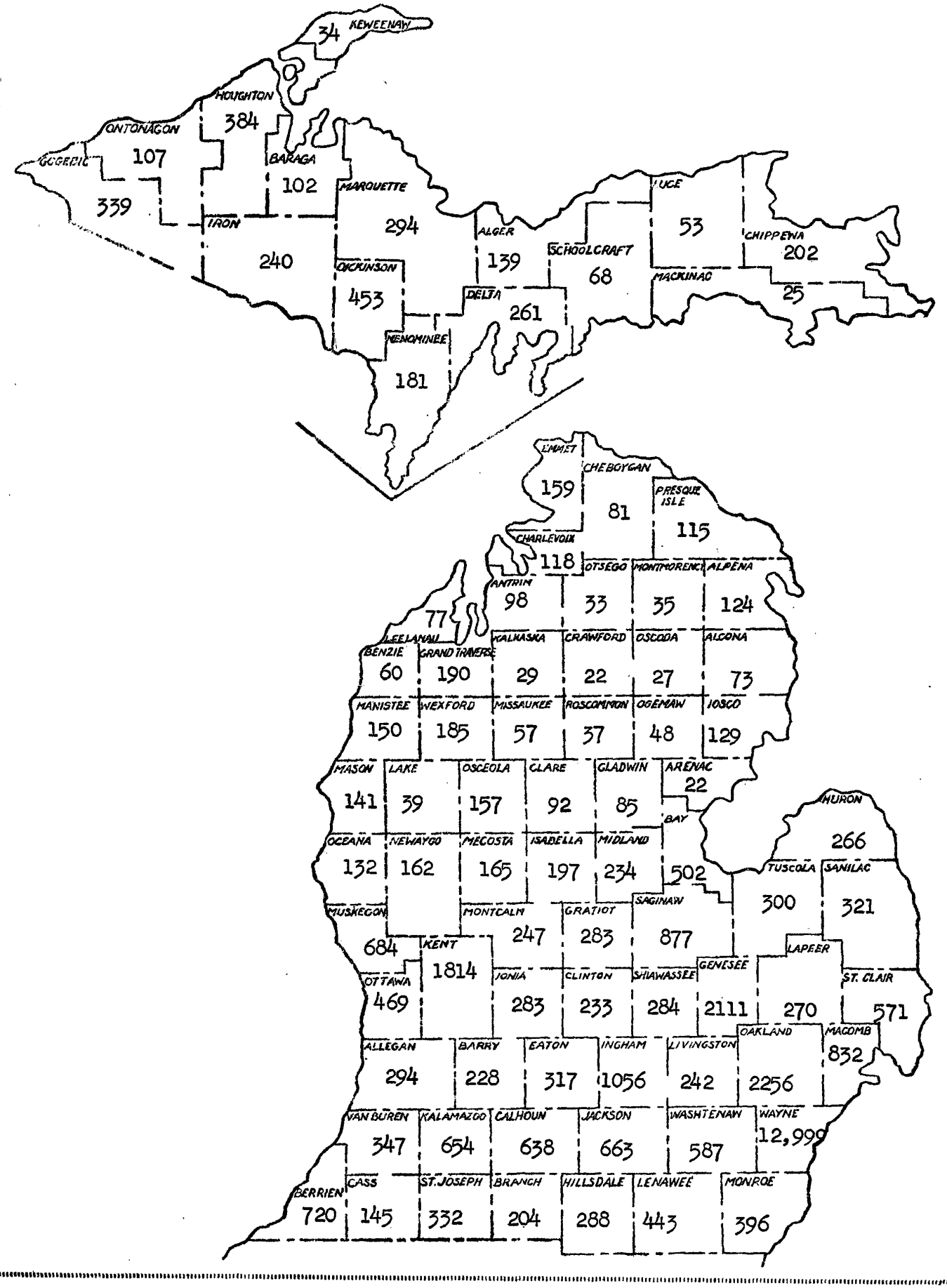

Fig. 1. Michigan 12-year High School Graduates by Counties, June 1945

Students selected for this study- College entrance requirements point the way to the selection of the upper third of the high school graduates of 1945 for purposes of this study, because this group is most likely to enter college. High school principals are usually requested to indicate the graduate's scholastic rank, and colleges quite generally accept the upper third. This is apparently true for 88 percent of the universities and colleges of the United States.[3]

Other research has indicated the wisdom of surveying the more capable graduates. Anderson found "That more able graduates, as determined by high school marks, surpassed the less able ones in going to college and in finding full employment."[4]

In the summary of the studies relating to college success Segal states: "All evidence from individual institutions, and from data grouped for a variety of colleges and universities, is consistent in pointing to the fact, that the best single measure for predicting college success is previous scholarship."[5] Since this study is primarily interested in students capable of success in college this thesis is limited to a study of the barriers and factors related to higher education as they affect the top third of the graduates of Michigan High Schools in 1945 (superior students).

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[3] "From High School to College", N.E.A. Research Bulletin, XVI, No.2, pp.78-81, Washington, D.C. (March, 1938).

[4] G. Lester Alderson and T. J. Berning, Ibid. p.15

[5] David Segel, "Differential Prediction of Ability as Represented by College Subject Groups", Journal of Educational Research, XV, 14-26, pp.93-98, 1932.

Selecting one third of the graduates outside of the city of Detroit provided 9,878 graduates as subjects for the study. Table II indicates the distribution of graduates according to the membership of the school from which each was graduated. From these graduates the information essential to the study was solicited.

TABLE II

Distribution of the Top Third of the Graduates of 602 Michigan High Schools according to Class of School* (1945)

	Class of School								
	A	B	C	D	Bu	Cu	Du	Eu	Total
Graduates	3880	1871	1937	1143	538	295	77	137	9878

(*) Fifty-two schools from Detroit are not included.

Information requested in the high school principals' list- The cooperation of the high school principal was solicited by letter, and a blank was provided for the list of graduates. Practicability demanded that this blank be brief and simple, but at the same time sufficiently detailed to get the necessary information. The blank included the names, addresses, and sex of the graduates, these data being essential to the process of contacting them by mail.

It seemed advisable to the writer to request an answer to two other questions: first, "Was the graduate already in the armed service or likely to be inducted prior to July 1, 1945?", and second, "Was the graduate of the negro race?" The former question was included because the graduate in the armed services could not attend college for the time being at least, and might be impossible to contact.

The latter question was included in the principals' lists rather than the student questionnaire to insure an answer to the question. Copies of both the letter to the principal and the blank are included in Appendix B, p. 192-93

Preparation and use of the questionnaire- Plans for the study involved consideration of the type of instrument to be used in the collection of data. Reference to the literature in the field showed that the majority of follow-up studies employed questionnaire methods.[6] Whether these are deserving of as much credence as investigations by personal interview is a moot question. Toops believes that such successive follow-ups as have been made "lead to at least a slight presumption that the taken-for-granted biases of questionnaire samplings may not be as severe as some have suspected".[7] At any rate the questionnaire does afford a practicable means of collecting data on a large scale, and was the writer's only means of contacting the graduates of 1945 on a broad sampling.

Principles of questionnaire construction were studied and the following characteristics determined as the most important in phrasing the blank: (1) interest (2) ease of answering (3) willingness to answer.

To meet the first requirement the questionnaire was organized around those post-graduate activities of most interest to students. To secure continuing interest as well as to further the purposes of the study, questions relating to vocational preparation and job opportuni-

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[6]Rupert C. Koeninger, Follow-up Studies, State Board of Education, Lansing, 1942, (Mimeo. pp.50)

[7]Herbert A. Toops, The Questionnaire, Encyclopedia of Educational Research, pp.874-76.

ties were included. For graduates interested in attending college specific questions were phrased to indicate the choice of college, reasons for the choice, and the persons exerting the most influence on the choice.

To secure ease in answering and willingness to answer, all questions were stated as briefly and concisely as possible, and mimeographed on a double post card with return address. A brief congratulatory message to the graduate and an explanation of the purpose of the questionnaire were included on the reverse side of the post card. A sample questionnaire is shown in Figure 2.

Wording the questionnaire required several rather arbitrary decisions. For example, the questionnaire did not call for the income reported for Federal Income Tax purposes, but rather asked the amount of income according to wide salary groupings. This was done because parents might not be willing to divulge more exact earnings; also, narrow income divisions would have yielded too few data for statistical computation in many cases. However, more specific information was requested in the fourth question, the graduate being asked to state exactly how he planned finance his higher education. In the final question, reporting the number of dependents, Federal Income Tax procedure was followed. In general, questions were phrased so as to elicit accurate reporting and to secure useful information.

GRADUATE QUESTIONNAIRE No._____

1. What are your plans for the coming year? Military Service____
   Work.....____
   College.....____
   Other.....____
2. Do you think your school courses prepared you for this activity? Yes___ No___
   What vocation interests you most?_____
   What subjects would you like to study further?_____
3. If you plan to work, indicate type of work_____
   Why this particular type of work?_____
4. If you intend to go to college this year, which college?_____
   Reason for this choice?_____
   Did brothers or sisters attend college? Where_____When?_____
   How do you plan to finance your future education? Personal earnings,____ %
   Furnished by parent___ %
   All other sources_____ %
   Have you been offered a scholarship?_____
5. Father's occupation:_____
6. Country of birth: Father_____ Mother_____
7. Highest grade completed: (Father)-6-7-8-9-10-11-12 College 1-2-3-4-5 years
   (Mother)-6-7-8-9-10-11-12 College 1-2-3-4-5 years
8. Check annual family income: under $2500__, $2500-5000__, 5000-10,000__, over $10,000_____
   How many are dependent upon the family income for their living?_____

(Tear along this line)

Supt. Edwin M. Boyne
Mason, Michigan

Sec. 562
P.L. & R.
U.S. Postage

Mr. John Doe
413 Oak Street
Wurzburg, Mich.

Figure 2. Graduate Questionnaire Used in the Major Investigation.

SUMMARY

The following points have been discussed in this chapter:

1. 602 high schools were selected for the study. These 602 schools were found to represent every county and type of school in the State of Michigan. Detroit and certain other schools could not be included in the study due to local restrictions.

2. Over one-half of the 1945 graduates were from schools in the five most populous counties, while only 7 percent resided in the Upper Peninsula.

3. The student population to be studied was defined as the top third of the graduates since they apparently represent a group qualified for admittance, and success in, higher education (superior students).

4. The questionnaire method was defended as a practicable means of collecting information on a broad sampling basis.

Chapter III

REPRESENTATIVENESS OF SAMPLING AND ACCURACY OF REPORTING

The purpose of this chapter is to critically examine the representativeness of the sample of graduates who returned completed questionnaires. This is done by considering the type of school, sex, geographical distribution, and military status of the graduates participating in the study. Certain other evidence is reported which helps clarify the accuracy of reporting.

Types of schools represented- One or more students from 323 of the graduating classes returned completed questionnaires (Table III).

TABLE III

Types of Schools Represented in the Study

	Class of School									
	A	B	C	D	Bu	Cu	Du	Eu	Total	%
No. of 12 grade schools outside Detroit	37	77	207	204	14	18	16	29	602	
No. of schools to which questionnaires were mailed	21	57	126	123	10	14	9	18	378	62.8
No. of schools returning questionnaires	18	56	120	86	10	14	7	12	323	53.7
% of schools returning questionnaires	48.7	72.7	58.0	42.2	71.4	77.7	43.7	41.4		

All but 10 of the 204 Class A, B, and C schools which were mailed questionnaires were represented in the returns. Only 2 of the 33 larger schools in the Upper Peninsula failed to gain representation. For schools with fewer than 10 superior (top third) graduates, 37 of the

123 Class D and 6 of the 18 Class Eu schools represent the only major losses. These losses however, are not serious when viewed in the light of the data in Table III. Considered together as representing rural areas, 50.1 percent of Class C and D schools returned questionnaires. For the Upper Peninsula 52.3 percent of Class Cu, Du and Eu schools responded and these are also largely rural.

Distribution of respondents according to class of school- Michigan High school graduates of 1945 completed and returned 1617 questionnaires. This represents 28.1 percent of the superior graduates[1] who were mailed questionnaires. In general the best response came from the medium sized high schools, although Class Eu schools in the Upper Peninsula made the largest percentage report. The range was from 22.0 percent to 34.3 percent,(Table IV). The low representation of Class A schools is

TABLE IV

Distribution of Respondents According to Class of School

	Class of School								
	A	B	C	D	Bu	Cu	Du	Eu	Total
All superior students in the state	3880	1871	1937	1143	538	295	77	137	9,878
Total questionnaires mailed	1593	1391	1457	630	338	224	55	70	5,758
Total completed questionnaires	350	460	452	165	86	63	17	24	1,617
% of mailed questionnaires returned	22.0	33.1	31.0	26.2	25.5	28.1	30.9	34.3	28.1
% returns of all superior graduates in state	9.0	24.6	23.3	14.4	16.0	21.3	22.1	17.5	16.4

[1]Top third of their respective graduating classes.

partially offset by the high representation of Class B schools both of which are located in urban areas.

In terms of school size the ratio of completed questionnaires to total possible respondents ranged from 9.0 percent for Class A to 24.6 percent for Class B schools. The average for all schools was 16.4 percent as given in Table IV. The data indicate that the smallest percentage sample is from city schools where facilities for higher education are likely to be more readily available.

Geographical distribution of respondents- Questionnaires were returned by graduates living in eighty of the eighty-three counties of the state (Fig.3). No replies were received from graduates of schools in Alcona, Oscoda, and Otsego counties. Reference to Fig. 1 will show that these three counties had a total of 133 graduates in 1945, with 45 in the top third of their respective classes, which is less than one-half of one percent of the total for the state.

Over one-third of the graduates in the state were from five counties- Wayne (outside of Detroit), Oakland, Genesee, Kent, and Ingham (Fig.1). It is interesting to note that 11.3 percent of the superior graduates from these counties responded whereas the average for the state was 16.4 percent (Table IV). This fact suggests that the data were not heavily weighted with returns from metropolitan areas but were representative of the state as a whole.

When broader areas of the state are considered and the number of completed questionnaires are compared with the total number of graduates in the top third of all graduating classes certain facts become evident.

Fig.3 Geographical distribution of schools in this study

In the Upper Peninsula 19.8 percent of all the superior graduates were included in the study; 18.2 percent of the superior graduates of the 21 northern counties of the Lower Peninsula were included; and 16.0 of the superior graduates of the remainder of the state.

The above data indicate that the sampling is slightly larger for the areas of the state which are more remote from the centers of higher education. Since the Upper Peninsula and the 21 Northern Counties of the Lower Peninsula only represent 15.9 percent of the graduates outside Detroit, the bias in sampling introduced by a larger percentage return from these areas is fairly negligible.

Sex differences in questionnaire respondents- Analysis of the data indicated that boys responded to the questionnaire in somewhat larger proportion than girls. The average percentage of boys who returned their questionnaires was 33.5 percent, while that for girls was 26.3 percent.

TABLE V

Distribution of Boy Respondents

	Class of School								
	A	B	C	D	Bu	Cu	Du	Eu	Total
No. of questionnaires mailed	362	397	346	151	71	45	10	16	1398
No. of questionnaires returned	118	137	120	40	27	19	3	5	469
% returning questionnaires	32.6	34.5	34.7	26.5	37.8	42.2	30.0	31.2	33.5

TABLE VI

Distribution of Girl Respondents

	Class of School								
	A	B	C	D	Bu	Cu	Du	Eu	Total
No. of questionnaires mailed	1231	994	1111	489	267	179	45	54	4360
No. of questionnaires returned	232	323	332	125	59	44	14	19	1148
% returning questionnaires	18.9	32.5	29.9	25.5	22.1	24.6	31.1	35.2	26.3

Boys from the larger schools in both the Lower and Upper Peninsula responded in a larger percentage of cases as shown in Tables V and VI. However, the boys represent less than a third of the total sample. Within the 378 senior classes listed by their high school principals, only 28.8 percent were boys while 71.2 percent were girls. Final tabulation of the questionnaires included in this study indicated that 469 were returned by boys and 1148 by girls. In terms of total percentage 29.0 percent were returned by boys and 71.0 by girls, which is in almost exact proportion to the totals listed by high school principals.

Rank of respondents in ninths of their respective graduating classes for Class C and D schools- When high school students are asked to respond to questionnaires centered about advanced education, one might suspect that more top ranking students would be interested, and the resulting data be biased with a preponderance of their opinions. To check this type of bias, the students were classified according to the respective ninths of the graduating classes which they represent.

When this check was made it was found that 34.9 percent were in the top ninth of their graduating class. An even 35 percent were in the second ninth and 30.1 percent were in the third ninth. This indicates that the top two-ninths of the graduates listed by their high school principals responded only slightly better than the third ninth, and that the sample is fairly representative of all superior (top third) graduates as far as scholarship is concerned. The distribution is indicated in Table VII.

TABLE VII

Scholastic Rank of Class B and C Respondents

	Top Ninth	Second Ninth	Third Ninth	Total
No. Class B Respondents	158	164	128	450*
No. Class C Respondents	154	152	146	452
Total B-C Respondents	312	316	274	902
% Total B-C Respondents	34.9	35.0	30.1	100.

(*) Data for 10 Class B graduates were not available.

Class A schools were not analyzed in a like manner because high school principals did not rank their graduates in order of scholastic achievement in all cases. For smaller schools the number of graduates was too few to consider statistically in terms of ninths of the group.

When a chi square test[2] is applied to the above data no particular bias in responding to the written questionnaire is revealed. Although slightly less than one third of the respondents were from the third ninth, this might result from chance.

[2]See Appendix A, p. 178

Influence of military withdrawals on the representativeness of the sample- Analysis of the data for Class B and C graduates who planned to enter military service showed that 29.5 percent were in the top ninth of their graduating class, scholastically. In the second ninth there were 34.8 percent, and 35.6 percent were in the third ninth. Table XI in Chapter IV records the complete data. This seems to indicate that no particular level of student was seriously decreased by military withdrawals. Also since a larger percentage of boys than girls responded to the questionnaire, (Tables V and VI) the loss of some boys via military service did not seem to injure the sex balance in the total sampling. Thus it appears reasonable to conclude that the withdrawal of boys to enter the armed services had little or no injurious effect on the data used in this survey.

Reliability of student replies to the questionnaire- Reliability of the written replies to the questionnaire is indicated in several instances in this study. For example, when a follow-up personal interview[3] was made with a group of respondents attending Michigan State College it was found that written and oral responses were almost identical in nearly all cases.

Furthermore, reliability of reporting was indicated by the fact that over 70 percent of the graduates who reported plans to attend college actually matriculated at the college named.[4] Likewise the percentage of graduates who carried out their plans was almost identical for the University of Michigan and Michigan State College.[3]

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[3] See p. 29

[4] See p. 30

Reasonableness is indicated in reporting parental income and occupation. Graduates whose fathers were doctors or dentists were reported to be earning incomes in excess of $5000. Insurance agents, real estate brokers, independent manufacturers and managers of industrial concerns usually received good salaries according to the written reports of graduates. Unskilled laborers, many government employees and some sales and service workers were reported to receive low incomes. These data seem to be in general agreement with reported income tax returns and suggest accuracy of reporting on the part of the graduates. Relationships between income and occupation are discussed further in Chapter VIII.

Care and thought in reporting is also evidenced by graduates in their selection of a college and the reasons given for the choice. Location, outstanding courses, and the offer of a scholarship were frequently mentioned. Very few gave superficial reasons for their selection. This point is treated more completely in Chapter X.

A specific check of the vocational interests of Class A graduates and a comparison with out-of-school employment gave no suggestion of a bias in reporting. The largest number of girls were interested in commercial work, nursing, teaching and social service work. Summer employment was likely to be in office work or clerking, both related to vocational interests. Boys gave engineering first choice as a vocation followed by medicine and business administration. When responding to the question, "What subjects would you like to study further?", these boys listed chemistry, mathematics, and physics. Such answers suggest a seriousness and thoughtfulness in response.

Reliability of reporting was also suggested by the variety of nationalities, levels of education of the parents, and the number dependent upon the family income. On the other hand impossible and improbable answers were not evident, and there were no facetious replies to the questionnaire. In fact, as far as could be determined, accuracy of reporting was the rule in all questionnaires.

VALIDATION OF QUESTIONNAIRE RESPONSES BY A FOLLOW-UP STUDY OF CERTAIN STUDENTS

Significance of plans made prior to high school graduation- Since portions of the data reported in this thesis represent the plans of graduates made prior to graduation, the reader might ask, "Did the majority of students who reported plans to attend college actually carry out their plans?" It might be expected that some would be forced into other activities because of home circumstances over which they could have no control. At any rate the answer is that approximately 71 percent of those planning college entrance did matriculate in the fall of 1945.

High school graduates who planned to attend either the University of Michigan or Michigan State College- Data revealed that 204 from the upper third of the graduates of Michigan high schools in 1945, included in this study, planned to attend Michigan State College. These data were reported in the spring and early summer of 1945. When the fall enrollment was completed the Michigan State College Student Directory reported that 146 of these graduates were in actual attendance. This represents 71.5 percent of the total.

Table VIII

The Relationship between Planned and Actual College Attendance

	University of Michigan			Michigan State College		
	Boys	Girls	Total	Boys	Girls	Total
Planned Attendance	48	100	148	41	163	204
Actual Attendance	33	73	106	26	120	146
% Actual Attendance	68.7	73.0	71.6	63.4	73.6	71.5

As shown in Table VIII the percentage of girls enrolling at Michigan State College was 73.6 compared to 63.4 percent for the boys. The lower percentage of boys enrolling in college is understandable when we recall that the military draft was an unpredictable element in the planning at that time.

A similar study was made of the 148 graduates who planned to enroll at the University of Michigan. In this case it was found that 106 or 71.6 percent of those who planned attendance actually arrived and began work. This percentage is almost identical with that for graduates enrolling at Michigan State College. Of the total number who enrolled, thirty-three were boys and seventy-three were girls. The 33 boys comprised 68.7 percent of the boys who planned to attend college, and the 73 girls represented 73 percent of the girls who planned to attend college. As in the case of those planning to attend Michigan State College a lower percentage of boys than girls actually carried out their plans (Table VIII).

When these data are analyzed in terms of school size (Table IX), there is some evidence to indicate that the graduates of large schools

are more likely to carry out their plans than are those from small schools. However, the fact that Upper Peninsula graduates and those from Class D schools tend to change their plans in greater proportion suggests that college accessibility may exert an influence in this situation.

TABLE IX

Graduates who Planned and Actually Attended the University of Michigan and Michigan State College (Size of School)

	Class of School								
	A	B	C	D	Bu	Cu	Du	Eu	Total
No. Planning Attendance	87	126	84	29	14	6	2	4	352
No. who Matriculated	69	94	60	13	8	4	1	3	252
No. who did not Matriculate	18	32	24	16	6	2	1	1	100
% not Matriculating	20.7	25.4	28.6	55.2	42.8	33.3	50.0	25.0	28.4

In appraising these data two facts should be kept in mind. The number listed as having matriculated included only those who entered college during the fall term immediately following high school graduation, and did not include those who might have enrolled during the year or even the next fall. Neither were those included who might have changed plans and entered a college other than the one reported. The inclusion of these two groups of students would, no doubt, have increased considerably the percentage of students who carried out

their plans to attend college.

As indicated high school graduates are not likely to carry out their plans one hundred percent. Nevertheless they represent the one best indication of those who will go to college and the specific college in which they will enroll. It is important for the high school counselor to know that a well-worded questionnaire can get fairly reliable information as to the graduates future plans. The degree of reliability may be a function of the previous conditioning which the graduate received through school guidance activities.

THE SCHOLASTIC RANK OF THE GRADUATE IN RELATION TO COLLEGE ATTENDANCE

Significance of scholastic rank in relation to college attendance- Data submitted by all Class C and D principals listed graduates in order of their scholastic rank. Principals of many Class A and B schools also submitted this information. The results are of interest because they answer the question, "Does scholastic rank within the top third of the class affect student plans regarding college attendance?" Analysis of the data shows that a very large percentage of high ranking students enroll in college. This fact supports the belief that colleges generally make a determined effort to interest class valedictorians and salutatorians.

High ranking graduates who entered college- Of the 37 Class C high school graduates who matriculated at Michigan State College, there were seven class valedictorians, four salutatorians, and six others who ranked third in their respective classes. Of ten students from

Class D schools there were two valedictorians, two salutatorians, and one in third position.

Figures for the University of Michigan were very similar. Of twenty-three students from Class C high schools who enrolled at the University, four ranked first in their graduating class, four ranked second, and one ranked third. Only three Class D graduates in this study entered the University of Michigan. Two of these were class valedictorians and the other was a salutatorian.

The average class rank of the twenty-three Class C graduates who enrolled at the University of Michigan was 5.9 . The average rank of the ten who planned to attend but failed to enroll in the fall term was 5.3, with two salutatorians in the group. The average rank for the three Class D graduates who enrolled at the University was 1.3 while the eight who did not enroll had an average rank of 3.75, with two valedictorians and one salutatorian.

The same general trend was in evidence for those Class A and B schools which reported class rank. Apparently colleges are enrolling a large percentage of the most capable high school graduates, but many are ending their formal education at the high school level.

THE RELATIONSHIP OF VERBAL AND QUESTIONNAIRE RESPONSES

Follow-up study of a group of graduates who enrolled at Michigan State College- To determine the reliability of response, the writer made a spot check of a group of students attending Michigan State College to determine the accuracy of the responses to the original questionnaire.

To do this, a second blank was prepared and twenty-five students, listed in the Michigan State College Directory, were interviewed. These interviews took place during the month of May, approximately one year after the original survey was made. Verbal responses to these questions were then compared with the answers to the original questionnaire.

These data revealed that the original facts were very reliable and accurate. In fact the information regarding parents was probably more accurate on the original questionnaire, because the parents were available when the questionnaire was completed and could be questioned. When the graduates were interviewed at the later date, they were not too sure of their parents education and exact annual income. Circumstances had changed in certain of the homes following the war and student answers were obviously influenced by such changes. For example the annual family income had changed from the previous year. Likewise the number of dependents in certain homes had been changed by the army draft.

Summary of the verbal and written responses- (1) Four students reported both in writing and orally that they had been granted scholarships. (2) There was no change in the responses concerning the occupations of the fathers. (3) The country of birth of both father and mother was identical in the two reports. (4) Of the twenty-five graduates interviewed, six reported verbally a different grade as the highest completed by the parents. When interviewed four students thought father had completed a higher grade than they reported on the original questionnaire. In two cases a different grade was reported for mother, one being higher and one being lower. These replies suggest a tendency to upgrade the education of the parents in verbal reports, particularly

when the educational status is low. (5) Five graduates reported that the family income had changed during the year, four to a higher bracket, and one to a lower bracket, the latter because of the ending of the war. (6) The number of dependents in three families had changed; a son was drafted and two returned from the war. (7) Graduates found it necessary to change their plans for financing college expenses as explained in a later(V) chapter. In general they were able to provide less money from earnings than they had planned.

In conclusion it can be stated that the original data were very accurate for the data collected, June 1945, and that any changes verbally were the results of changes in conditions during the interveening year.

A STUDY OF CLASS C GRADUATES TO DETERMINE THE SIGNIFICANCE OF THE SIZE OF THE SAMPLE

To explore possible effects of changes in the size of the sample used in this survey, a special study of two groups of Class C graduates was made. The findings give a partial answer to the question, "What effect on data would have resulted from a larger sample?"

Class C schools were divided into two groups on the basis of the percentage of questionnaires which were returned by the various graduates. Those schools from which 33 percent or more of the circulated questionnaires were returned were considered together as Group I, and all others became group II. The 33 percent point was selected because it represented the average return fromClass C schools, the two groups being approximately equal.

These two groups were then compared from the standpoint of after-graduation plans, colleges selected, fathers' occupation, family income and number of dependents, parents' education and country of birth. In each case a chi square test was applied to locate any differences between the two groups.[5] Table X gives the post-graduate plans of the two groups of Class C graduates.

TABLE X

POST-GRADUATE PLANS OF TWO GROUPS OF CLASS C GRADUATES

Activity	Group I	Group II
Military Service	28	37
Work	52	61
College	113	99
Other Activities	34	26
Not Given	0	2
Total	227	225

In summary, the data and tests show that there was little or no significant difference between the two groups. Group I had a slightly larger number of girls with a larger number going to college and into nursing work. Group II, with a few more boys, had a larger number planning military service and immediate employment. A very few more scholarships were granted to members of Group II. The remaining factors such as income, education of parents, number of dependents, and country of birth of the parents show no difference between the groups.

[5] Appendix A, p. 178-79-80

Therefore it is reasonable to believe that the respondents from Class C schools were all very much alike and that a larger percentage of response would not have changed the data. It appears likely that the above was true for other sized schools, and that a sample twice as large would have yielded similar data.

THE VALIDITY OF REASONS GIVEN BY GRADUATES FOR THEIR SELECTION OF A PARTICULAR COLLEGE

It was encouraging to summarize the specific reasons given by high school graduates in accounting for their choice of a particular college, and to observe the many evidences of careful thought and sound judgement. Very few gave, what appeared to be, superficial reasons for their decision to attend a particular college. In all probability some had more reliable information about the college than did others, but regardless of this fact, their thinking was directed toward some very generally accepted characteristics of a good college. Characteristics of the college considered to be important by prospective students- Data revealed that high scholastic standards, capable instructors, and good courses were considered very important by high school graduates in selecting a college for further study. Nearly 39 percent credited their decisions to these factors. Low cost was named by only 7.4 percent, but scholarships and college location were given important consideration, and both of these are a part of the financial picture. If certain of the graduates had not been offered scholarships it is probable that they would have been forced to give more consideration to costs.

A denominational college was named by 6 percent as their choice and many supported the decision by stating that they were planning to attend their own church college. Over 3 percent reported that the "small college appeal" influenced them in their decision, yet the majority of graduates so reporting were not from small high schools.

TABLE XI

Reasons Given by the Top Third of the Graduates of Michigan High Schools in 1945 for Selecting Certain Colleges for Further Study

Reasons Given	Class of School								Total* Replies	% of Total Graduates
	A	B	C	D	Bu	Cu	Du	Eu		
High Standards-Good Courses-Competent Instructors-etc.	61	98	89	25	16	14	3	5	311	38.9
Scholarship	48	74	54	41	8	3	5	6	239	29.8
College Location	55	64	63	15	8	7	4	5	221	27.6
Low Cost	11	16	19	5	4	1	1	2	59	7.4
Attended by Parents-Relatives	4	21	10	15	3	2	0	0	55	6.9
Denominational College	12	9	19	8	1	1	1	0	51	6.4
Recommended by Friends	7	9	14	1	2	1	0	2	36	4.5
Small College	11	10	3	4	0	0	0	0	28	3.5
Recommended by Teachers	2	2	4	1	0	0	0	0	9	1.1
Parental Desire	1	4	0	0	0	0	0	0	5	.6

(*) Students frequently listed more than one reason for selecting a college.

Table XI gives a detailed analysis of the reasons listed by the graduates in this study for their choice of a particular college.

Parents sometimes arbitrarily select the institution of higher learning for their children, and at other times may very strongly encourage attendance at their alma mater. In this study, however, final decisions seemed to have been reached after a fairly careful review of many important factors. Only five students out of the 801 (Table XI) reported that their parents chose the college and insisted that they attend. Another 6.9 percent indicated that they intended to go to a particular college because a near relative was an alumnus of the institution.

Summarizing the data it is interesting to note that the most important considerations in the choice of a college were college standards and costs, and that all other factors were relatively unimportant.

Summary

The following points were considered in this chapter:

1. Graduates in this study are representative of all types of 12-grade schools in 80 of the 83 counties of the State, and questionnaire respondents include 28.1 percent of the top third of all graduates contacted by questionnaire.

2. For all schools contacted 28.8 percent of the top third of the graduates were boys, while exactly 29 percent of all questionnaires in this study were returned by boys.

3. Class C and D respondents who returned completed questionnaires were considered separately and were found to be representative scholastically of all levels of graduates listed by high school principals.

4. Military withdrawals were shown to have had little influence on the total data.

5. Representativeness of sampling was indicated by a special study of two groups of Class C graduates. It was found that a larger sample of graduates from the various schools did not significantly change the data.

6. Reliability of student replies was indicated by a consideration of the reports of parental income and occupation, selection of a college, vocational interests, and education and nationality of the parents.

7. Certain checks on the validity of the questionnaire responses by means of follow-up personal interviews were discussed. These indicated that:

   (1) Over 71 percent of the graduates who reported plans to attend college actually enrolled in the fall term immediately following graduation.[6]

   (2) That the class rank of those who carried out their plans to attend the University of Michigan was only slightly higher than those who failed to enroll.

   (3) That written responses by questionnaire and oral responses during a personal interview yield substantially the same information.

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[6] Data for Michigan State College and The University of Michigan only.

Chapter IV

WHAT DO MICHIGAN'S SUPERIOR GRADUATES PLAN TO DO IMMEDIATELY AFTER GRADUATION?

This chapter analyzes the general data submitted by the top third of the graduates of 1945 and describes their planned post-graduate activities. These activities are organized in four categories: (1) military service, (2) immediate employment, (3) college attendance and (4) other activities. Further analysis is made of the scholastic rank of the respondents and the interests of boys and girls are compared.

Post-graduate activities of the respondents from various types of schools- The data (Table XII) revealed that approximately one-half of the graduates planned to seek advanced schooling during the year immediately following graduation. Another 10.4 percent listed one of

TABLE XII

Post-graduate Activities of Respondents of Various Types of Schools

Activity	Class of School								Total	%
	A	B	C	D	Bu	Cu	Du	Eu		
Military Service*	67	67	65	15	11	12	1	2	240	14.8
Employment	81	111	113	36	24	19	5	6	395	24.4
College	182	241	212	85	37	23	8	13	801	49.6
Other Activities	18	37	60	29	10	9	3	2	168	10.4
Not Given	2	4	2	0	4	0	0	1	13	.8
Total	350	460	452	165	86	63	17	24	1617	100.

(*) 364 boys inducted prior to July 1, 1945 are not included.

a number of other activities quite generally involving some type of specialized training. One out of four planned to seek employment, while 14.8 percent expected to enter military service. Suprisingly few of the graduates failed to indicate their intended post-graduate activity.

The military service group comprises less than 15 percent of the total and is made up of 240 boys of age for military service. Class A high schools in the Lower Peninsula of Michigan and Class Cu in the Upper Peninsula appear to have a larger percentage of boys who planned to enter military service, according to Table XIII, than Classes D, Du, and Eu. However, this might be due to omissions from the principals' listings of those in the armed services as of July 1, 1945, and who are not included in the table. Combined data for all boys in the armed services are tabulated in the appendix A, p.180

TABLE XIII

Post-graduate Activities of Respondents of Various Types of Schools (Percentage)

	Class of School								
	A	B	C	D	Bu	Cu	Du	Eu	Total
Military Service	19.1	14.6	14.4	9.0	12.8	19.0	5.9	8.3	14.8
Employment	23.1	24.1	25.0	21.8	27.9	30.1	29.4	25.0	24.4
College	52.0	52.4	46.9	51.5	43.1	36.5	47.1	54.2	49.6
Other Activities	5.1	8.0	13.2	17.7	11.6	14.4	17.6	8.3	10.4
Not Given	.7	.9	.5	.0	4.6	.0	.0	4.2	.8
Total	100.	100.	100.	100.	100.	100.	100.	100.	100.

Twnety-four and four-tenths percent of the respondents planned to seek employment immediately after graduation. This means that one out of every four of the top third of the graduates of 1945, presumably the leading students, were not planning to continue their schooling, but intended to become wage-earners at once. For the various types of schools the percentages range from 21.8 percent to 30.1 , with planned employment running generally larger in the Upper Peninsula.

Approximately 50 percent of those who returned completed questionnaires definitely planned to go to college the first year after graduation from high school. Data showed that 801 out of a total of 1617 checked college attendance as their intended post-graduate activity. On the basis of size alone there is some support to the belief that graduates of large high schools planned to attend college in greater proportion than those of small schools. The fact that Class D and Eu school graduates are above average in planned attendance may be due to the fact that a large number of scholarships are annually awarded to this group, (Chapter IX). Also Table XIII indicates that the graduates of Lower Peninsula schools planned to attend college in a larger than average percentage of cases. This is discussed in detail in Chapter X.

Graduates who planned "other" activities totaled 168 with only 55 being graduated from Class A and B schools. In the Upper Peninsula 11.6 percent of Class Bu respondents were in this category, indicating that in general, larger schools had fewer in this group.

Analysis to determine the types of activities designated as "other" activities showed a wide range of interests, many involving specific job

training. Perhaps because of a desire to aid the war effort, 77.9 percent intended to become nurses aids or take up some branch of nursing work (Table XIV). Business and technical courses were of interest to smaller numbers of graduates.

TABLE XIV

Detailed Analysis of "Other Activities" Planned by Graduates of Various Schools

Activity	Class of School								Total	%
	A	B	C	D	Bu	Cu	Du	Eu		
Cadet Nurse	9	14	28	11	4	4	0	0	70	41.7
Hospital Training	3	17	15	14	4	5	2	1	61	36.2
Business Courses	3	1	7	2	0	0	1	0	14	8.3
Art Courses	1	0	1	0	0	0	0	0	2	1.2
Technical Courses	2	2	0	0	1	0	0	0	5	3.0
Beauty Culture	0	1	1	0	0	0	0	0	2	1.2
Music Courses	0	0	1	1	0	0	0	0	2	1.2
Marriage	0	1	3	0	0	0	0	1	5	3.0
Travel	0	1	1	0	0	0	0	0	2	1.2
Not Given	0	0	3	1	1	0	0	0	5	3.0
Total	18	37	60	29	10	9	3	2	168	100.0

Some comparisons among the four groups of graduates- Although all respondents in this study were from the top third of their respective graduating classes, Class B and C graduates were again divided into

thirds (ninths) to show a finer analysis of scholarship. These groups were used because the data were not complete for Class A graduates and the number of graduates in the small schools was not large enough to treat statistically in this manner.

When Class B and C boys who expected to enter military service were considered together, 39 were in the top ninth, 46 in the second ninth, and 47 in the third ninth. In percentages (Table XV) the range is from 29.5 for the top ninth to 35.6 percent for the third ninth. Applying a chi square test[1] shows no significant difference and

TABLE XV

Scholastic Rank of Class B and C Graduates
Who Planned Various Activities

Post-graduate Activity	Top Ninth		Second Ninth		Third Ninth		Total	
	No.	%	No.	%	No.	%	No.	%
Military Service	39	29.5	46	34.8	47	35.6	132	100.
Employment	64	28.6	69	30.8	91	40.6	224	100.
College	171	37.7	155	34.2	127	28.1	453	100.
Other Activities	30	30.9	31	31.9	36	37.2	97	100.

suggests that the boys entering military service were fairly typical scholastically.

Study of the data for those seeking immediate employment from Class B and C schools indicated that the largest percentage were in the third ninth. Of the 224 students in this group 64 or 28.6 percent were in the top ninth of their class compared to 91 or 40.6 percent in the third ninth.[2] This indicates that those who were seeking

[1] X^2 --.69 with 2 degrees of freedom (not significant)

[2] X^2 3.50 with 2 degrees of freedom (not significant)

employment immediately following graduation were somewhat more likely to be average or below average for the superior group of graduates.

When the 453 graduates who indicated plans for college attendance were divided into ninths on the basis of scholastic rank, 171 were found to be in the top ninth of their class and 127 in the third ninth.[3] This distribution is nearly the reverse of that for immediate employment and indicates that the very superior graduates are somewhat more likely to continue with advanced training.

Graduates who reported an interest in one of a number of miscellaneous activities were in the third ninth of their class in more cases than in the first ninth. In this respect the group listing "other" activities corresponds fairly closely to the group seeking immediate employment. A chi square test[4] shows no statistical difference.

When the data for boys and girls are separated several interesting facts are revealed. Of the 469 boys slightly more than half planned to enter military service.

TABLE XVI

Post-graduate Activities of the Boys from Various Types of Schools (Raw data)

Activity	Class of School A	B	C	D	Bu	Cu	Du	Eu	total	%
Military Service	67	67	65	15	11	12	1	2	240	51.2
Employment	9	12	19	8	6	2	1	0	57	12.2
College	41	58	33	17	10	5	1	3	168	35.8
Other Activities	1	0	3	0	0	0	0	0	4	.8
Not Given	0	0	0	0	0	0	0	0	0	.0
Total	118	137	120	40	27	19	3	5	469	100.0

[3] X^2 --1.50 with 2 degrees of freedom (not significant).
[4] X^2 -- .62 with 2 degrees of freedom (not significant).

Another third intended to go to college, while most of the remainder were planning immediate employment (Table XVI). Only four boys were not included in the above statement and they intended to take training in radio and shop.

When the above data are resolved into percentages, it is apparent that Class C schools were sending only 27.5 percent of their boys to college as compared with 35.8 percent for all schools in the study. Also, only 7.6 percent of the Class A boys and 8.8 percent of the boys in Class B schools were planning employment. The latter figures

TABLE XVII

Post-graduate Activites of the Boys from Various Types of Schools (Percentage)

Post-graduate Activities	Class of School								Percent
	A	B	C	D	Bu	Cu	Du	Eu	
Military Service	56.8	48.9	54.2	37.5	40.7	63.2	33.3	40.0	51.2
Employment	7.6	8.8	15.8	20.0	22.2	10.5	33.3	.0	12.2
College	34.7	42.3	27.5	42.5	37.1	26.3	33.4	60.0	35.8
Other Activities	.9	.0	2.5	.0	.0	.0	.0	.0	.8
Total	100.	100.	100.	100.	100.	100.	100.	100.	100.

are considerably below the average of 12.2 percent for all schools. Possible reasons for these facts are that farm conditions were generally good in 1945, and boys from small schools were generally aiding the national food production program.

Analysis of the plans of the 1148 girls (Table XVIII) revealed that 55.1 percent were planning to go to college, and that another 29.5 percent were going to work immediately after graduation.

TABLE XVIII

Post-graduate Activities of the Girls from Various Types of Schools (Raw data)

Post-graduate Activities	Class of School								Total	%
	A	B	C	D	Bu	Cu	Du	Eu		
Military Service	-	-	-	-	-	-	-	-	-	-
Employment	72	99	94	28	18	17	4	6	338	29.5
College	141	183	179	68	27	18	7	10	633	55.1
Other Activities	17	37	57	29	10	9	3	2	164	14.3
Not Given	2	4	2	0	4	0	0	1	13	1.1
Total	232	323	332	125	59	44	14	19	1148	100.

Since none of the girls were 21 years of age and eligible for military service, the remainder checked such activities as nursing and business training.

A percentage analysis (Table XIX) reveals that a larger proportion of the girls from Class A high schools planned to attend college than from other schools, particularly those from the Upper Peninsula; and that a larger percentage of girls from small schools were interested in nursing. As was true for boys, the percentage going to college was below average for Class C and Cu schools.

Since military service laws required that girls be 21 years of age before voluntary enlistment, none of the girls were in the armed

services, while 51.2 percent of the boys planned military service. Those already in the army as of July 1, 1945 were not contacted and were not included in the 51.2 percent. Miscellaneous activities for the girls accounted for 14.3 percent of the total. These activities included cadet nursing, and hospital training and represented the nearest approach to war service that could be undertaken by the girls.

TABLE XIX

Post-graduate Activities of the Girls from Various Types of Schools (Percentage)

Post-graduate Activities	Class of School								
	A	B	C	D	Bu	Cu	Du	Eu	Percent
Military Service	0	0	0	0	0	0	0	0	0
Employment	31.0	30.7	28.3	22.4	30.5	38.6	28.6	31.6	29.5
College	60.8	56.7	53.9	54.4	45.9	40.9	50.0	52.6	55.1
Other Activities	7.3	11.4	17.2	23.2	16.8	20.5	21.4	10.5	14.3
Not Given	.9	1.2	.6	.0	6.8	.0	.0	5.3	1.1
Total	100.	100.	100.	100.	100.	100.	100.	100.	100.

Although consideration of all respondents indicates that a larger percentage of girls than boys planned to attend college (Tables XVII and XIX), much of this is apparently due to the war and military service (Table XX). When military service respondents are excluded from consideration, the boys have a larger percentage planning to attend college and the girls a larger percentage seeking immediate employment.

TABLE XX

Post-graduate Activities of All Respondents

and Non-military Respondents

Post-graduate Activities	All Respondents		Non-military Respondents	
	Boys	Girls	Boys	Girls
Military Service	51.2	0.0	0.0	0.0
Employment	12.2	29.5	24.9	29.5
College	35.8	55.1	73.4	55.1
Other Activities	.8	14.3	1.7	14.3
Not Given	0.0	1.1	0.0	1.1
Total	100.	100.	100.	100.

SUMMARY

Data presented in this chapter shows that approximately one-half of the graduates in the top third of their respective graduating classes planned to go to college, and that one in four was headed for immediate employment. Military service called one in seven and the remainder planned to enter a wide range of activities, prominent among them being nursing.

Due at least in part to the war, a larger percentage of girls than boys from the top third of their class were planning to attend college, and more were seeking immediate employment. Other factors related to college attendance are considered in succeeding chapters.

Part II

ANALYSIS OF THE HOME CONDITIONS RELATED TO COLLEGE ATTENDANCE

Chapter V

FAMILY INCOME

It has been quite generally supposed that money is one of the bottle necks which prevent many worthy students from attending college. It is entirely possible that parents with modest incomes are not in a position to finance a college education for their children, and that students cannot afford the necessary time to earn their expenses through a modern socialized college program.

In this chapter comparisons are made between the family income of those who plan to attend college and those who do not. Interrelationships between high family income and plans to attend college are considered. Data are analyzed to determine the possible effects of the withdrawal of military personnel, and the interrelationships between income and the fulfillment of plans to attend college are indicated. Finally the relation of family income to the plans made by graduates for the financing of their college expenses is pointed out.

Family income of the graduates of 1945- Nearly one of every three of the respondents (Table XXI) indicated that the total amount of his family income was less than $2500. Approximately half of the families were reported to have incomes ranging from $2500 to $5000. This means that five-sixths of all of the families were reported to have incomes of less than $5000, while only one family in nine was

was reported to have an income of more than that amount, with one respondent in 20 failing to report income. It is reasonable to suppose that if those "Not Given" had reported they would have increased, still further, the percentage in the low income groups.

TABLE XXI

Family Income of the Graduates of 1945

Income	No. of Cases	Percent of Total
Under $2500	534	33.0
$2500-$4999	821	50.8
$5000-$9999	143	8.9
$10,000 and up	36	2.2
Not Given	83	5.1
Total	1617	100.

The possible effects of military losses on the income data- To determine the possible influence of the withdrawal of those who entered the armed services, income data for the families of the 67 Class B boys who planned to enter military service were compared with the family incomes of the 70 boys not planning immediate military service. Class B boys were selected as a sample to check the representativeness of the income data, because almost one-half were listed for military service. Table XXII shows that 34 boys came from families with incomes below $2500 and that exactly half were planning to enter military service. In the salary range $2500 - $4999, 41 of the total of 80 were in the military group,

and for family incomes above $5000, 9 of 21 were planning military service. Although the percentages vary slightly between the two groups, it is evident that changes in the plans of one or two individuals would account for the differences.

TABLE XXII

Family Income of Military and Non-Military Respondents from Class B Schools[1]

Income	Military		Non-military	
	No.	%	No.	%
Under $2500	17	25.4	17	24.3
$2500-$4999	41	61.2	40	57.1
$5000-$9999	7	10.4	9	12.9
$10,000 and up	2	3.0	3	4.3
Not Given	0	0.	1	1.4
Total	67	100.	70	100.

This close similarity suggests the probability that military withdrawals represented a cross section of the male respondents, and that they had little effect on the representativeness of the income data.

Comparison of family incomes among the college and non-college groups- When the family incomes of those intending to go to college are compared with those not going, the former show a larger proportion of families in the high income brackets (Table XXII). For families with incomes above $5000 the ratio is two to one, two planning to attend college for every one not planning to attend college. For incomes

[1] Chi Square Test in Appendix A. p.180

under $5000 the relationship, four to five, is in reverse order, with a larger number of superior graduates from this group not planning college.

TABLE XXIII

Family Income Among the College and Non-College Groups

Income	Planned College Attendance		Not Planning College		Total	
	No.	%	No.	%	No.	%
Under $2500	236	44.2	298	55.8	534	100.
$2500-$4999	409	49.8	412	50.2	821	100.
$5000-$9999	90	62.9	53	37.1	143	100.
$10,000 and up	30	83.3	6	16.7	36	100.
Not Given	36	43.3	47	56.6	83	100.
Total	801	---	816	---	1617	----

When the data are presented according to percentage of college and non-college respondents in each income range, the trends become evident (Table XXIII). Beginning with 44.2 percent of those with incomes under $2500, the college group increases to 83.3 percent for those with incomes of $10,000 and over. The opposite trend is true for those not planning to attend college. A graphic representation of the data (Fig. 4) clearly reveals these marked trends.

To determine the significance of the difference of the income factor as revealed in the foregoing table a chi square test was applied. From Table XXIV we note that chi square equals 32.86. For three degrees of freedom any chi square value above 11.34

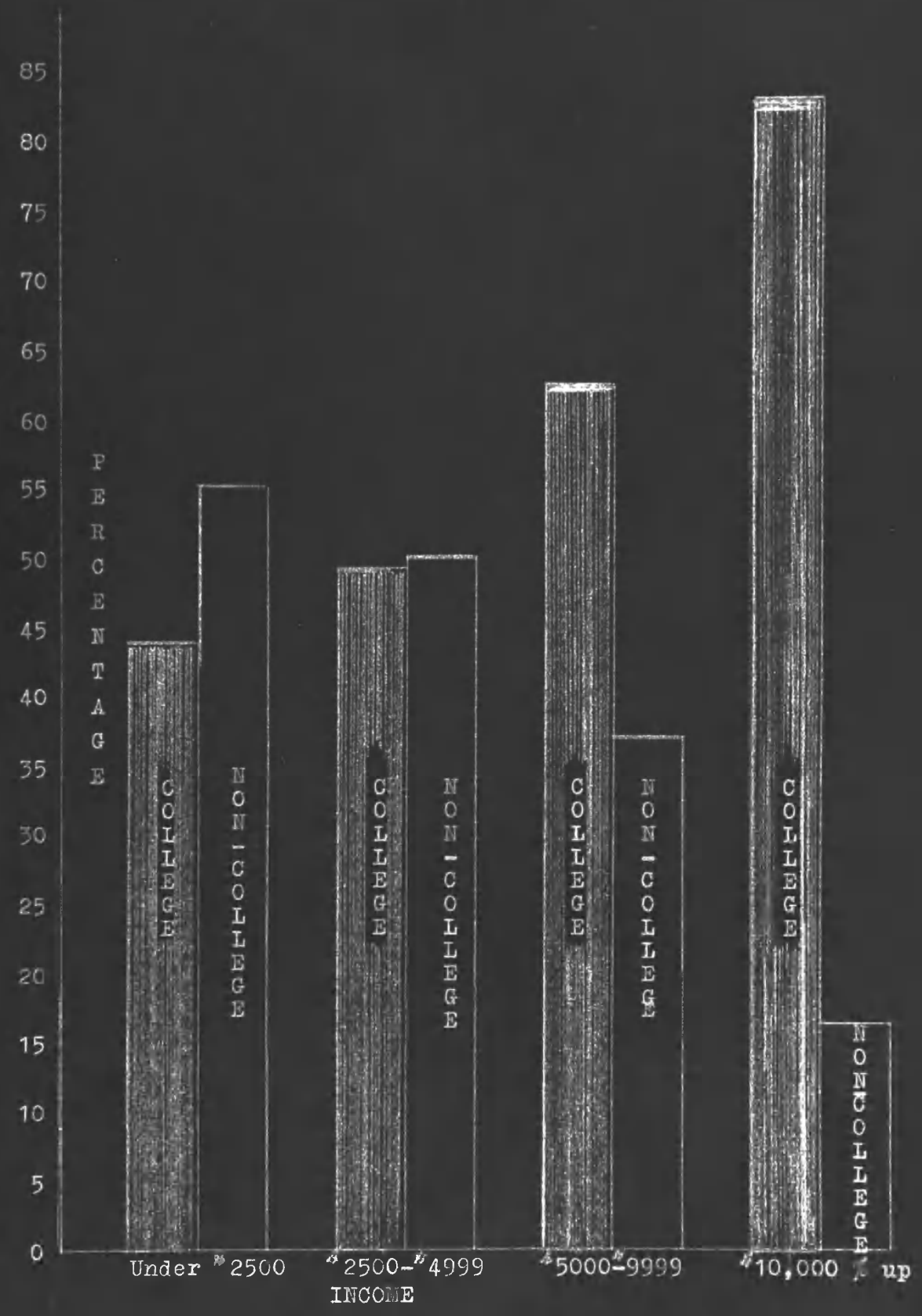

Fig. 4 - Family Income of College and Non-college Respondents

indicates that the differences are likely to occur, by chance, in less than one sample in a hundred. Therefore the difference is highly significant.

TABLE XXIV

Chi Square Test of Family Income

Income	Planned College Attendance		Not Planning College		Total
	No.	x^2	No.	x^2	
Under $2500	236	3.39	298	3.38	534
$2500-$4999	409	.0	4 12	.0	821
$5000-$9999	90	5.08	53	5.01	143
$10,000 and up	30	8.00	6	8.00	36
Total	765	16.47	769	16.39	1534*

(*) The 83 who did not respond to the income item were omitted.

The interrelationship between high family income and plans to attend college- The data above indicate that 30 out of 36 graduates from families in the income range of over $10,000 planned to go to college. One might expect that factors other than income could account for the large percentage of high income graduates who planned to attend college. One hypothesis might be that a large number from this group happen to fall in the highest scholastic ranks in their graduating class. To check this possibility the class ranks of this group were analyzed.

Data reported by high school principals indicated the class rank of 23 of the 30 graduates in this high income group. It was found

that eight were in the top third (top ninth) of this already select group of respondents, eight were in the middle third, and seven were in the low third. In other words eight were in the top ninth of their graduating class, eight were in the second ninth, etc. This fact indicates that these 30 students were not superior to the other respondents in scholarship but were probably near the average.

In one respect, however, each person in this group did differ from all other respondents, namely he was not likely to be prevented from going to college because of a low family income. Assuming that all other respondents had been provided with family funds to the same extent, we might reasonably have expected 30 out of each 36 or five-sixths of them to go to college. Five-sixths of the 534 students in the low income group is equivalent to 445 potential college students. However, only 236 actually planned to attend college, indicating a loss of 209 (39.1%) superior students. In the income range of $2500 to $4999 we might expect five-sixths of 821 or 684 to plan college attendance. Actually there were only 409, a loss of 275 (33.5%) from the estimated number. Even in the $5000 to $9999 income range where we might expect 119 to go to college, only 90 had made such plans, a loss of 29 (24.4%). It is, therefore, possible to conceive the idea that these 209, 275, and 29 students, a total of 512 (34.2%) are lost to the college group, because their parents do not have the $10,000 income with which to send them to college.

<u>The interrelationship between income and fulfillment of plans to attend college-</u> To explore the possibility that a larger percentage

of graduates from low income families might forego plans to attend college than from high income families, a selected group was checked. Of the 51 Class C graduates who planned to attend Michigan State College, it was found that 37 were in actual college attendance in the fall term immediately after graduation. This represents 73.5 percent[2] of those who indicated plans to attend Michigan State College (Table XXV). For the graduates in the income range under $2500 the percentage of graduates who actually matriculated is

TABLE XXV

Family Income of Class C Graduates who Changed Plans to Attend Michigan State College[3]

Family Income	Planned to Attend	Actually Matriculated		Failed to Attend	
	Total	No.	%	No.	%
Under $2500	15	11	73.4	4	26.6
$2500-$4999	26	20	76.9	6	23.1
$5000-$9999	6	3	50.0	3	50.0
$10,000 and up	2	2	100.	0	0.
Total*	49	36	73.5	13	26.5

(*) Family income was not given in 2 cases, one of whom matriculated at Michigan State College.

almost identical with the average for all Class C matriculants, while in the next higher income range it is only slightly larger. These data give no evidence to indicate that one income group is more likely to change plans to attend college than another.

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[2] 71.5 % of all graduates who intended to enter M.S.C. actually enrolled (ChapterIII).

[3] Chi Square Test, Appendix A. p. 181

The relation of family income to the plans made by graduates for financing a college education- Nearly all of the 1945 graduates who intended to go to college had made plans for financing their training according to the data which they submitted. This section of the questionnaire was completed by 772 graduates whereas only 29 or 3.6 percent failed to report.

The extent of student participation in the financing of college expenses is indicated by the fact that nearly three out of every eight students planned to provide one-half or more of the necessary funds (Table XXVI). Another 25.9 percent planned to earn from 10 percent to 50 percent of college expenses. Only 23.7 percent of the graduates expected their parents to provide the full amount.

Graduates anticipated that scholarships would provide part of the money in 239 cases or 29.8 percent of the total. The part played by scholarships in the plans made by students is discussed in Chapter IX.

Analyzing the data from the standpoint of student financial burden, the figures showed that 20 percent of the students planned to assume the major share of their college expenses, and that another 17 percent planned to provide one-half. Still another 15 percent planned to assume a quarter or more of their expenses. These figures mean that over half of the graduates going to college planned to shoulder a financial burden which might seriously impair their educational opportunities. Only one in four students would be free from financial responsibilities.

TABLE XXVI

Analysis of the Plans of Graduates for Financing a College Education

Method of Finance	No. 6	%
Student provides 50% or more of the total-		
Student-- 100%	70	
Student-- 80-95%, parents & other sources	29	
Student-- 75% , other sources--25%	10	
Student-- 75% , parents--25%	33	
Student-- 55-75%, parents & other sources	17	
Student-- 50% , parents--50%	124	
Student-- 50% , other sources--50%	6	
Student-- 50% , parents & other sources	10	
	299	37.3
Student provides 10% - 50% of the total		
Student-- 40% , parents--60%	12	
Student-- 33% , parents--67%	8	
Student-- 33% , parents--33%, other sources	6	
Student-- 25% , parents--50%, other sources	23	
Student-- 25% , parents--75%	67	
Student-- 20% , parents--80%	21	
Student-- 10% , parents--90%	38	
Miscellaneous with student contributing	32	
	207	25.9
Parents provide 100% of the funds	190	23.7
Miscellaneous		
Parents provide most of the funds	62	
Most of the money from "other" sources	14	
	76	9.5
Total Plans of Finance	772	96.4
Not Given	29	3.6
Total Respondents Going to College	801	100.

To determine the relationship between the graduates family income and his plans for financing his college education, the data for each respondent were tabulated (Table XXVII). This table shows that the students who planned to assume the major responsibility for financing their education came, for the most part, from low income families.

TABLE XXVII

The Graduates' Plans for Financing College Training in Relation to Family Income

Plan	Under $2500		2500-4999		5000-9999		10,000		Not Given		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Student 100%	45	64.3	19	27.1	1	1.4	0	0	5	7.2	70
51-99%	39	43.8	48	54.0	1	1.1	1	1.1	0	.0	89
50%	54	38.1	74	52.8	8	5.7	0	.0	4	3.3	140
1-49%	71	25.1	157	55.5	42	14.5	5	1.8	8	3.1	283
Parents 100%	19	10.0	93	49.0	35	18.4	24	12.6	19	10.0	190
Not Given	8	27.6	18	62.1	3	10.3	0	.0	0	.0	29
Total	236	---	409	---	90	-----	30	---	36	---	801

Only one of the 70 graduates who planned to earn all college expense money came from a family with an annual income of over $5000. Only two of the 89 graduates who planned to earn between 51 percent and 99 percent of their expenses reported a family income of $5000 or more.

In those cases where students expected to share college costs equally with parents and other sources, the family income was more likely to be in the $2500-$4999 range. Only 8 of 140 respondents in this group reported an income over $5000.

Students planning to contribute less than one-half to their expense fund came from families with varied incomes, one in four being less than $2500. How parents hope to supply the necessary funds from their very limited annual incomes is difficult to understand.

Of the 190 families planning to finance the entire cost of a student's advanced training, 19 had incomes under $2500. Obviously no amount of personal sacrifice on their part would make the necessary funds available from current income. Some other source of revenue would have to be found.

When the above data were resolved into percentages certain trends became evident. Necessity apparently determined student planning in most cases, for nearly two-thirds of the families of the students who expected to earn all of their college expenses had an income under $2500 (Table XXVII). The percentage of families in the $2500 income bracket decreased as the planned contributions of the student decreased, until it reached 10 percent in cases where the parents were expected to provide all needed monies. The opposite relationship is true for all students whose family income was above $5000. These observable trends lead to the generalization that the planned earnings of the graduate are inversely related to the family income.

To determine the degree to which financial plans are followed, data submitted by 25 students in attendance at Michigan State College were checked by interview. Of the 14 who originally expected their parents to furnish 100 percent of their college expense money,

13 received the full amount while one was able to earn approximately 10 percent of his expenditures. Seven of the 11 who reported plans involving a sharing of expense found that they could not contribute as much as originally planned since earnings were 10 to 25 percent lower than anticipated. Two of the group were not able to contribute anything toward expenses. Further reference is made to this group of graduates in a later chapter.

SUMMARY

1. Since Class B military respondents were not significantly different from Class B non-military respondents, it is probable that the withdrawal of military personnel had little effect on the income data.

2. Approximately 67 percent of the superior graduates from families who had incomes above $5000 and only 47 percent of the graduates from families with incomes below $5000 planned to attend college.

3. For each income group below $5000 there is a larger percentage of the families of those who do not plan to attend college, while for each income group above $5000, the opposite is true.

4. A spot check of the actual matriculants at Michigan State College indicated that low income groups were no more likely to change plans than high income groups. This is important in terms of the development of a personal motivation to pursue appropriate advanced study. No amount of financial assistance is likely to benefit the superior student who has no desire to attend college. However, once the desire has been initiated the student, regardless of finances, tends to carry out his plans.

5. For those who would increase college attendance among superior students it is important to know that the motivation should be developed prior to high school graduation.

6. Sufficient financial help and other proper motivation gives promise of an over-all 34 percent increase in planned college attendance for superior students whose family income is now below $10,000. The data support the thesis that the large bulk of financial assistance should go to students with a family income below $5000, for every scholarship given to a student whose family income is above $5000 there should be in the neighborhood of 17 scholarships awarded students whose family incomes are below $5000 (From data on p. 57).

7. Also there are apparently more superior students in need of financial assistance whose family incomes are between $2500 and $4999 than those whose family incomes are either lower or higher than this amount (See p. 54)

8. Since 3 out of 8 students who planned college attendance also planned to earn more than half of their current expense it is apparent that this group also needs financial assistance.

Chapter VI

FAMILY SIZE

Continuing the analysis of the home conditions related to college attendance, the relationship between family size and planned college attendance is surveyed in the following paragraphs. This is done by making a comparison of the families of those intending to enter college with the families of all other respondents. A further analysis is made to show the relationship between the family income and family size of those planning to attend college and those not planning to go to college.

Data show that nearly 83 percent of all graduates come from families with five or fewer persons dependent upon the family income (Table XXVIII). Families with seven or more dependents are represented in less than 8 percent of the entire number of cases. The most common sized family is one with four dependents (2 children) and the average size represented in this study is 4.2 persons.

Families with one dependent are considered to be those cases in which the high school graduate was separated from the parents and entirely dependent upon other sources of income. Families with two dependents were made up of the graduate and one parent, usually the mother. The number of broken homes is suprisingly large, totaling 125 or nearly 8 percent of all families. Graduates from these homes were living under a variety of circumstances widely divergent from

the typical family, hence descriptions of graduates from broken homes are not likely to follow usual trends. For this reason these data are omitted from certain of the tabulations.

TABLE XXVIII

Family Size for the Top Third of the Michigan High School Graduates of 1945

No. of Dependents*	No. of Families	% of Total
One	13	.83
Two	112	7.12
Three	437	27.76
Four	470	29.86
Five	263	16.71
Six	156	9.91
Seven	62	3.94
Eight	36	2.29
Nine	12	.76
Ten	10	.63
Over ten	3	.19
Total	1574	100.
(*) Not Given	43	

To investigate further the accuracy of reporting family data and the reasonableness of questionnaire answers, these data were compared with similar vital statistics for the State of Michigan and the United States. World Almanac[1] reports indicate that 82 percent of

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[1]The World Almanac, New York World Telegram, New York, 1946, p.486

[2]Population and Housing, Families-General Characteristics, 16th Census of the United States, 1940, Washington, D.C., U.S. Government Printing Office, 1942, p.28

the 19,469,710 families with children in 1940, reported three or fewer children, while 9.6 percent listed five or more. In this study 83 percent of the Michigan high school graduates of 1945 came from families with three or fewer children, while less than 8 percent came from families with five or more children. The average United States family in 1940 had 5.17 dependents compared to 4.22 per family reported in this study. For the State of Michigan comparable figures show a larger proportion of families with three, four and five dependents, and a smaller proportion with seven or more than is true for the United States as a whole.[2] These facts suggest that the data reported by graduates in this study are true and substantially what one might expect.

Comparison of college and non-college respondents according to family size. Approximately one-half of the total group reporting the number of dependents planned to attend college (Table XXIX), 789 of the 1574. Graduates from families with four dependents or less (2 children) made up nearly 68 percent of the college group but only 63 percent of the non-college group. Graduates from families with six or more dependents made up less than 15 percent of the college group but more than 20 percent of the non-college group. The average number of dependents for the college group was 4.17 and for the non-college group 4.27. Although the difference is not large, there is an indication in the above data that graduates from large families are somewhat less likely to attend college than those from small families.

When data for broken families (1 and 2 dependents) are omitted it is evident that the percentage of graduates planning to attend college decreases as the number of children increases. For families with one child over 55 percent of the graduates intend to enter college.

TABLE XXIX

Comparison of the Family Size of those Respondents Planning and not Planning to Attend College

	Broken Homes	No. of Children							Total
		1	2	3	4	5	6	over 6	
Total	125	437	470	263	156	62	36	25	1574
No. in the College Group	43	241	252	132	69	29	13	10	789
Percent in the College Group	34.4	55.1	53.6	50.1	44.2	46.8	36.1	40.0	
No. in the Non-College Group	82	196	218	131	87	33	23	15	785
Percent in the Non-College Group	65.6	44.8	46.4	49.9	55.8	53.2	63.9	60.0	

For families with two children 53.6 percent intended to enter college, and in families with three children just slightly over 50 percent. In all larger families the percentage planning to attend college was less than 50 percent with a general trend in inverse ratio to the number of dependents.

By grouping the distributions where the frequencies are small and checking with a chi square test, the differences are found to be

significant. The computation is given in the Appendix p. 181. Figure 5 gives a graphical comparison of the two groups.

It is interesting to note that a smaller percentage of superior graduates from broken homes planned to attend college than from families with seven and eight children. Although other factors undoubtedly influence these students in their post-graduate planning, the home situation apparently is an important determinant.

An analysis of a combination of family income and size as it is related to college attendance- When the data are arranged to show both family income and number of dependents (Table XXX), the analysis indicates that in most cases the higher income groups have a larger percentage of

TABLE XXX

Percent of Respondents Planning to go to College According to Income and Size of Family*

No. of Children	Family Income: Under $2500		2500-4999		5000-9999		10,000 & up		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
1	83	51.9	124	57.1	25	65.9	4	80.0	236	58.6
2	60	49.2	139	54.2	28	59.6	13	81.2	240	54.0
3	30	47.6	71	46.7	17	70.8	4	80.0	122	50.0
4	23	49.9	28	36.8	8	44.4	5	100.0	64	43.8
5 & more	17	45.9	22	35.5	6	100.0	4	100.0	49	44.9
Total	213	49.6	384	50.3	84	63.2	30	85.7	711	52.3

(*) Respondents with broken homes (i.e. living with only one or neither parent) are not included in these tabulations. Percentages are based on the 1360 who reported both income and family size.

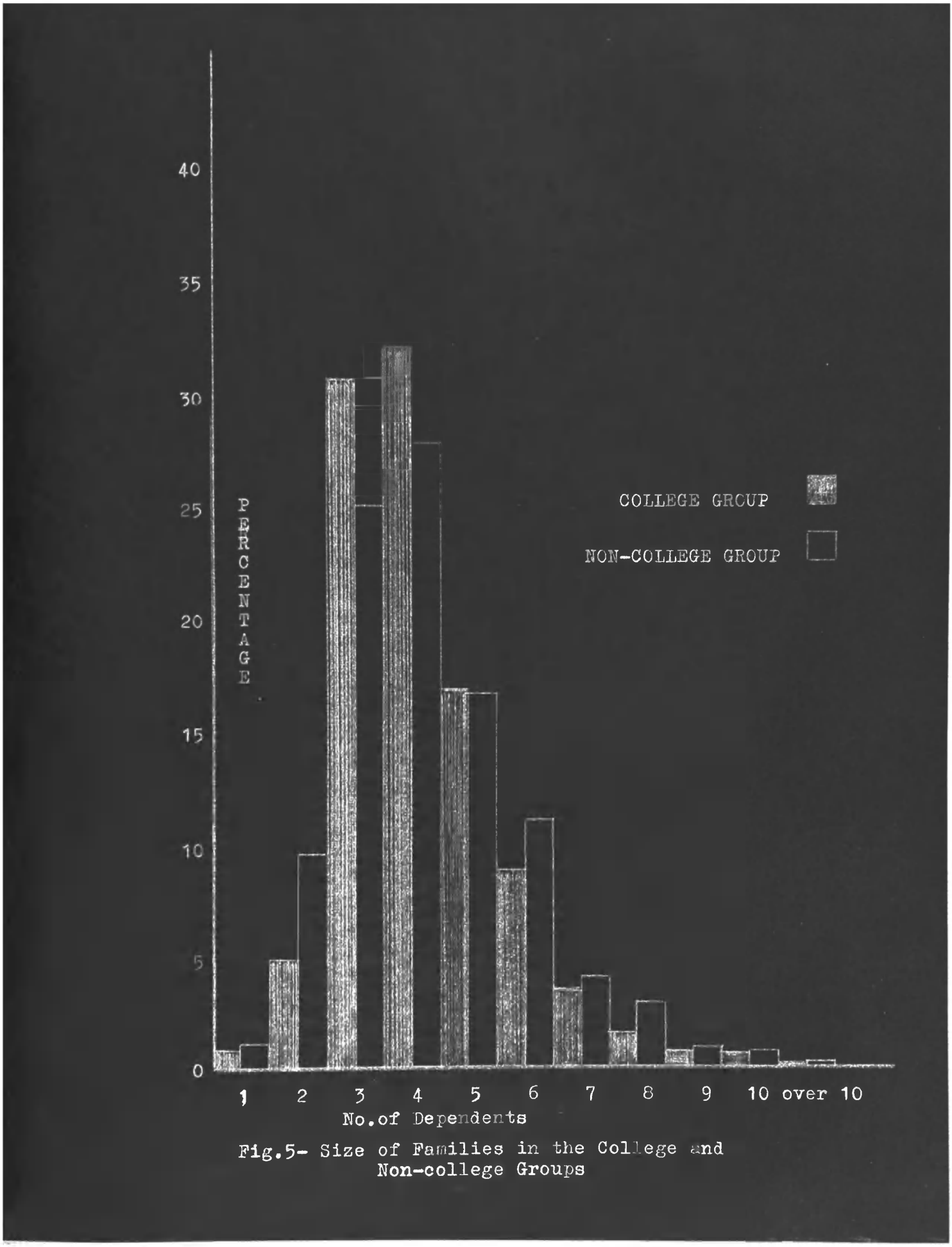

Fig.5- Size of Families in the College and Non-college Groups

graduates planning to attend college. For incomes below $5000 the proportion of graduates planning to attend college tends to decrease with increases in the size of the family. In both cases there are exceptions, as, for example in the number of families with four children and an income of under $2500. Such cases probably indicate the influence of factors other than family size and income.

The table also indicates that families with one child and an income under $2500, and families with one or two children and incomes between $2500 and $5000, are the only groups in the low salary brackets with better than an even chance of attending college. For families with an income over $5000, graduates, in general, have considerably better than an even chance of attending college. It is interesting to note that for families with one and two children an increase from under $2500 to the next higher income group noticeably increases the percentage who planned to attend college, whereas, for families with three or more children, the income must be considerably larger before an increase is noted in the number of graduates who plan to attend college.

The general trends (Table XXX) are indicated in the totals which show that, regardless of the number of children, the percentage of graduates planning to attend college increases from 49.6 percent in the lowest income bracket to 85.7 percent of those with incomes over $10,000. For all income groups the totals show that the percentage of graduates planning to attend college decreases continually from 58.6 percent for families with one child to 44.9 percent with families of five or more. As might be expected the decrease is apparently less pronounced for families with more than three children.

SUMMARY

1. The average number of dependents in the families of those planning to attend college is 4.17, while for those not going to college it is 4.27.

2. Except for graduates coming from broken homes, college attendance is apparently inversely proportional to the size of the family from which the student comes.

3. An only child from a broken home is apparently not as likely to attend college as one from a normal home with seven or eight children(See Table XXIX p.68)

4. In general the lower the income and the larger the family, the less likelihood there is of college attendance on the part of the children.

5. For families with one and two children a definite trend upward is evident in the number of graduates planning to attend college in every income bracket.

6. Where families have three or more children there is no trend upward until the $5000 income rate is reached.

7. Under $2500 there is little or no difference in the percentage of graduates planning to attend college from different sized families.

8. In the $2500-$4999 income bracket there is a definite decrease in the percentage of those planning to go to college with an increase in the number of children per family.

9. When the incomes are above $5000 but less than $10,000 there is no apparent relation between number of children and number planning college attendance.

10. In families above the $10,000 income rate, 80 percent or more of the graduates plan to attend college regardless of the number of children in the family.

Chapter VII

EDUCATION OF THE PARENTS

It has often been assumed that young people reflect their surroundings in their expectations from life. To some extent their desires, aspirations, and attitudes indicate the cultural level of the homes in which they are reared. If this assumption be true we would expect that parents who have enjoyed the advantages of higher education would encourage their children to attend college. Further, it would be natural for those deprived of college training for lack of money to make every sacrifice to send their children to college.

The purpose of this chapter is to compare the education of the father and mother of each graduate, in an attempt to reveal its bearing upon college attendance. The highest school or college year completed by each parent of those planning to attend college is compared with that of the parents of the graduates not planning to attend college. Finally, the education of the parents is combined with family income and family size, to secure further insight as to the relative importance of these factors.

The educational status of the parents of the graduates in this study- The median grade completed by the 1540 fathers of graduates reported in this study is nine and one-third. The median school grade completed by all males in the United States, twenty years of age and over, according to the 1940 census was eight and eight-tenths.[1] For fathers

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[1] Population, Fourth Series, 16th Census of the United States, 1940 p.60, Washington D.C. United States Government printing Office, 1942.

ranging from thirty-five to sixty years of age (the age range for most parents in this study) the median reported by the census was eight and five-tenths grades. These figures indicate that the fathers under consideration in this study are a select group with a better than average education. This would seem natural since their children comprise the top third of the graduating classes of Michigan high schools.

The median grade completed by the mothers of the graduates in this study is exactly eleven. The median grade completed by all females in the United States[2] in the age group comparable to the mothers in this study is eight and seven-tenths. Evidently mothers here under consideration are also a select group further above the national average than fathers. Table XXXI indicates that the median schooling of the mothers of the graduates is more than one and one-half years above that of the fathers. Apparently the mothers' education is more positively related to the students' high school rank than is the formal educational achievement of the father.

A comparison of the education of the parents of those graduates who planned to attend college and those not planning to attend college- When the college and non-college groups in this study are separated, we find that the median grade completed by the fathers is ten and eight-tenths and, eight grades, respectively. As would be expected grades eight and twelve are modal points. It is interesting to note (Table XXXII) that nearly twice as many graduates from the non-college as from the college group failed to report the fathers' education. This suggests a hesitancy on the part of the graduate to reveal data

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[2] 16th Census of the United States, op. cit. p. 60

TABLE XXXI

The Schooling of the Fathers and Mothers of the Graduates in this Study

Highest Grade Completed	No. of Fathers	No. of Mothers
Under 6	47	24
Grade 6	78	36
Grade 7	41	33
Grade 8	467	363
Grade 9 (Med. 9.3)	92	89
Grade 10	135	140
Grade 11	83	(Med.9.3) 89
Grade 12	229	349
College 1	64	111
College 2	73	145
College 3	40	50
College 4	93	102
College 5	56	17
College 6	14	1
College 7	14	2
College 8	14	0
Not Given	77	66
Total	1540	1551

TABLE XXXII

Median Education of the Fathers for College and Non-college Groups

Highest Grade Completed	College	Non-college
	No. of Fathers	No. of Fathers
Under 6	15	32
Grade 6	23	55
Grade 7	13	28
Grade 8	200	(Med.8.0) 267
Grade 9	38	54
Grade 10 (Med. 10.6)	66	69
Grade 11	38	45
Grade 12	135	94
College 1	39	25
College 2	44	29
College 3	26	14
College 4	65	28
College 5	36	20
College 6	10	4
College 7	13	1
College 8	13	1
Not Given	27	50
Total	801	816

uncomplementary to his father. If this hypothesis be true the "Not Given" data would further depress the medians and increase still further the difference between the two groups of fathers.

It will be observed (Table XXXII) that many more of the fathers of the college group have college training, the ratio being almost exactly two to one. However, a chi square test, also a t-score test, of the data in the first twelve grades show the differences to be significant even at this level.[3] The graphic presentation (Fig. 6) indicates that while the difference in cumulative percentage is largest in the high school (12th grade) the ratio increases continually as the level of education increases.

The median grade completed by the mothers of the graduates of the college group is 11.4 and that of the non-college group is 9.6 (Table XXXIII). Grades eight and twelve are modal points with another large group of the mothers of the college group completing two years of college training. This differential of nearly two years of training suggests that the mothers exert an important influence on the college plans of the children.

A chi square test and a T-score test of the data in the first twelve grades show a significant difference between the two groups of mothers.[4] The graphic presentation (Fig. 7) is similar to that for fathers.

When the two charts are compared it is interesting to note that a larger percentage of mothers than fathers continue through high school

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[3]See appendix p. 181-2

[4]See appendix p. 182-3

TABLE XXXIII

The Highest Grade Completed by the Mothers of the College and Non-college Groups

Highest Grade Completed	College	Non-college
	No. of Mothers	No. of Mothers
Under 6	10	14
Grade 6	17	19
Grade 7	4	29
Grade 8	135	228
Grade 9	35	(Med.9.6) 54
Grade 10	61	79
Grade 11	(Med.11.4) 42	47
Grade 12	186	163
College 1	65	46
College 2	106	39
College 3	25	25
College 4	70	32
College 5	14	3
College 6	0	1
College 7	2	0
College 8	0	0
Not Given	29	37
Total	801	816

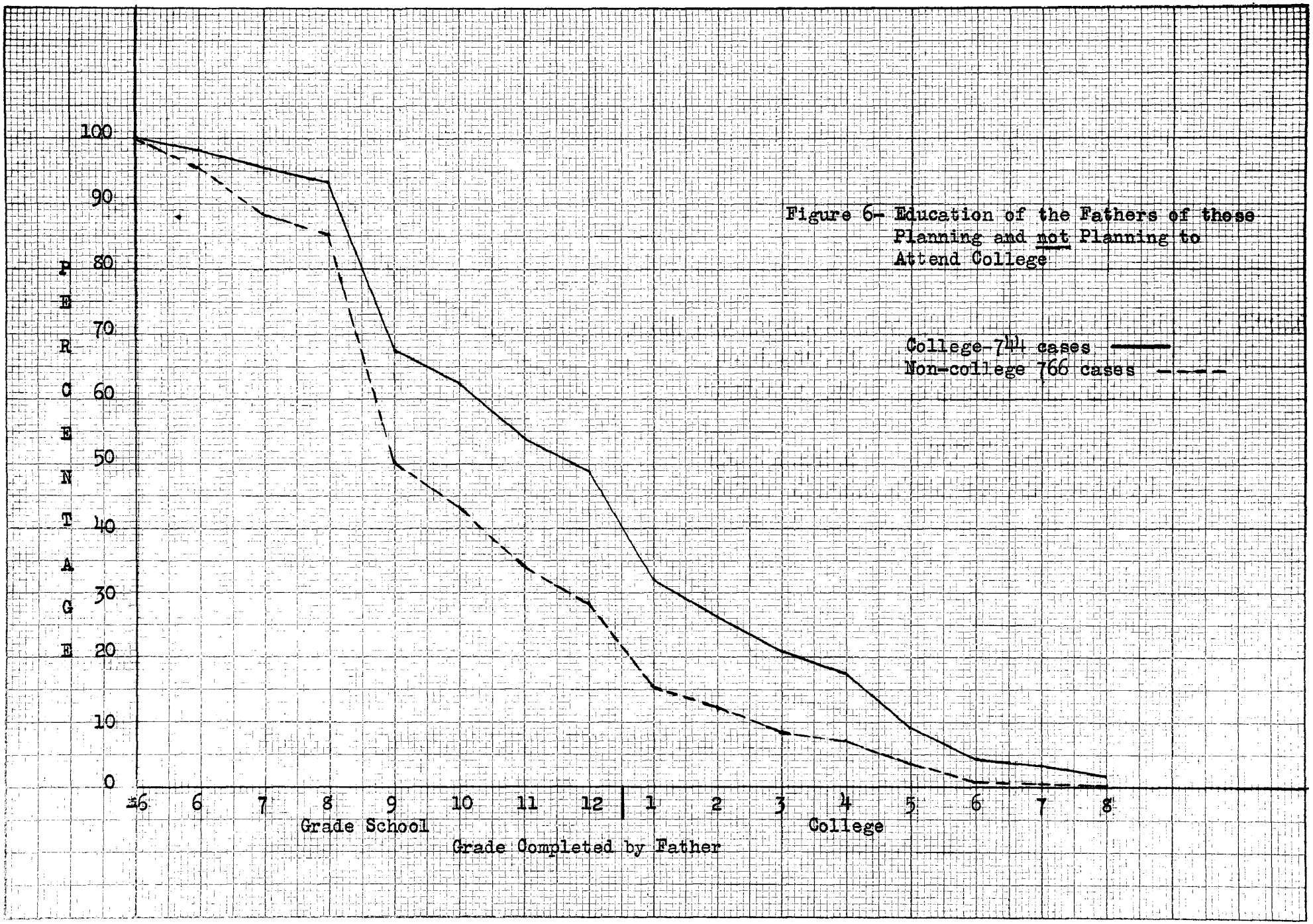
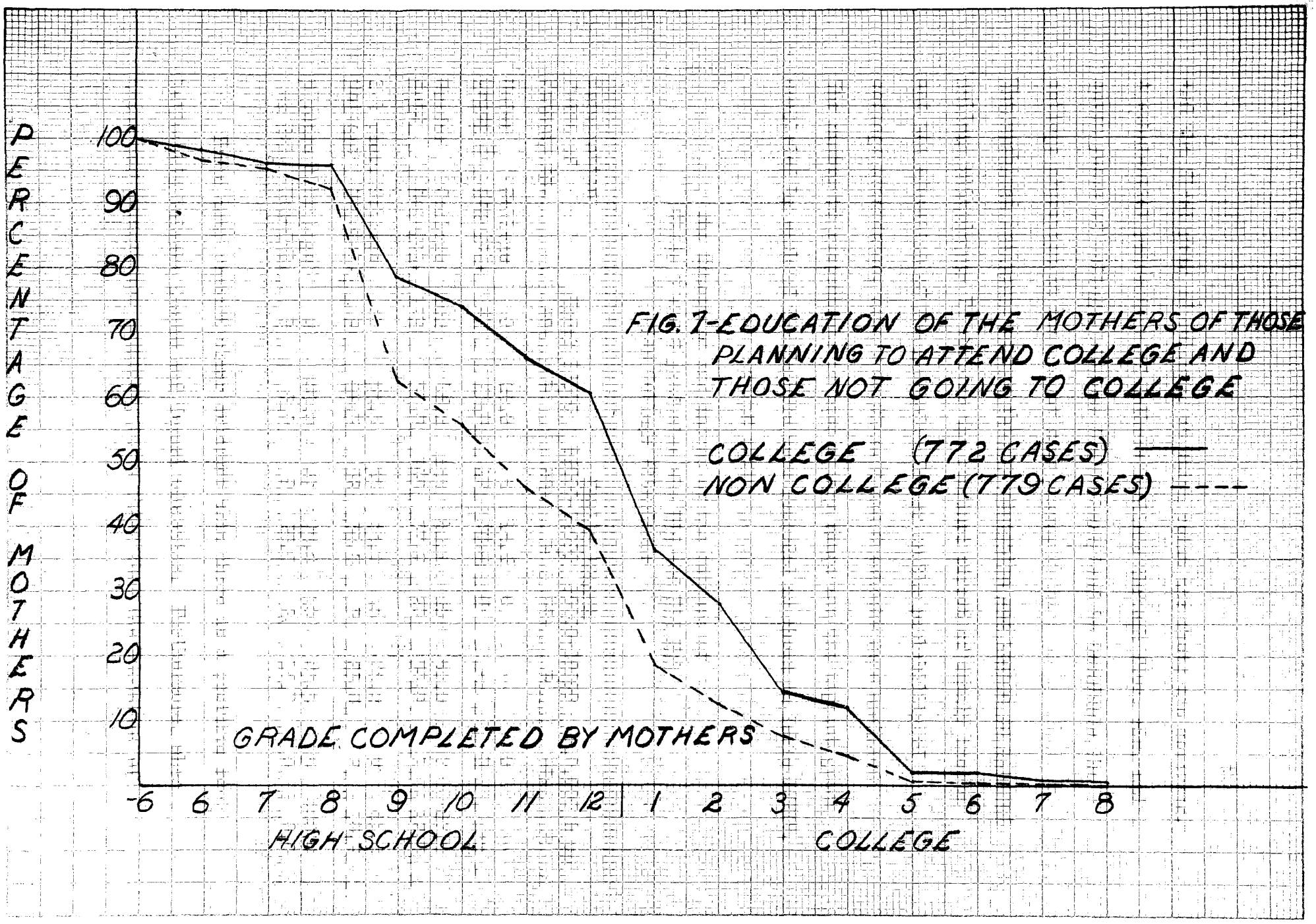


Figure 6- Education of the Fathers of those Planning and not Planning to Attend College


PERCENTAGE OF MOTHERS
100
90
80
70
60
50
40
30
20
10
-6 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8
HIGH SCHOOL
COLLEGE
GRADE COMPLETED BY MOTHERS
FIG. 1-EDUCATION OF THE MOTHERS OF THOSE PLANNING TO ATTEND COLLEGE AND THOSE NOT GOING TO COLLEGE
COLLEGE (772 CASES) ——
NON COLLEGE (779 CASES) ----

and the first year of college, at which point the facts are reversed. A substantial percentage of fathers continue through five, six, and seven years of college, whereas the mothers tend to terminate their college education at the end of four years.

The combined influence of the fathers education and income on planned college attendance- To explore the combined effect of family income and the education of the graduates father on the probability of college attendance, data from Class B and C schools were analyzed. The number of respondents in each salary range and the highest grade completed by each of the fathers were recorded as shown in Table XXXIV.

TABLE XXXIV

The Education and Income of the Fathers of Class B and C graduates who Did and Did Not Plan College Attendance

Termination Point of Fathers Ed.		Family Income: Under $2500		$2500-$4999		$5000-$9999		$10,000 & up	
		No.	%	No.	%	No.	%	No.	%
Under Grade 8	College	9	25.0	3	13.6	0	--	0	--
	Non-Col.	27	75.0	19	86.4	0	--	0	--
Grades 8-12	College	102	46.2	133	42.1	20	50.0	7	87.5
	Non-Col.	119	53.8	183	57.9	20	50.0	1	12.5
1-4 years College	College	11	55.5	55	63.2	16	76.2	9	81.8
	Non-Col.	9	44.5	32	36.8	5	23.8	2	18.2
5 years & up Col.	College	2	100.0	27	75.0	10	83.3	5	100.0
	Non-Col.	0	0.0	9	25.0	2	16.7	0	0.0

These data present clear evidence that there is a positive relationship between income and formal education. Furthermore, when these two factors are combined, it is clear that the education of

the father exerts a separate influence beyond that of income. Data in Table XXXIV show that, when income is held constant, an increasing percentage of students planned college attendance as the fathers' education advanced. As an example, the $2500-$4999 range shows that graduates coming from families where the father had not finished the eighth grade, planned attendance at college in less than 14 percent of the cases. When the father had taken work beyond the usual four years of college, the percentage of graduates planning to attend college was 75 percent.

Cumulative percentages of fathers of the college group completing various grades of schooling, according to income groups are shown graphically in Figure 8. This chart gives further evidence of the relationship between income and formal education. It indicates that 10 percent more fathers had gone to college from the high income group than had entered high school from the low income group; that approximately 5 percent more fathers had completed four years of college from the high income group than had been graduated from high school in the low income group; and that as many fathers had completed seven years of college from the high income group as had completed one year from the low income group.

The combined import of the parents education and family size as they are related to the graduates plans for college attendance- To determine the relationship of the mothers education and the size of the family to the likelihood of college attendance, data for Class A and B schools were analyzed. Omitting those graduates from broken homes

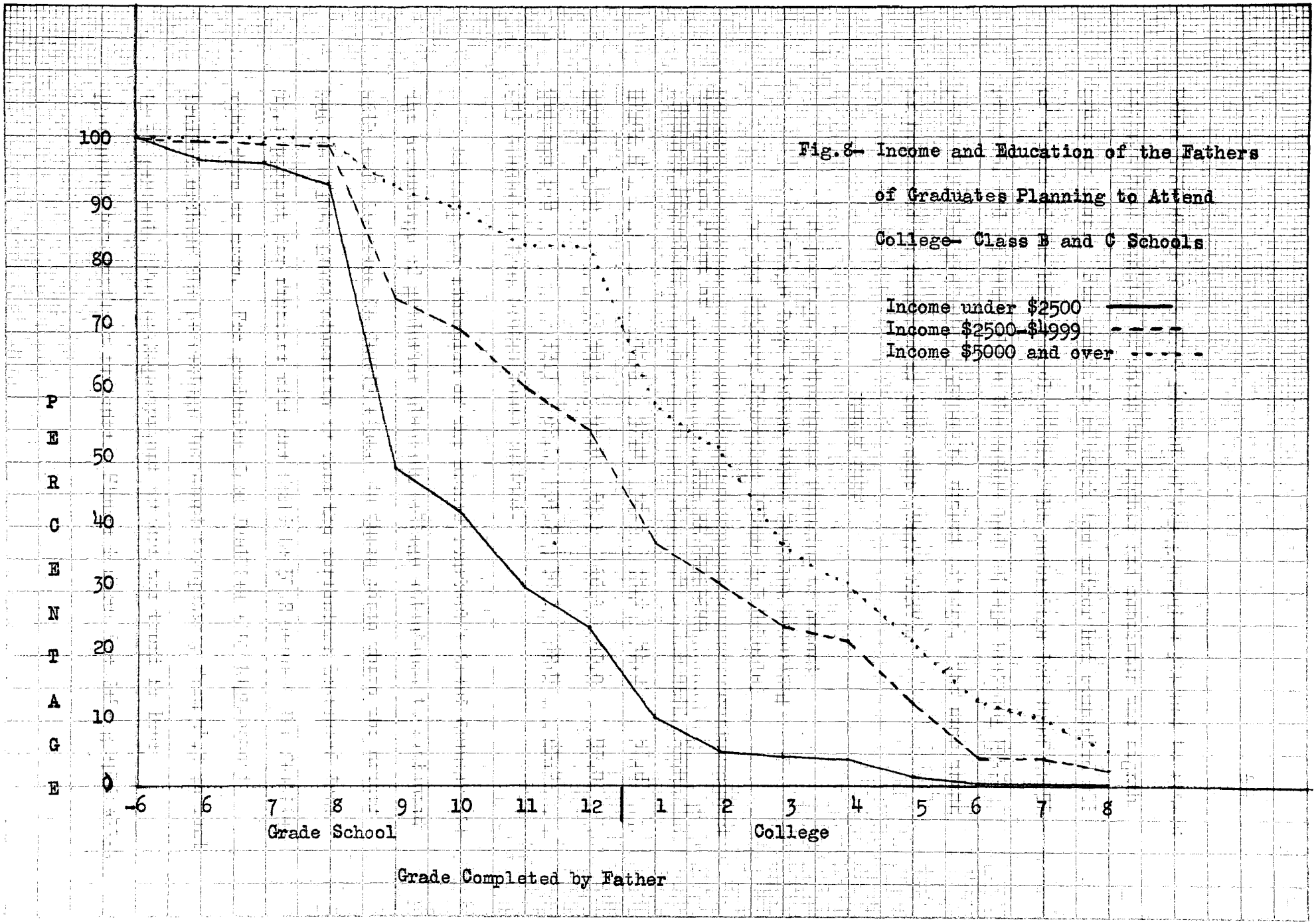


Fig.8- Income and Education of the Fathers of Graduates Planning to Attend College- Class B and C Schools
Income under $2500
Income $2500-$4999
Income $5000 and over
PERCENTAGE
100
90
80
70
60
50
40
30
20
10
0
-6
6
7
8
9
10
11
12
1
2
3
4
5
6
7
8
Grade School
College
Grade Completed by Father

Table XXXV shows that 37.6 percent of the graduates planned to attend college from families of which the mother had completed the eighth grade or less. For families of which the mother had completed all or a part of the high school course, the percentage increased to 50 percent, and in cases where the mother had college training 65.7 percent of the graduates planned to attend college. The same trend is evidenced in families of each size (Table XXXV).

TABLE XXXV

Percentage of Graduates Planning to Attend College from Various Sized Families According to the Mothers Education (Class A-B Schools)

Termination Point of Mothers Education	No. of Children					
	1	2	3	4	5 & over	Total *
Grade 8	41.1	37.2	36.4	33.0	31.2	37.6
Grades 8-12	54.3	53.9	39.1	46.4	40.0	50.0
College 1-8	77.7	67.1	51.2	58.3	62.5	65.7

(*) Graduates from broken homes omitted.

Holding the education of the mother constant a trend downward in the percentage of graduates planning college attendance is evidenced with each increase in family size. In those cases where the mother had an eighth grade education or less the percentage decreased from 41.1 percent for families with one child to 31.2 percent for families with five or more. For graduates from families with high-school trained mothers the percentage decreased irregularly from 54.3 percent to 40 percent. For college-trained mothers the trend is less pronounced but still in evidence. Figure 9 shows the data graphically.

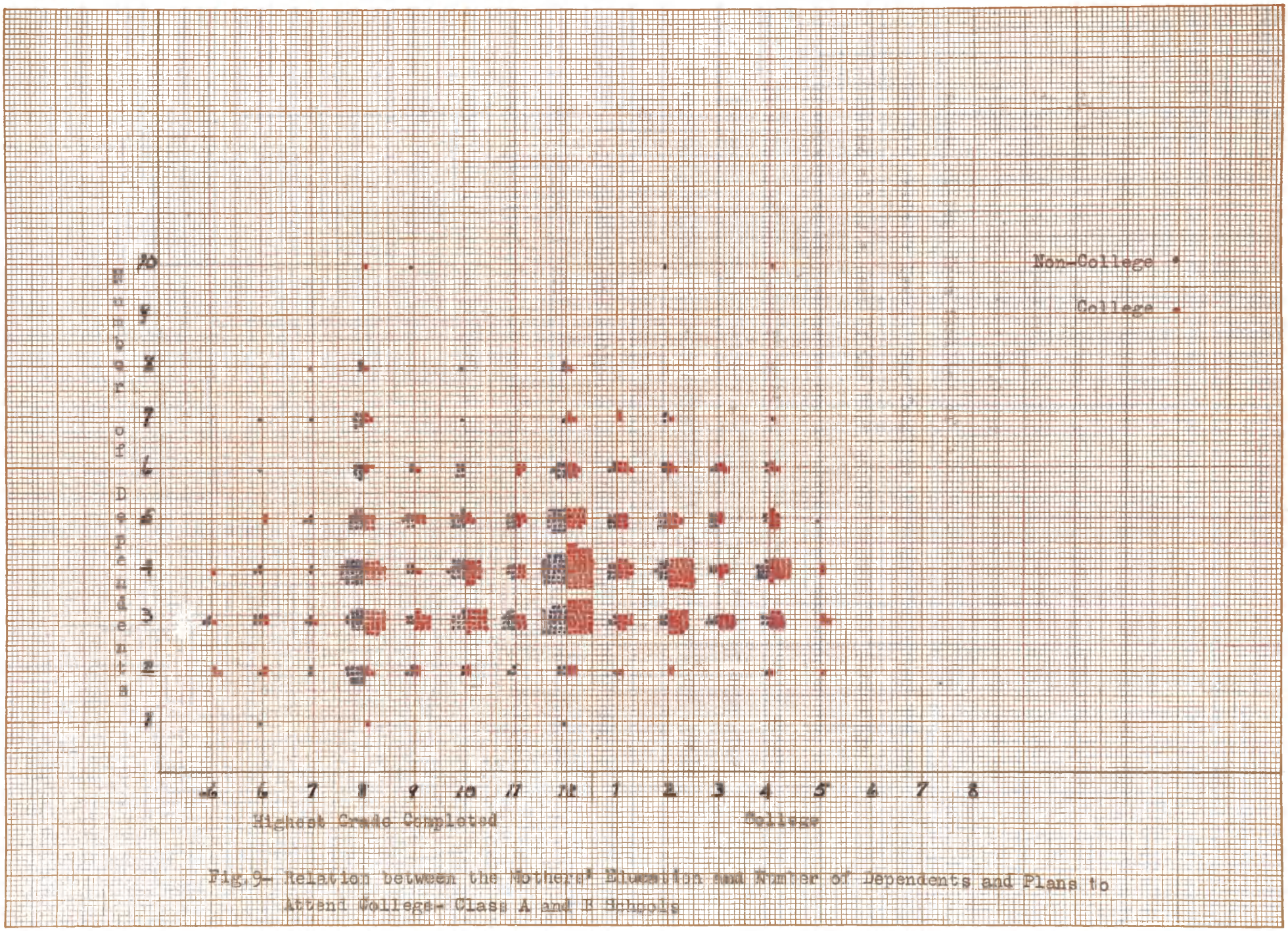


Fig. 9— Relation between the Mothers' Education and Number of Dependents and Plans to Attend College— Class A and B Schools

To explore the relationship of the fathers education and size of family to the likelihood of college attendance, data for Class C schools were analyzed. Omitting those graduates from broken homes it was found that 37.9 percent of the graduates planned to attend college from families of fathers who had completed the eighth grade or less. For families of which the father had completed all or a part of the high school course, the percentage increases to 48.9 percent, and in cases where the father had college training 66.6 percent of the graduates planned to attend college. The same trend was evidenced in families of each size and the data bear a close resemblance to that for mothers (Table XXXI). Figure 10 shows a scattergram of the data.

In general this analysis indicates a positive relationship between the schooling of the parents and the graduates' planned college attendance. It suggests that continuing large college enrollments can be assured by getting more future parents in college now.*

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* Chi Square Test, Appendix A, p.183

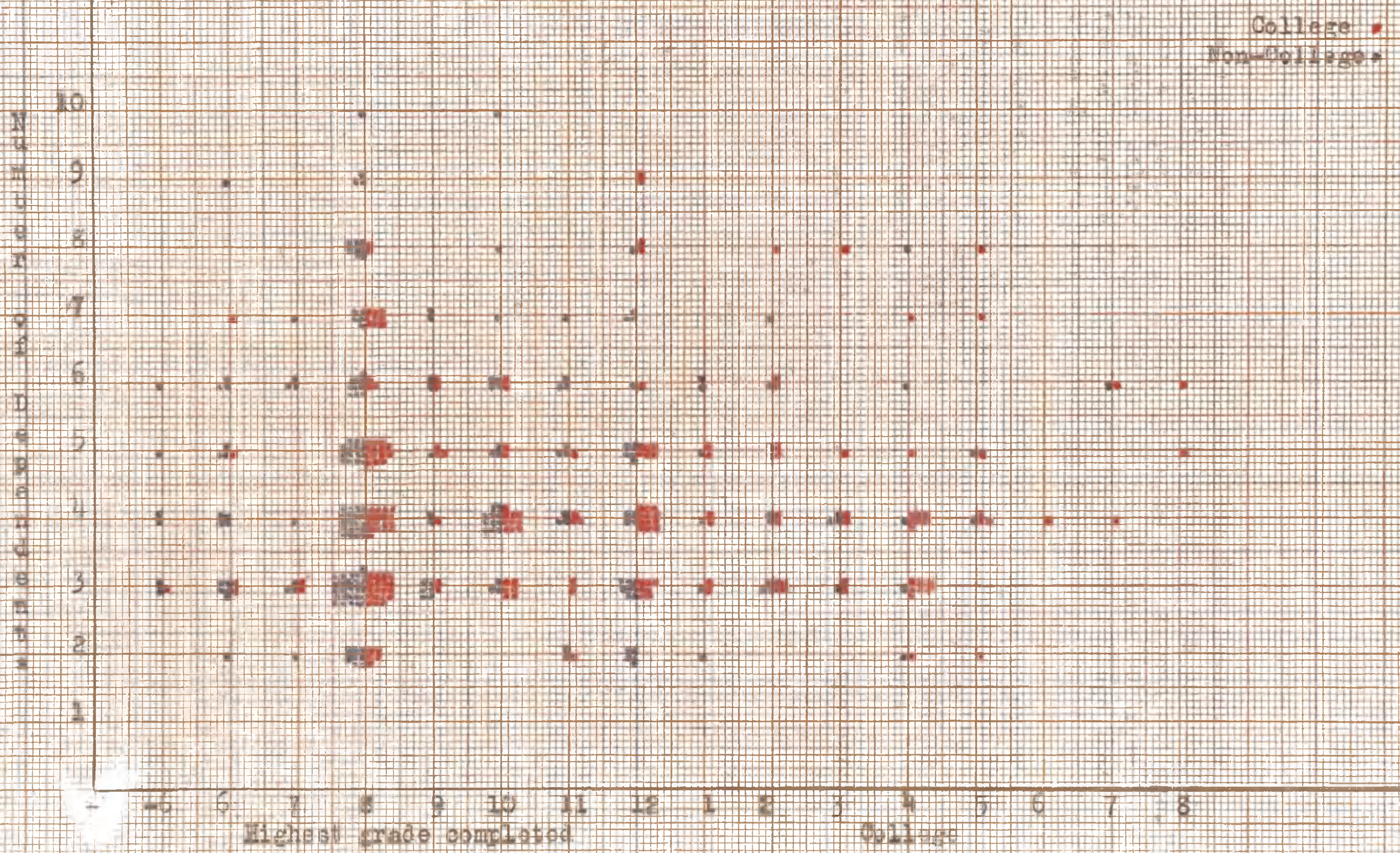

Fig.10- Relation of the Fathers' Education and Number of Dependents to Plans to Attend College- Class C Schools

SUMMARY

1. The education of the parent, separate from income, is an important consideration in determining the probability that a superior high school graduate will attend college. In every salary range the graduates who have college-trained parents are more likely to attend college than those who have less well trained parents.

2. The median schooling of the mothers of these superior graduates is more than one and one-half years above that of the father. Apparently the mothers' education is more positively related to the students' rank than is the formal educational achievement of the father.

3. If society wishes to be assured of larger college enrollments in the future, it might well give attention to the possibility of getting more future parents in college now.

4. For this group of superior graduates, the median school grade completed by the fathers is 9.3 compared with grade 11 for the mothers. The median grade completed by the fathers of those planning to attend college is 10.8 compared to 8.0 for those not going to college. The median grade completed by the mothers of those planning to go to college is 11.4 compared to 9.6 for those not going to college.

5. Few families with college-trained parents receive less than $2500 annually. Apparently colleges provide a type of training which enables one to earn a larger income which in turn can be used to finance the education of children.

Chapter VIII

THE FATHERS OCCUPATION AND NATIONALITY OF THE PARENTS

Closely related to the problem of family income is that of the occupation of the father which is analyzed in this chapter. Following a brief discussion of systems of occupational classification the occupations of the fathers of the graduates in this study are listed and possible relationships with geographical location are noted. Fathers of graduates who planned to attend college are compared with fathers of graduates not going to college in each occupational group. The relationship between income and occupation is shown. Finally, the nationality of each parent is tabulated and a comparison made between the parents of the college group and the non-college group.

For purposes of this study no predetermined system of occupational classification was used. Instead each occupation was listed exactly as reported, in all some two hundred eighty-nine different types of work. The groupings into which these naturally fell were then used as the occupational classification for study and analysis. This eleven division system is somewhat similar to that formerly used by the United States Census.

Certain deviations from the typical classification need explanation. First, it should be noted that there is no need of a domestic class since only the occupation of the fathers is under consideration.

Second, the large number with government war jobs made desirable a separate classification for government employees. Third, skilled and unskilled workers were kept separate, regardless of the industry in which they were engaged, because of the obvious implications in studying income. Fourth, sales and service occupations were listed separately and not included with the trade. Fifth, and finally, the unemployable are indicated in this classification although not an occupational group.

Occupations of the fathers of the graduates in this study- Nearly 20 percent of all respondents reported that their fathers were engaged in one of the extractive industries; farming, lumbering, mining or fishing. Nine percent were engaged in sales and service occupations and another 9 percent and more were professional men. Families representing the retail trades made up 6.7 percent of the group and transportation and communication 3.8 percent. The unskilled, unemployable, and deceased account for 16.7 percent and the skilled trades for 16.3 percent.

TABLE XXXVI

The Number and Percentage of Fathers Engeged in Each Occupation.

Occupation	No. of cases	Percentage
Extractive Industries:		
Farming	282	
Lumbering	14	
Fishing	3	
Mining	16	
Miscellaneous	5	
Total	320	19.8

TABLE XXXVI (Continued)

Occupation	No. of Cases		Percentage
Professional Men:			
Teachers	51		
Engineers	46		
Doctors	26		
Lawyers	9		
Ministers	13		
Miscellaneous	4		
Total		149	9.2
Retail Trades:			
Retail merchants	60		
Druggists	10		
Meat Business	5		
Retail Clerks-Mgrs	14		
Gasoline-automotive	6		
Miscellaneous	14		
Total		109	6.7
Industrial Occupations:			
Manufacturers	24		
Industrial managers	21		
Foremen	43		
Superintendents	12		
Inspectors	14		
Engineers, Operation & Stationary	14		
Factory supervisors	4		
Miscellaneous	17		
Total		149	9.2
Transportation-Communication:			
Railroad employees	18		
Bus-Truck employees	16		
Telephone men	7		
Sailors-Water Transport	9		
Miscellaneous	11		
Total		61	3.8
Government Employees:			
Mail carriers	18		
Armed services	23		
Policemen	7		
Federal employees	15		
State employees	10		
County-City officials	4		
Total		77	4.8

TABLE XXXVI (Continued)

Occupation	No. of Cases		Percentage
Sales and Service Occupations:			
Salesmen	44		
Insurance	23		
Real estate-investments	18		
Hotel-Restaurant-Tavern	14		
Janitors-Custodians	10		
Wholesale-Jobbers	8		
Miscellaneous	30		
Total		147	9.1
Clerical Occupations:			
Accountants & Auditors	16		
Bookkeeper	7		
Other office workers	25		
Total		48	3.0
Skilled Trades:			
Electricians	29		
Machinists-mechanics	70		
Tool & Die makers	36		
Carpenters	33		
Plumbers	10		
Contractors	11		
Painters	7		
Crane Operator	9		
Miscellaneous	59		
Total		264	16.3
Unskilled Laborers:			
Day laborers	28		
Factory Workers	150		
Total		178	11.0
Unemployed:			
Unemployable	13		
Deceased	80		
Total		93	5.7
Not Given		22	1.4
Grand Total		1617	100.

The relation of geographical location and occupation- Geographical location and size of school influenced the data for certain of the occupational groups. Farming was the typical occupation of the parents of the respondents of Class C and D schools, while graduates of Class A and B schools reported many in industrial occupations and in the skilled trades. Government employees were more likely to be the fathers of graduates of large schools. Mining and lumbering were given as the occupation of many fathers of Upper Peninsula graduates and fishing and lake transport as the work of those living in shore and port cities. Professional men and fathers in the retail trades were fairly well distributed over the state and from schools of all sizes according to reports. Table XXXVI shows the analysis by occupations.

Comparison of the occupations of the fathers of those graduates planning and not-planning to attend college - A study of the occupational data submitted for this dissertation shows that the children of parents engaged in the professions and the sales and service trades plan to attend college in a larger percentage of cases than those whose parents are engaged in other occupations (Table XXXVII). This is true also of the children of retail merchants. Two out of each three graduates from professional families planned to attend college, while only one out of three from the families of unskilled laborers had such plans. Approximately four of each ten graduates whose fathers were engaged in transportation and communication planned to attend college.

The detailed analysis of the occupational data (not given in the table) indicates that the children of doctors, lawyers, druggists, and insurance agents have a four to one chance of going to college,

TABLE XXXVII

Occupation of the Father of Those Planning and Not Planning to Attend College

Occupation	College		Non-College		Total	
	No.	%	No.	%	No.	%
Extractive Industries	132	41.3	188	58.7	320	100.
Professions	101	67.7	48	32.3	149	100.
Retail Trades.....	70	64.2	39	35.8	109	100.
Industrial Occupations	88	59.1	61	40.9	149	100.
Transportation-Communication.....	24	39.3	37	60.7	61	100.
Government employees	40	51.9	37	48.1	77	100.
Sales-Service.....	98	66.6	49	33.4	147	100.
Clerical Occupations..	23	47.9	25	52.1	48	100.
Skilled Trades.....	122	46.2	142	53.8	264	100.
Unskilled Laborers....	61	34.0	117	66.0	178	100.
Unemployable-Deceased	34	37.6	59	62.4	93	100.
Not Given.....	8	36.4	14	63.6	22	100.

while the children of teachers, ministers, general salesmen and grocers have a two to one chance. On the other hand children of day laborers, truck drivers, carpenters and mechanics are to be found with the college group in less than one out of three cases. Children of farmers have less than a 50-50 chance of attending college.

Figure 11 gives a graphic picture of the percentage of total

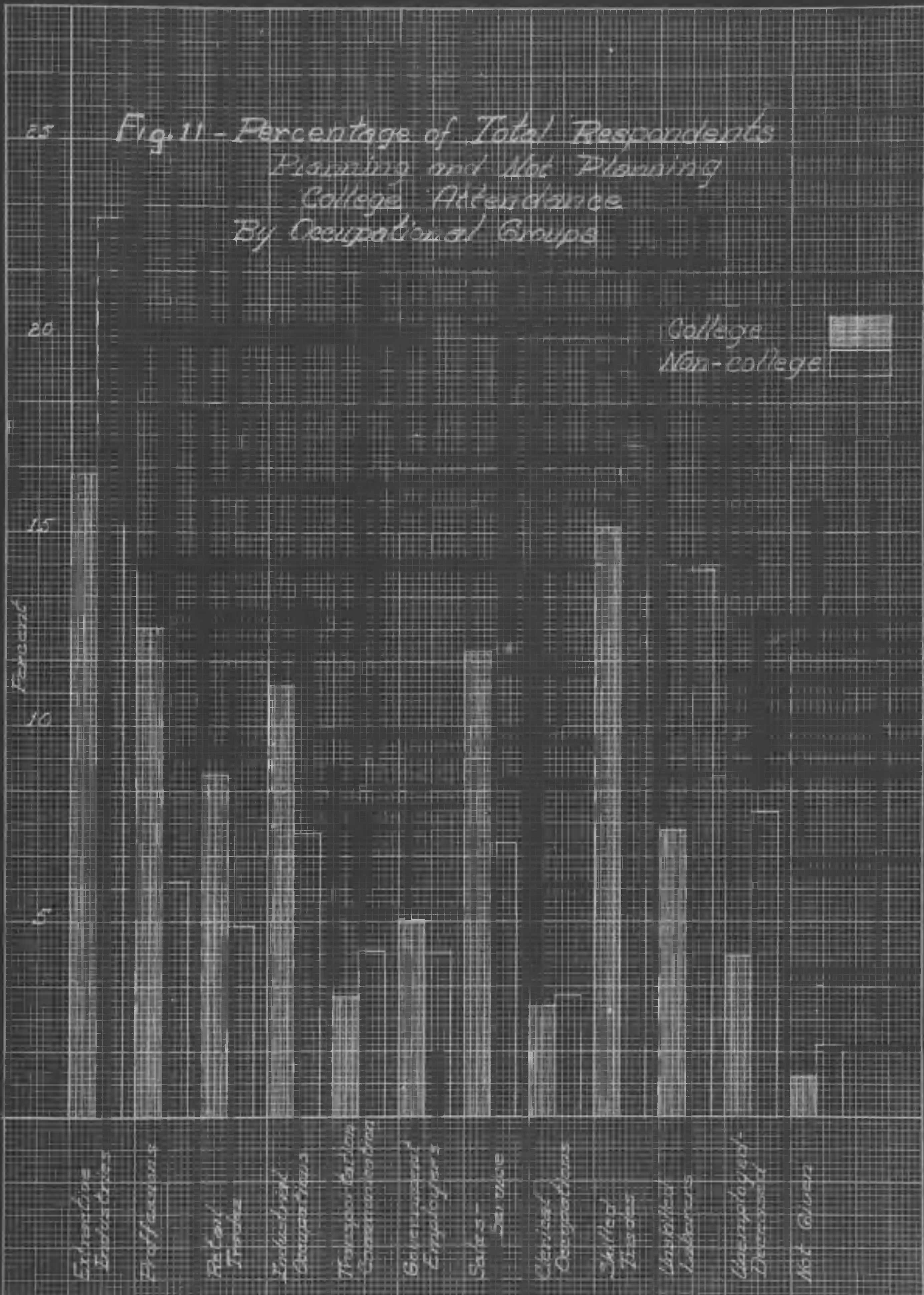

Fig. 11 - Percentage of Total Respondents Planning and Not Planning College Attendance By Occupational Groups

respondents planning and not planning to attend college by occupational groups.

Significant occupational differences between the two groups by t-test- In order to determine statistically the difference between the percentages of college and non-college cases for each occupational classification a t-test was made.[1] By this method it was found that there was a significant difference between the percentage of graduates planning to attend college in the case of professional men, retailers, salesmen, unskilled workers and those in extractive industries. Differences between planned college attendance for graduates from the families of skilled workers and those in industrial occupations were not significant, while there were too few cases in other occupations to treat statistically.

Relationship between the father's income and occupation- Tabulation of the data in this study showed a relationship between the occupation of the respondent's father and his income. Doctors and dentists were almost always reported as having incomes in excess of $5000, while government employees and unskilled laborers seldom reached that mark. Insurance agents and real estate brokers usually received good salaries according to reports. This was also true of independent manufacturers and managers of industrial concern. About as many farmers were reported with incomes under $2500 as above that amount. Ministers commonly received low salaries, while school administrators and college professors were usually paid between $2500 and $4,999.

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[1] See Appendix p. 184-87

The relationship between occupation and income was not so evident in the case of general salesmen, accountants, auditors and many of the skilled trades. Possibly the income derived from these occupations is dependent more largely upon other factors such as personality, degree of skill, initiative, etc. As previously discussed these data indicate that there was accuracy in responding to questions on the part of the graduates, for a large number of occupations are represented and the incomes are about what would be expected. Fig. 12 gives a graphic picture of the income-occupation relationship for Class C and D respondents.

Country of birth of the parents of the graduates- When data were analyzed it was found that 84.1 percent of the fathers of graduates in this study and 88.8 percent of the mothers were born in the United States. With Canada included the percentages are 86.7 percent and 90.6 percent respectively. According to census reports,[2] 86 percent of the total population of the State of Michigan is of native parentage. The above figures indicate that the parents under study contain about the expected percentage of native born, but may not necessarily contain the different foreign nationalities in typical proportion.

Some nationalities are not represented to the extent that their numbers in the entire population of the State would warrant. This is true of Austria, Czechoslavia, Hungary, Italy and Poland. On the other hand Finland, Norway, Sweden, Scotland and the Netherlands have a higher percentage than should be expected. In general it seems to be true, that the children of North Europeans graduate in the highest third of the class in greater proportion, than their numbers bear to

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[2]Statistical Abstracts of the U.S. 1946, No. 67, pp.179-182, U.S. Gov. Printing Office, Washington, D.C.

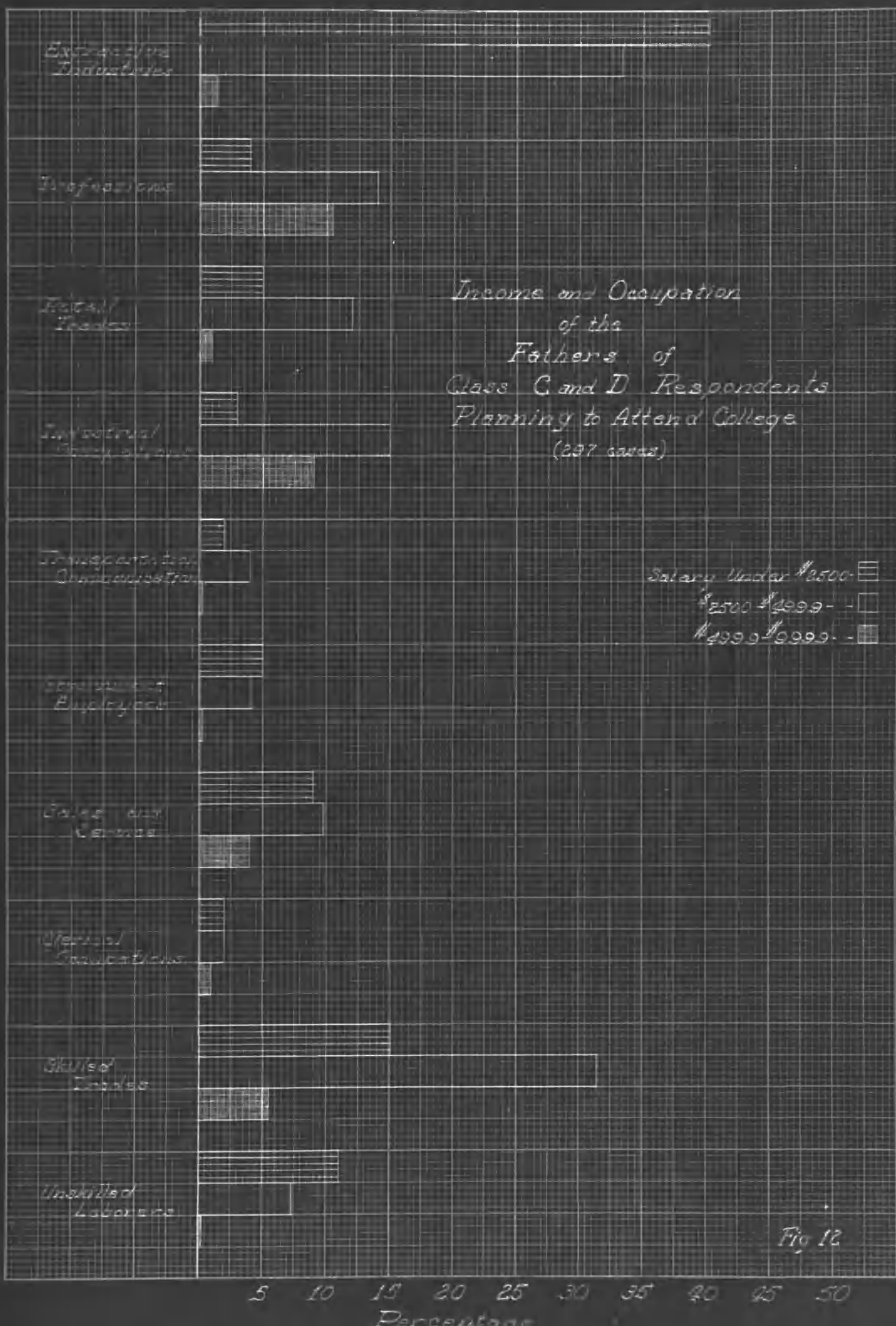
Extractive Industries
Professions
Retail Trades
Transportation Communication
Clerical Occupations
Skilled Trades
Unskilled Laborers
Income and Occupation of the Fathers of Class C and D Respondents Planning to Attend College
(297 cases)
Salary Under $2500
$2500-$4999
$4999-$9999
5 10 15 20 25 30 35 40 45 50
Percentage

Fig 12

the entire population, and that those of South and Eastern European parentage graduate in a lower proportion. However, the number of families in some of the nationalities is too small for generalizations to be drawn. A comparison of the parents of the graduates under study with those of the State of Michigan is shown in Table XXXVIII.

TABLE XXXVIII

Nationality of Parents in this Study
Compared with the General Population of Michigan

Country of Birth	% Total Foreign* Born in Michigan	% Total Foreign Born in this Study
England.....	.91	.82
Finland.....	.40	1.01
Germany.....	1.14	1.06
Italy.....	.77	.46
Norway.....	.10	.30
Poland.....	1.84	1.39
Russia.....	.61	.57
Sweden.....	.33	.46

The numbers of parents from Austria, Czechoslavia, Denmark, Hungary, Ireland, Greece were too small to merit statistical treatment.
(*) World Almanac, 1946, p. 484.

Relationship between the parents country of birth and the graduates college attendance- Analysis revealed that the children of fathers born in Canada, England, Sweden, Norway, Russia and the Netherlands are more likely to attend college than those whose fathers were born in Poland, Finland, Yugoslavia and Italy. The latter have less than 50-50 chance of going to college the year after high school graduation

even though in the highest third of the graduating class. In the case of the children of native born fathers and those born in Germany the chances are about 50-50. When a chi square test is applied to this data including that for the United States it does not show a significant statistical difference.[3] Table XXXIX lists all countries with five or more cases and shows the distribution for the 237 foreign born fathers.

TABLE XXXIX

Comparison of Those Planning to Attend College with those Not Going to College According to the Country of Birth

Country of Birth	College Group No.	Non-College Group No.
United States.....	680	680
Canada.....	24	18
Poland.....	13	16
England.....	10	9
Germany	11	11
Sweden.....	7	6
Finland.....	7	17
Russia.....	8	6
Norway.....	5	3
Netherlands.....	7	3
Scotland.....	2	3
Yugoslavia.....	3	7
Italy.....	4	6
Others.....	15	16
Not Given.....	5	15
Total	801	816

[3]See Appendix , p. 187

Children whose mothers were born in Canada, England, Scotland and the Netherlands planned to attend college in more than half the total cases. Those whose mothers were born in the United States, Germany, Russia and Poland had a 50-50 chance of going to college while those whith Italian, Yugoslavian, and Scandinavian mothers had less than a 50-50 chance. Table XL shows the country of birth of the 169 foreign born mothers. It indicates a wider distribution and less uniformity than was true of the graduates whose fathers were foreign born. A chi square test does not show the differences to be significant.[4]

TABLE XL

Comparison of the College and Non-College Groups According to the Mothers Country of Birth

Country of Birth	College Group No.	Non-College Group No.
United States	712	724
Canada	19	10
Poland	10	12
England	6	5
Germany	8	9
Sweden	1	3
Finland	4	9
Norway	0	3
Russia	3	4
Netherlands	9	0
Scotland	4	1
Yugoslavia	2	6
Italy	1	6
Others	18	16
Not Given	4	8
Total	801	816

[4] See appendix, p. 188

SUMMARY

1. Parents of the graduates in this study are not an average occupational group. Some occupations are much more heavily represented (e.g. extractive industries) than others, and some occupations are missing entirely (e.g. domestic service).

2. Graduates whose fathers are professional men, salesmen and retail merchants are much more likely to plan to attend college than the children of day laborers, truck and bus drivers, carpenters and mechanics even though they are superior academic students. Since some of these occupational groups send more of their sons and daughters to college, should this be considered in awarding scholarships and in providing other forms of financial assistance? It is apparent that the children of laboring men, of farmers, and those engaged in transportation need further inducement to attend college. This suggests that various labor unions and farmers' organizations might well adopt a program of financial assistance for the children of their members so that top ranking graduates would plan a college education.

3. Nearly 90 percent of the parents of graduates in this study were American born. This percentage is about the same as that for the population of Michigan as a whole. More fathers than mothers were foreign born.

4. Apparently the expected number of children of foreign born parents are graduated from high school in the top third of their respective classes and plan to attend college. However, graduates whose parents are North Europeans are somewhat more likely to plan to attend college than graduates whose parents are South and East Europeans.

Part III

FACTORS PERTAINING TO THE PARTICULAR COLLEGE WHICH INFLUENCE STUDENT ATTENDANCE

Chapter IX

SCHOLARSHIPS

Realizing that they discharge their full duty to society only by providing an education to rich and poor alike, colleges are giving more attention to the problem of student aid. Ever since the original bequest to Oxford College nearly seven hundred years ago, scholarships have been provided for needy students, but there never have been nearly enough to go around. Many worthy students from the upper third of their respective graduating classes are not going to college. Whether the condition is being improved is open to question, but its importance is quite generally recognized. Temporarily, of course, hundreds of veterans are receiving benefits under the G.I. Bill of Rights.

The purpose of this chapter is to analyze the data to determine how many scholarships were awarded, to whom they were given, and by what college. Further analysis is intended to explore some of the factors which might influence the awarding of scholarships, particularly the significance of high scholastic rank in high school.

Analysis of scholarship data reported for this study- Two hundred thirty-nine graduates or 29.8 percent of all those who planned to attend college were found to have accepted scholarships. This percentage might be suprisingly large but it must be kept in mind that this is a study of the upper third of all high school graduates, and colleges quite commonly make overtures to good students in preference to mediocre.

Analysis of the data indicated that the small schools in both the upper and lower peninsula were allotted a larger percentage of scholarships than were the large schools. Fifty eight and two-tenths percent of Class D graduates who planned to go to college had accepted scholarships. The percentage for Class Du schools was 62.5 percent, and for Class Eu graduates it was 46.1 percent. As discussed later in this chapter the probable reason for this particular distribution was the high scholastic rank of the students receiving the scholarships. Table XLI shows the distribution of scholarships according to school size.

TABLE XLI

Scholarships Received by Graduates According to School Size

	Class of School								
	A	B	C	D	Bu	Cu	Du	Eu	Total
Total Number Planning College	182	241	212	85	37	23	8	13	801
No. Accepting Scholarships	48	74	54	41	8	3	5	6	239
Percent Accepting Scholarships	26.3	30.7	25.5	48.2	21.6	13.0	62.5	46.1	29.8

Colleges granting scholarships to students in this study- Analysis revealed a wide difference in the number of scholarships granted by the various colleges in Michigan. Seventy percent of those who planned to go to Central State Teachers College were doing so with the promise of a scholarship, while only 18 percent of the candidates for Michigan State College expected such assistance. Forty percent

of the group intending to enroll at the University of Michigan were promised scholarships and 51 percent of those going to Western Michigan College of Education. Out-state colleges awarded proportionately fewer scholarships. Table XLII gives a detailed record of the colleges granting scholarships.

TABLE XLII

Distribution of Students who gave "scholarships" as the Reason for Attending a Particular College

College	No. from Various Classes of Schools Receiving Scholarships								Total	Total Planning College	Percent Receiving Scholarships
	A	B	C	D	Bu	Cu	Du	Eu			
Univ. of Michigan	15	23	8	5	4	0	0	4	59	148	40.
Mich. State College	10	12	9	5	0	1	1	0	38	204	18.
Western Mich. Col.	5	12	6	7	0	0	0	0	30	62	51.
Central Mich. Col.	0	7	12	11	0	0	0	0	30	43	70.
Northern Mich. Col.	0	0	0	0	0	1	2	1	4	17	24.
Wayne University	2	0	1	0	0	0	0	0	3	15	20.
Ypsi. Teachers Col.	0	2	2	1	0	0	0	1	6	17	35.
Mich. Jr. Colleges	4	1	2	0	0	0	0	0	7	29	24.
Other Mich. Colleges	7	11	10	9	3	1	2	0	43	133	32.
Out-State Lib. Arts Colleges	2	4	2	2	1	0	0	0	11	80	14.
Other Out-state	3	2	2	1	0	0	0	0	8	42	19.
Totals	48	74	54	41	8	3	5	6	239	801	

Comments written into the questionnaire were evidence that some students did not know of available scholarships, nor how to apply for them. Some requested information from the writer. A typical communication is given in the appendix B, p. 196-7

It is interesting to observe that our four State Teachers Colleges show a wide difference in the number of scholarships granted, at least insofar as these data are concerned. The percentage varies from 24 percent for Northern College of Education to 70 percent for Central State Teachers College. One would expect a fairly uniform policy and would naturally ask, "Why this difference?" If these data are fairly representative in this respect, certain colleges either grant more scholarships or else they direct such benefits to the upper third of the graduates, the group under consideration in this study. In either event the policies adopted by the institution granting the scholarships will determine the eligible group of high school graduates.

Scholarships refused by graduates planning to attend college- Another suprising fact was the large number of scholarships refused by graduates (Table XLIII). These refusals amount to 26.0 percent of all that were offered.

TABLE XLIII

Scholarships Refused by Graduates

	Class of School								
	A	B	C	D	Bu	Cu	Du	Eu	Total
Scholarships Offered	62	94	79	51	11	7	8	11	323
Scholarships Refused	14	20	25	10	3	4	3	5	84
Percent refused	22.6	21.3	31.6	19.6	27.3	57.1	37.5	45.5	26.0

The percentage of refusals varied from 19.6 percent in the case of Class D schools to 57.1 percent for Class Cu schools. Omitting those classes of schools where the number of scholarships was small, there was still a range of refusals from 19.6 percent to 31.6 percent because 25 of 79

offers were refused by the graduates of Class C schools. Although reasons for refusing scholarship aid were not always stated in the data, the writer made a study of the after-graduation plans of these students. In most cases these data indicated why the graduates refused scholarships.

Analysis of the Plans of Students who refused the offer of scholarships- Of those offered scholarships 20 were joining the armed service and therefore were not free to accept them. Eight others refused scholarships but planned to enter college, 4 in the same college that offered the scholarship and 4 in another college. Only one of the former came from a family with an income over $5000. Why the other three refused aid is not apparent. Of the 4 who planned to attend another college, in each case they chose a considerably larger institution with a larger number of courses.

The remaining 56 graduates who refused scholarships were planning office work or miscellaneous jobs (Table XLIV). The incomes of parents of 25 of these were below $2500, and 23 were between $2500 and $4999. Therefore it can readily be presumed that in most cases the scholarship did not offer sufficient financial aid to warrant plans to attend college,

TABLE XLIV

Analysis of the Plans of Students Who Refused Scholarships

Planned Activity	Class of School								Total
	A	B	C	D	Bu	Cu	Du	Eu	
Military	7	5	6	1	0	0	1	0	20
Other College	2	5	0	1	0	0	0	0	8
Office Work	3	9	11	3	1	2	1	3	33
Miscellaneous	2	1	7	4	2	2	1	1	20
Not Given	0	0	1	1	0	0	0	1	3
Total	14	20	25	10	3	4	3	5	84

and in the majority of cases the work selected did not demand college training. However with proper guidance and more substantial financial assistance it is probable that several of the students in this group would have gone to college.

The Question of Policies governing the awarding of scholarships- When one attempts to discern the policies used by boards of awards granting the scholarships discussed above, one immediately becomes lost in a maze of questions. Are they awarded on the basis of student need or to get the student most likely to profit from college training? Are they distributed in response to alumni or political pressure, or is it merely a case of the benefits going to the one who lives nearby, or who makes the greatest effort to get one?

If granted on the basis of need, what need? Is it because the graduate lacks money, because he is from a large family, because his parents are well educated, because his father is engaged in a certain business, or merely because he is of a certain nationality? If awarded to attract the most likely college student, how determined? Was it decided on the basis of an intelligence test or on class rank according to high school marks? These and similar issues are discussed in the paragraphs which follow.

School size and the awarding of scholarships to the graduates in 1945- Analysis of these data revealed considerable variation in the percentage of scholarships reported by graduates of schools of different sizes. For Class C schools 25.5 percent of the graduates who were going to college were recipients of scholarships, while 48.2 percent of Class D graduates were so favored. The average for all schools from the Lower

Peninsula was 30.1 percent. Class B graduates received about the average number of scholarships, while Class A were somewhat below. Class D received the largest percentage of scholarships and Class A girls received the smallest percentage of any group. The complete analysis is given in Table XLV.

TABLE XLV

Distribution of Scholarships according to Sex and School Size in Michigan High Schools in 1945

Class of School	Boys			Girls			Total		
	No. Attend. College	No. Receiv. Scholarships	% Receiv. Scholarships	No. Attend. College	No. Receiv. Scholarships	% Receiv. Scholarships	No. Attend College	No. Receiv. Scholarships	% Receiv. Scholarships
A	41	17	41.5	141	31	22.0	182	48	26.1
B	58	23	39.7	183	51	27.9	241	74	30.5
C	33	9	27.3	179	45	25.1	212	54	25.5
D	17	6	35.3	68	35	51.5	85	41	48.2
Lower Peninsula Total*	149	55	36.9	571	162	28.4	720	217	30.1

(*) Upper Peninsula schools omitted because of the relatively small number of cases.

To determine the influence of those who refused scholarships on the above data the total number of scholarships offered was compared with the total number of students who planned to go to college. Results indicated that refusals were a contributing factor in the maldistribution of scholarships but apparently not the only one. Class C schools faired considerably better in this comparison but Class D school remained the favored group (Table XLVI). Later in this chapter the above point is discussed under

the heading, "class rank in its relation to the awarding of scholarships."

TABLE XLVI

No. of Scholarships offered to Graduates of Various Classes of high schools

	Class of School					
	A	B	C	D	Bu-Cu-Du-Eu	Total
Total Going to College	182	241	212	85	81	801
Total Scholarships Offered	62	94	88	51	37	332
% Offered Scholarships	34.1	39.0	41.5	60.0	45.7	41.4

Sex composition of the graduates who accepted scholarships- Because of the war and the fact that less than 21 percent of those planning to attend college were boys, it might be expected that they would be shown favoritism in the awarding of scholarships. This proved to be true, and although only 21 percent, they were awarded 25.5 percent of all the scholarships as shown in Table XLVII.

TABLE XLVII

Sex Composition of the Graduates Who Accepted Scholarships

	Class of School					
	A	B	C	D	Bu-Cu-Du-Eu	Total
Total No. of Scholarships	48	74	54	41	22	239
Percent Accepted by Boys	35.4	31.1	16.7	14.6	27.3	25.5
Percent Accepted by Girls	64.6	68.9	83.3	85.4	72.7	74.5

When the data were checked for schools of the various sizes, it was found that the boys from Class A and B schools received 35.4 percent and 31.1 percent, respectively, of the scholarships awarded to these schools. Girl graduates of Class C and D schools were recipients of 83.3 percent and 85.4 percent, respectively, of the scholarships, rather than the proportionate 79 percent. When the above data are translated into index numbers and arranged in tabular form the ratio of scholarships granted to the girls and to the boys from different sized schools is clearly shown (Table XLVIII).

TABLE XLVIII

Index Numbers Indicating the Ratio of the Percentage of Girls Receiving Scholarships to the Percentage of Boys Receiving Scholarships

		Class of School *			
		A	B	C	D
$\frac{\text{Percent Girls}}{\text{Percent Boys}} \times 100$ --		182	221	499	585

(*) Upper Peninsula school omitted because of relatively small number of cases.

indicates a trend to offer proportionately fewer scholarships to boys from smaller schools. Possible reasons for these discriminations are indicated in succeeding paragraphs, where a detailed comparison is made between that group who were awarded scholarships and those who did not receive them.

A comparison of family incomes of those Awarded and Not Awarded Scholarships- To those who believe that scholarships are granted to the worthy poor, it should be noted that only 35.2 percent of the

graduates of the lowest income group were granted scholarships (Table XLIX), while the average for all income groups was 30.6 percent.

TABLE XLIX

Distribution of Scholarships among Families of Various Income

Family Income	No. Planning College	Offered Scholarships No. of Cases	Percent
Under $2500	236	83	35.2
$2500-$4999	409	126	30.8
$5000-$9999	90	23	25.5
$10,000 and over	30	2	6.7
Total*	765	234	30.6

(*) Five students who were offered scholarships did not give family income.

In the $2500-$4999 range the scholarships granted were in almost exact proportion to the total number going to college. But perhaps, most noticeable was the fact that one out of every four graduates from families with incomes between $5000 and $9999 was granted a scholarship and that scholarships were granted to those in the $10,000 and over income bracket. This suggests that scholarships are not awarded primarily on the basis of need although Table XLV indicates that the number of scholarships awarded were in reverse proportion to the family income. Other possible factors which influence the awarding of scholarships are investigated in following paragraphs.

A comparison of family size of the scholarship and non-scholarship groups- When the data for the graduates who were awarded scholarships were arranged according to family size, it was evident that a smaller percentage of graduates from small families were offered scholarships.

For families of three 27.8 percent of the graduates received scholarships and the percentage increases to 44.8 for families of seven. The distribution given in Table L indicates that the percentage of graduates receiving scholarships drops for families of eight and over. Because of the limited number of cases this might be due to chance or other factors might be exerting a stronger influence. Such differences as exist between the two groups clearly favor the belief that the larger the family the greater the likelihood of being offered a scholarship.

TABLE L

Distribution of Scholarships Among Various Sized Families

No. of Dependents	No. Planning College	Offered Scholarships No. of Cases	Percent
Three.....	241	67	27.8
Four.....	252	76	30.2
Five.....	132	40	33.0
Six.....	69	24	34.8
Seven.....	29	13	44.8
Eight and over.....	23	8	34.8
Total*	746	228	30.6

(*) Those from broken homes and those "Not Given" are omitted.

A comparison of the education of the parents of the two groups of graduates- One might have the belief that college trained parents, realizing the value of a college education, would be more likely to request scholarships for their children, and insist that they continue their training. This belief did not prove true for these data. An

even 28 percent of the graduates whose fathers had college training were offered scholarships while 33.9 percent of the graduates whose fathers completed eight grades or less were offered scholarships. The same was true in the case of the mothers of graduates, while the graduates whose parents had high school training rated lowest. The fact that low educational standards are likely to be associated with low income suggests that it was the income factor which influenced the data given in Table LI.

TABLE LI

A Distribution of Scholarships Among Graduates Whose Parents had Achieved Various School Grades

Parents Educational Achievement	No. Planning College		No. Offered Scholarships		% Offered Scholarships	
	Father	Mother	Father	Mother	Father	Mother
Grade 8 or less	251	166	85	59	33.9	35.5
Grades 9 thru 12	277	324	76	81	27.4	25.0
College 1 yr. or more	246	282	69	90	28.0	31.9
Totals*	774	772	230	230	29.7	29.7

(*) The parents grade achievement was not reported in all cases.

The median of the highest grade completed by the fathers of the graduates was 10.6 for the scholarship group and 10.8 for all planning college. In the case of the mothers of the graduates the median grade completed was 11.4 for all planning college and 11.5 for the scholarship group. Differences in both cases indicate little if any causal relationship.

A comparison of the occupations followed by the fathers of the graduates who received scholarships with those who did not receive scholarships- It is interesting to learn that the children of certain occupational groups are the recipients of more than an average share of college scholarships, the average in this study being 29.8 percent. Children of those in the skilled trades and in the extractive industries, ask for and receive scholarships in a greater percentage of cases than those in any other occupational group; 40.9 percent for the former and 35.6 percent for the latter. Children of professional men, such as doctors, dentists, lawyers, teachers and engineers receive scholarships in 32.7 percent of the cases, about the proportion which their numbers in this study would warrant. Those whose parents are unskilled laborers, clerical workers, engaged in transportation or communication, or retail merchants are not getting their proportionate share of financial assistance through scholarships (Table LII).

An analysis of the above facts raises certain important issues. If we assume that scholarships are a justifiable form of financial aid to graduates coming from families with generally low income and education, then the farm group qualifies. Both the professional group and those engaged in the skilled trades receive fairly good incomes and have no larger than average sized families. On the other hand the unskilled laborers family is clearly entitled to greater consideration.

TABLE LII

Distribution of Scholarships Among Graduates
Whose Fathers were Engaged in Various Occupations

Occupation	No. Planning College	Offered Scholarships No.	%
Extractive.....	132	47	35.6
Professional.....	101	33	32.7
Retail Trades.....	70	16	22.9
Ind. Occupations.....	88	24	27.3
Transportation-Communication	24	3	12.5
Gov. Employees.....	40	11	27.5
Sales-Service.....	98	28	28.6
Clerical.....	23	4	17.4
Skilled Trades.....	122	50	40.9
Unskilled.....	61	12	19.7
Unemployed-Deceased.....	34	9	26.5
Not Given.....	8	2	25.0
Total.....	801	239	29.8

Occupations are probably not considered by scholarship committees in making awards, yet the above facts are not likely to be mere coincidence. One reasonable explanation is that certain students do not know of the available scholarships and do not 'go after them', and their parents are not informed and sufficiently interested. Nevertheless, certain occupational groups have more of their sons going to college, this fact should be considered in awarding scholarships and other financial assistance. Table LIIgives the detailed analysis

and a chi square test is given in appendix p.188.

Scholarships awarded to graduates whose parents were foreign born- Analysis of the data showed that scholarships were awarded to graduates, one or both of whose parents were foreign born, in 50 cases. In 18 of the cases both parents were foreign born, in 19 only the father was foreign born, and in 13 only the mother was foreign born. In families where both parents were foreign born, 14 of 18 were of the same nationality. Table LIII indicates that children of foreign parents were awarded 21 percent of the scholarships, which is slightly more than the average percentage of foreign born parents in the study. Although the data are limited in terms of the number of foreign born there is no evidence of discrimination against foreign groups.

TABLE LIII

Distribution of Scholarships to Graduates Whose Parents were Native born and foreign born

	Only Father foreign born	Only Mother foreign born	Both foreign born	Neither foreign born	Total
* No. of Scholarships	19	13	18	188	238
% of Scholarships	7.9	5.5	7.6	79.0	100%

(*) Country of birth of one father and one mother was not given.

The importance of class rank in securing a scholarship- Since the Principals of Class C, D, Du, and Eu high schools listed their graduates according to rank, it was possible to determine the number of scholarships granted valedictorians and salutatorians. When the data were checked it was found that thirty scholarships out of forty-one ranked

either first or second in the class. In Class C schools sixteen out of fifty-four went to those ranking 1-2 in the class. If we include the four highest ranking students in each graduating class, we find that over two-thirds of the scholarships were awarded in this group.

In Class Du there were two valedictorians and two salutatorians among the five awarded scholarships, while in Class Eu four of the six granted scholarships were the top students in the class. Clearly this indicates an effort on the part of colleges to get the best students from the high schools of the State.[1] Not only are the colleges seeking students from the upper third, but they want them from the very top. This gives the graduate of the small school an advantage in securing scholarships, since they have more opportunity to become valedictorians or salutatorians.

Conclusions regarding the factors which influence the awarding of scholarships- From the data it appears to be true that scholarships are not granted primarily on the basis of student need. Although some few students reported that they were refused a scholarship because they could not show sufficient financial need, the number of low income families represented in the scholarship group is only slightly larger than their proportionate number warrants. There was some evidence to indicate that graduates from large families were more likely to be awarded scholarships but no casual relationship with the education of the parents. Neither did the nationality of the parents appear to have any relationship to the awarding of scholarships.

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[1]For a discussion of scholastic rank in relation to college attendance, see Chapter III, p. 32

Certain occupational groups appeared to be favored in the awarding of scholarships, but this might have been due to the importance placed upon class rank, and the awarding of more scholarships to small school graduates in farming areas. Another reason might have been the lack of information regarding scholarships and the procedures in applying for them.

SUMMARY

1. For the graduates who responded to the questionnaire 29.8 percent of those who planned to attend college were granted scholarships. These respondents had been granted in the upper third of the Class of 1945.

2. Of all scholarships offered, 26.0 percent were refused. This suggests that scholarships alone will not solve the problem of college attendance.

3. The percentage of graduates who selected a particular college because they were offered a scholarship ranged from 18 percent of the total in one college to 70 percent. This indicates a wide difference in the inducements to attendance offered by various colleges and in fundamental policy toward the awarding of scholarships. It may mean that certain colleges attract their students by other means and need not solicit students by means of financial rewards.

4. Although those boards which grant scholarships may ask graduates to show financial need before considering them eligible for a scholarship, apparently this does not apply to many from families with incomes below $10,000. At any rate the percentage of all graduates receiving scholarships does not drop off abruptly until that salary bracket is reached. Beginning with 35.2 percent for those from families with incomes under $2500, the percentage of scholarships decrease to 30.8 percent in the next income bracket and then to 25.5 percent in the $5000-$9999 income range. Then it drops abruptly to 6.7 percent for all from families with incomes over $10,000.

5. Parental education and nationality did not show up as important considerations in the awarding of scholarships, but certain occupational groups received more than their share of scholarships. Other groups, particularly labor groups receive less than their share. To correct this situation labor unions and farmers' organizations might grant scholarships or other financial aid to deserving graduates from families in the labor groups.

6. Since scholarship is apparently the most frequently used single factor in determining to whom a scholarship shall be awarded, small school graduates have more opportunity to rank first or second in a class and hence to earn a scholarship. Is it not evident that this inequality should be corrected by those awarding scholarships?

Chapter X

COLLEGE ACCESSIBILITY AND ITS RELATION TO ATTENDANCE

In this chapter answers to the following questions will be discussed: 1. "Is there a college for advanced educational training readily available to every high school graduate in Michigan?" 2. "Is the distance from the graduate's home to college an important factor in his decision regarding college attendance?"

To answer these questions the data were analyzed in terms of the location of the various colleges of Michigan in relation to the high schools of the State. Mileage zones around each college were determined, and the drawing power of representative colleges was established. Finally the reasons given by graduates for the selection of a particular college were tabulated and analyzed.

Areas of Michigan less adequately serviced by institutions of higher learning- Graduates of most high schools in the southern half of the Lower Peninsula of Michigan have ready access to one or more good colleges. Few students from this area are required to travel more than fifty miles to reach either a junior college or a four-year institution of collegiate status. This is not true for graduates living in the northern counties of the Lower Peninsula and for many sections of the Upper Peninsula. Few students from these areas the traveling distance to an institution of higher learning may exceed one hundred and fifty miles, and then the college may not offer the

particular courses in which the graduate is interested. Areas around Alpena and Petoskey in the Lower Peninsula and around Sault Ste. Marie in the Upper Peninsula are more than one hundred miles from an institution of higher learning.

Figure 13 indicates the areas of Michigan that are more than one hundred miles from any one of our state colleges of education. Fortunately the shaded area in the western part of the Upper Peninsula is serviced by the Michigan College of Mines and Ironwood Junior College, and the thumb are by Bay City, Flint, and Port Huron Junior Colleges. However, no institution of collegiate standing exists in the northern part of the Lower Peninsula above Bay City, nor in the Sault Ste. Marie area.

Graduates in the areas not serviced by institutions of higher learning- Figure 13 indicates that those areas fairly remote from centers of higher education are sparsely settled and contain but a small percentage of the total number of graduates. The data for 1945 showed that about five percent of the 39,311 graduates for the entire state were living further than one hundred miles from one of our state teachers colleges. The number of graduates in this group was estimated to be between eighteen and nineteen hundred. While these students were not within a one hundred mile radius of a teachers college, a large number of graduates in the Lansing area could choose between one of three teachers colleges, each considerably nearer. While they were but a small proportion of the total, these eighteen hundred graduates were not being accorded equality of education opportunity.

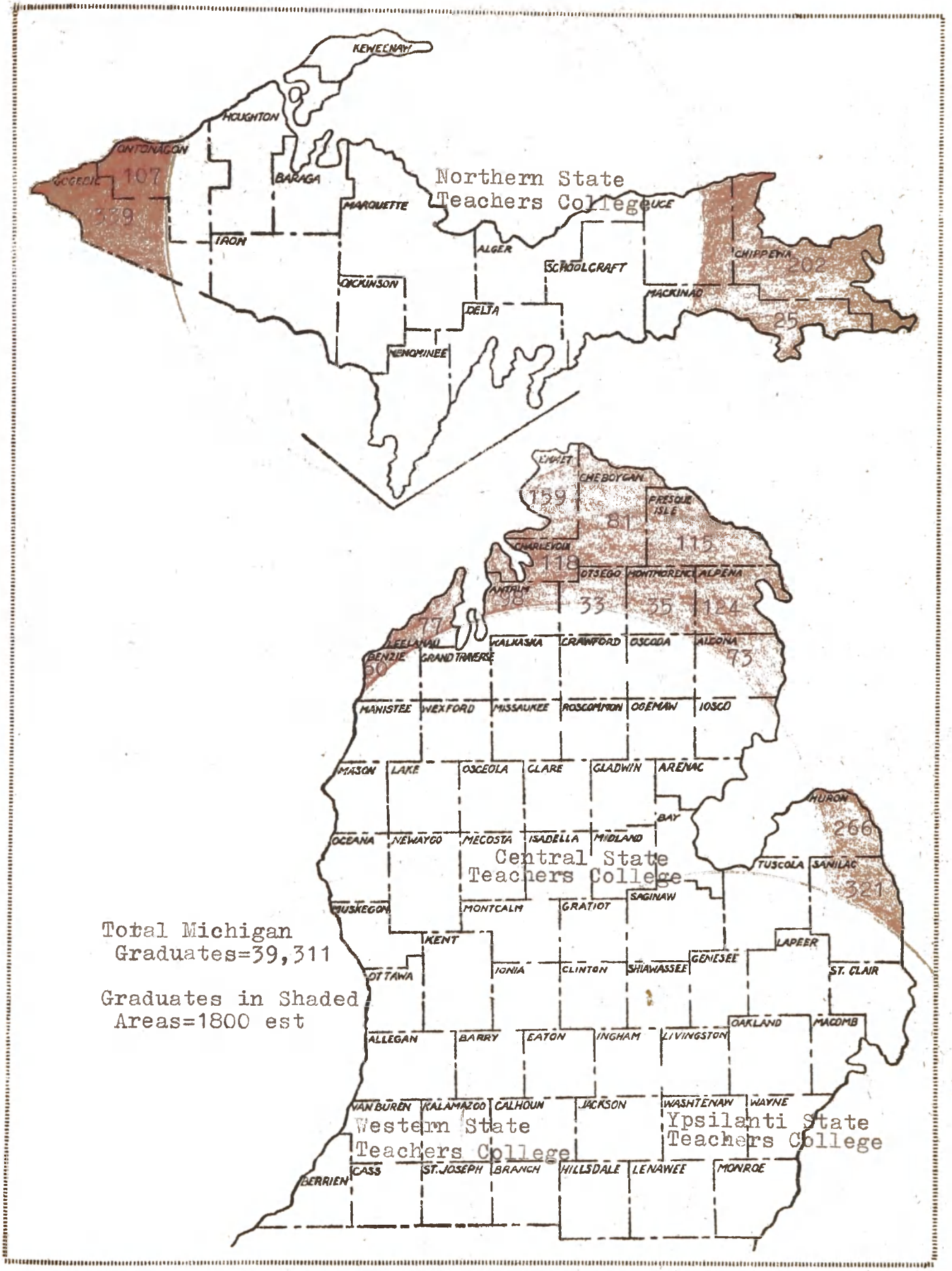

Fig.13- Areas More Than 100 Miles from a State Teachers College
Note-Figures in shaded areas indicate total graduates (1945)

Areas of Michigan not having college services within commuting distances- When we analyze the data in terms of the numbers of graduates not within a twenty-five mile commuting distance, the problem assumes different proportions. Large numbers of graduates of lower Michigan high schools outside the city of Detroit do not have access to a neighborhood college. If we include Michigan's nine junior colleges which provide many of the usual Freshmen-Sophomore courses, there remain large sections of southern Michigan without benefit of college. These areas include some fairly large centers of population such as South Haven, Sturgis, Ionia and Harbor Beach. Much of the Upper Peninsula and all of the Lower Peninsula north of the Bay City - Big Rapids line is without a college. This is shown in Figure 14. While we may rejoice that for such a considerable portion of the graduate population the conditions are favorable, the fact remains that the youth of the small cities, towns, and rural areas in many parts of Michigan, particularly toward the north, are not within commuting distance of a college.

GEOGRAPHICAL DISTRIBUTION OF INTEREST IN COLLEGE

The importance of mere physical distance as a deterrent to college attendance is a debatable point. With present day facilities for travel it would seem that ones place of residence in relation to college would be relatively unimportant, and that distance would not be seriously considered by the prospective college student. To test the validity of such assumptions, the data were arranged and organized so that definite areas in the state could be compared.

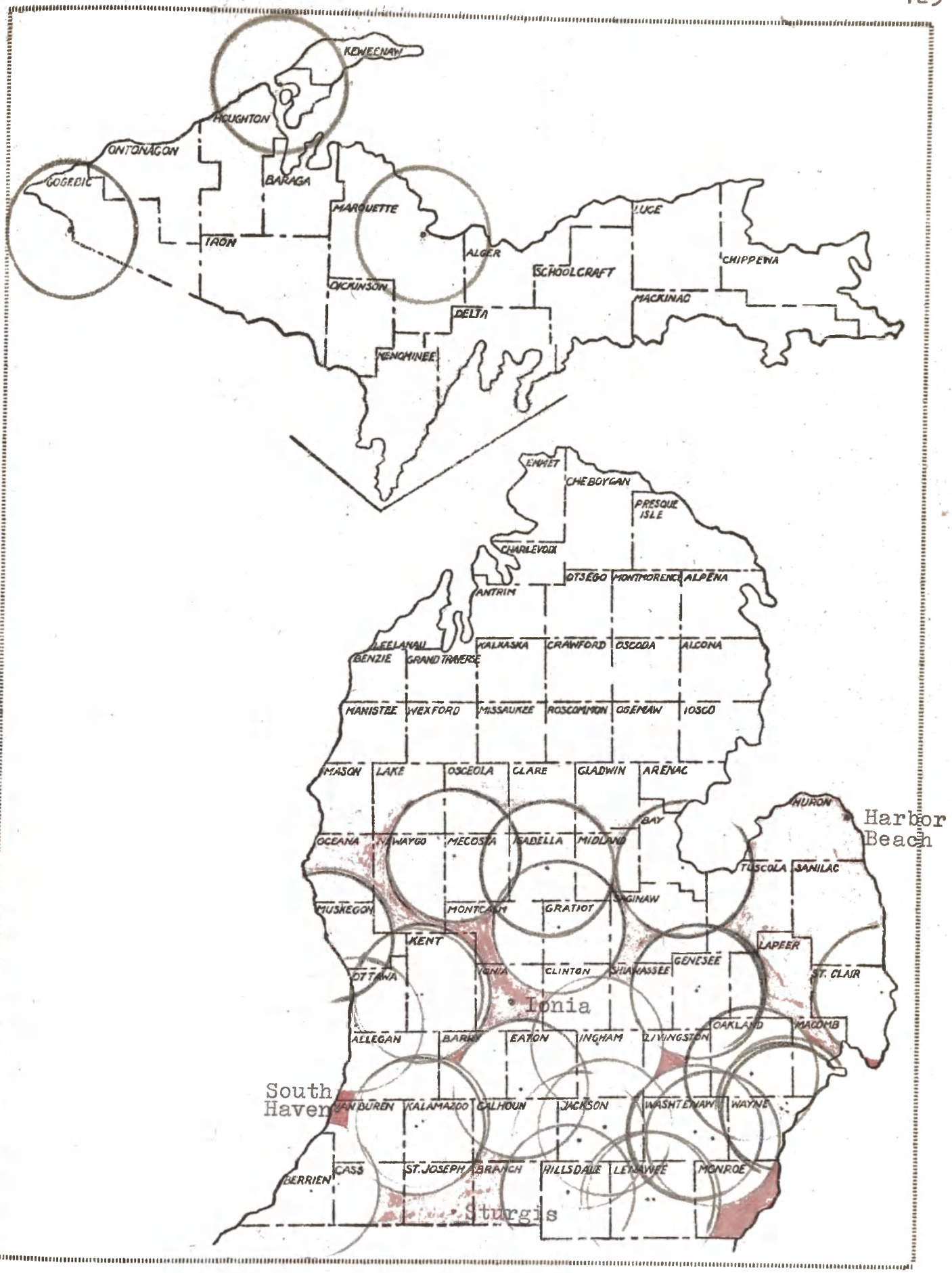

Fig.14-College Neighborhoods in Michigan
(25 mile radius)

The relation between distance and interest in college attendance-

A very interesting fact appeared when upper Michigan data were assembled separately and compared with that for the remainder of the state. It showed that interest in plans to attend college apparently decreased as the distance to the college increased. While the percentage of respondents in the 47 Southern counties who planned to attend college was 51.3 percent, only 41.1 percent from the Northern twenty-one counties of the Lower Peninsula were making such plans. For the Upper Peninsula the comparable figure was 42.6 percent. Table LIV gives the data for the three areas.

TABLE LIV

Geographical Distribution of the 1945 High School Graduates Planning College Attendance

	Northern 21 Counties of the Lower Peninsula	15 Counties of Upper Peninsula	47 Southern Counties in Lower Peninsula
Total Respondents	112	190	1315
Total Planning to Attend College	46	81	674
Percent Planning to Attend College	41.1	42.6	51.3

While Table LIV suggests a relationship between distance and a graduates interest in planning to attend college, these data do not necessarily mean that distance alone accounted for the differences in percentages. A number of contributing factors may have influenced the behavior of the graduates. They may have very different vocational interests. Residents of remote areas may have been earning lower incomes, have larger families and less schooling, and in general may

have been less interested in education. In order to determine the existence of such influences the data were analyzed in terms of the three geographical areas indicated.

Comparison of the vocational interests of the graduate from the three areas of Michigan who planned to attend college- Analysis of the data concerning vocational interests indicated that the graduate's choices followed the same general pattern for the three areas of the state. The girls listed teaching, secretarial work, home economics, nursing, music, social service work and writing in the order given. The boys named engineering, medicine, business administration, and various science occupations. Slight differences appeared in the frequency with which certain vocations were named and the variety of interests was more limited in the northern part of the Lower Peninsula and in the Upper Peninsula.

Probably because of the predominant character of the area, there was more interest in engineering in the Upper Peninsula, no interest at all in agriculture in the Northern 21 counties of the Lower Peninsula, and interest in aviation and radio only in the Southern division of the Lower Peninsula. Graduates from the 21 Northern counties were interested in teaching, secretarial work, home economics and music in slightly larger proportion than in the other areas. Journalism and related literary fields rated more than proportionate interest in the Upper Peninsula. Table LV lists each vocation named by 10 or more graduates.

TABLE LV

Vocational Interests of the Graduates from Three Areas of Michigan

Vocational Interest	Northern 21 Counties of the Lower Peninsula		15 Counties in the Upper Peninsula		47 Southern Counties in the Lower Peninsula	
	Col.	Non-Col.	Col.	Non-Col.	Col.	Non-Col.
Nursing	2	13	3	23	35	103
Secretarial work.....	7	12	3	34	45	133
Teaching.....	10	3	13	6	106	26
Engineering.....	3	15	10	12	56	71
Medicine.....	2	5	6	4	44	11
Business Administration	1	1	5	1	31	36
Home Making Courses...	5	4	6	0	47	13
Science Occupations...	1	2	5	0	43	20
Journalism-Writing, etc.	2	1	7	7	36	16
Social Service work...	4	0	4	1	35	14
Music.....	4	2	1	1	30	16
Agriculture.....	0	3	1	3	11	29
Art & Related Fields..	1	1	1	1	18	14
Law.....	0	0	0	3	14	8
Electricity-Radio.....	0	0	0	3	8	20
Aviation.....	0	0	0	0	8	20
Foreign Service.....	0	1	1	1	11	5

Comparison of the vocational interests of the graduates not planning to attend college from the three areas of Michigan- The vocational interest of the graduates who did not plan to attend college are in three fields

in a majority of cases. These fields are secretarial, nursing and engineering. This concentration of vocational interest is particularly noticable for nursing and secretarial work amongst Upper Peninsula graduates. Of a total of 109 graduates not going to college, 34 were interested in secretarial work and 23 in nursing. A large percentage of the boys from the 21 Northern counties were interested in engineering while from the remainder of the Lower Peninsula business administration, agriculture, aviation, radio and science occupations were the chosen occupations. Table LV above indicates the most frequently mentioned vocations.

Comparison between the parents income in three areas of Michigan- When the data for family income were assembled for the Upper Peninsula and for the Northern 15 counties of the Lower Peninsula and compared with the data for the remainder of the state, an observable difference appeared. In the Northern 21 counties, 70 parents out of 112 were reported to have incomes under $2500 per year. This is 62.5 percent of the total. In the Upper Peninsula 58.9 percent of the families reported incomes under $2500 while in the 47 Southern counties of the Lower Peninsula only 26.8 percent of the families reported incomes in this bracket.

Reference to Table LVI shows that a larger percentage of students planned to attend college in the higher income groups, and that the 21 northern counties and the Upper Peninsula had a considerably smaller percentage of graduates who planned to attend college. Since these general trends were reversed or substantiated in a random manner in the limited data from the 21 northern counties with reported family

incomes of over $2500, these data were subjected to special analysis. The questionnaire returned by the 10 students planning to attend college and the 26 not planning to attend college were rechecked to locate possible factors which might account for the reversal in general trends. The conclusions from this survey are summarized in the following paragraphs. (Fig. 15)

TABLE LVI

Graduates Planning to Attend College from Three Geographical Areas of Michigan and three different income brackets

Income		Northern 21 Counties of the Lower Peninsula		15 Counties in the Upper Peninsula		47 Southern Counties in the Lower Peninsula		Total	
		Col.	Non-Col.	Col.	Non-Col.	Col.	Non-Col.	Col.	Non-Col.
$5,000 & 6 above	No.	3	1	7	4	110	54	120	59
	%	75.0	25.0	63.6	36.4	67.1	32.9	67.0	33.0
$2500-$4999	No.	10	26	26	29	373	357	409	412
	%	27.7	72.3	47.3	52.7	51.1	48.9	49.8	50.2
Below $2500	No.	33	37	43	69	160	190	236	298
	%	47.1	52.9	38.4	61.6	45.5	54.5	44.2	55.8
Not Given		0	2	5	7	31	38	36	47
Total	No.	46	66	81	109	674	641	801	816
	%	41.1	58.9	42.6	57.4	51.3	48.7	49.6	50.4

Survey of the 36 students in the $2500-$4999 income range from the 21 northern counties of the Lower Peninsula included eight girls and two boys, all of native American parentage. All came from fairly small families, quite typical for this study, and three of the ten accepted scholarships. Only in respect to the occupation of the fathers and the education of the parents did this particular group differ from other

respondents. The parents were somewhat better schooled and none were engaged in farming or in the unskilled occupations. Both of these circumstances would tend to encourage college attendance according to evidence already presented in this thesis.

The 26 graduates who did not plan to attend college, likewise proved to be fairly typical as regards nationality, family size, education of parents. In two respects they differed noticeably: (1) Fourteen of the twenty-six were boys and (2) Fourteen of the fathers were either farmers of skilled mechanics. Both differences are important. Eleven of the fourteen boys were entering military service and therefore would not be able to enter college in the fall of 1945. Graduates whose fathers are farmers or skilled mechanics were found to go to college in less than one-half the total number of cases, therefore the occupation factor might be expected to reduce the number from this group, who otherwise would be interested in attending college. It is reasonable to suppose that these two circumstances were sufficient to account for the discrepencies indicated in Table LVI.

Comparison of the occupations of the fathers of the graduates in the three areas of Michigan- Analysis of the data pertaining to the occupation of the fathers of the graduates who planned to attend college, revealed that 11 out of 46 or 23.9 percent of those from the 21 northern counties of Michigan were farmers, and that 24.7 percent of those from the Upper Peninsula were either farmers or engaged in one of the other extractive industries (Table LVII). Compared to this was 101 out of 674 fathers or 15.0 percent for the 47 southern counties of the Lower Peninsula.

TABLE LVII

Occupation of the Fathers of Graduates According to Geographical Location

Occupation	Northern 21 Counties of the Lower Penin.		15 Counties in the Upper Peninsula		47 Southern Counties in Lower Peninsula	
	Col.	Non-Col.	Col.	Non-Col.	Col.	Non-Col.
Extractive.....	11	4	20	40	101	134
Professional.....	4	4	15	5	82	39
Retail Trades.....	4	5	9	5	57	29
Industrial Occupations.....	2	2	1	3	85	56
Transportation-Communication....	5	3	2	4	17	30
Gov. Employees.....	4	6	8	3	28	28
Sales & Service.....	2	4	2	2	94	43
Clerical Occup.....	0	0	3	3	20	22
Skilled Trades.....	7	12	8	12	107	118
Unskilled.....	3	11	7	17	51	89
Unemployed-Deceased	3	5	4	9	27	45
Not Given.....	1	0	2	6	5	8
Total	46	66	81	109	674	641

Analysis of the data pertaining to the occupations of the fathers of the graduates who did not plan to attend college revealed that 14 out of 66 or 21.2 percent of those from the northern 21 counties of Michigan were farmers, and that 36.7 percent of those from the Upper Peninsula were either farmers or were engaged in one of the extractive industries. Compared to this was 134 of 641 fathers or 20.9 percent for the 47 southern counties of the Lower Peninsula.

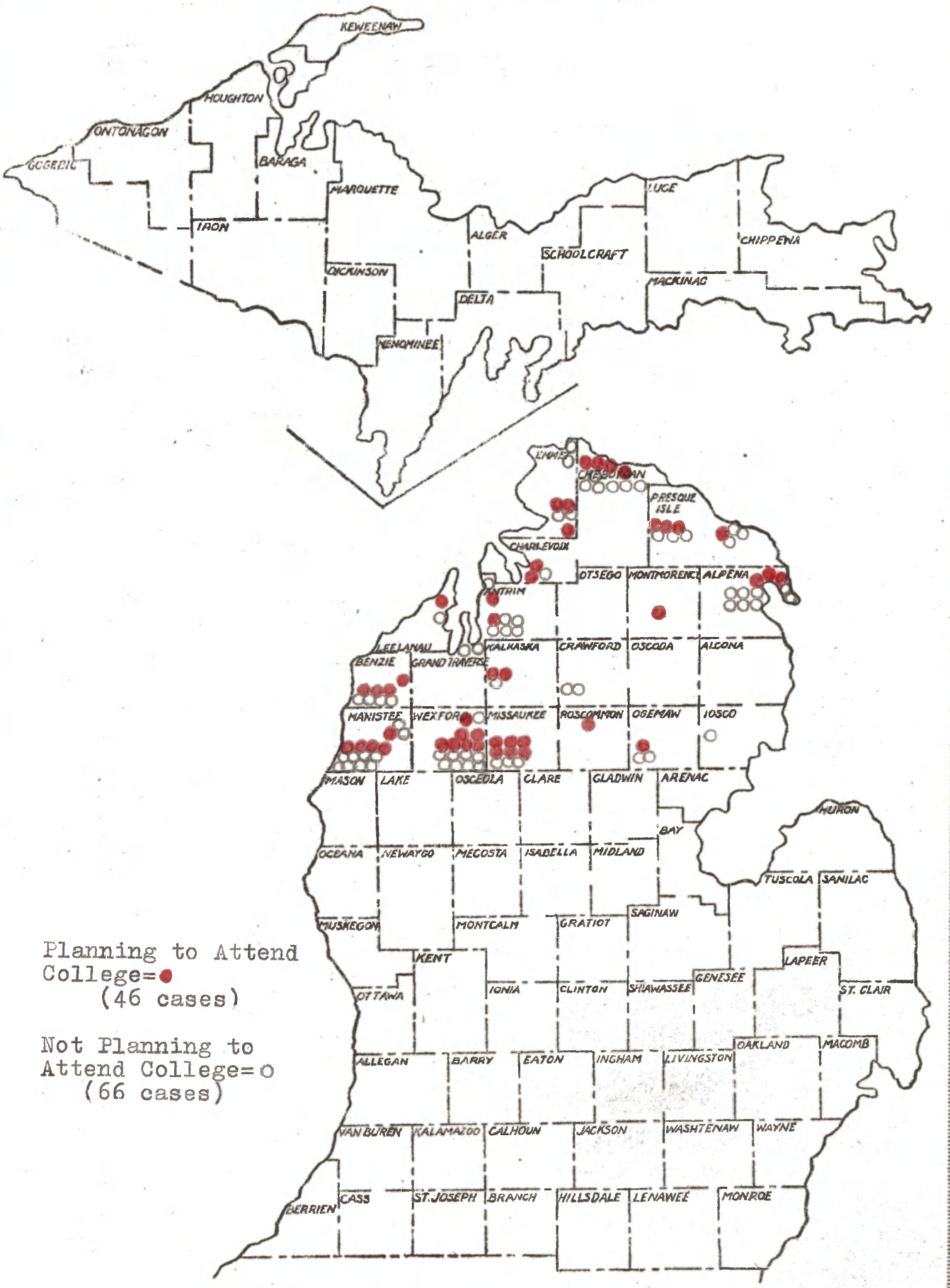

Fig.15- Those Planning and Not Planning to Attend College from the 21 Northern Counties of the Lower Peninsula

These figures indicate that a large percentage of the fathers of graduates in the Upper Peninsula and the 21 northern counties of the Lower Peninsula are engaged in one of the extractive industries, but they reveal no other noticeable variation from the expected. In fact it appears rather definite that factors other than the fathers occupation account for differences in the percentage of graduates who planned to attend college. Finally the vocational interests of the graduates not planning to attend college (Table LV) show no definite causal relationship with the occupation of the fathers and there was no evidence to indicate that the occupation of the father was instrumental in their decision not to attend college.

The Education of the parents of the graduates in three selected areas of Michigan- When the data were arranged so that the areas in the state not adequately serviced by institutions of higher learning could be compared with the remainder of the state, it was revealed that parents living in the former areas were less well educated. In each area the mothers were likely to have had the most schooling and in each area the parents of those who planned to go to college were better educated than those who did not plan to attend college. Table LVIII gives the data and shows the median schooling for both fathers and mothers in each area. Since the education of the parents was apparently related to the probability of college attendance on the part of the graduate according to data from Chapter VII, it now appears likely that the relatively lower schooling of parents from the Upper Peninsula and the 21 northern counties of the Lower Peninsula would tend to result in a smaller percentage interested in college. (Fig. 15)

TABLE LVIII

Education of the Parents of Respondents by Geographical Areas

Grade	Upper Peninsula				N. 21 Counties-Low.Pen.				S.47 Counties-Low.Pen.			
	Father		Mother		Father		Mother		Father		Mother	
	Col.	Non-C.	Col.	Non-C.	Col.	Non-C.	Col.	Non-C.	Col.	Non-C.	Col.	Non-C.
Under Grade 6	0	7	1	4	2	4	1	0	13	21	8	10
Grade 6	17	21	7	6	2	3	3	1	4	31	7	12
Grade 7	5	10	2	8	3	2	1	2	5	16	1	19
Med.	7.8	7.6		7.9		7.8						
Grade 8	24	30	21	40	14	35	14	25	162	202	100	163
					9.0			8.8				
Grade 9	1	7	4	6	2	2	0	6	35	45	31	42
							9.8			9.1		
Grade 10	4	6	3	4	5	2	5	4	57	61	53	71
Grade 11	2	6	4	7	3	2	4	4	33	37	34	36
									11.2		11.6	
Grade 12	5	6	10	18	8	5	8	8	122	83	168	137
College 1	2	4	6	0	1	2	3	4	36	19	56	42
College 2	3	2	13	6	0	1	4	3	41	26	89	30
College 3	3	1	2	3	2	2	0	4	21	11	23	18
College 4	5	1	6	1	0	3	2	3	60	24	62	28
College 5	4	1	0	0	2	2	0	0	30	17	14	3
College 6	0	0	0	0	1	0	0	0	9	4	0	1
College 7	2	0	0	0	0	0	0	0	11	1	2	0
College 8	1	0	0	0	0	0	0	0	12	1	0	0
Not Given	3	7	2	6	1	1	1	2	23	42	26	29
Total	81	109	81	109	46	66	46	66	674	641	674	641

Distance as a deterrent to planned attendance at a particular college- To determine the proportion of graduates who planned to attend a distant college, the data were arranged in terms zones at intervals of twenty-five miles from the college center. These data showed that colleges get the bulk of their students from that area of the state in which the college is located. Although some students migrate rather long distances in search of specific courses, the percentage of the total is rather small.

TABLE LIX

Percentage of Michigan Graduates Planning to Attend College from Various Distances

College	Distance 0-25 mi.		26-50 mi.		51-75 mi.		76-100 mi.		Over 100		Total
	%	No.	%	No.	%	No.	%	No.	%	No.	
Michi State College	28.1	41	24.0	35	24.6	36	8.9	13	14.4	21	146
Univ. of Michigan	12.3	13	27.3	29	10.4	11	11.3	12	38.7	41	106
West. College of Ed.	19.4	12	43.6	27	16.1	10	3.2	2	17.7	11	62
Cent. College of Ed.	27.9	12	20.9	9	23.3	10	16.3	7	11.6	5	43
Four Colleges	21.8	78	28.0	100	18.9	67	9.5	34	21.8	78	357

Table LIX indicates the percentage of students planning to enter college from each of the distant zones around four Michigan colleges. Twenty-eight and one-tenth percent of the graduates who planned to attend Michigan State College lived within twenty-five miles of the college, while only 12.3 percent of the students who intended to enter the University of Michigan lived that near. Only 14.4 percent of the 1945 graduates who planned to enter Michigan State College lived outside the

one hundred mile zone, while 38.7 percent of the prospective University students lived farther than one hundred miles from Ann Arbor. Fig. 16-17 show the location of the schools from which the students were graduated.

In the interpretation of the above data the relative locations of the two institutions should be kept in mind. Michigan State College is situated in the central part of the state so that most of the lower half of the Lower Peninsula is within a distance of one hundred miles. The University of Michigan is located in the south-eastern part of the state, so that large sections of Western Michigan are outside the one hundred mile zone.

Another fact which probably influenced the distribution of students in the data was the absence of Detroit school graduates from the tabulation. Both Michigan State and the University regularly enroll a number of students from Detroit. Since the University is nearer the Detroit area, students from there would naturally increase the proportion from within a fifty mile radius.

Data for the two colleges of education, with a sufficient number of cases to warrant further examination, revealed that 43.6 percent of those planning to attend Western College of Education were within the 25-50 mile range, while only 20.9 percent of those going to College of Education were in the same range. On the other hand Central had a much larger proportion in the 75-100 mile zone. Fig. 18-19 show the location of the schools from which the students were graduated. The location of the two institutions and the characteristics of the surrounding areas probably account for most of the differences observed in these data. Reasons given by graduates for their choice of a particular college are discussed later in this study.

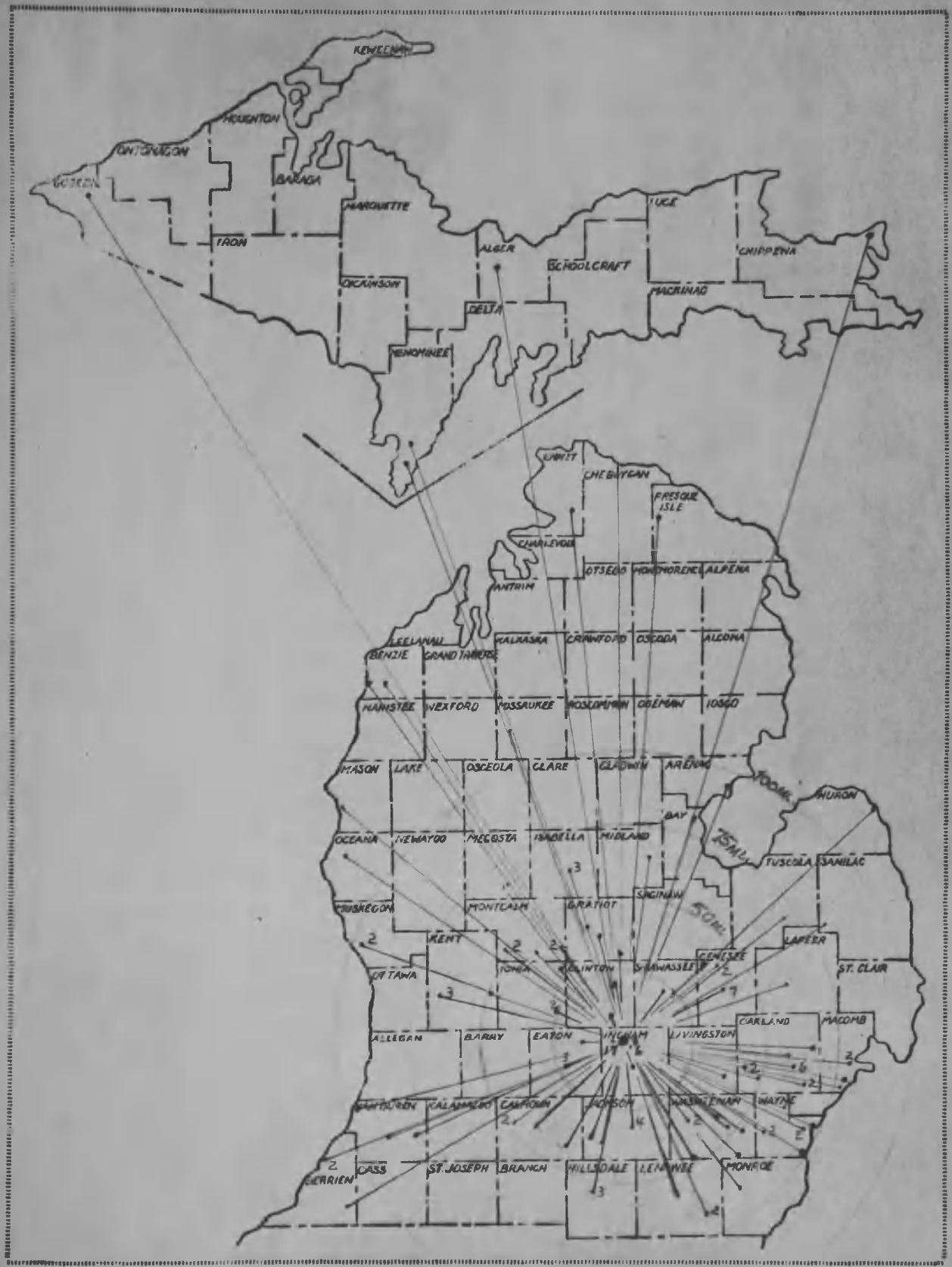

Fig. 16 – Home Location of Michigan State College Students
(146 Students)

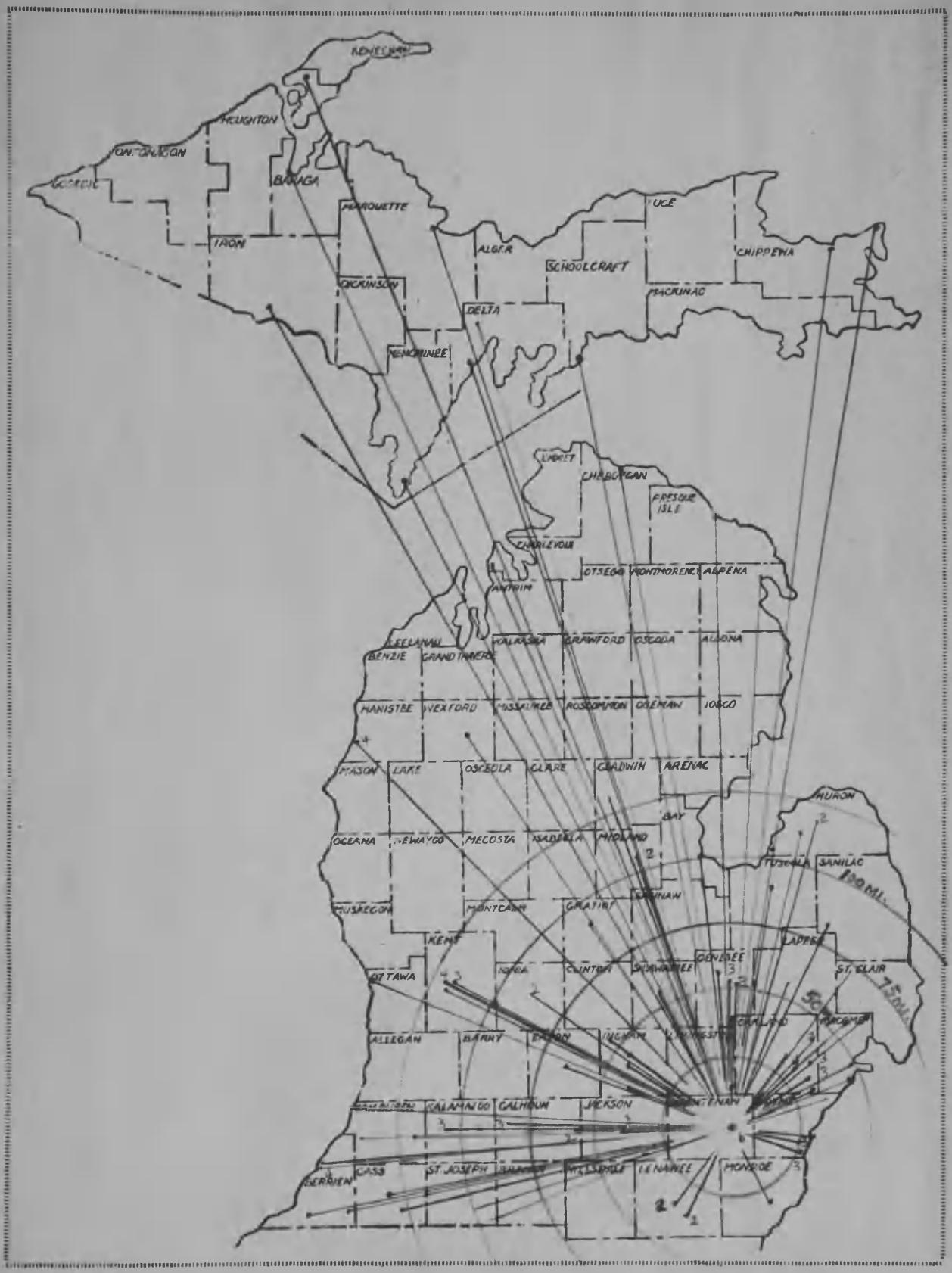

Fig. 17 - Home Location of University of Michigan Students
(106 students)

Fig.18 _ Home Location of Western Michigan College Students
(62 students)

Fig.19 Home Location of Central Michigan College Students
(45 students)

A SURVEY OF DATA FROM FOUR COMMUNITY COLLEGE AREAS

A total of 110 graduates from the high schools of Flint, Grand Rapids, Jackson and Muskegon returned completed questionnaires for this study. This number represented 26.2 percent of a total of 420 questionnaires mailed to the graduates in these cities, while 28.8 percent of all questionnaires over the entire state were returned. Therefore these data may be considered somewhat representative and can be compared with facts submitted from other areas of Michigan.

Graduates who planned to attend college from community collage cities- Of the 110 graduates from these four cities who returned their questionnaires, 51 planned to attend college. This was 46.4 percent and was lees than the average of 49.6 percent who planned to attend college from the entire state. Why a smaller percentage of graduates should plan to attend college from a community college city, than from other areas of the state more remote from institutions of higher learning is worthy of further study. Even more suprising was the fact that only 16 of the 51 or less than one-third planned to attend the local community college. In an attempt to discover reasons for this behavior on the part of graduates, a special study was made of the 35 who planned other than junior college attendance, and of the 59 who did not plan to attend college at all. The results are discussed in the following paragraphs.

The influence of scholarships on college attendance in community college cities- A total of 16 scholarships was offered to these 51 graduates and 14 were accepted. One boy was drafted into the army and hence could not accept and one girl planned immediate employment. Of the 14 accepted 4 were offered by the community college and 10 by other colleges. Since

in both groups the percentage receiving scholarships was very similar, it seemed probable that other factors were responsible for the small number who planned to attend the community college. One factor might have been that the community college curricula was not appropriate to the needs of the graduates who planned to attend a more distant college.

The vocational interests of those who planned to attend college from these community college cities- Analysis of the data for the 16 graduates who planned to attend the home city junior college showed that 4 were interested in teaching, 3 in secretarial work, 2 in social work and one each in medicine, journalism, forestry, science, personnel work, library work, and interior decorating. The vocational interests of the 35 who planned to attend other than a junior college were quite similar to the above with 5 interested in teaching, 4 in journalism, 3 each in secretarial work, medicine, engineering, music and home economics. The remainder were either scattered or undecided.

A comparison of the vocational interests of these two groups showed that 17 of these who planned to attend a four year college, were interested in the identical courses which 11 planned to study in their home city community college. And further, reference to the junior college catalogs for these cities indicated that they were prepared to offer two years of work for practically all the courses of interest to the graduates who planned to attend a four year college. These facts made it seem reasonable to conclude that graduates decided to attend a four year college for reasons other than for course offerings. To gain further insight into the probable reasons for the choice of a particular college, the data

given by the graduates themselves are summarized in the following paragraphs.

Reasons given by graduates for their decision to attend a particular college- Analysis of the reasons given by the 16 high school graduates for planning to enroll in their community college revealed that "nearest to home" and a "scholarship" accounted for the decision in most cases. Reasons given by the 35 graduates who planned to attend a four year college were more varied. Seventeen claimed that their decision was due to the courses offered by four year colleges, 10 had been offered scholarships, and 7 gave nearness to home as the reason for their decision. Five others said that they wanted to go to a small Christian college, and 3 intended to attend a specific college because their relative had gone there. Only one graduate mentioned expense.

Vocational interests of the 59 graduates in college communities who did not plan to attend college- Of the 32 girls who did not plan to attend college, 18 were interested in secretarial work, and 8 in nursing. The remaining 6 were interested in such vocations as writing, music, social service, laboratory technician, beautician, and undecided. Seventeen of the 18 interested in secretarial work were entering office work immediately, and the 8 interested in nursing had signed as cadet nurses. The remaining 7 planned to work at the following tasks: 3 in telephone offices, and 1 each as a beautician and an office worker, and 2 undecided.

Analyzing the data regarding the above 7 girls revealed that the family income of two was under $2500 and five between $2500 and $4999. One father was engaged in the transportation industry, one was deceased, and one unskilled and four were engaged in the skilled trades.

Of the 27 boys not planning to attend college, 24 were going directly into military service, but expressed an interest in the following vocations: 11 in engineering and the remainder in radio, business, law, medicine, dentistry, etc. Two of the three not going into the army planned office work and the third was undecided. Fathers of 2 of the boys were unskilled laborers and were earning less than $2500, and the other was a skilled mechanic earning between $2500 and $4999.

It would seem reasonable to suppose that at least three of the girls--those interested in music, languages and social work would be interested in attending college if financial aid were provided. It is also quite possible that some of the superior students interested in nursing, office work and telephone jobs might have planned to attend college if financial aid were forthcoming.

The large percentage of boys in the military draft made it difficult to draw conclusions regarding their need for assistance.

The family income of respondents from community college cities- Analysis of income data revealed that a larger percentage of those graduates who planned to attend a community college was in the low income brackets than of those who did not plan to attend college. This percentage was much larger than for those graduates who planned to attend a four year college. Data given in Table LVI indicates that the general income

pattern for those who planned to attend the community college resembled the general pattern of those not planning to attend college; while graduates interested in attending a four year college came from families with higher incomes. These data suggest the probability that the community college is more likely to serve the educational needs of the low income groups.

TABLE LX

The Family Income of Graduates* from Community College Cities

Income	Planned to Attend 4 Year College		Planned to Attend Community College		Not Planning Attendance		Total	
	No.	%	No.	%	No.	%	No.	%
Under $2500	3	9.5	4	25.0	9	15.8	16	14.9
$2500-$4,999	18	52.9	11	68.2	40	70.2	69	64.5
$5,000 & over	13	37.6	1	6.3	8	14.0	22	20.6
Total	34	100.	16	100.	57	100.	107	100.

(*) The family income for 1 graduate who planned to attend college and for 2 who did not plan to attend college was not given.

Comparison of the family incomes of the respondents from the community college cities with those from the state as a whole showed more families from the former in the higher income brackers. From Table LX it may be noted that 20.6 percent of the graduates were from families earning at least $5000. For the respondents from the entire state this percentage was but 11.1 as given in Chapter V. Incomes under $2500 were earned by 14.9 percent of the families from community college cities and by 33.0 percent for the state as a whole. These data indicate that incomes in community college cities are above the state average and suggest the need for a study to determine the desirability of establishing

community colleges in low income areas.

Other factors related to college attendance by graduates from community college cities- Those graduates who planned to go to other than community colleges came from families with 3.9 dependents, while those who planned to attend the community college like the non-college group averaged 4.1 dependents. Although the differences are not large, such evidence as there is showed that the community college attracts the children of larger families.

Data regarding the education of both parents was analyzed but no clues were discovered. Mothers were better schooled than fathers, and the parents of those graduates who planned to attend college from community college cities had completed more school grades than those of the graduates who did not plan to attend college. These facts were in agreement with the general findings of this study.

Finally, the occupations of the fathers in the three groups were compared. Fathers of the college group were quite likely to be independent manufacturers in retail sales or the skilled trades. Fathers of those planning to attend the community college were more likely to be professional men or to be engaged in retail sales or unskilled labor. Fathers of the non-college group were predominantly skilled or unskilled laborers. Since it was reported in Chapter VII that the children of parents in the professions, manufacturers and those in the retail trades tend to enter college in larger numbers than those in skilled and unskilled jobs these data yield no new information.

Combining the three groups together, there were fewer parents in the extractive industries and more in the skilled trades than for the state

as a whole. This might be expected, since the community colleges are located in urban areas. There were twice as many in the retail trades in proportion to numbers as in the state as a whole, and a larger percentage engaged in unskilled occupations. In order to check the above data more carefully, a survey was made of five comparable cities not having community colleges. These data are presented in the following paragraphs.

A SURVEY OF SUPERIOR GRADUATES IN SELECTED CITIES COMPARABLE TO THE COMMUNITY COLLEGE AREAS

A total of 111 graduates from the high schools of Battle Creek, Benton Harbor, Midland, Owosso and Pontiac returned completed questionnaires for this study. These cities were considered comparable in terms of size, industries, etc. This number represented 30.7 percent of a total of 358 questionnaires mailed to the graduates of the high schools in these cities while only 26.2 percent of the graduates from community college cities returned data. In the following paragraphs the findings will be analyzed and comparisons made with similar data from community college cities.

Graduates who planned to attend college from non-community college cities- Of the 111 graduates from the high schools of the cities under consideration at this point 56 or 50.5 percent of the total planned to attend college. This was approximately 1 percent more than planned to attend college from all of the high schools of this study. In order to locate possible reasons for this difference the number of scholarships granted

to each group were compared.

The number of scholarships offered and accepted by graduates of non-community college cities- A total of 22 scholarships were offered to the 111 graduates of the high schools of Benton Harbor, Battle Creek, Midland, Owosso and Pontiac who were respondents in this study. Two of these were refused for military reasons and the third because the individual to whom it was offered felt it necessary to enter employment immediately. Thus 19 were accepted by 17.1 percent of the graduates who planned to attend college. For the entire state 239 scholarships were accepted by 14.7 percent of those who cooperated in this study. The five cities, therefore, received slightly more than their fair share of scholarships.

Vocational interests of the graduates who planned to attend college from non-community college cities- Of the 33 girls who did not plan to attend college, 14 were interested in secretarial work, 4 in nursing, 3 in art work, and 3 in writing. The remainder were interested in a wide variety of vocations such as teaching, singing, dancing, dietetics, missionary work, foreign relations, etc. All of the girls who were interested in a secretarial vocation were going to work in offices, and all interested in nursing were either signed as cadet nurses or hospital apprentices. Two of the three interested in art were to be employed in that general field and the third was beginning a selling job. Two of the three interested in writing were to do newspaper work and the third was to be given an office job. The remaining 9 girls planned to work at the following tasks: telephone office, dietetics, sewing, and undecided.

Analysis of the data for the 9 girls revealed that the family income of 4 was under $2500 and that 5 were between $2500 and $4999. Five of the fathers were skilled mechanics, 2 were factory workers, 2 were in the retail business, 1 was a factory superintendent, and 1 was a farmer. It would seem reasonable to suppose that, at least, the 6 girls interested in teaching, singing, dietetics, foreign relations, and the 2 in missionary work, would be interested in attending college if financial aid were provided. It is also quite possible that some of those planning to enter secretarial work, nursing, art work, and writing might have planned to attend college if special financial aid had been available.

Of the 22 boys not planning to attend college, 11 were going directly into military service. The others were planning the following types of employment; secretarial, engineering, drafting, law, clerking, skilled labor, and factory work. The fathers of two of the boys earned less than $2500, seven earned between $2500 and $4999, and two earned over $5000. Two of the fathers were engineers, 2 were skilled workmen, and two were factory laborers. The others were in the following occupations: farming, retail sales, government service, industrial management, and one was deceased. These data give support to the belief that with financial assistance, all except the two graduates whose fathers were earning over $5000 would have been interested in attending college.

Comparison of these graduates with those from the community college cities revealed fewer boys subject to the army draft and a larger percentage planning to attend college.

Reasons given by graduates for their decision to attend a particular college- Reasons given by graduates from non-community college cities for planning to attend a particular college revealed that good courses, competent instructors, and high scholastic standards accounted for the graduates decision in more than half of the cases. A small number attributed their decision to general interest in the college, while some gave no particular reason. A summary of these data suggested that graduates are likely to select a particular college because they feel that it will meet their particular individual needs.

Family income of respondents from non-community college cities-Comparison of the graduates from non-community college cities who planned to attend college with those who did not plan to attend college indicated that a larger percentage of the latter were from families with incomes below $2500. Conversly a larger percentage of graduates coming from families with incomes of over $5000 planned to attend college. These facts are revealed in Table LXI. Graduates from non-community college cities came from families with incomes considerably higher than the average for the

TABLE LXI

Family Income of Graduates from Non-Community College Cities

Income	Planned to Attend College		Did not plan to Attend College		Total Group	
	No.	%	No.	%	No.	%
Under $2500	5	9.8	15	27.3	20	18.9
$2500-$4999	34	66.7	34	61.8	68	64.1
$5000 & above	12	23.5	6	10.9	18	17.0
Total	51*	100.	55	100.	106	100.

(*) 5 who planned to attend college did not indicate income.

Comparison between community college and non-community college data-

1. Graduates from non-community college cities returned completed questionnaires in 30.7 percent of the cases. Those from community college cities in 26.2 percent of the cases.

2. Of the graduates from non-community college cities 50.5 percent planned to attend college, of community college cities only 46.4 percent. It might be expected that the larger percentage of returns from non-community college cities would include more of those not interested in college. Either this supposition is untrue or else there were other influences to account for the differences indicated.

3. Non-community college city graduates received and accepted 19 scholarships which is above average for the state, while graduates from high schools in community college cities received but 14. A chi square test showed that this could be due to pure chances in 50-60 cases in 100.

4. Although they named a somewhat wider variety of vocations, the general interest pattern for graduates from non-community college cities was very similar to that for community college cities.

5. Graduates from non-community college cities gave nearly the same reasons for planning to attend a particular college as were given by graduates from cities in which a community college was located. As might be expected that placed somewhat less emphasis on "nearness to home" and financial assistance through scholarships.

6. In community college cities 15.8 percent of those who did not plan to attend college were from families with incomes under $2500 while in non-community college cities there were 27.3 percent. In community college cities it was shown in Table LVI that 25.0 percent of those who attended the local college were in the income bracket below $2500. These data support the conclusion that low family income discourages plans for college attendance, and that the community college gets more than its proportion of low income graduates.

7. Data regarding family size were very similar for the graduates from these two groups of cities. The average family of graduates who planned to attend college from community college cities had 3.9 members, and that from non-community college cities had 3.8 members. The average family of graduates who did not plan to attend college from community college cities had 4.1 members, and that from the second groups of cities had 4.2 members.

8. Data regarding the education of the parents was also very similar. The median grade completed by the fathers of graduates who planned to attend college from community college cities was 11.1 grades; for non-community college cities it was 11.6 grades. Similar data for the mothers of graduates were 11.1 and 11.8 grades. The median grade completed by fathers of graduates who did not plan to attend college from community college cities was 9.9 grades; for non-community college cities it was 9.0 grades. Similar data for the mothers of graduates were 10.7 and 10.4 grades.

9. Finally, the occupations of the fathers of the graduates from these two groups of cities were compared. Fewer of the fathers of graduates from community college cities were engaged in the extractive industries, and more were skilled and unskilled laborers. These differences would be expected to counteract each other, since it was found in an earlier chapter, that the sons and daughters of skilled mechanics are more likely to plan to attend college than graduates whose fathers are farmers; while sons and daughters of unskilled laborers are less likely to attend.

10. Little evidence was discovered in this comparison to show that high school graduates from cities with a community college were being more adequately served with advanced educational opportunities, than those from cities without a community college.

HIGH SCHOOL SIZE IN RELATION TO COLLEGE ATTENDANCE

Some believe that graduation from a small high school is an educational handicap and that a smaller percentage of graduates actually go to college. They seem to feel that the graduate of the small school is less likely to attempt the necessary adjustment to college life. Data reported in this study do not support this particular belief.

The relationship between school size and college attendance- These data indicate a range in the percentage of the upper third of the graduates of 1945, who planned to attend college, from 36.5 percent in the case of

Class Cu schools to 54.2 for Class Eu schools. In the Lower Peninsula the range was from 46.9 percent for Class C schools to 52.4 percent for Class B schools. Table LXII indicates that the medium sized schools in both the Upper and Lower Peninsula had the lowest percentage of graduates who planned to attend college. This fact raised the question as to why the small schools had such a good planned attendance record and suggested that influences other than size might have accounted for the difference. To test this supposition the influences of scholarships was checked.

TABLE LXII

Graduates Who Planned to Go to College from Various Sized Schools

	Class of School								
	A	B	C	D	Bu	Cu	Du	Eu	Total
Total No.	350	460	452	165	86	63	17	24	1617
Going to College	182	241	212	85	37	23	8	13	801
% Going to College	52.0	52.4	46.9	51.5	43.1	36.5	47.1	54.2	49.6

The influence of scholarships on college attendance by graduates from various sized high schools- When the graduates of the schools of various sizes, who were offered and accepted scholarships, were subtracted from the total, a very interesting fact appeared. The percentage of graduates who planned to attend college without the help of a scholarship decreased as the schools from which they were graduated decreased in size. This data is given in Table LXIII.

TABLE LXIII

Graduates Who had not Received Scholarships
but who Planned to Attend College

	Class of School								
	A	B	C	D	Bu	Cu	Du	Eu	Total
Total Graduates in this study	350	460	452	165	86	62	17	24	1617
No. going to College without scholarships	134	167	158	44	29	20	3	7	562
% of Total Going to College without Scholarships	38.3	36.3	34.9	26.7	33.7	31.7	17.6	29.1	34.8

Comparison of the figures for the Upper Peninsula and the Lower Peninsula showed that planned college attendance was better in the Lower Peninsula. This evidence offers further support to data presented elsewhere in this chapter which showed that attendance from more remote areas is likely to be smaller.

SUMMARY

1. Most superior high school graduates in Michigan have access to a good college, but some 5-10 percent who live in sparsely populated areas are located more than 100 miles from an institution of higher learning. A neighborhood college within a 25 mile commuting distance is not available to large numbers of the boys and girls outside of the city of Detroit.

2. The percentage of superior high school graduates who plan to go to college is apparently in inverse ratio to the distance from home to college. Only 41.1 percent of the graduates from the Northern 21 counties of the Lower Peninsula planned to go to college, while over 51 percent of the graduates from the remainder of the Lower Peninsula planned to attend college. These data suggest the need of additional educational facilities of collegiate grade for the boys and girls of the northern part of the Lower Peninsula. The vocational interests of the graduates indicate that special secretarial work should be provided as well as the usual college courses.

3. Data indicate no causal relationship between size of school and the probability that the graduate will attend college. However, small school graduates were offered more scholarships in proportion to total members. When these were eliminated from consideration the data reveal that a larger percentage from large rather than small high school plan to attend college. Possibly the added incentive of a scholarship is necessary to encourage small school graduates to continue their schooling.

4. Although little evidence was discovered to show that high school graduates from cities with community colleges were being more adequately served with opportunities for advanced education, there was some evidence to suggest that low income graduates were being more adequately served. Therefore these data support the contention that the junior college may not be the answer to the problem of inequality of educational opportunity but that some form of financial subsidy may be necessary, a program somewhat similar to G.I.benefits.

Chapter XI

SUMMARY AND CONCLUSIONS

The purpose of this chapter is to state the principal conclusions reached in this study of 1617 superior Michigan high school graduates in 1945. The conclusions are presented in terms of the factors studied and in the following order.

1. Family income
2. Family size
3. Education of parents
4. Occupation of Father
5. Parents nationality
6. The influence of a scholarship
7. College accessibility
8. Scholastic rank and high school size

In making generalizations from the conclusions the reader is reminded that the study included only superior graduates (top third), those customarily accepted for college without entrance examination, and that the data was collected by questionnaire from the graduates of schools of the entire state of Michigan outside the city of Detroit.

CONCLUSIONS

Factor 1- Family Income

1. Apparently family income exerts a strong influence in determining the likelihood of college attendance for superior Michigan high school graduates. Those who plan to attend college come from families with more than average incomes, but exceptionally high incomes are not essential. Approximately 67 percent of the superior graduates were from families who had incomes above $5000 and only 47 percent of the graduates from families with incomes below $5000 planned to attend.

2. A spot check of the actual matriculants at Michigan State College indicated that low income groups were no more likely to change plans than high income groups. This is important in terms of the development of a personal motivation to pursue appropriate advanced study. No amount of financial assistance is likely to benefit the superior student who has no desire to attend college. However, once the desire has been initiated, the student, regardless of finances, tends to carry out his plans. (See p. 29, 56-58).

3. A study of the graduates whose family income was above $10,000 indicates that sufficient financial help and other proper motivation gives promise of a possible over-all 34 percent increase in planned college attendance for superior students whose family income is now below $10,000.

4. The data support the thesis that the large bulk of financial assistance should go to students with a family income below $5000. For every scholarship given to a superior student whose family income is above $5000, there should be in the neighborhood of 17 scholarships awarded superior students whose family incomes are below $5000.

5. Also there are apparently more superior students in need of financial assistance whose family incomes are between $2500 and $4999 than those whose family incomes are either lower or higher than this amount.[1]

6. Since three out of eight students who planned college attendance also planned to earn more than half of their current expense, it is apparent that this group also needs substantial financial assistance.

Factor II- Family size

7. Except for graduates coming from broken homes, college attendance is apparently inversely proportional to the size of the family from which the student comes. Table XXX p. 69.

8. An only child from a broken home is apparently not as likely to attend college as one from a normal home. This relationship holds true even when there are as many as seven or eight children to be supported in the normal home.

9. In general the lower the income and the larger the family, the less likelihood there is of college attendance on the part of the children.

10. For families with one and two children a definite trend upward is evident in the number of graduates planning to attend college in every income bracket; but where families have three or more children there is no trend upward until the $5000 income rate is surpassed.

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1. Fifty-one percent of students were from $2500-$4999 income group.

11. Under $2500 there is little or no difference in the percentage of graduates planning to attend college from different sized families, but in the $2500-$4999 income bracket there is a definite decrease in the percentage with every increase in family size.

12. When incomes are above $5000 there is no apparent relation between family size and the number of superior graduates planning college attendance.

13. In families above the $10,000 income rate, 80 percent or more of the graduates plan to attend college regardless of the number of children in the family.

Factor III- Education of the Parents

14. When the annual family income was held relatively constant, it was found that the education of the parent is an important consideration in determining the probability that a superior high school graduate will attend college. In every salary range the graduates who have college trained parents are more likely to attend college than those who have less well trained parents.

15. The median schooling of the mothers of these superior graduates is more than one and one-half years above that of the father. Apparently the mothers education is more positively related to the students' high school rank than is the formal education achievement of the father.

16. Few families with college trained parents receive less than $2500 annually. Apparently colleges (at that time) provided a type of training which enabled one to earn a larger income which in turn can be used to finance the education of children.

Factor IV- The Father's Occupation

17. The parents of superior high school graduates are not an average occupational group, for some occupations are represented in larger proportion in these data than their numbers in the entire working population would warrant.

18. Graduates whose fathers are professional men, salesmen and retail merchants are much more likely to plan to attend college than the children of day laborers, truck and bus drivers, carpenters and mechanics, even though only superior academic students were studied. It is apparent that the superior children of laboring men, of farmers, and those engaged in transportation need further inducement to attend college.

Factor V- Parents Nationality

19. Nearly 90 percent of the parents of graduates in this study are American born, which is only slightly more than the percentage for the population of Michigan as a whole. This indicates that a proportionate number of children of foreign born patents are graduated from high school in the top third of their respective classes.

20. Superior students of foreign born parentage also planned to attend college in approximately the same proportion as those of native parentage. This suggests that there is no need for special assistance for this group.

21. Graduates whose parents are North Europeans are somewhat more likely to plan to attend college than graduates whose parents were born in South or East Europe.

Factor VI- Scholarships

22. Nearly 30 percent of the superior graduates in this study who planned to attend college accepted scholarships.

23. Of all scholarships offered, 26.0 percent were refused. This suggests that scholarships alone will not solve the problem of college attendance.

24. The percentage of graduates who selected a particular college because they were offered a scholarship ranged from 18 percent in the case of one institution to 70 percent for another. This variation indicates a great difference in the inducements to attendance offered by various colleges, and perhaps a difference in fundamental policy regarding the purposes of scholarships.

25. Data indicate that scholarships have not been granted primarily on the basis of student need. Although some students were refused scholarships because they could not show sufficient financial need, apparently all from families with incomes under $10,000 were considered eligible. At any rate the percentage of graduates receiving scholarships does not drop abruptly until the $10,000 bracket is reached.

26. Class rank is evidently the most important single factor in determining to whom a scholarship shall be awarded. This results in the awarding of a large share of all scholarships to valedictorians and salutatorians from small high schools.

27. Certain occupational groups (such as the skilled trades) appeared to be favored in the awarding of scholarships.

28. Neither education nor nationality of the parents showed up as important considerations in the awarding of scholarships.

Factor VII- College Accessibility

29. The percentage of superior high school graduates who plan to attend college is apparently in inverse ratio to the distance between the graduate's home and college. Only 41.1 percent of the graduates from the northern 21 counties of the Lower Peninsula and 42.6 percent of the graduates from the Upper Peninsula planned to attend college, while over 51 percent of the graduates from the remainder of the Lower Peninsula made plans to attend college. These data suggest the need of additional educational facilities of collegiate grade for the boys and girls of all northern Michigan.

30. The vocational interests of the graduates in those districts remote from centers of advanced education indicate that secretarial and nursing courses should be provided.

31. Data indicate little or no relationship between size of school and the probability that the graduate will attend college.

32. However, small school graduates were offered more scholarships in proportion to total numbers. When scholarships were eliminated from consideration the data reveal that a larger percentage from large rather than small high schools plan to attend college. Possibly the added incentive of a scholarship is necessary to encourage small school graduates to continue their schooling.

33. Little evidence was discovered to show that high school graduates from cities with community colleges were, in general, being more adequately served with opportunities for advanced education since no greater percentage of their superior graduates planned college attendance.

34. However, there was some evidence to indicate that low income graduates were being more adequately served in these junior college areas. Of those planning to attend the community college 25 percent came from families with incomes below $2500, and only 6.3 percent came from families with incomes over $5000. Therefore these data seemingly support the contention that the junior college is not the whole answer to the problem of the inequality of educational opportunity.

35. The location of a college is apparently an important consideration in the judgement of those graduates seeking general college courses. Those seeking special types of training find the college offering the desired courses even though it be at considerable distance.

VIII- Miscellaneous Factors:

36. Students who planned to earn all or a part of their college expenses showed a tendency to over-estimate probable earnings. Students who enrolled at Michigan State College in the fall term immediately after high school graduation actually earned from 10-25 percent less than they expected to earn.

37. Over 70 percent of those who made plans to attend college actually matriculated.

38. High scholastic standards, well planned courses, well-known and capable instructors were named as important considerations in the graduates choice of a college. The fact that a college is large and widely known apparently adds to its appeal.

Major limitations involved in the collection and treatment of data for this study centered around the following issues:

1. The selection of the top third of the graduates
2. The omission of Detroit high schools
3. The decision not to consider negro graduates as a special group
4. The limitations inherent in the questionnaire method
5. The limitations imposed by the Second World War

Reasons for the selection of the top third of the graduates are given in the review of related studies which state that superior students are most likely to enter college and are most likely to profit by college training. Furthermore since colleges customarily accept graduates in the top third of their classes without special examination, the graduate was free to make his own decision regarding college attendance. Therefore the factors which influenced him in that decision could be studied.

The omission of graduates from Detroit schools was necessary because of local restrictions, but was not believed to be serious since it is probably true that college facilities are fairly adequate in the metropolitan area, and also since other schools in Wayne County were well represented. Omission of Detroit schools would probably affect the

data dealing with attendance at specific colleges such as Wayne University, Ypsilanti State Normal College and the University of Michigan. However, comparisons of attendance at various colleges was not a major purpose of the study.

The decision to omit a special study of negro graduates was made when data revealed that there were too few cases from which to draw useful generalizations.

The questionnaire method was selected despite certain obvious limitations because it provided a convenient method of collecting large numbers of subjects on a broad sampling basis. In this case it was desirable to get a representative sample from the entire State of Michigan.

- Finally, the study was made during the war period, with data collected in the spring and summer of 1945. For this reason it was subject to war influences, e.g. selective service. However, the percentage of boys (29%) in the study was almost identical with the percentage of boys in the top third of the various graduating classes. Approximately half of these boys planned to enter the armed services. The remainder intended to engage in the usual post-graduate activities such as college, work, etc. When used in conjunction with pre-war studies these data can serve an important function in indicating trends and in offering suggestions for post-war action.

Chapter XII

A RECOMMENDED COURSE OF ACTION

The goals of education are self realization, economic efficiency, human relations and civic responsibility. It is here assumed that these goals are vital to the growth of a democratic way of life and, therefore, cannot be left to the vagaries of individual communities nor to the uncertain resources of individual families. It is further assumed to be the state's responsibility to share in the providing of optimum educational opportunity for each individual at the level of his personal ability.

According to the report of the Presidents Commission on Higher Education equality of educational opportunity does not exist even for those individuals in that superior half of the population which can profit by college attendance. A review of the data uncovered by this study indicates that only a fraction of the superior Michigan high school graduates are now attending college. Since the heart of the democratic philosophy is centered around the worth and dignity of each human individual, the inequality of educational opportunity warrants immediate attention.

Society, as a whole, also loses when human capacities are not fully realized, since the level of democratic society is directly related to the individual growth and accomplishments within its masses. It is with these principles in mind that the writer intentionally interprets the data in such a way as to obtain the following recommen-

dations for a program of immediate action.

Recommendation I

According to data presented in this study (Chapter V) it was estimated that 512 students were lost to college because of inadequate financial resources. This loss was from a group of 1617 Michigan high school graduates in the upper third of their respective classes. If this rate of loss were true for all superior high school graduates in 1945, our society lost, in that year alone, 3,121 potentially superior college students (31.6% 9,878) outside the city of Detroit.

Therefore it is recommended that financial assistance be made available to these students in the form of scholarships and/or direct financial subsidies. A study of the adequacy of the provisions established by the G.I. Bill of Rights is suggested as a method to determine an appropriate amount of such financial assistance. Individual need for a scholarship or other financial assistance might well be established on the basis of information pertaining to those factors herein described as barriers to higher education.

Data in this study of Michigan high school graduates support the recommendations of the President's Commission on Higher Education, that for purposes of income tax deductions the amount allowed for dependents in college be considerably increased, possibly to $1,000. Also, that tuition-free education, through the first two college years, be made

available in public institutions such as state colleges and universities, community colleges, and/or an extension of the high school program in centrally located communities. Also that tuition rates in the public senior colleges be materially reduced with additional state grants to make up the loss of revenue to the college.

Recommendation II

Since children from broken homes apparently need scholarships as badly as children from families with seven or eight children, it is recommended that these graduates be given special consideration by committees in charge of granting scholarships. It is also recommended that they be considered separately in any state or federal program of individual financial assistance.

Recommendation III

In every salary range graduates who have college trained parents are more likely to attend college than those with less well trained parents. Hence, one way to assure larger college enrollments in the future is to interest more future parents in attending college now. Reference to Figures 6-7 suggests that, other factors being equal, nearly twice as many superior high school graduates would plan to attend college if all their parents were college trained. Another possible method of increasing the education of parents and hence, of securing future college attendance, is by means of adult education programs.

Therefore, it is recommended that programs of adult education be expanded and that colleges be encouraged to develop

courses that fit adult needs and interests.

Recommendation IV

Certain occupational groups such as the professions, salesmen, and retail merchants, send more of their sons and daughters to college than do day laborers, truck and bus drivers, carpenters and mechanics even when their children are of similar superior academic caliber.

Therefore it is recommended that the various labor unions and farmers' organizations be encouraged to adopt programs of financial assistance to the children of their members, so that top-ranking high school graduates would plan college attendance in greater numbers.

Recommendation V

Apparently the expected number of the children of foreign born parents are graduated from high school in the top third of their respective classes and plan to attend college. Therefore it is recommended that no special provision be made to financially assist the children of foreign born parents.

Recommendation VI

In proportion to the total number of graduates, more scholarships are given to the superior graduates from small high schools(Chapter IX). This assistance has apparently encouraged many to attend college. However, without the incentive of a scholarship, the percentage of small high school graduates planning to go to college is much less than for large high schools. This suggests the need for a study and possible revision of the policy of granting a

scholarship to at least one graduate of every accredited high school in Michigan.

Recommendation VII

It is entirely consistent with the philosophy implied in this thesis that financial assistance be available to those who have earned it. Whether the valedictorian in a small class has earned the scholarship privilege any more than those who rank substantially lower in a large class is questionable. Therefore it is recommended that more scholarships be made available for Class A and B graduates, not only on a competitive basis but also on the basis of need.

Recommendation VIII

Since 26 percent of all scholarships were refused, it is evident that scholarships alone meet only a small part of the total expense and will not, therefore induce graduates to attend particular colleges.

Therefore it is recommended that scholarships be combined with some other form of assistance. A carefully planned work-study curriculum is suggested to meet the particular need of those students who feel compelled to seek employment immediately upon graduation from high school.

Recommendation IX

Evidence indicates that for every scholarship given to a student whose family income is above $5000, approximately seventeen should be awarded to graduates from families with incomes below $5000.

Therefore it is recommended that the bulk of all help be given to the low income groups, particularly those whose family income is between $2500 and $5000.

Recommendation X

Since 62.5 percent of the parents studied in the 21 northern counties of the Lower Peninsula and 58.9 percent of the parents in the Upper Peninsula have incomes below $2500, compared to 26.8 percent for the rest of Michigan, it is recommended that a larger percentage of scholarships and direct subsidies be given in these areas to take care of the differences in annual income and cost of living. Income data for underprivileged areas of the State indicate the extent of the difference.

Recommendation XI

Data in this study show that approximately 20 percent of the graduates in junior college communities, who planned to go to outside colleges, had accepted scholarships (Chapter X). This practice of encouraging graduates not to attend their community college, but to go elsewhere, is questioned on the basis of social economy.

It is recommended that graduates needing financial assistance attend their community college whenever courses related to their job interests are available, and that outside scholarships be reserved for the junior year, after they have been graduated from the community college.

Recommendation XII

There is aufficient vocational interest to indicate a need for a business college in the 21 northern counties of the Lower Peninsula and more secretarial education facilities in the Upper Peninsula. There is also indication of a definite need for more facilities for nurses training in the Northern counties and in the Upper Peninsula. It is recommended that these needs be studied further to determine whether the educational facilities should be taken to the students or the students be subsidized so as to be able to attend college in southern Michigan.

Recommendation XIII

It was found that graduates from low income families were no more likely to change their plans for college attendance than were those from high income families. Once the desire has been initiated, the student, regardless of finances, tends to carry out his plans. In terms of the development of personal motivation to pursue appropriate advanced study, the desire to attend college must be initiated as early as possible.

Therefore it is recommended that high schools give greater attention to vocational guidance, to the selection of a college, to plans for financing a college education, etc., at the ninth and tenth grade levels or earlier. It is also recommended that the opportunity to compete for scholarships and other forms of financial assistance be provided considerably before graduation from high school.

Recommendation XIV

Students quite generally planned to earn a larger part of their college expense money than proved possible in actual practice. They should be made aware of the fact that it is exceedingly difficult for a student to "work his way through" college, and at the same time adequately participate in the present socialized college program.

Recommendation XV

The importance which high school graduates attach to high scholastic standards, well planned courses, and capable instructors in the selection of a college indicates the drawing power of these factors. Therefore it is recommended that all colleges, and especially those serving remote areas, be given the financial and consultant services through which they may initiate continuing programs of curriculum revision and improvement, and that all substandard teaching be eliminated from the faculties.

Recommendation XVI

Large numbers of graduates in the various areas of the state were interested in such menial tasks as general office work, telephone office and relatively unskilled factory jobs. For these graduates and for those who have not decided upon their post-graduate activity, it is recommended that a work-study program be developed in order that superior students may move into the more skilled occupations. This might well be one of the functions of the community college and the 13th and 14th secondary school grades.

Recommendation XVII

Because of the probable importance of scholarships in any plan for equalizing educational opportunity in Michigan, and because of the need for an equitable basis for the awarding of such scholarships, it is recommended that a master plan be developed. Some of the recommended steps to be taken are as follows:

1. Encourage all agencies now granting scholarships to continue the policy of holding periodic meetings for the purpose of revising and improving the policies relating to the awarding of scholarships,
2. Determine new sources for scholarships. Interest additional organizations in the granting of loans and awards to superior high school graduates, who may be the children of their own members.
3. Lay out geographical areas in the state in terms of high schools and determine the number of scholarships needed to equalize opportunity for higher education in these areas, and also to encourage a desirable percentage of the superior students to enter college. Promote state legislation to provide the necessary funds to carry out this program of equalization in Michigan.
4. Formulate policies which will integrate Federal and State stipends, not only for the purpose of increasing the personnel being trained for certain areas of work, but also to equalize educational opportunity.

5. Agree upon a policy of awarding scholarships to high school graduates from junior college communities, which will encourage attendance at the community college during the first two collegiate years.

6. Adopt additional ways and means of informing high school students of available competitive scholarships considerably before high school graduation.[1]

7. Determine limits for each of the factors discussed in this study. Some suggested limits might be:

   Grant no scholarships in any family whose annual income is over $10,000.

   Grant no scholarships to students whose family income is over $5,000 and whose family has less than three children.

   Award scholarships entirely irrespective of race, nationality, or parental education, but with some special consideration for graduates from broken homes.

   Set aside a minimum number of scholarships to equalize educational opportunity in certain areas of the state.

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[1]The Scholarship Handbook prepared by the American Association of University Women and published by the Michigan Department of Public Instruction is recognized as a definite contribution in this field.

Recommendations for future study-

1. That several junior college areas be studied intensively over a 3-5 year period to determine why superior high school graduates (upper 1/3 or 1/2) are not attending the junior colleges in greater numbers but are going to colleges elsewhere, or are not going to college at all. A personal interview method is suggested.

2. That a study of the results of the G.I. Bill of Rights be made in order to determine appropriate amounts of financial assistance that might be necessary to provide equality of educational opportunity for all superior high school graduates.

3. That a detailed study be made of annual family income, per dependent, to determine more exactly when help is needed and the amount of such help. The use of narrower income brackets should help locate the point, apparently between $5000 and $10,000, where income ceases to be an important factor in determining the likelihood of college attendance.

APPENDIX A

To supplement the statistical data in the body of this thesis the following tests have been added. For a more complete explanation of the statistical procedures and the reasons for their selection, the reader is invited to review any one of the standard texts in statistical analysis.

Contents

APPENDIX A

Contents (Continued)

Statistical Tables

Table I
Scholastic Rank of Class B and C Respondents

Respondents Rank	No.	X^2
Top Ninth	312	.26
Second Ninth	316	.70
Third Ninth	274	2.09
Total	902	3.05

X^2 = 3.05 (not significant)

Table II
Post-Graduate Plans of Two Groups of Graduates ov Class C High Schools

Group I		Group II		Total
No.	X^2	No.	X^2	No.
28	.66	37	.66	65
52	.39	61	.40	113
113	.40	99	.44	212
34	.26	28	.23	62

X^2 = 3.44 (not significant)

Table III
Colleges Selected by Two Groups of Graduates of Class C High Schools

College	Group I		Group II		Total
	No.	X^2	No.	X^2	
Univ. of Mich.	17	.02	16	.02	33
Mich. State Col.	26	.05	25	.06	51
Western State	11	.07	8	.08	19
Others in State*	43	.12	42	.13	85
Out-State	16	.80	8	.92	24
Total	113	1.06	99	1.21	212

(*) Grouped for all colleges with fewer than 10.

X^2 = 2.27 (not significant)

Table IV

Occupations of the Fathers of Two Groups of Graduates from Class C high schools

Occupation	Group I No.	Group I X^2	Group II No.	Group II X^2	Total
Extractive Industries	31	.04	25	.05	56
Professions	19	.06	11	.06	30
Industrial Occupations	11	.01	9	.01	20
Skilled Trades	20	.03	19	.03	39
Other Occupations*	32	.38	35	.44	67
Total	113	.52	99	.59	212

(*) Grouped for all occupations with fewer than 10.

$X^2 = 1.11$ (not significant)

Table V

Family Income from Two Groups of Graduates of Class C High Schools

Income Range	Group I No.	Group I X^2	Group II No.	Group II X^2	Total
Under $2500	41	.00	37	.00	78
$2500-$4999	45	.23	47	.25	92
$5000-$9999	13	.18	9	.20	22
$10,000 and over	6	.77	2	.85	8
Total*	105	1.18	95	1.30	200

(*) 12 incomes not given.

$X^2 = 2.48$ (not significant)

Table VI

Number of Dependents in the Families of Two Groups of Graduates of Class C High Schools

No. of Dependents	Group I No.	Group I X^2	Group II No.	Group II X^2	Total
Two	4	.54	7	.59	11
Three	30	.00	27	.00	57
Four	36	.51	25	.56	61
Five	18	.40	22	.44	40
Over Five	21	.01	18	.02	39
Total*	109	1.46	99	1.61	208

(*) 4 not reported.

$X^2 = 3.07$ (not significant)

Table VII

The Education of the Fathers of Two Groups of Graduates oc Class C High Schools

Highest Grade Completed	Group I No.	Group I X^2	Group II No.	Group II X^2	Total
Grade 8	39	.02	36	.03	75
Grades 9-10	18	.88	9	1.01	27
Grades 11-12	14	2.85	27	3.26	41
College Attendance	38	.91	23	1.04	61
Total*	109	4.66	95	5.34	204

(*) Eight not given.

X^2 = 10.00 (significant)

Table VIII

Distribution of Graduates Effected by Military Service

Graduates	Class of School A	B	C	D	Bu	Cu	Du	Eu	Total
Total Boy Grad.	401	493	461	202	106	62	15	22	1762
In Service July 1, 1945	39	96	115	51	35	17	5	6	364
Planned Military Service	67	67	65	15	11	12	1	2	240
Total Military	106	163	180	180	46	29	6	8	604
% of total boys in military	26.4	33.1	36.9	32.6	43.4	46.8	40.0	36.4	34.3

Table IX

Family Income of Military and Non-Military Respondents (Boys from Class B Schools)

Income of Family	Military No.	Military X^2	Non-Military No.	Non-Military X^2	Total No.
Uncer $2500	17	.02	17	.02	34
$2500-$4999	41	.00	40	.00	81
$5000-$9999	7	.01	9	.01	16
$10,000 and over	2	.08	3	.08	5
Total	67	.11	69	.11	136

X^2 = .22 (not significant)

Table X

Family Income of Class C Graduates who Changed Plans Regarding Attendance at Michigan State College

Family Income	Matriculated No.	Matriculated X^2	Failed to Matriculate No.	Failed to Matriculate X^2	Total No.
Under $2500	11	.00	4	.01	15
$2500-$4999	20	.04	6	.11	26
$5000-$9999	3	.40	3	1.01	6
$10,000 and over	2	.19	0	.53	2
Total	36	.63	13	1.66	49

X^2= 2.29 (not significant)

Table XI

Size of Family of those Respondents Planning and Not Planning College Attendance

No. of Dependents	Planning Attendance No.	Planning Attendance X^2	Not Planning Attendance No.	Not Planning Attendance X^2	Total No.
One and Two	43	5.97	82	5.99	125
Three	241	2.18	196	2.21	437
Four	252	1.14	218	1.15	470
Five	132	.00	131	.00	263
Six	69	1.08	87	1.09	156
Seven	29	.14	33	.14	62
Eight and over	23	1.88	38	1.89	61
Total	789	12.39	785	12.47	1574

X^2 = 24.86 (significant)

Table XII

Education of the Fathers of those Graduates Planning and Not Planning to Attend College (Grades only)

Highest Grade Completed	P lanning College No.	P lanning College X^2	Not Planning College No.	Not Planning College X^2	Total No.
Under Six	15	1.79	32	1.42	47
Grade Six	23	4.17	55	3.41	78
Grade Seven	13	1.61	28	1.32	41
Grade Eight	200	.49	267	.40	467
Grade Nine	38	.28	54	.23	92
Grade Ten	66	.45	69	..37	135
Grade Eleven	38	.01	45	.00	83
Grade Twelve	135	10.53	94	8.11	230
Total	528	20.33	644	15.26	1173

X^2 = 35.6 (significant)

Table XIII

t-test Education of Fathers (12 grades only)

$P_1 = \frac{381}{801} = .475 \qquad P_2 = \frac{216}{816} = .264 \qquad q_1 = 1 - P_1 = .525 \qquad q_2 = 1 - P_2 = .736$

$\sigma_{P_1} = \sqrt{\frac{.475 \times .525}{801}} = \sqrt{\frac{.249375}{801}} = \sqrt{.000311}$

$\sigma_{P_2} = \sqrt{\frac{.264 \times .736}{816}} = \sqrt{\frac{.194304}{816}} = \sqrt{.000238}$

$\sigma_{(P_1 - P_2)} = \sqrt{.000311 + .000238} = \sqrt{.000549} = .0234$

$t = \frac{(P_1 - P_2) - 0}{\sigma_{(P_1 - P_2)}} = \frac{.475 - .264}{.0234} = \frac{.211}{.0234} = 9.02$ (There is a significant difference)

Table XIV

Education of the Mothers of those Graduates Planning and Not Planning to Attend College (Grades Only)

Highest Grade Completed	Planning College No.	Planning College X^2	Not Planning College No.	Not Planning College X^2	Total No.
Under Grade Six	10	.04	14	.03	24
Grade Six	17	.06	19	.05	36
Grade Seven	4	7.70	29	6.22	33
Grade Eight	135	3.46	228	2.62	363
Grade Nine	35	.53	54	.43	89
Grade Ten	61	.02	79	.02	140
Grade Eleven	42	.14	47	.12	89
Grade Twelve	186	6.06	163	4.86	349
Total	490	18.01	633	14.35	1123

$X^2 = 32.36$ (significant)

Table XV

t-test Education of the Mothers (12 Grades only)

$P_1 = \frac{468}{801} = .583 \qquad P_2 = \frac{309}{816} = .379$

$q_1 = .417 \qquad q_2 = .621$

$\sigma_{P_1} = \sqrt{\frac{.417 \times .583}{801}} = \sqrt{\frac{.243111}{801}} = \sqrt{.0003}$

$\sigma_{P_2} = \sqrt{\frac{.621 \times .379}{816}} = \sqrt{\frac{235359}{816}} = \sqrt{.000288}$

$\sigma_{(P_1 - P_2)} = \sqrt{.0003 + .000288} = \sqrt{.000588} = .0242$

$t = \frac{(P_1 - P_2) - 0}{\sigma_{(P_1 - P_2)}} = \frac{.583 - .379}{.0242} = \frac{.204}{.0242} = 8.43$

(There is a significant difference)

Table XVI

Percentage of Graduates Planning to Attend College from Various Sized Families According to the Fathers Education (Class C Schools)*

Termination Point of Fathers Education	Size of Family (No. of Children) 1	2	3	4	5 & over	Total
Grade 8	40.0	38.6	44.1	15.0	40.9	37.9
Grade 9-12	50.0	56.5	53.9	33.3	28.6	48.9
College	71.4	69.2	66.7	44.4	71.4	66.6

Graduates from broken homes omitted.

Table XVII
Occupational Classification of Fathers
t-test of Percentages

$P_1 = \frac{132}{801} = .165$ $\quad P_2 = \frac{188}{816} = .2304$

$q_1 = .835$ $\quad q_2 = .7696$

$\sigma_{P_1} = \sqrt{\frac{.165 \times .835}{801}} = \sqrt{\frac{.137775}{801}} = \sqrt{.000172}$

$\sigma_{P_2} = \sqrt{\frac{.2304 \times .7696}{816}} = \sqrt{.000216}$

$\sigma(P_1 - P_2) = \sqrt{.000388} = .0197$

$t = \frac{(P_1 - P_2) - 0}{\sigma(P_1 - P_2)} = \frac{.165 - .2304}{.0197} = -3.32$

There is a significant difference between groups in these industries.

Table XVIII
Professional Men

$P_1 = \frac{101}{801} = .126$ $\quad P_2 = \frac{48}{816} = .058$

$q_1 = .874$ $\quad q_2 = .942$

$\sigma_{P_1} = \sqrt{\frac{.126 \times .874}{801}} = \sqrt{.000136}$

$\sigma_{P_2} = \sqrt{\frac{.058 \times .942}{816}} = \sqrt{.000067}$

$\sigma(P_1 - P_2) = \sqrt{.000203} = .0142$

$t = \frac{(P_1 - P_2) - 0}{\sigma(P_1 - P_2)} = \frac{.126 - .058}{.0142} = 4.78$

There is a significant difference between these percentages

Table XIX
Retail Trades

$P_1 = \frac{70}{801} = .088$ $\quad P_2 = \frac{39}{816} = .0478$

$q_1 = 1 - .088 = .912$ $\quad q_2 = 1 - .0478 = .9522$

$\sigma_{P_1} = \sqrt{\frac{.088 \times .912}{801}} = \sqrt{\frac{.080256}{801}} = \sqrt{.0001002}$

$\sigma_{P_1} = \sqrt{\frac{.0478 \times .9522}{816}} = \sqrt{\frac{.04371516}{816}} = \sqrt{.0000535}$

$\sigma_{(P_1 - P_2)} = \sqrt{.0001537} = .01237$

$t = \frac{.088 - .0478}{.01237} = 3.25$

There is a significant difference between these percentages.

Table XX
Industrial Occupations

$P_1 = \frac{88}{801} = .109$ $\quad P_2 = \frac{61}{816} = .0747$

$q_1 = .891$ $\quad q_2 = .9253$

$\sigma_{P_1} = \sqrt{\frac{.109 \times .891}{801}} = \sqrt{\frac{.097119}{801}} = \sqrt{.000121}$

$\sigma_{P_2} = \sqrt{\frac{.0747 \times .9253}{816}} = \sqrt{\frac{.06911991}{816}} = \sqrt{.0000847}$

$\sigma_{(P_1 - P_2)} = \sqrt{.0002057} = .0143$

$t = \frac{.109 - .0747}{.0143} = \frac{.0243}{.0143} = 1.7$ (not significant)

Table XXI
Sales and Service Occupations

$P_1 = \frac{98}{801} = .122 \qquad P_2 = \frac{49}{816} = .06$

$q_1 = .878 \qquad q_2 = .94$

$\sigma_{P_1} = \sqrt{\frac{.122 \times .878}{801}} = \sqrt{\frac{.106016}{801}} = \sqrt{.000119}$

$\sigma_{P_2} = \sqrt{\frac{.06 \times .94}{816}} = \sqrt{\frac{.0564}{816}} = \sqrt{.000069}$

$\sigma_{(P_1 - P_2)} = \sqrt{.000188} = .0137$

$t = \frac{.122 - .06}{.0137} = \frac{.062}{.0137} = 4.52$

There is a significant difference between these percentages.

Table XXII
Skilled Trades

$P_1 = \frac{122}{801} = .152 \qquad P_2 = \frac{142}{816} = .174$

$q_1 = .848 \qquad q_2 = .826$

$\sigma_{P_1} = \sqrt{\frac{.152 \times .848}{801}} = \sqrt{\frac{.128896}{801}} = \sqrt{.000161}$

$\sigma_{P_2} = \sqrt{\frac{.174 \times .826}{816}} = \sqrt{\frac{.133724}{816}} = \sqrt{.000164}$

$\sigma_{(P_1 - P_2)} = \sqrt{.000325} = .018$

$t = \frac{.152 - .174}{.018} = \frac{-.022}{.018} = -1.22$

Not a significant difference.

Table XXIII
Unskilled and Others

$P_1 = \frac{65}{801} = .081$ $\quad P_2 = \frac{126}{816} = .154$

$q_1 = .919$ $\quad q_2 = .846$

$\sigma_{P_1} = \sqrt{\frac{.081 \times .919}{801}} = \sqrt{\frac{.074439}{801}} = \sqrt{.000093}$

$\sigma_{P_2} = \sqrt{\frac{.154 \times .846}{816}} = \sqrt{\frac{.130284}{816}} = \sqrt{.000159}$

$\sigma_{(P_1 - P_2)} = \sqrt{.000252} = .0158$

$t = \frac{.081 - .154}{.0158} = \frac{-.073}{.0158} = -4.62$

There is a significant difference between the groups of Unskilled.

Table XXIV
Country of Birth of the Fathers of Graduates Planning and Not Planning to Attend College

Country	Planning to Attend College No.	X^2	Not Planning to Attend College No.	X^2	Total No.
United States	680	.011	680	.010	1360
Canada	24	.459	18	.455	42
Poland	13	.136	16	.134	29
England	10	.027	9	.027	19
Germany	11	.00	11	.00	22
Sweden	7	.037	6	.037	13
Finland	7	2.018	17	1.984	24
Others	44	.009	44	.009	88
Total	796	2.697	801	2.656	1597

$X^2 = 5.35$ (not significant)

Table XXV

Country of Birth of the Mothers of Graduates Planning and Not Planning to Attend College

Country	Planning to Attend College No.	X^2	Not Planning to Attend College No.	X^2	Total No.
United States	712	.002	724	.002	1436
Canada	19	1.469	10	1.449	29
Poland	10	.074	12	.073	22
England	6	.044	5	.044	11
Germany	8	.019	9	.018	17
Finland	4	.961	9	.961	13
Others	38	.010	39	.010	77
Total	797	2.579	808	2.557	1605

$X^2 = 5.14$ (not significant)

Table XXVI

Distribution of Scholarships Among Graduates Whose Fathers were Engaged in Various Occupations

Occupation	Not Offered a Scholarship No.	X^2	Offered a Scholarship No.	X^2	Total No.
Extractive Industries.....	85	.62	47	1.46	132
Professions	68	..11	33	.26	101
Retail Trades.....	54	.49	16	1.15	70
Industrial Occupations.....	64	1.77	24	3.99	88
Transportation-Communication.....	21	1.05	3	2.45	24
Government Employees	29	.03	11	.07	40
Sales-Service	70	.02	28	.05	98
Clerical	19	.52	4	1.22	23
Skilled Trades.....	72	2.16	50	5.08	122
Unskilled	49	.90	12	2.11	61
Other .. Occupations.....	31	.07	11	.18	42
Total	562	7.74	239	18.02	801

$X^2 = 25.76$ (significant)

APPENDIX B

To inform the interested reader of the methods and techniques used in the collection of the data, questionnaires and letters are appended.

Typical student comments are also included to indicate the relative importance attached to certain factors by specific respondents.

MASON PUBLIC SCHOOLS

Mason, Michigan

May 11, 1945

Dear Principal:

Considerable attention is being given to the guidance of high school students and more interest is evidenced in follow-up studies by forward-looking administrators. They want to know what happens to their students after graduation.

I am making a study of the highest third of the June graduates to determine to what extent finances affect post-graduate plans; and, also how vocational preparation is related to later employment.

I propose to contact them directly with questions relative to family earnings, number of sisters and brothers, subjects studied in high school, etc.

It is hoped that this data will be of value in the guidance of future high school students, and that it will answer the question "Are our superior graduates prevented from attending College because of a lack of funds?" Information collected will be kept strictly confidential.

Will you cooperate to the extent of sending me the names and addresses of the upper third of the May-June (1945) graduates? A blank record sheet is inclosed for your convenience.

Very sincerely

Edwin M. Boyne
Supt. of Schools

High School Graduates 1945
(Upper Third of class)

School _____
City _____ Reported by _____

Name	Address	Sex M-F	Race W-B (#)	M.S.*

* Mark (M.S.) those now in military service or to be inducted prior to June 30, 1945.

(#) Be sure to check negro, using letter "B".

June 16, 1945

Mr. Otis Crosby
Dept. of Information Service
Board of Education
1354 Broadway
Detroit, Michigan

Dear Mr. Crosby:

I am making a study of some of the factors effecting the probability of college attendance on the part of the better students in our Michigan High Schools. To lighten clerical work I have asked high school principals for the names and addresses of those seniors in the upper third of the 1945 June graduating class, and have been contacting the individual graduates with a questionnaire (sample inclosed).

I know it is contrary to your general policy to circulate student lists for commercial purposes, but my only object in wanting such lists is for the scientific study and they would be kept strictly confidential. I have received the requested information from about 65% of all Michigan High Schools indluding a number of parochial schools in the Detroit area.

A typed list with the upper third checked, or if this is not available, the upper 10 percent, would be appreciated.

Very sincerely yours

Edwin M. Boyne
Supt. of Schools

EMB/f
Inc. 1

BOARD OF EDUCATION

Detroit, Mich.

Department of
Information Service

June 21, 1945

Mr. Edwin M. Boyne
Superintendent of Schools
Mason, Michigan

Dear Mr. Boyne:

I regret that I am unable to comply with your request of June 16. To begin with, we do not designate on our lists the upper ten per cent. In the second place, the lists are extensive, we having graduated more than 6,500 in June.

We made a survey a few years ago and found that about 18 per cent of our January graduates asked for transcripts of credits to colleges and 21 per cent of the June graduates. We have no way of knowing how many actually go to college. I note the national norm is around 20 per cent and that appears to be true for Detroit as well.

Very truly yours,

OAC:es

Otis A. Crosby

Mr. Edwin M. Boyne

Supt. of Schools

Mason, Michigan

Dear Graduate:

Your high school principal informs me that you are in the upper third of the 1945 graduating class of your high school. I wish to congratulate you on the occasion of your graduation and commend you for your high grade work.

I am making a study of the post-graduate plans of the superior graduates of every high school in Michigan. Results of this study will be of value in the guidance of future high school students. It will help school principals to evaluate subject offerings, and may indicate a need for lower college tuition rates and more scholarships.

I know that you will want to have a part in this study and that you will check the questions on the inclosed card and return it to me at once. All answers will be kept strictly confidential and no agency will be given your name nor any information about you.

Very sincerely

Edwin M. Boyne
Supt. of Schools
Mason, Michigan

CERTAIN FACTORS EFFECTING COLLEGE ATTENDANCE
(Follow-up Study)

Name_____ Address_____ No._____

2. Do you think your high school courses prepared you for college? Yes___No_____
   What vocation interests you most?_____
   What other high school subjects would you like to have studied?_____

4. Why did you decide to go to M.S.C.?_____
   Did brothers or sisters attend college? Where?_____ When?_____
   How are you financing your education? Personal earnings..... _____%
   Furnished by parents .. _____%
   All other sources..... _____%
   Were you offered a scholarship? _____

5. Father's Occupation:_____

6. Country of Birth: Father_____ Mother_____

7. Highest grade completed:(Father)-6-7-8-9-10-11-12 College 1-2-3-4-5 years
   (Mother)-6-7-8-9-10-11-12 College 1-2-3-4-5 years

8. Check annual family income: under $2500__,$2500-5000__,$5000-10,000___
   over $10,000___
   How many are dependent upon the family income for their living?_____

(Although students were not asked to make comment, many of them did add explanatory notes).

Typical Student Comments

The research you are doing interests me considerably....my school courses only partially prepared me for my future activities.. I think we need additional subjects in school which will more closely deal with our lives. I haven't had an opportunity to study sociology at all. Sex education is not given in schools....Aside from academic angles I feel that high school has been invaluable to me in that I have learned to get along with people.... There should be colleges where one can earn a part of his way through. Scholarships are helpful but a student would often feel that he received his education on a more equal status if he earned it himself. (56-C-7)

My father and mother are not living, so I work in the summer months and use the money to go to school with. I plan to go to college. I would be very grateful for any information you would send me, or what you think would be the best vocation to study. Thank you kindly for any information you might send. (3-D-10)

Frankly high school courses are not nearly strict enough to insure proper preparation for further education. (80-C-7)

If I continue to go to school I will most likely use my own money and will be helped by my parents. (90-C-10)

I think it would be better if more high schools offered more subjects in college preparatory courses and less in general and commercial courses, also have more college prep. subjects required rather than elective....It would be better if more scholarships could be offered without lowering the standards, it would encourage more to go to college. (107-C-1)

I received your card June 4 and I felt pleased about the whole thing. It is pleasant having someone else know about my fairly high scholastic standing and, also, I am a firm believer in lowering college tuition rates and increasing scholarships. (195-C-3)

I am glad that you are conducting a survey of this nature as I believe that high school guidance programs can be much improved. In our school if a Freshman signs up in a Math. Room he ends up with a lopsided schedule heavy with math., likewise with any other subject. Last year our school decided to require all students to meet college entrance requirements. Instead of starting out with the Freshmen class and following through the plan, the whole high school had to change at once, thus loading commercial students up with an excess of science and math. in their senior year which they undoubtedly will not use.

Why high schools keep insisting on only four subjects, I do not know. Many students are capable of handling more and will do better work if they have more to do. Why should a "B" average student or better not be encouraged to take more subjects if he wants to? (7-B-2)

I am interested in political affairs both here and abroad and would like to enter that field in some small way. (50-A-7)

I was refused permission to take an examination because they decided financial need was not great enough. (45-A-6)

Education consists of much more than mere study of books. I have paid dearly for some of this other "education". (10-Bu-28)

I have not been offered a scholarship. To my regret I somehow missed the chance. (7-Cu-3)

No, I haven't been offered a scholarship and I was wondering if it would be possible for me to get one yet. (235-D-4)

I am interested in this survey. I know there is a definite need for lower tuition rates and more scholarships.....I am fourth in my class but my Supt. mentioned nothing to us about examinations for scholarships. Is there still a chance? (235-D-7)

I was offered the chance to try for a scholarship but felt there were others who needed the financial help more than I. (15-B-5)

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