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The Need of Public Junior Colleges in Utah

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A Study of

THE NEED OF PUBLIC JUNIOR COLLEGES IN UTAH.

A Thesis

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By

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Table of Contents.

Introduction

"The need for junior colleges becomes more urgent from year to year. I would recommend that the Legislature make provision for the establishment and maintenance of state junior colleges at such centers as it may deem advisable."[1] This is a quotation from State Superintendent C. N. Jensen.

The following study is intended to answer, to a degree at least, the two questions inherent in this statement; namely, Is there a need for state junior colleges in Utah? If there is a need, where should they be established?

Delimitations. This study is not concerned with maintenance of state junior colleges except in a very general way. It does not propose to answer the question of program of studies to be offered if junior colleges are established. It has been the viewpoint of the writer that need for junior colleges can be ascertained by investigating the following problems:

1. What does a typical state junior college aim to do?
2. What are present junior college offerings in Utah?
3. To what extent do these junior colleges care for possible junior college students of Utah?
4. If there are areas not adequately served, what are possibilities that a sizable junior college student body can be secured?

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1. Seventeenth Biennial Report, June 30, 1928. p. 23.

Sources of information. The writer has used three recently published books on the junior college problem together with numerous monographs and magazine articles to answer question one, and for securing data pertaining to question four. Questions two and three have been answered in part through use of catalogues of present colleges which listed students in attendance during the school year 1928-29. This has been used as a typical year. Where the school does not publish a catalogue the desired information has been secured by direct communication with registrars of the various schools. The biennial reports of the State Superintendent from 1930 to 1928 have been used extensively in answering these questions. Reports of the State High School Inspector have proved valuable. These constitute the principal sources of information.

Technique. A general survey type of technique has been used. Four general problems have been surveyed.

1. What is the present status of junior colleges in the United States?
2. From what areas do the junior colleges of Utah draw their students?
3. What is the relationship that exists between the high school population and the junior college students in each of the forty school districts of Utah?
4. What are some accepted junior college standards that should be considered before a junior college is established?

Regarding this type of technique, Crawford says:

> "The school surveyor is more than a manipulator of facts and statistics. He serves somewhat in the capacity of an expert adviser as well. He must supplement his figures in many ways by common sense and expert judgment. He must not only find facts but interpret them." 2

The study has not been written with the idea of giving advice, but with the idea of presenting the facts. Tables, maps, graphs, standards, and all allied phases of the study have received what the writer considers to be common sense interpretations based upon facts presented.

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2. The Technique of Research in Education, p. 102.

The Development of the American Junior College.

A discussion of the general junior college movement in the United States is necessary to give a perspective to the problem in Utah. It is necessary to get a general idea of the philosophy that lies back of the junior college movement. The extent to which the junior college is functioning in America today is important. This chapter has b en written to indicate, in a general way, what type of institution this new school unit is.

Chapter 1.

The junior college is the most recent major innovation in the American school system. It is important to note that the last two important changes in American school organization have hinged themselves around the secondary school,---the junior high school, which is a downward extension of the secondary school, and the junior college, which is an upward extension of the secondary school. So recent has been this last movement that no standard book on the subject can claim to embody the most recent developments. Books published at intervals of twelve months during the last three years present very different pictures when they deal with such topics as the number of junior colleges in operation, size of student bodies, standards set up by statutes, curricula offerings, and many other phases pertinent to the movement.

Whitney reports that in 1927-28 there were in operation 146 public junior colleges in 25 states and the Philippine Islands.[1] There were 236 private junior colleges operating in 36 states, the District of Columbia, and the Philippine Islands, or a total of 382 junior colleges. This same report also shows that 74.6% of the public junior colleges have been established since 1922, and 2.1% established prior to 1910. The private schools have not had any recent phenomenal growth in the number of schools established. Prior to 1900, 15.1% of the private schools were estab-

1. The Junior College in America, pp. 10-11.

lished, 16% were established in 1922-23, and only 21.4% since the school year 1922-23.

The state of California has taken the lead in promoting the public junior college. In 1923 there were 31 such schools in operation in that state, the greatest number in any state. Two names are prominently associated with the promotion of this new school unit---David Starr Jordan, past president of Leland Stanford University, and Dr. A. J. Lange, past dean of the School of Education in the University of California. The development of junior colleges in California is pointedly discussed by W. J. Cooper.[2] The California idea has become a national idea as Whitney's investigations indicate.

The writer has so far attempted to show that when he, or anyone, attempts to write anything about public junior colleges, he is writing about a comparatively new institution and must be cognizant of the fact that any conclusions that have been reached or recommendations made are apt to have to be modified greatly. This will be made more clear when a discussion of some junior college standards is made.

These questions seem to arise at this point. What is this new unit of school organization that has experienced such a recent phenomenal growth? What does it aim to do? How well has it done the assigned tasks? What factors are promoting its growth?

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2. The Junior College in California---monograph no. C-3. State Department of Education.

Whitney has analyzed the definitions of a junior college as proposed by 24 state authorities.[3] These are some of the most clear cut definitions given.

1. An institution offering only two years of college work.

2. A curriculum covering two years of work equivalent in prerequisites, methods, aims, and thoroughness, to that of the first two years of an accredited four-year college.

3. A college maintaining 60 semester hours acceptable in the state university.

The American Association of Junior Colleges, in the report of 1927, defines a junior college as "An institution offering two years of instruction of strictly collegiate grade".

The North Central Association of Colleges and Secondary Schools, June 1927, published the following:

> "A junior college is an institution of higher education with a curriculum covering two years of collegiate work which is based upon and continues or supplements the work of an accredited high school."

The gist of all of these definitions seems to be, that a junior college is an institution offering two years of college work beyond the usual high school level. Such is the institution under consideration. There are, of course, many phases connected with standardization of a junior college, such as the preparation of faculty, library facilities, and many others which cannot be covered in this study. There are some standards

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3. Ibid.

regarding organization or creation of a junior college which will be discussed in later sections of the study. What are the aims or legitimate functions of junior colleges? Around this question hinges the educational philosophy back of the junior college idea. This question, I think, has been best answered by F. W. Thomas, President, Fresno State Teachers' College, Fresno, California.[4]

In order to arrive at conclusions as to what are proper functions for a junior college, Thomas proposed the following three tests:

1. Has the proposed function played any influential part as a recognized aim in the establishment of existing junior colleges?

2. Does there now exist a marked social or educational need not met by other institutions, which would be satisfied through the fulfillment of the proposed function by the junior college?

3. Has this function been advocated or approved by educators of sufficient standing and familiarity with college problems to merit consideration on such grounds.

It seems that this question of functions is vital to a discussion of any new school unit in any locality. This conclusion is supported by findings of Koos.[5] Dr. Koos was anxious to know what were moving forces or purposes back of this move-

4. Unpublished Ph.D. thesis. Stanford University, 1926. "The Functions of the Public Junior College."

5. The Junior College Movement, Chapter II.

ment. What do the proponents of the movement aim to have the school do? Koos found 21 separate and distinct purposes for justification of the junior college. These purposes cover a very wide scope. Writers on the subject have serious doubts as to whether many of those purposes are defensible.

The conclusions reached by Thomas, when he applied his three tests, are that the junior college has four basic functions:

1. The preparatory function.
2. The popularizing function.
3. The terminal function.
4. The guidance function.

The preparatory function seems to have been greatly encouraged by the larger established universities. Dr. Jordan and Dr. Lange seemed to see that the first two years of work in a four-year college or university were largely preparatory for the last two years. In reality they are merely a continuation of secondary education. They concluded that a university could function as it is intended it should function when it is relieved of this preparatory function. Writing in 1913, Dr. Jordan said:

> "I am looking forward to the time when the large high schools of the state, in conjunction with the small colleges, will relieve the two great universities from the expense and from the necessity of giving instruction of the first two university years. The instruction of these years is of necessity elementary and of the same general nature as the work of the high school itself. It is not desirable for a university to have more than 2000 students gathered together in one place and when the number comes to exceed that figure, then some division is desirable." 6

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6. School Review, March 1913. p. 166.

The preparatory function has been of great influence in promoting the junior college movement. The large universities have welcomed this development, and the local communities have taken pride in the fact that they were doing regular college and university work.

The popularizing function has strengthened the preparatory function. To popularize college training, to a great extent at least, is to make college facilities available.

According to some of the early investigations of the movement this was the important motive for establishing junior colleges. It was apparent in the early investigations of college enrollment that colleges drew their students from rather a small area---the area adjacent to the college. Koos found that in 39 four-year colleges 40.9 per cent of the enrollment came from within a radius of 25 miles and that 27.5 per cent from the immediate community.[7] The U. S. Bureau of Education survey of 1914-1915 showed facts very similar. This point will receive considerable attention in later sections of this study.

The terminal function, according to practically all educators qualified to speak with authority, is one of the most important which the junior college has to perform. As has been indicated, the first two years work in the ordinary four-year college is preparatory for the last two years. The terminal

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7. L. V. Koos, "The Residential Distribution of College Students," School and Society, XLVIII, 557.

function has not been recognized in the junior college work of the four-year colleges. Some of those who have written cogent arguments for these terminal, vac tional, semi-professional courses are mentioned here. Koos states his conclusion regarding this type of work in the following language:

> "The hope must rest not in readjustments within colleges and universities of the current type, but in institutions in which the first two college years under consideration are terminal grades. That is to say, it rests in the utilization of the junior college idea." 8

R. J. Leonard, Director of the School of Education of Teachers College, Columbia University, says:

> "In so far as universities concern themselves with professional education, their efforts will be confined to the higher and highest levels. Those are the permanent university fields. No other institutions can perform these services satisfactorily, and in so far as junior colleges concern themselves with occupational education, their efforts will be confined to the middle level. In like manner, this will be their permanent field." 9

Thomas reports that he found in such an occupation as engineering that there was a very gre t need for the semi-professionally trained worker. Indeed his investigation showed that in the corporations employing engineers, which he investigated, there were 755 men employed in semi-professional work, and 239 employed in purely professional work.[10] Nicholas Riccardi, chief of Division of City Secondary Schools, California, writes concerning this function:

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8. L. V. Koos, Junior College Movement, p. 120.
9. Teachers College Record, May 1935, p. 724.
10. Ibid., Reported in The Junior College---Its Organization and Administration, by Proctor.

> "The secondary school is intended to give concrete expression to democracy in education. The new type of secondary school, therefore, should make available to all a program of public education characterized by equality, continuity, and completeness of educational opportunity, and the junior college is the most recent vital aspect of the new secondary school." 11

A final word on the terminal function from Dr. Lange will, it seems to the writer, suffice to make clear the importance of this function. Writing in 1918, Dean Lange said:

> "The junior college will function adequately only if its first concern is with those who will go no farther, if it meets local needs efficiently, if it turns many away from the university into vocations for which training has not hitherto been afforded by our school system."

The guidance function. According to Koos, Professor of Secondary Education at the University of Minnesota, who has been quoted frequently, there goes on in the typical four-year university a process of "depersonalization". The individual student, except the exceptional, becomes lost in the crowd. Koos shows further that the College of today are stocked, for the most part, in first two years with immature youths. 12 The middle 50 percent enter Minnesota University above the age of seventeen years nine months, and below that of nineteen years six months. A fourth of the freshmen range in age from fifteen years to seventeen years nine months. Thomas concludes:

> "The University intent on professional preparation, is loth to acknowledge any responsibility for those who cannot go beyond the lower college years. The junior college must accept the duty of guiding these into lines of study for which they are fitted and which they can profitably pursue." 12

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11. Ricciardi---"The Need for Terminal Courses in the Junior College", Bulletin no. c-6. 1928.
12. The Lange Book, 1927, p. 122.

These statements present something of the situation that confronts the typical freshman who now goes to college. Riccardi shows another phase of the guidance function. In 1928 California had approximately 27,000 high school graduates. He estimates that 50 per cent of these have earned credits necessary to be 'recommended' to college. That means that the other 50 per cent need not apply for admission to the University of California or any other university in that state because only the 'recommended' students are accepted. It is this 50 per cent of 'unrecommended' students that need guidance. Authorities are not willing to admit that those who graduate from high school and are kept out of our four-year university cannot profit by some type of college training.

It seems that the universities are becoming more aware of the need of guidance for entering college students. The introduction of "freshman week" is indicative of this feeling. Orientation courses are becoming more common. L. D. Coffman of the University of Minnesota, in an address before the National Association of State Universities in 1924, gave what appears to be sound advice. He said there should be a separate junior college administrative unit on every university campus. There should be a specially selected "Freshman Faculty" chosen on the basis of their fitness to guide and advise such students. He characterized this new unit in these words:

> "If the junior college is created, it must have a director, a man who knows the high school and its problems, a man who is a good judge of teaching and who maintains that the first two years exist primarily for the students, not for contributions to science. The organization will not be complete unless those who teach the freshman will be will to be advisers to the freshman . . .
>
> "The efficiency of our higher institutions of learning in the future will be dependent, not upon the number they eliminate, but upon the extent to which they guide wisely, train them in proper habits of thinking, become interested in their individual abilities and personal welfare, reorganize the materials of instruction, improve their methods of teaching, introduce programs of work adapted to modern society and to the needs of the students." 14

The preceding discussion has been an attempt to assemble the best thought to be found in print regarding the mission of this new school unit, the junior college. It appears that there are some worthy functions to be performed by this school unit.

In the first part of this chapter the writer proposed four questions which seemed pertinent to the chapter. What is a junior college? This has been answered by giving definitions proposed by two different groups. Those given by state educators, and those given by accrediting associations. The second and fourth questions are in a sense one question. What are the aims and functions of the junior college? What factors are promoting its growth? The functions which have been generally agreed upon as belonging to the junior college have been listed and discus-

14. L. D. Coffman, "Major problems of the Freshman Year" in Transactions and Proceedings of the National Association of State Universities, II, 40-42.

sed. These are: the preparatory, the popularization, the terminal, and the guidance functions. It is the attempt on the part of school people and general citizenry to have these objectives realized, that has been the moving force in fostering this type of school. The third question asked: How well has this new unit discharged its assigned tasks? has no definite answer. It is one of those questions which can only be answered by comparison and in this case there is very little data to compare. All people interested in junior colleges would like to know the answer, just as all people interested in any phase of school work would like to know how well that phase is succeeding. We can give a slight indication as to how well the junior college is succeeding in the preparatory function compared with the junior college work given in a four-year university. Here the degree of success is measured by the success of students in senior college and graduate work. W. C. Ells, Associate Professor of Education, Stanford University, provides some meagre evidence on this point. Ells investigated the record of 1200 upper division students at Stanford University. He classified them into two groups. Those who had received their first two years of university work at Stanford and those who were transfer students. Only 80 were transfer students from junior colleges as a junior college has been defined in this study. Ells says his results should be taken as being suggestive rather than

conclusive. This is his summary of findings:

> "A comparative study of the records of various groups of students at Stanford University over a three-year period shows that students of the University, after completing a junior college course elsewhere, are superior in ability to other groups when measured by standard intelligence test scores, or when measured by their previous academic records; that they have made slightly lower average records during their first year of adjustment to university conditions, but that at the conclusion of their course they have carried off much greater than their share of graduation honors. Judged by results to date, the junior college seems to be successfully performing at least one of its important functions---that of preparation of students for advanced work in the University." 15

Koos found a superior type of teaching in junior colleges compared to universities. In scholastic achievement of students the junior colleges are shown in a favorable light.

The general problem of the junior college has been sketched. Junior colleges have had a very rapid growth in the United States. This is indicative that they have been giving valuable and appreciated service. That does not answer the questions: Does Utah need public junior colleges? If so, where are some desirable centers?

Chapter 2.

Whether Utah needs additional junior college facilities depends a great deal on how well her present facilities are serving her needs. This was one of the criteria proposed at the beginning of this study. In this chapter each of the schools is mapped out separately to show the home residence of its junior college students. The school year 1928-29 has been selected as a typical year. Figure 1 shows the location of all schools in Utah offering junior college work.[1] Three of the colleges are state controlled and state supported.

The Utah State Agricultural College at Logan, and the University of Utah at Salt Lake City, are four-year institutions. The Branch Agricultural College at Cedar City is a junior college which has third and fourth year students in high school work. These are the three state schools. The other schools listed are denominational colleges. The Brigham Young University at Provo; Weber College at Ogden; L. D. S. College at Salt Lake City; Snow College at Ephraim; Dixie College at St. George, are all controlled and supported by the Latter Day Saint Church. Westminster College of Salt Lake City is an interdenominational church school. As will be shown later, this study deals somewhat with future conditions. It is appropriate to introduce at this point an item which may seem extraneous but which to the writer appears very pertinent.

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1. St. Mary's of the Wasatch, a denominational school in Salt Lake City, is not considered in this study except in a table given later. Only 20 college students were enrolled in 1928-29.

Location of Colleges operating in Utah 1928-29.
1. Utah State Agricultural College 2. University of Utah, L.D.S. College, and Westminister College 3. Brigham Young University 4. Weber College 5. Branch Ag. College 6. Snow College 7. Dixie College

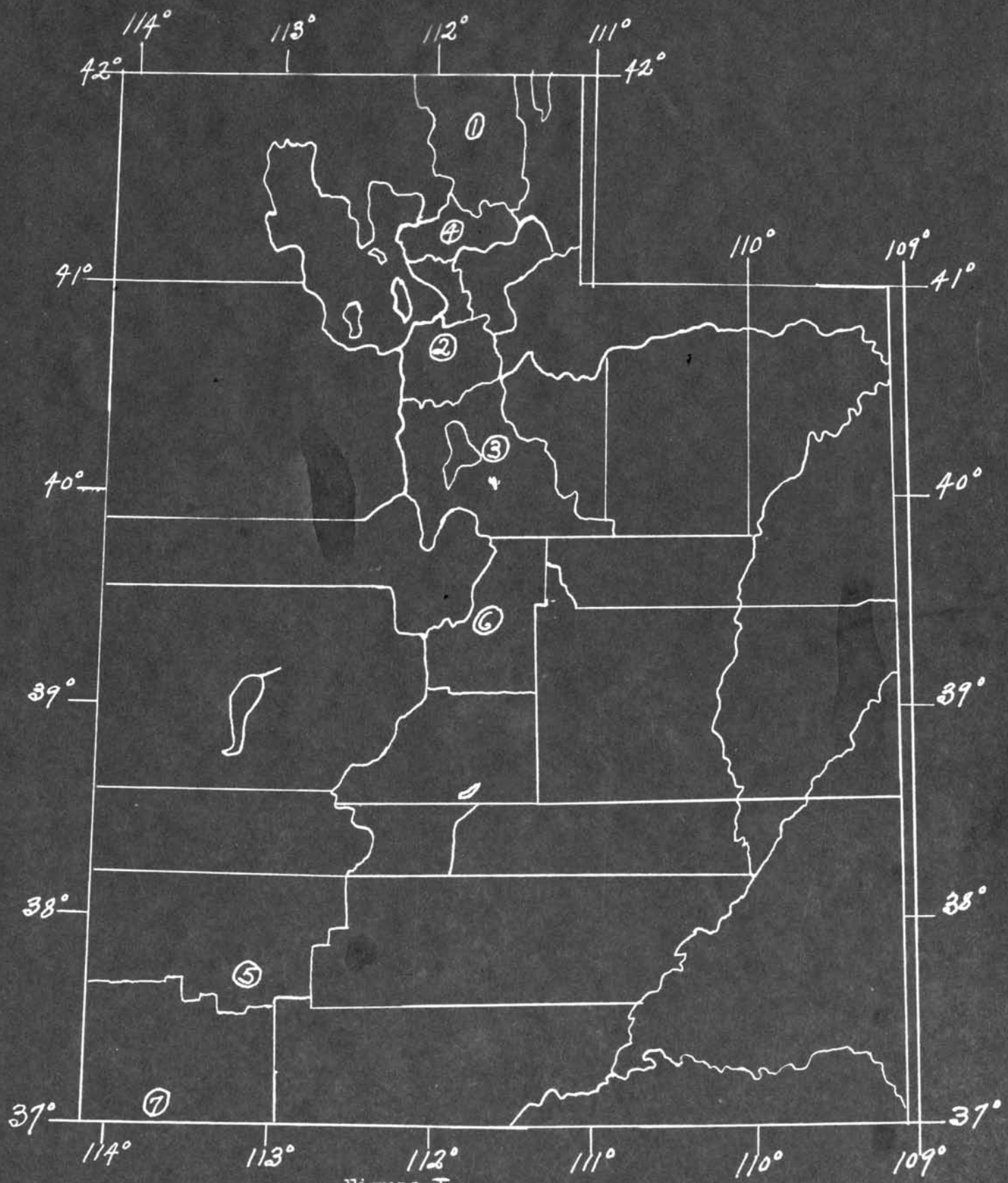

Figure I

The question of junior colleges in Utah has been discussed a great deal recently because of the contemplated action of the Latter Day Saint Church. It has been the intention of the leaders of this church to make a rather sweeping change in their school system. In a recent communication Joseph F. Merrill, Church Commissioner of Education, said, "The junior colleges of the church will close sooner or later, at least some of them will probably be closed in June, 1931".[2] This point will be recognized and given consideration in later sections of the study.

In order to present clearly the junior college enrollment of each of these schools, for 1928-29, spot-maps were prepared and students located, as nearly as could be done, according to towns. The information was secured by using the published catalogues of 1929 which listed the students for the year 1928-29 and their home addresses. If schools did not publish catalogues, as was the case with some of the smaller ones, the information was secured directly from the school registrar. In the tabulation no attempt was made to list the students by counties or school districts. In making the spot-map, however, it was deemed advisable to use a map having county lines. But "spotting" was done by towns. The writer also secured from reports sent to the State Superintendent's office the junior college enrollment by school districts for each school.[3] The composite tabulation from this

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2. Joseph F. Merrill---Personal communication to the writer, January 9, 1930.

3. University of Utah by counties rather than school districts.

source is listed in table I.

If table I is compared with the separate spot-maps and the composite spot-map which follows, some minor inconsistencies will be seen to exist. This arises from these sources; first, the spot-maps, because of necessity of using a population legend, cannot be absolutely accurate without being confusing. The spot-map which has been used as a graph is used to present data in picture form. A second reason is that the author intentionally used data from two sources. One to check against the other. The spot-map was made from catalogue data. Table I was made from reports rendered to the State Superintendent. At least part of this discrepancy is easily explained. In the reports rendered to the State Superintendent there were several students 'unclassified' as to whether they were freshmen, sophomores, juniors, or seniors. This was not the case in the catalogues used. This would tend to make the totals of junior college students different in some cases.

UTAH STATE AGRICULTURAL COLLEGE

Figure II shows the geographical distribution of freshmen and sophomores at the Utah State Agricultural College in 1928-29. The distribution by towns is appended to this study. There was a total of 721 junior college students shown by separate towns. Table I shows 594 junior college students for this school. Which is more nearly correct? In the summary of attendance given in

Enrollment of Junior College Students at the Utah State Agricultural College 1928-29

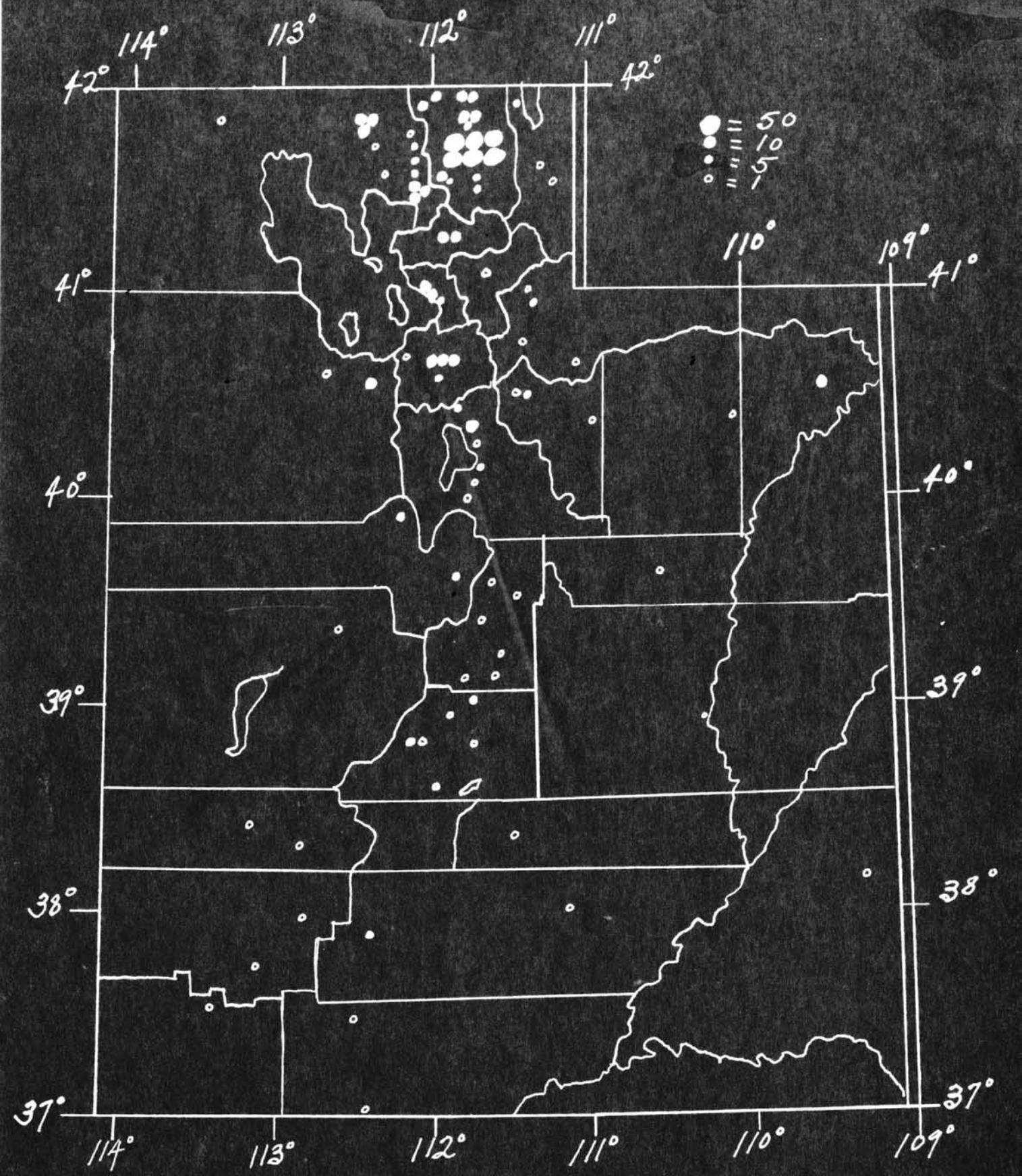

Figure II

TABLE I

Showing junior college total enrollments of Utah students in Utah colleges for the year 1928-29 shown by school districts.*

From the report to the State Superintendent.

District	U. A.C.	B. Y.U.	U. of U.	B. A.C.	Weber	Snow	L. D.S.	Dixie	West. Wm.	St. Mary	Total
Alpine	18	76			1		1				96
Beaver	5	7	6	16					4		38
Boxelder	79	1	25		30		1				136
Cache	126	2	6	3	6				1		143
Carbon	3	8	30			2			7		50
Daggett		1									1
Davis	21	10	62		10		9			1	113
Duchesne	1	4	11			2					18
Emery	1	7				11	2		1		37
Garfield	6	5	6	6		4		4			31
Grand			4								4
Granite	12	1		1			2				16
Iron	1	10	4	50	1			2			68
Jordan	4	20					2				26
Juab	7	16	80	1	1					3	47
Kane		1	1	4	1			2			9
Millard	6	37	11		1	12			1		67
Morgan	5	5	5		15	3					33
Nebo	13	132		1		2			1		149
North Sanpete	7	21	15			30			5		86

* University of Utah shown by counties.

TABLE I (continued)

Showing total junior college enrollments of Utah students in Utah colleges for the year 1928-29 shown by school districts.

District	U. A.C.	B. Y.U.	U. of U.	B. A.C.	Weber	Snow	L. D.S.	Dixie	Nat. Min.	St. Mary	Total
North Summit	10	3	21								34
Park City	1										1
Piute			2	6		3					11
Rich	15		10				1				26
San Juan		3	5								8
Sevier	22	43	26	1		21			2		115
South Sanpete	4	3			1	112			2		122
Tintic	5	8									13
Tooele	10	4	35				1		1		51
Uintah	11	17	10						2		40
Wasatch	12	15	6								33
Washington		6	4	8				63			81
Wayne	1	1				7					9
Weber	4	2	71		81				1		159
S. L. City	10	15	1360		1		79		17	9	1491
Ogden	12	3			257	2			7	1	287
Provo	3	200	39				3		1		245
Logan	158	1									159
Murray		5				5					10
TOTALS	594	685	1816	96	407	217	109	71	53	14	

the 1929 catalogue, page 248, it is reported there were 322 sophomores and 490 freshmen or a total of 812. From this it seems that the figures used for making of figures are more nearly correct. Again, in a report direct from the school registrar it is shown that there were in attendance at this school from Cache County, during 1928-29, 695 students. If there were 695 total students from Cache County it is reasonable to conclude that there were more than 284 junior college students, because if a whole district is considered there are likely to be more junior college than senior college students. The writer has therefore concluded to interpret his findings as shown in figure II. Of the 721 students referred to above 402 are listed as residing in Cache County. There is some evidence to show that several students who register as living in Logan are really not legal residents of Logan, but are students who live there only during the school year. How great this tendency is cannot be ascertained accurately hence it must be disregarded. This tendency though swelling Logan's total registration, would not seem to affect other districts of Utah, because it seems more logical to assume that those non-natives who register as Logan students would be from other states, since a higher fee is charged non-residents of Utah. The 402 who live in Cache County comprise 55.7 per cent of 721. These students can practically live at home and commute to and from school. Seventy-four of the 721 are shown to live in Boxelder County, the contiguous county to

the west. These students live within 30 or 40 miles of the College with the exception of a few students. Transportation for these students does not seem feasible due to barriers. If those of Boxelder County are added to those from Cache County it is seen that approximately 66 per cent of the junior college students live within a radius of 40 miles of the College. Figure II reveals the fact that this college does draw students from practically every corner of Utah.

UNIVERSITY OF UTAH

Figure III presents the geographical distribution of the Utah students enrolled in the junior college years at the University of Utah in 1928-29. The data was secured from the school catalogue of 1929. The same procedure was followed as was done with the Utah State Agricultural College students. No attempt was made in the tabulation to list students by counties or school districts. The community was the basis of listing.

In areas of rather dense college enrollment, of course, the exact town location has been impossible with the legend that was used. When figure I is compared with table I, the data of which was secured from reports rendered to the state superintendent, there is very close harmony seen to exist. From data used in making figure II there was a total of 1825 junior college students at the University of Utah in 1928-29. Of this total 1280 or approximately 70 per cent lived in Salt Lake City. There were an additional 108 from Salt Lake County from points outside of Salt Lake City. It might be explained that from data secured from reports which went to make up table I the number from Sale Lake County was greater than the figure given here, and the number from Salt Lake City was fewer than that given here, The total from the county and city checked very closely. The most accessible territory to Salt Lake City is Davis County to the North, Utah County to the South, and Eastern Tooele County to the West. This territory is

Enrollment of Junior College Students at the University of Utah 1928-29

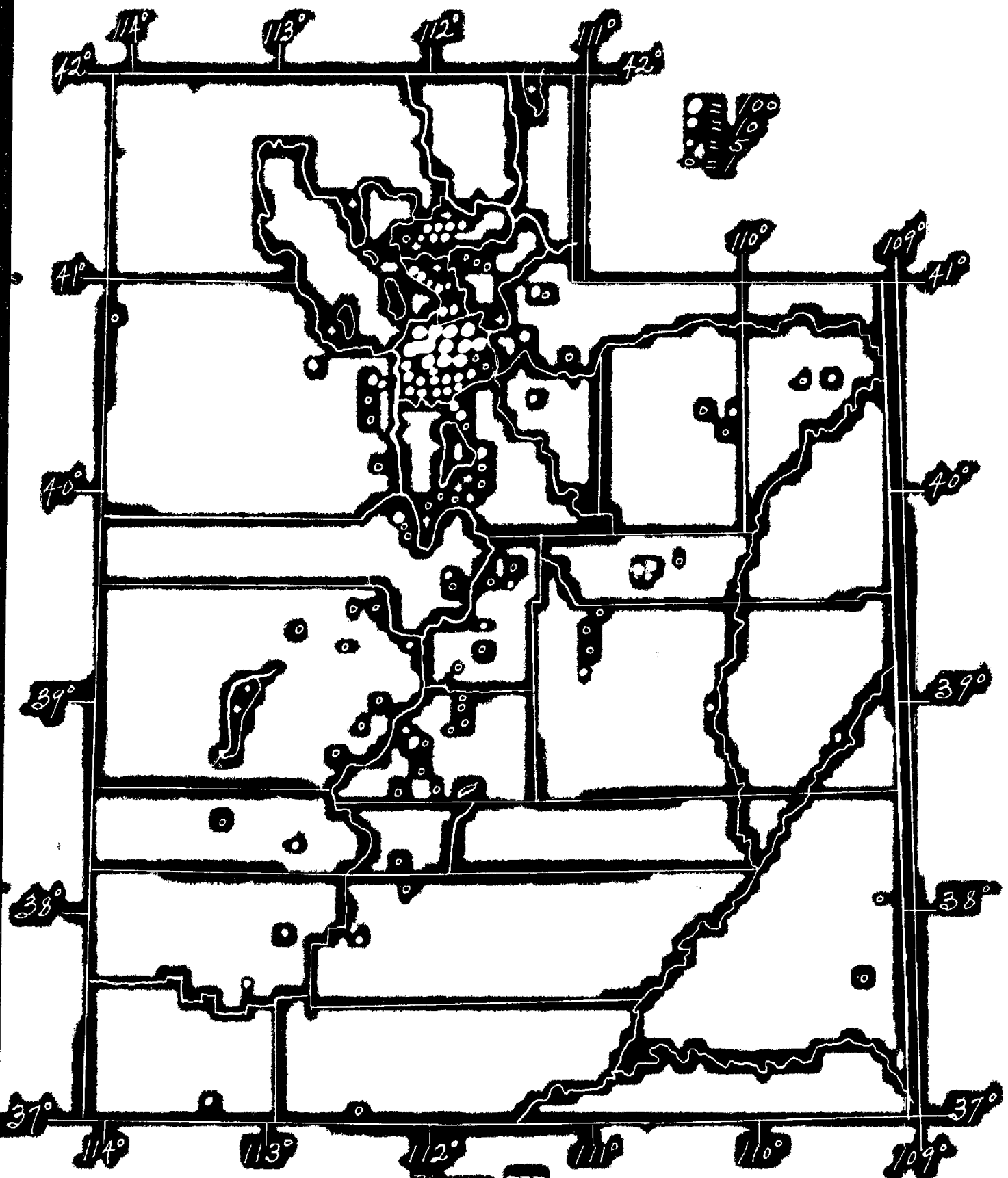

Figure III

all provided with excellent transportation facilities. The writer does not attempt to answer the question to what extent students attending the University from these areas commute. From Tooele and Grantsville, the two principal centers in Eastern Tooele County it is between 35 and 40 miles to Salt Lake City. From the most northern important center in Davis County is approximately 30 miles. If we include only the northern part of Utah County, as far south as Lehi, it is about 32 miles. These distances are taken from the most recent map published by the state road commission. If we take the total of students residing in Sale Lake City, those in other parts of Salt Lake County, those from Davis County, from eastern Tooele County, and from northern Utah County, we secure a total of 1491 students. This is 81.9 per cent of the total for 1925. In these calculations none of the territory to the east of Salt Lake City, coming within the 35-mile radius, was included. This territory is separated by a mountain barrier. We can say that at least 80 per cent of the junior college students of the University of Utah is drawn from a radius of 35 miles not separated by any barriers. As we observed in figure II, in connection with the Utah State Agricultural College, the University of Utah draws students from many widely scattered areas of Utah. Its culture reaches practically every corner of the state through its regularly enrolled junior college students.

BRIGHAM YOUNG UNIVERSITY

This is the largest of the private schools of Utah. It is a regular four-year institution. The letter quoted in the early part of this chapter concerning the fate of the L. D. S. junior colleges is not interpreted as referring to this institution. Figure IV presents the Utah students enrolled in this institution in the freshmen and sophomore years for 1928-29. The data for figure IV was taken from the 1929 school catalogue. As in the case of the two schools already discussed the unit of listing was the town or city, not the county or school district. If figure IV is compared with table I there is found to exist a very close agreement. The total number of students listed in table I for this school is 685, the total used for making figure IV is 676. Table I was constructed for the B. Y. U. from the same source of data as that pertaining to the Utah State Agricultural College and the University of Utah. The data for figure IV is included in the appendix to this study. Since there is such a close agreement between the two sources of data used the writer has concluded to use the data from table I in interpreting figure IV.

Utah County, in which Provo the seat of the Brigham Young University, is the geographical center, is made of three separate school districts---Alpine district in the northern part of the county, Provo City district in the central part, and Nebo district in the southern part. It is approximately 33 miles from Provo to

Brigham Young University Junior College Enrollment of Utah Students 1928-29

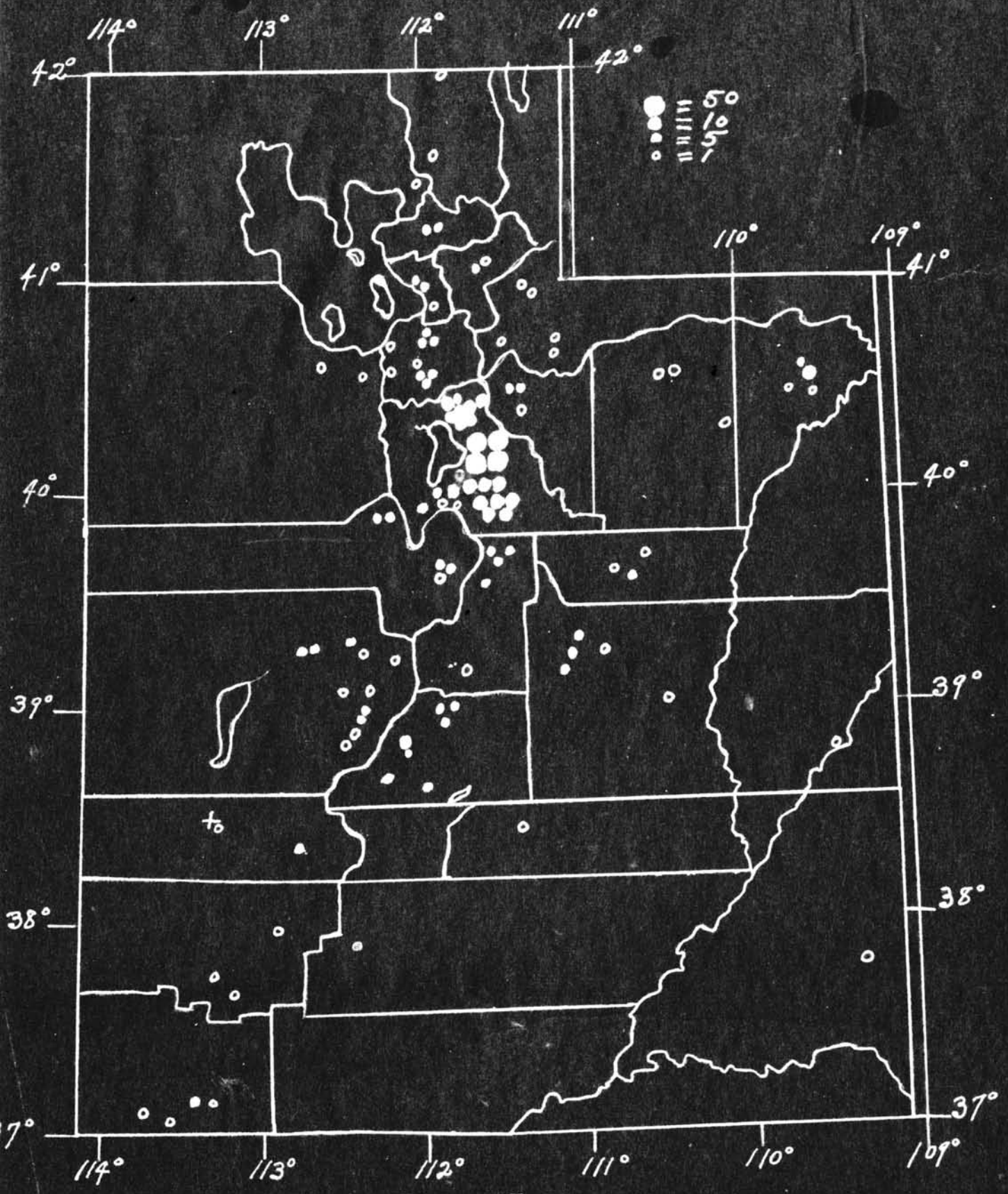

Figure 1V

the farthest point of importance south within Utah County. It is some less than this to the farthest point north. Table I shows that 200 of the 685 junior college students reside in Provo City. This is 29.6 per cent. In the three districts of Utah County there is a total of 408 students or 59.6 per cent of the tota. Figure IV reveals that aside from Utah County there is no district that contributes particularly heavy registration.

There is one part of figure IV which should receive special attention at this time because of its importance to later sections of this study. The writer wishes especially to call attention to the comparatively large number of students attending the Brigham Young University from Millard County and Sevier County, 27 and 43 respectfully. Fillmore could be considered the geographical center of population in Millard County, and Richfield is the closest to the center of Sevier County. By use of highway data previously referred to, it is found that it is approximately 110 miles from Fillmore to Provo and 120 miles from Richfield to Provo. The importance of this registration will be referred to again.

WEBER COLLEGE

This is the largest of the junior colleges of Utah. It is one of the Latter Day Saint schools. Figure V presents the geographical distribution of its student body for the year 1928-29. This school did not publish a catalogue in 1929, therefore the information from which figure V was prepared was secured from direct correspondence with the school registrar.

There is little needs to be said in interpreting figure V. A glance at the figure will readily show that Weber is distinctly a local college. The data showed a total enrollment of 403 students. Of this number 267 were from Ogden City and an additional 75 from other parts of Weber County. Eighty-four per cent of the student body comes from within Weber County. There is no point within this county which is more than 15 to 18 miles from Ogden City. The only other districts which contribute students to any appreciable extent are Morgan, Davis and Boxelder. There are several important centers in Davis County which are within 20 miles of Ogden. Brigham City to the North is approximately 22 miles from Ogden. There is, of course, no transportation provided for students except as they themselves provide for it. If we compare the college enrollment of Boxelder and Davis districts as shown by figure II for the Utah State Agricultural College and figure III for the University of Utah, it will be seen that most of the students who attend college from these districts go to the larger schools, not to the junior college. This is a dis-

Enrollment of College Students at Weber Junior College 1928-29

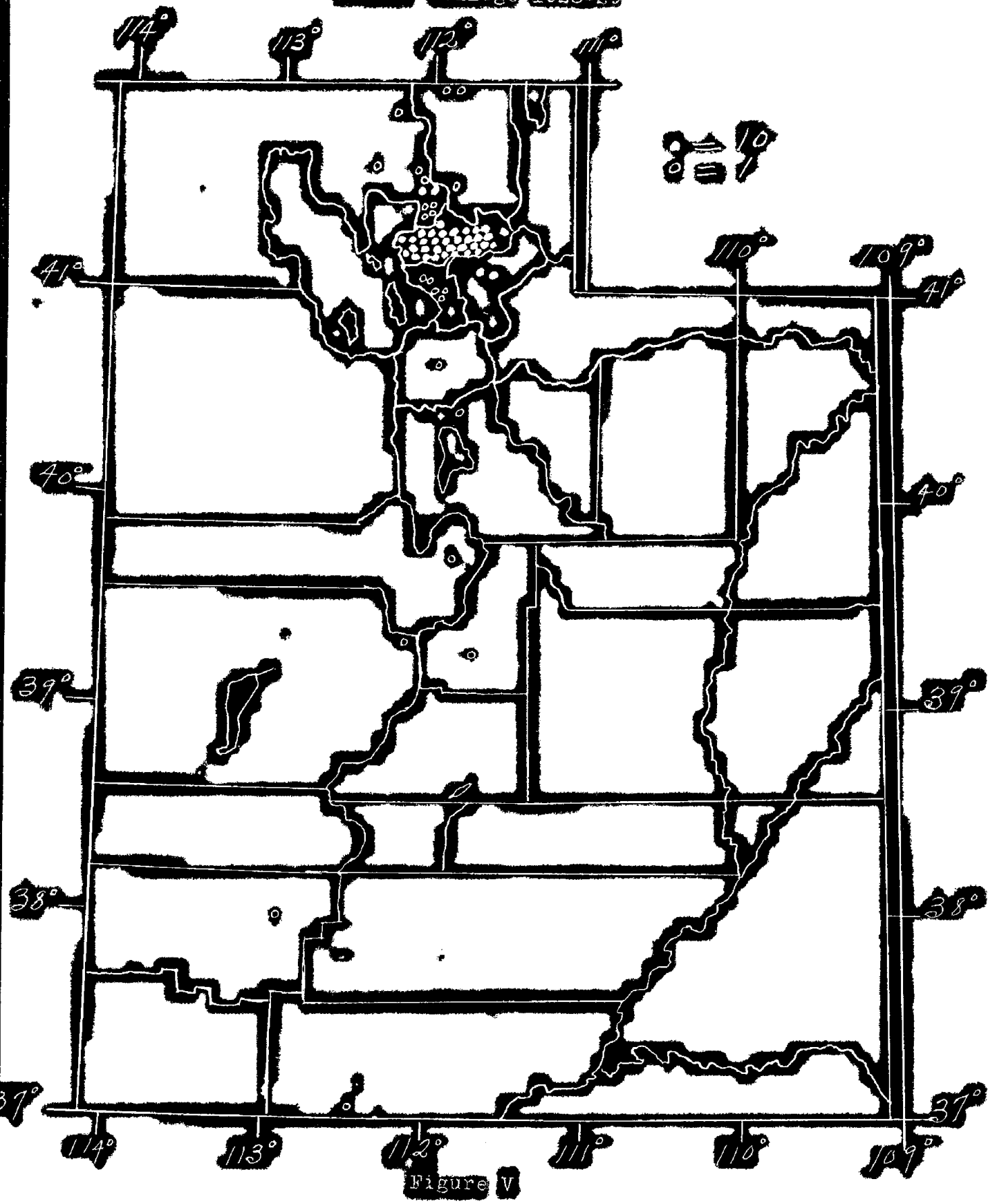

Figure V

advantage from the standpoint of distance traveled in many cases.

To the writer this indicates that the idea of the junior college so far as this one under consideration is a criterion, has not had any great acceptance when we get away from almost immediate proximity. It must be kept in mind that this is a denominational school, whether that is a pulling or repelling force the writer does not propose to answer. If students are forced to go any great distance from home they go to larger schools even though at some disadvantage.

SNOW COLLEGE

This is the second largest junior college of Utah. It is also one of the denominational schools being controlled and supported by the Latter Day Saint Church. The geographical distribution of its student body in 1928-29 is shown in figure VI. The data for making this representation was secured directly from the school. The data shows a total enrollment of 223 students. As was noticed in connection with Weber College this school is distinctly a local institution from the standpoint of its student body. If we analyze the enrollment by school districts or towns the extent to which its enrollment is a local enrollment becomes even more evident. Ephraim, the location of the school, is approximately in the geographical center of Sanpete County.

The county is about 65 to 70 miles in length, by regular highway. Of the 223 students enrolled, 153 resided in Sanpete County. This is 68.6 per cent. The next important district in sending students to this school is Sevier district to the south.

A very interesting comparison can be drawn by using the three largest communities of Sanpete County. The most recent authentic population data we have is the 1920 census. There may have been some important relative changes since that time, though the writer sees no reason to suspect any great change. The 1920 census gives the population of Ephraim as 2267, of Manti 2412, of Mt. Pleasant 2415. The data used in making

Enrollment of College Students at Snow Junior College 1928-29

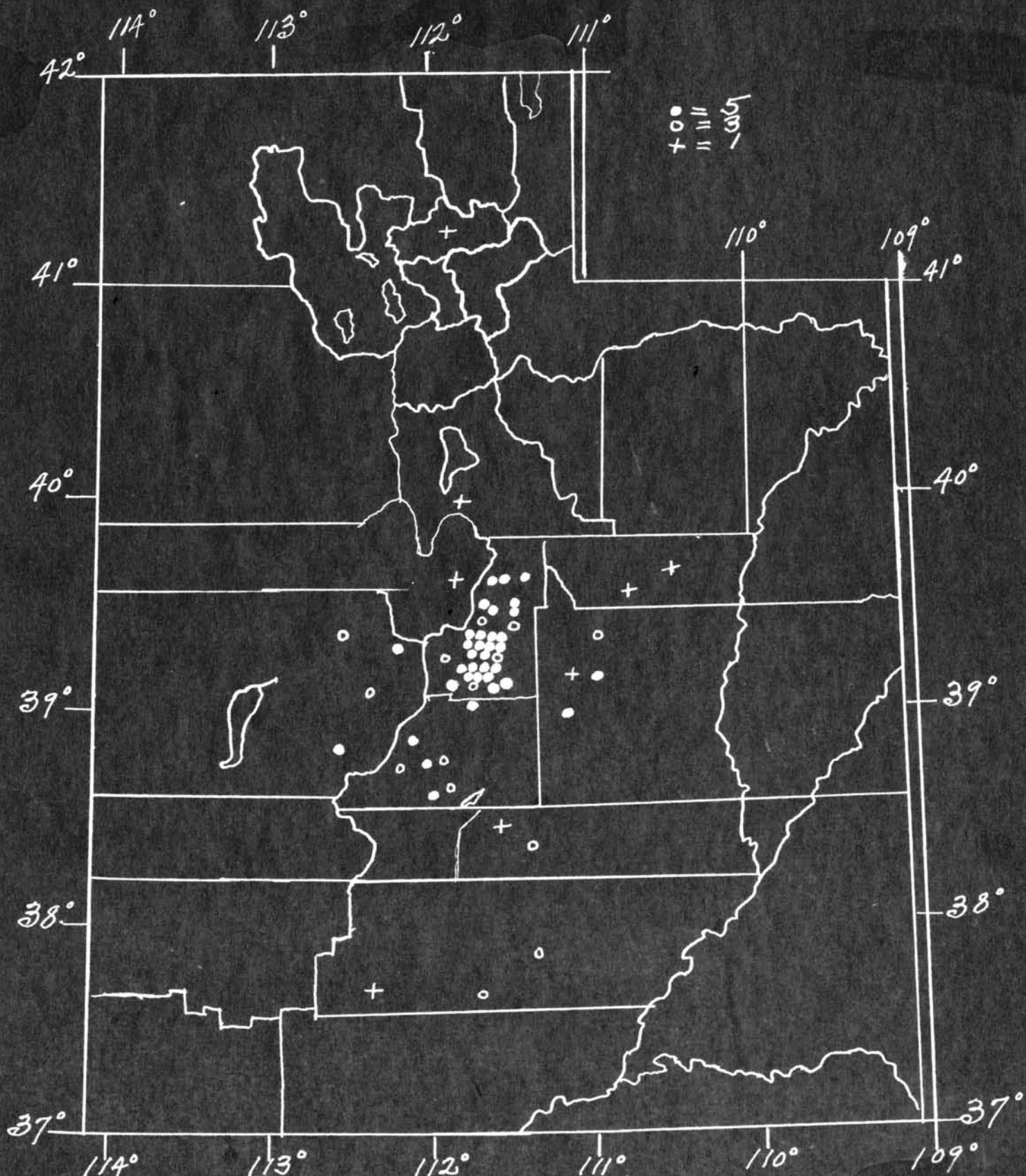

Figure V1

figure VI shows that Ephraim sends 52 students to Snow College, Manti 35 students, and Mt. Pleasant 10 students. Manti is 7 miles south of Ephraim, Mt. Pleasant is approximately 17 miles north of Ephraim. This in a small way indicates to the writer how a small college may popularize college education. It indicates something else that was discussed in connection with Weber College. As was stated Mt. Pleasant sent 10 students to Snow. In the appendix of this study data is given which shows that Mt. Pleasant sent 26 students to all junior colleges in 1928-29. Ephraim sent a total of 56 students to junior colleges; 16 students out of 26 from Mt. Pleasant attended some other school than Snow; 4 out of 56 from Ephraim attended some other school than Snow. Manti had 39 students attending junior college, 35 of which attended Snow. From Manti there are private student transportation facilities to Ephraim regularly operating. From Mt. Pleasant there is no such regular service. Here again, it seems to the writer, is evidence that if students are forced to go away from home any appreciable distance they do not choose the junior college.

Regarding the choice of school which students make we can again refer to Sevier District. Table I shows that Sevier District sent 43 junior college students to the Brigham Young University and 21 to the Snow Junior College. Yet from Richfield, center of Sevier District, it is approximately 120 miles to

Provo, and from Richfield to Ephraim 55 miles. This again is evidence that students disregard distance to attend larger institutions unless the small school is in the immediate vicinity. In connection with the last example mentioned it should be borne in mind that the Brigham Young University and Snow Junior College are both controlled and supported by the same Church organization.

BRANCH AGRICULTURAL COLLEGE

This is the only public junior college in Utah. It is operated under direction of the Utah State Agricultural College. In addition to the two years of college work it gives regular senior high school work. Figure VII shows the distribution of its college student body in 1928-29. The data was secured directly from the school. The data used gave a total of 92 students compared with 96 as given in table I. The source of table I has previously been explained. When we get into the part of the state where this school is located, and from which it draws its students, there is little need to say very much about transportation facilities. Towns are pretty much isolated from each other, and this part of the state is rather isolated from other parts.

The principal item of interest in figure VII is to note that the small college enrollment is drawn from areas rather widely separated. The closest settlement to the school having more than 1 student is 20 miles away. From the communities which are furnishing several students to this school, there are very few junior college students in other schools. Data shown in Appendix to this study shows for example, that Cedar City has 43 students in junior colleges and 36 are in the B. A. C. Minersville has 13 junior college students and 11 in B. A. C. Parowan has 17 in all junior colleges and 10 in the B. A. C. Beaver has 15 in all junior colleges and 5 in the B. A. C. This

Branch Agricultural College Junior College Enrollment of Utah Students 1928-29

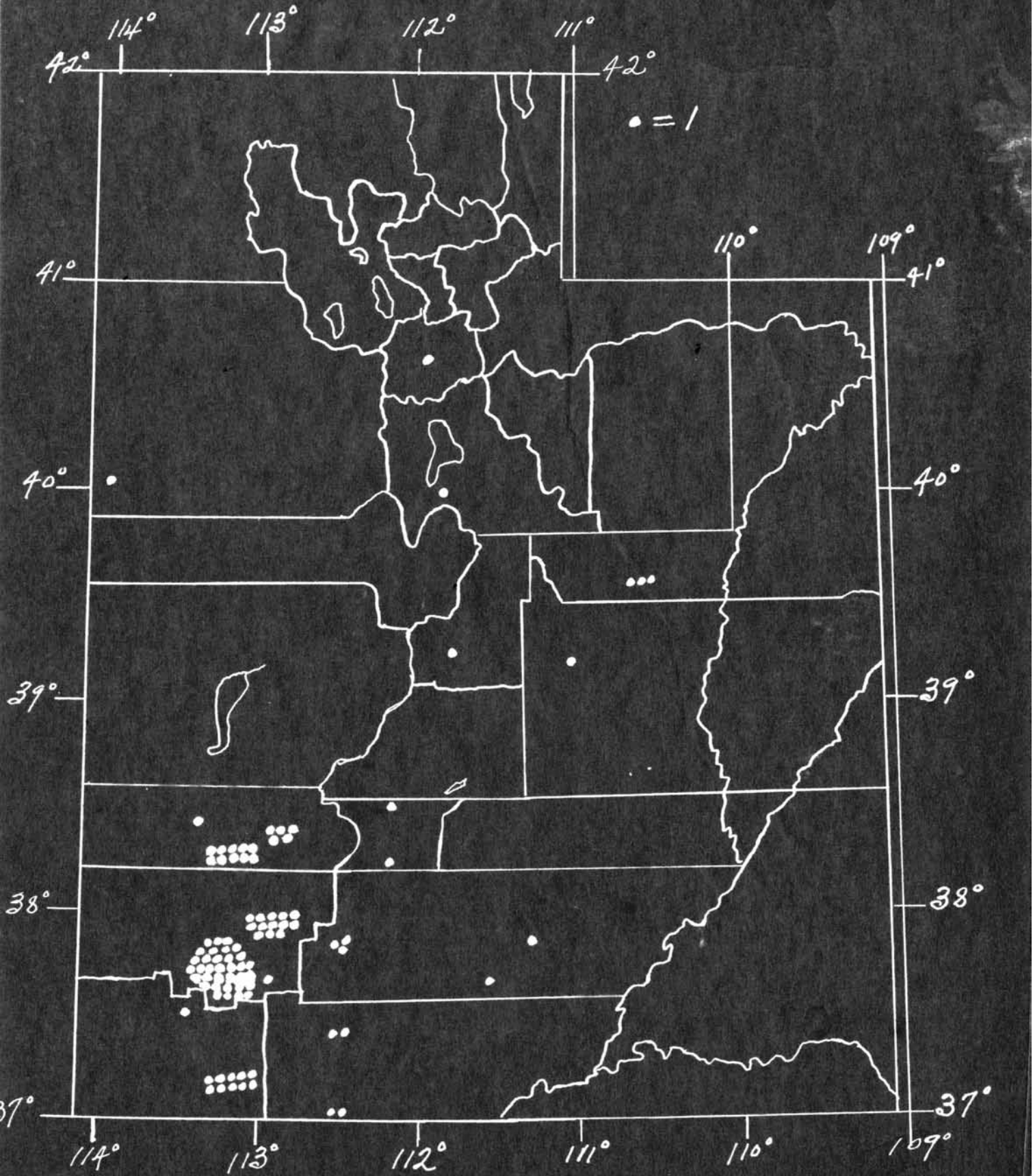

Figure V11

school is so small in its college department that it must either present a very limited college offering or it is a very expensive institution. For this reason it doesn't appear that any point can be made by further discussing its drawing power or making other comparisons. The area from which the student body is drawn will receive discussion in a later section.

L. D. S. JUNIOR COLLEGE

Figure VIII when observed in connection with figures I and III, explains all that needs to be said concerning it. It pictures a small junior college which is located in Salt Lake City, the home of the University of Utah. In connection with the college is given regular high school work. The data used in making figure VIII shows a total college enrollment of 105. Eighty of these 105 resided in Salt Lake City. This, it seems, is all the explanation that this figure justifies. This does not include the L. D. S. Business College.

Enrollment of College Students at L. D. S.

Junior College 1928-29

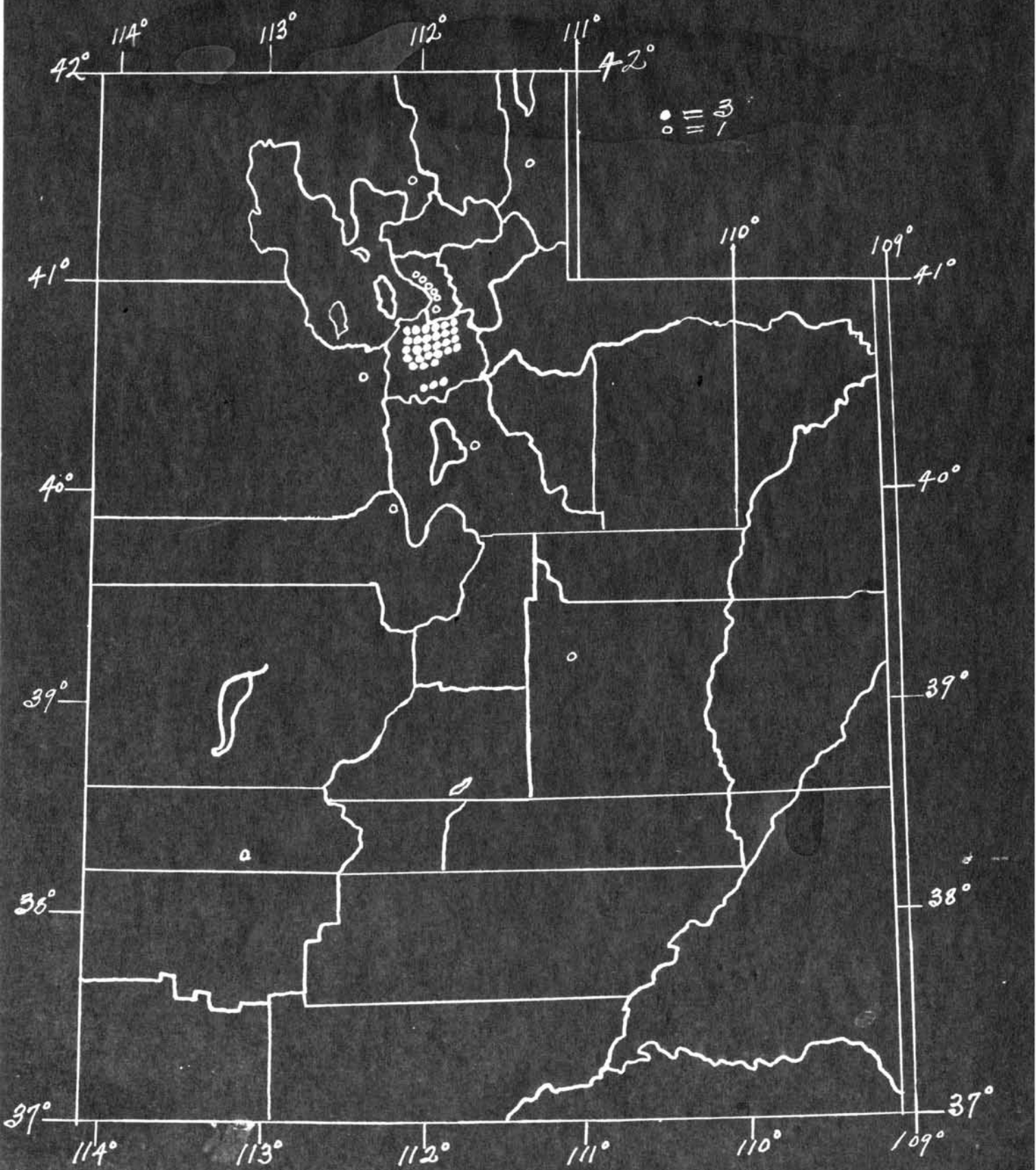

Figure V111

WESTMINSTER COLLEGE

Figure IX, like figure VIII, is easily explained. It is the representation of the college enrollment of a private junior college operating in Salt Lake City. It is the only private college in Utah that is not controlled by the Latter Day Saint Church.[3] This probably accounts in large measure for the students drawn from remote parts of the state. The data used showed a college enrollment of 49, of which number 20 resided in Salt Lake City.

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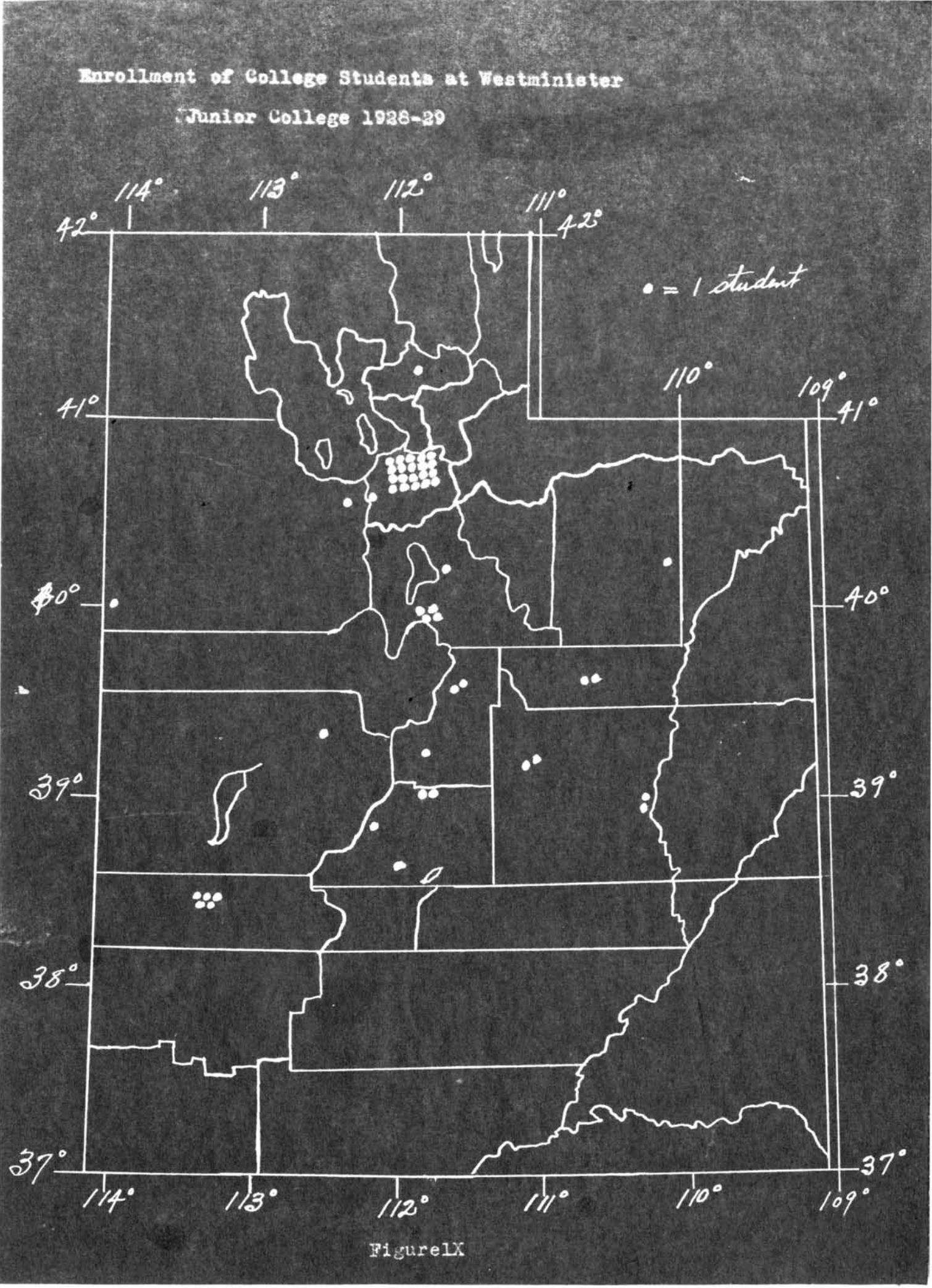
3. Except St. Mary's of the Wasatch, previously mentioned.

Enrollment of College Students at Westminister Junior College 1928-29



FigureLX

DIXIE JUNIOR COLLEGE

Figure X shows the area from which this school drew its college enrollment in 1928-29. This is another of the Utah colleges which operates in conjunction with a high school. The data used in making figure X shows a college enrollment of 76. Forty-three are shown to be residents of St. George, the home of the college. It is to be expected that it would be largely a small 'one-town' college, since there are no other communities of any sizable population in the neighborhood. It may be noted that the small town of Hurricane, with a population of 1021 in 1920, sends 8 students into junior colleges in 1928-29. Only 2 of these 8 attended Dixie College. Hurricane is about 20 miles from St. George, and about 45 miles to Cedar City, the next nearest college. St. George with a population of 2215 in 1920, sent 51 students to junior colleges in 1928-29, 43 of which remained at Dixie College. This is the same general picture that was drawn in connection with other junior colleges.

The most important item in connection with figure X, so far as future considerations in this study are concerned, is the fact that if we leave out the city of St. George, this school is drawing its students from approximately the same territory as the Branch Agricultural College which was pictured in figure VII.

Enrollment of College Students at Dixie Junior College 1928-29

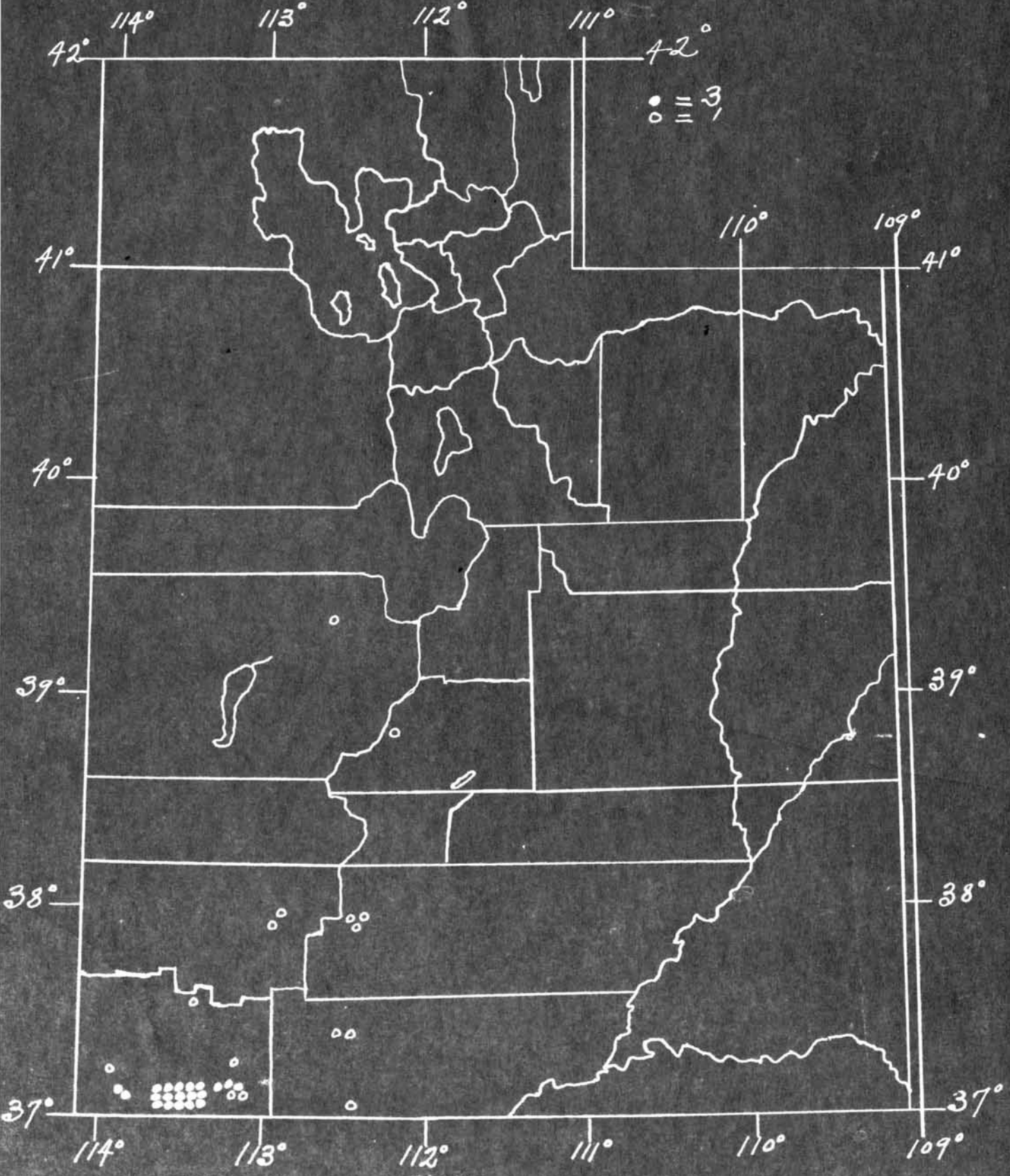


Figure X

S U M M A R Y

The preceding section has been an attempt to present an analysis of the location of the junior colleges and their populations clearly, and the areas from which the junior colleges in Utah secured their students. Nine colleges are offering junior college work in Utah. at the present time. These colleges are rather widely scattered over the state. When the various high schools of the state are presented in a later section of this study, it will be seen that the present colleges follow rather closely the present population centers as reflected by the present high schools. It has been shown that at least four of the existing colleges are to be closed beginning in the very near future.

The year 1928-29 has been chosen as a typical year for the purpose of presenting the present situation. The general conclusion that can be drawn from the preceding discussion is that each of Utah's present colleges is drawing the large proportion of its students from a small area.

If a 30 to 40 mile radius was considered it was found that the percentage of total enrollment enrolling at different schools from this area ranged from 59.6 per cent at B. Y. U. to 81.9 per cent at the U. of U. When the junior colleges were considered the percentage rose very much higher than this and would also probably go some lower in the case of the Branch Agricultural College. A radius of 13 miles in case of Weber College

included over 84 per cent of the students. A radius of 30 miles would include practically 100 per cent. This section has also shown that if students are forced to travel upwards of 20 miles to get to college they in general tend to go to the larger schools.

A few examples are used to show how the presence of a college popularized higher education. This will be discussed very much more in later sections. Figure XI is introduced to show the composite junior college enrollment of Utah in 1928-29. The data used was the same as used in making other figures for separate schools.

The question may logically be asked, do the present colleges satisfy Utah's needs for junior college work? This cannot be answered definitely until a study is made of the high school population of Utah. The high schools are the feeders for the junior colleges. The last section has presented the present college enrollment. The next section will present the high school enrollment of Utah. From these two considerations some conclusions can probably be drawn regarding the adequacy of present college offering in Utah.

Total Junior College Enrollment of Utah Students in Utah Colleges 1928-29

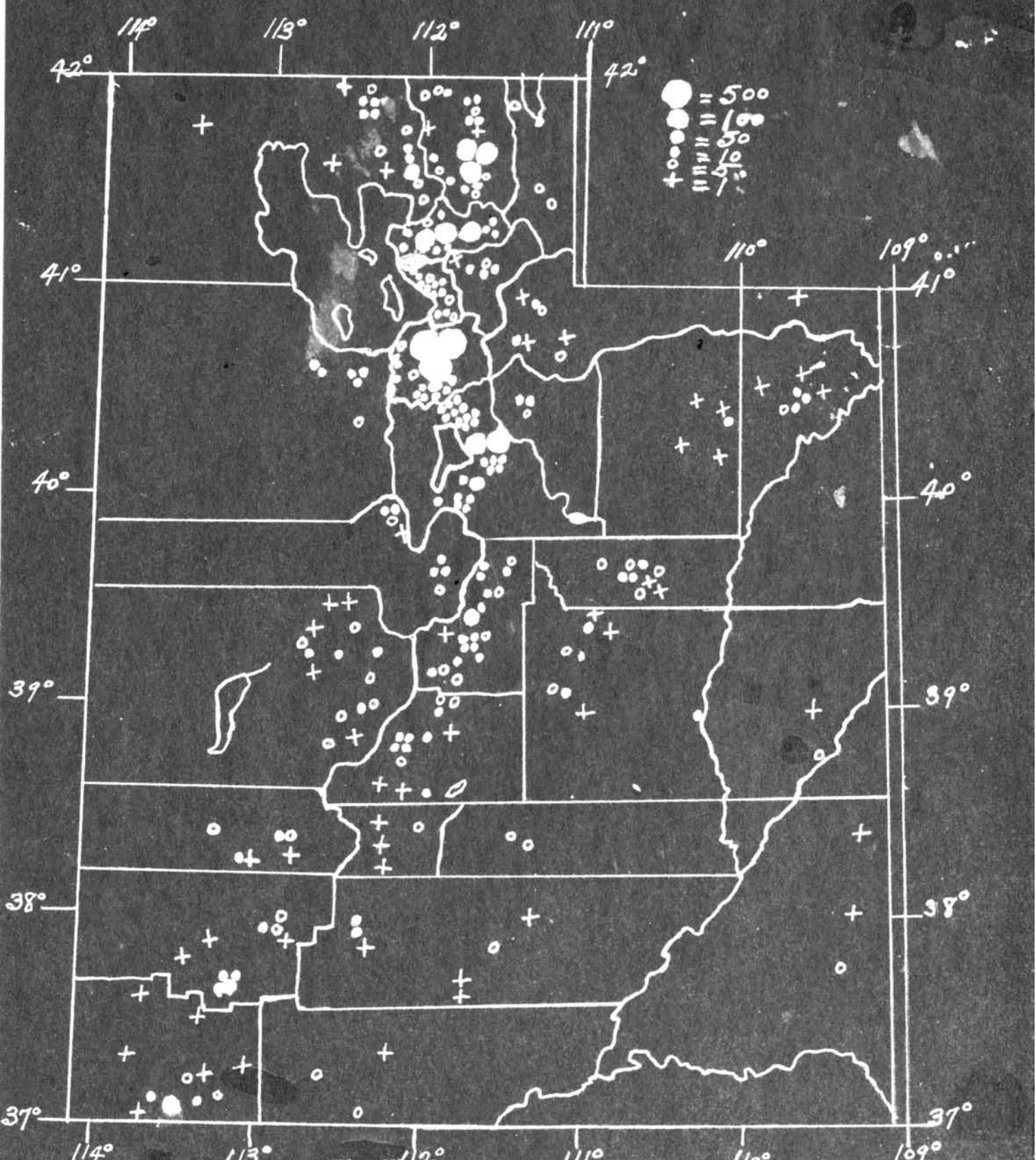


Fig. XI

Chapter 3.

The High School Population of Utah.

Junior colleges in many areas enroll people in their courses who have not had regular high school work. Adult members of the community enroll for short term courses. These students, however, make up a very small part of the student body. The writer sent a questionnaire to many of the public junior colleges of California to determine to what extent the schools enrolled special students. Practically all schools stood ready to offer work to adults but only in about two instances were there sufficient students enrolled to make up more than five to ten per cent of the student body.

Because of the limited number of special students who enroll in regular junior college work the needs of the regular high school students will be the criterion by which it is ultimately decided whether junior colleges should be established. It is the purpose of this section to present the present high school enrollment of separate school districts in Utah. Some comparisons will also be made between high school population and junior college population.

Figure XII presents the distribution of public high schools doing senior high school work in 1928-29.[1] This figure does not present the total high school population of the various dis-

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1. L. D. S. High School at Salt Lake City, Wasatch Academy at Salt Lake City, Dixie High School at St. George, and the Branch Agricultural High School are not considered here.

Location of schools that re ing Senior High School
ork in Utah in 1928- 9 igures indicate the
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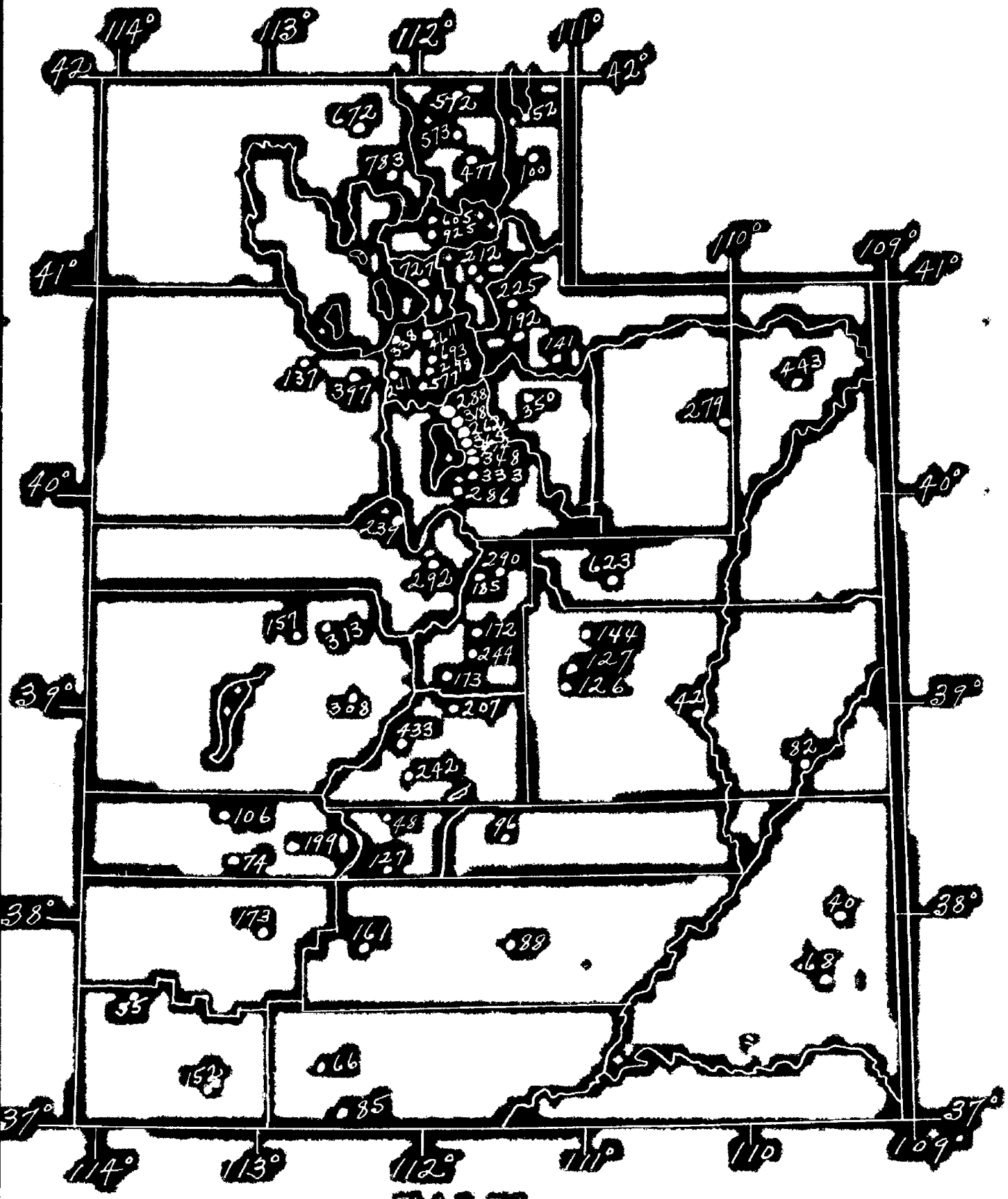

Figure XII

Table II.

Showing:

1. Total enrollment.
2. High School enrollment.
3. Percentage of total enrollment in High School.

	1918-19			1920-21			1922-23		
District	1	2	3	1	2	3	1	2	3
Alpine	3926	495	12.3	4552	813	17.9	4560	978	21.5
Beaver	1400	77	5.5	1294	67	5.2	1431	236	16.5
Boxelder	5038	520	10.3	5690	865	15.2	5695	1130	19.9
Cache	4592	388	8.4	5017	822	16.4	5070	1036	20.4
Carbon	3091	121	3.9	3832	247	6.6	4359	361	8.3
Daggett	108	3	2.8	87	8	9.2	90	7	7.8
Davis	2980	340	11.4	3352	532	15.9	3499	645	18.4
Duchesne	2414	130	5.4	2731	105	3.9	2442	216	8.8
Emery	1920	59	3.0	2308	192	8.3	2331	352	15.1
Garfield	1473	71	4.9	1535	126	8.2	1621	191	11.7
Grand	413	61	14.8	460	59	12.8	552	110	19.9
Granite	5591	460	9.2	5579	868	15.6	6411	1089	16.9
Iron	1511	145	9.6	1460	99	6.8	1618	125	8.2
Jordan	4202	448	10.7	4415	814	18.4	4574	891	19.5
Juab	1172	156	13.2	1242	192	15.5	1314	297	22.6
Kane	550	67	12.2	548	84	15.3	584	105	17.9
Millard	2512	107	4.3	2785	262	9.4	3168	513	16.2
Morgan	758	96	12.8	743	122	16.4	730	160	21.9
Nebo	4537	645	14.2	4943	941	19.0	5244	1062	20.2

Table II. (cont)

District	1918-19			1920-21			1922-23		
	1	2	3	1	2	3	1	2	3
North Sanpete	2546	316	12.4	2548	417	16.4	2534	507	19.2
North Summit	677	81	12.0	747	154	20.6	777	218	28.2
Park City	901	146	16.2	794	139	17.5	855	168	19.6
Piute	665			803			682	13	1.9
Rich	448	43	9.9	528	88	16.7	529	95	17.9
San Juan	529	21	4.0	678	59	8.7	773	44	5.7
Sevier	3242	327	10.0	3474	554	15.6	3725	845	22.7
South Sanpete	2190	269	12.3	2384	270	11.3	2417	480	19.8
South Summit	592	96	16.2	583	89	15.3	551	131	23.7
Tintic	1493	224	15.0	1365	227	16.6	1414	283	20.0
Tooele	2051	225	10.9	2061	313	15.3	2080	401	19.3
Uintah	2009	0		2300			2466	165	6.7
Wasatch	1396	193	13.8	1458	243	16.7	1624	348	21.4
Washing.	1767	0		1905	132	6.9	1939	167	8.6
Wayne	627	63	10.0	690	77	11.2	634	58	9.1
Weber	2654	0		2854	199	6.7	3033	302	9.9
S. L. City	24968	2690	10.8	27391	3931	14.4	29577	4522	15.3
Ogden	7112	695	9.7	7864	1223	15.5	9249	1706	18.4
Provo	2076	186	8.9	2407	440	18.3	2990	681	22.8
Logan	2069	287	13.9	2365	465	19.7	2599	623	23.9
Murray	1213	101	8.3	1294	168	13.0	1274	252	19.8

Table II.

Showing:

1. Total enrollment.
2. High School enrollment.
3. Percentage of total enrollment in High School.

	1924-25			1926-27			1928-29		
District:	1	2	3	1	2	3	1	2	3
Alpine	4545	969	21.1	4773	1146	24.0	4603	1225	26.6
Beaver	1525	307	20.1	1627	350	21.5	1630	377	24.6
Boxelder	5781	1221	21.1	5867	1368	23.3	5867	1500	25.6
Cache	5187	1126	21.7	5371	1123	20.9	5253	1159	22.0
Carbon	5267	477	9.1	5337	639	11.9	4706	725	15.4
Daggett	89	15	16.9	86	5	5.9	113	18	15.9
Davis	3612	671	18.5	3853	707	18.3	4012	836	20.8
Duchesne	2645	335	12.7	2587	334	12.9	2537	367	14.4
Emery	2375	436	18.3	2312	462	20.0	2107	504	23.9
Garfield	1596	244	15.3	1458	247	16.9	1445	272	18.8
Grand	521	98	18.8	542	99	18.3	502	79	15.7
Granite	7189	1216	16.9	7751	1348	17.4	7319	1443	19.7
Iron	1960	409	20.9	2119	432	20.4	2033	463	22.7
Jordan	5083	832	16.3	5489	988	18.0	5392	1123	20.8
Juab	1315	365	27.7	1274	338	26.5	1195	331	27.7
Kane	614	143	23.3	625	119	19.0	690	151	21.9
Millard	3558	580	16.3	3595	798	22.2	3510	838	23.8
Morgan	753	191	25.3	759	205	27.0	775	212	27.4
Nebo	5505	1060	19.3	5699	1230	21.6	5700	1328	23.3

Table II (cont)

District	1924-25			1926-27			1928-29		
	1	2	3	1	2	3	1	2	3
North Sanpete	2334	549	21.6	2505	596	23.4	2472	606	24.5
North Summit	739	195	26.4	802	212	26.4	795	224	28.2
Park City	920	190	20.6	1017	261	25.6	916	189	20.6
Piute	633	73	11.5	638	112	17.5	626	175	27.9
Rich	556	125	22.0	623	157	25.2	597	152	25.5
San Juan	713	95	13.3	666	80	12.0	699	108	15.5
Sevier	3717	857	23.5	3663	799	21.3	3582	917	25.6
South Sanpete	2588	703	27.1	2465	608	24.7	2262	608	26.8
South Summit	518	126	24.3	550	137	25.0	545	140	25.7
Tintic	1390	314	22.6	1411	288	20.4	1076	234	21.8
Tooele	2237	399	17.8	2389	464	19.4	2509	543	21.7
Uintah	2596	378	14.6	2697	399	14.8	2592	451	17.4
Wasatch	1631	363	22.2	1722	362	21.0	1694	369	21.8
Washing.	2001	239	11.9	2129	292	13.7	2238	382	17.1
Wayne	620	57	9.2	670	103	15.4	683	96	14.0
Weber	3194	447	13.9	3763	802	21.3	3632	925	25.5
S. L. City	31832	6050	15.8	32143	5602	17.4	30715	6616	21.2
Ogden	9434	2218	23.5	9842	2123	21.6	9683	2284	23.7
Provo	3536	822	23.2	3530	820	25.2	3648	907	24.9
Logan	2775	749	27.0	3012	830	27.5	2903	814	28.0
Murray	1400	212	15.1	1396	249	17.8	1457	295	20.2

tricts. Schools which do junior high school work including ninth and sometimes tenth grade work are not listed. The data used in making figure XII were obtained from the State High School Inspector. Only those schools doing senior high school work were considered.

Table II shows the high school enrollment for each district from 1919 to 1929, each alternate year being listed. It will be seen by comparing figure XII and the last section of table II, which lists total school enrollment in each district in grades nine to twelve, that there are more high school students in practically every district than those attending the senior high schools. (Data taken from the biennial reports of the State Superintendent.)

Table II was prepared to indicate what has been happening to the high school population over the past ten years in each separate district. The per cent that the high school enrollment is of the total school enrollment has been calculated for each of the alternate years beginning with the school year 1918-19. This table is not entirely accurate in those districts which have private high schools operating. This table reveals a phenomenal high school growth in Utah over the past ten years. There were 10,351 enrolled in the public high schools of Utah in 1918-19 and 29,986 in 1928-29. Column three is a very important part of the table. If any district is followed through the ten year period it is apparent that the high school growth has

come, for the most part, through enrolling a higher percentage of its possible high school enrollment. The total school enrolment has not greatly increased since 1921 except in some of the city districts. This will be shown graphically for several areas in a later section of the study. The percentage that the high school enrollment is of the total school enrollment in 1928-29 varies from 14 per cent in Wayne District to 28.2 per cent in the North Summit District. Has the saturation point been reached in our high school population? That is, can we expect any further increases in high school aside from that which will accrue from a general population increase?

The total school enrollment included enrollment in grades one to twelve. High school enrollment includes grades nine to twelve. Theoretically there might be 33 1/3 per cent of the school enrollment in the high school. Without a sudden influx of people from other areas, of the high school level, this practically would never be realized. It can easily be seen that all people who begin in the first grade could not continue on through the twelfth grade, that is what a limit of 33 1/3 per cent would demand. Using North Summit District previously referred to, it seems that the saturation point has practically been reached. There are several other districts where it seems there can reasonably be expected a much greater high school population even with the general population constant. Carbon District for example in 1928-29 had a total school enrollment

of 4,706 and a high school enrollment of 725, giving a percentage of 15.4. Alpine District with a total school enrollment of 4,603 had a high school enrollment of 1,225 or 25 per cent. There are doubtless some factors in the two districts that are not comparable. Character of the population, transportation problems are some possibilities. However, whatever the problems have been to retard high school attendance, they are apparently being overcome to a large extent in Carbon District because each succeeding year has shown a marked increase. By use of table II other comparisons could be made similar to this one. In general it can be said that some districts in Utah can most likely expect very little increase in high school enrollment unless through a general population increase. In many districts there is reason to believe that there will be a considerable increase with the general population constant.

In the summary of Chapter II it was stated that there is no conclusion as to how well existing colleges were serving the junior college needs of Utah by merely having a picture of the present college population. We must make some comparisons between present college enrollment, and the present high school enrollment. Table III was prepared to indicate one such comparison. Since the school year 1928-29 was used to map the college enrollment it seems that the high school graduates of 1927 and 1928 could be used for comparative purposes. The writer does not want to say that all of the students who are in

Table III.

Showing the relationship existing between the total high school graduates of 1927 and 1928, and the junior college enrollment of 1929, by counties.

	High School Grads. 1927-28	Junior College Enrollment for 1928-29.	Percent column 2 is of column 1.
Beaver	82	38	46.3
Boxelder	370	136	36.8
Cache	514	302	58.7
Carbon	124	50	40.3
Daggett	1	1	100.0
Davis	173	113	65.3
Duchesne	60	18	30.0
Emery	126	37	29.3
Garfield	56	31	55.4
Grand	30	4	13.3
Iron	171	68	40.0
Juab	159	60	37.7
Kane	30	9	30.0
Millard	179	67	37.5
Morgan	53	33	62.3
Sanpete	332	208	62.6
Summit	164	43	26.2
Piute	14	11	78.6
Rich	57	26	45.6

Table III. (cont)

	High School Grads. 1927-28.	Junior College: Enrollment for 1928-29.	Percent column 2 is of column 1.
San Juan	15	8	53.3
Sevier	248	115	46.4
Utah	903	490	54.2
Tooele	122	51	41.8
Uintah	86	40	46.5
Wasatch	133	33	24.8
Wash.	104	81	77.8
Wayne	14	9	64.3
Weber	810	446	55.1
Salt Lake	2532	1543	60.9
TOTAL	7661	4071	53.1

junior colleges in 1928-29 graduated from high school in 1927 or 1928. There are many obvious reasons why this is not so. However, it seems that the graduating classes of 1927 and 1928 are the two most logical years to compare with the junior college enrollment of 1929. With this explanation, a discussion of table III will be given.

The data for column 1, high school graduates, were taken from the Biennial Report of the State Superintendent.[2] This gave only the graduates in the public high schools. The total number of graduates from each of the private high schools was obtained directly from the schools and added to totals in districts where the private schools were operating. The data for column 2 was taken from table I, the source of which was previously explained. A good deal of common sense reasoning must be read into column 3, which shows the percentage that the junior college enrollment of 1929 is of the total high school graduates of 1927 and 1928.

The county instead of the school district was used because the report from the University of Utah was given by counties, and also because this is more useful for later sections of this study. Certainly we cannot say that the county which has the highest percentage of its high school graduates in college has the best college facilities. If this were done, Daggett County would stand as the favored county. It is easier to get 10 out

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2. Seventeenth Report, p. 153 and p. 225.

of 20 people in college than it is to get 100 out of 200. Districts with small numbers have a selected high school population, usually. We must compare things that are comparable. Because of diversity of conditions existing in Utah it is difficult to make comparisons. However, there are some rather pertinent facts revealed in table III.

Sanpete County, which has a private junior college, can be compared with two or three other districts which have no local college. Boxelder County, in the years considered, had 370 high school graduates and 136 in junior colleges, a percentage of 36.8. Sanpete County had 332 high school graduates and 208 in junior colleges, or 62.6 per cent. If the South Sanpete District, where the junior college is located, had been compared the percentage would have been found to be 70. Practically all of the graduates of Boxelder County are within 40 miles of a college. It seems reasonable to suppose that under similar conditions Boxelder County could send as large a percentage of its high school graduates to college as is sent in Sanpete County. If Sevier County is compared with Sanpete County, Sevier doesn't seem to be sending as high a percentage of its high school graduates to college as could be expected under more favorable college facilities. Davis County seems to show that the presence of a college in a district is not necessary to secure a high percentage of high school graduates enrolled in college. Davis is a small, rather compact area, having the best of transporta-

tion facilities. No place in the county is more than 20 miles from a College. If we take the counties which have college facilities in their midst---Cache, Iron, Sanpete, Washington, Utah, Weber, and Salt Lake---the percentages are all rather high, except Iron County. The writer is not sure that he has interpreted statistics from this area correctly. The high school department of the Branch Agricultural College takes high school students on a copperative basis from the Iron County schools. Whether the list of graduates published in the report of the superintendent included the graduates of this school is not known to the writer. A separate report from the Branch Agricultural College was received. Some districts that appear to be low in the percentage column are Boxelder, Carbon, Emery, Juab, Millard, Summit, Sevier, Tooele, Wasatch. Those counties with very few graduates for two years cannot be compared with districts which have many graduates.

The high school graduates show a tendency to fluctuate considerably from year to year, hence this one comparison made in table III may be criticized as being too much of a chance relationship. Table IV was prepared to show the relationship existing between the high school enrollment of 1927 and the junior college enrollment of 1929, shown by counties. This table again reveals the fact that those counties having college facilities have an appreciably higher percentage than those districts which have no college facilities, if comparable counties are considered.

This section of the study has aimed to make a comparison between the high school enrollment and the junior college enrollment by counties in Utah. These comparisons have very distinctly indicated that the presence of a college, though small, privately supported, with no special provisions regarding transportation, local financial support, or other items common to district junior colleges, greatly popularizes college education. Many districts do not have as high a percentage of their possible junior college students enrolled as could be expected if local district junior colleges were established.

The next problem to be considered is, what are the possibilities that these districts which lack college facilities could furnish sufficient junior college students to justify the establishment of a junior college?

The next section presents some of the standards which have been used in other states as guides in establishing junior colleges.

Table IV.

Showing the relationship existing between high school enrollment of 1927 and junior college enrollment in 1929 by counties.

	High School Enrollment for 1927.	Junior College Enrollment for 1929.	Percent column 2 is of column 1.
Beaver	350	38	10.6
Boxelder	1360	136	10.0
Cache	1953	302	15.5
Carbon	639	50	7.8
Daggett	5	1	20.0
Davis	737	113	15.9
Duchesne	334	18	5.4
Emery	402	37	9.0
Garfield	247	31	12.5
Grand	99	4	4.0
Iron	422	68	15.9
Juab	625	60	9.6
Kane	119	9	7.6
Millard	796	67	8.4
Morgan	205	33	16.1
Sanpete	1204	209	17.3
Summit	610	43	7.0
Piute	112	11	9.9
Rich	157	26	16.5

Table IV. (cont)

	High School Enrollment for 1927.	Junior College Enrollment for 1929.	Percent column 2 is of column 1.
San Juan	80	8	10.0
Sevier	799	115	14.4
Utah	3196	490	15.6
Tooele	464	51	11.0
Uintah	399	40	10.0
Wasatch	362	33	9.1
Wash.	407	81	19.9
Wayne	103	9	8.7
Weber	2925	446	15.3
Salt Lake	9478	1543	16.3

Chapter 4.

Some Junior College Standards.

This study has now progressed to the point where all previous discussions can begin to focus on the crux of the problem: Does Utah need public junior colleges? If so, where?

In delimiting his study the writer stated that it was not his purpose to discuss the problem of financing junior college education. It can readily be seen that the problem of finance enters into the study in one big general way. Need must be a rational need. Else one could say "Here is a district 150 miles from any college. There are ten students graduating from high school this year. Five want to continue on in college. Therefore we should have a junior college." Of course, the folly of such a proposal would be clearly evident. Need must be measured on two broad principles: What areas are not now adequately served? How do these areas measure up when subjected to present junior college standards? This then is the general way the writer must meet the financial problem. It cannot be said there is a need unless there is some evidence that a student body could be secured large enough to make this plan financially feasible under ordinary conditions.

This section of the study is an attempt to bring together some of the existing standards for junior colleges, largely as they pertain to population data.

Koos[1] reports that in 1920 the North Central Association chose 50 students as a minimum junior college enrollment in two years of work.

McDowell shows that in 1916-17 in twelve public junior colleges the median enrollment was 57.[2] One school was operating with nine college students.

California has been referred to as the leader in the movement. Her standards will indicate what has been developed over a rather long period. The first California law authorizing junior colleges was passed in 1907. This law said nothing regarding the size of the district where a junior college could legally be located. Essentially this law stated that,

> "The Board of Trustees of any city, district, union, joint union or county high school may prescribe post-graduate courses of study for the graduates of such high school, or other high schools, which courses of study shall approximate the studies prescribed in the first two years of university courses."

The law of 1921, in California, provided for a very extensive system of state junior colleges.[3] It provided that before a junior college district could be formed it must have an assessed valuation of $10,000,000 and an average daily attendance of 400 high school pupils the preceding year. During the time that junior colleges have been in operation in California several have had to be closed due to insufficient support. However, Proctor

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1. School Review, Vol. 29, 427.
2. Bureau of Education Bulletin No. 35, 1919.
3. Cooper---"The Junior College in California", Bulletin No. 63.

reports that "no junior college organized under the law of 1921, which requires at least a ten million dollar property valuation before a junior college district can be organized, has been discontinued".[4]

The latest statutory standard in California was made by the 1929 state legislature.[5] This law, like the law of 1921, provides for five types of public junior colleges. In four of these types, according to the 1929 law, the standards are an assessed valuation of $25,000,000 and an average daily attendance of 1,000 high school pupils the year preceding the establishment of the junior college. The law was not retroactive. In the county junior college district the standards were $25,000,000 assessed valuation and 500 high school pupils in average daily attendance.

The preceding discussion points out that California has seen fit to modify her standards repeatedly. The aim seems to have been to discourage the establishment of numerous very small colleges.

The state of Colorado has standards somewhat similar to those of California. In Colorado the electors of a district must favor the proposed junior college course by a two-thirds vote at a special election called on petition by 500 or more qualified electors residing in the school district. The popu-

4. The Junior College---Its Organization and Administration, p. 6.
5. Senate Bill, 699.

lation of the school district must be at least 10,000. There must be an assessed valuation in the district of at least $10,000,000. There shall be no college or university or other institution of higher learning in the district or located in the immediate vicinity. In the district where the school is to be established there must have been in average daily attendance 400 high school pupils over the past two years. Within a radius of twenty miles there shall be at least five high schools doing twelfth grade work. In these schools there shall have been an average daily attendance of high school pupils over the past two years of 450. When the college is established the enrollment must be at least 150, 75 per cent of the students must be taking work leading to graduation. In California the law of 1930 provides that any junior college organized after the law takes effect must have an average daily attendance of 200 after the second year, or be discontinued. Any school organized before the law takes effect must maintain an average daily attendance for the year of 75 or be discontinued.

Whitney reports some results found in twenty-four states studied.[6] His results were obtained from catalogues of standardizing agencies. Eight states reported there must be at least sixty regular students. Six states say a minimum of 50 regular students, and three states report a minimum of 25 regular students required. Aside from population and financial

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6. Ibid., p. 16.

data Colorado statutes provide that "the kindergarten and the first twelve grades shall be on the level commensurate with the best professional judgment". This is an important consideration for Utah.

> "The administration of the curriculum shall result in pupil progress at a normal rate and in pupil achievement of both proximate and ultimate goals comparable to that in the more advanced state and local public school systems of the country."

That is a further statement from Colorado.

The point of emphasis here seems to be that a junior college cannot be established in a district if it means the robbing of the lower units of the school system.

In Michigan any school district having a population of 30,000 may establish a junior college. Koos has been quoted as stating that in 1920 50 students seemed to be a satisfactory number for the minimum standard of enrollment. Writing in 1925, he says, "Data here presented indicate that the cost is likely to run unreasonably high for units which do not enroll as many as from one hundred and fifty to two hundred students".[7] Summarizing his discussion on location of junior colleges, Koos says:

> "The tentative minimum accepted for consideration here is two hundred students. It is not assumed that experience may not in time lead to the approval of a smaller number, nor that inaccessibility of opportunities for higher education may not recommend occasional units that are marked exceptions, just as it sometimes justifies the establishment of very small high school units. Present indications are, however, that enrollments should extend from two hundred students upward."

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7. L. V. Koos, The Junior College Movement, 330.

Koos concludes that when the junior college idea is accepted in a community that we can expect the ratio of junior college enrollment to high school enrollment to be at least one to six. This would necessitate a high school enrollment of 1200 to give a junior college enrollment of 200.

The preceding discussion seems to be sufficient to indicate that the educational thinking is and has been relative to the conditions necessary for the establishment of a junior college. This chapter has shown that standards for junior colleges have been greatly modified during the last fifteen years. For purposes of this study the following are some of the most important standards today:

1. A junior college shall not be established where there are already adequate college facilities.
2. A junior college should have an enrollment of 150 students or more when it becomes well established.
3. A high school enrollment of 1000 students is deemed necessary to provide an acceptable junior college enrollment.
4. Junior colleges should not be established in any area that cannot adequately support the lower units of its school system.
5. A general statement cannot be applied to all specific situations. This should be listed as an accepted standard of procedure.

This study has now discussed four leading topics: the present status of junior colleges in America, and the philosophy back of the movement; the present college situation in Utah; the present and past high school situation; and some standards that have been set up in various states as guides to

govern the establishment of junior colleges. The remaining task is to apply all of these findings to the problem of recommending or not recommending the establishment of public junior colleges in Utah. This is the subject of the succeeding chapter.

Chapter 5

Proposed Junior College Districts for Utah.

This section of the study is the application of all previous findings to the major problem of the study. This section is written from the viewpoint that a state system of junior colleges may be established without any legal restrictions to the contrary.

At no place in the study has the idea of need been introduced using as a criterion the overcrowding of the present schools. To the writer that is not vital to the study. What the condition is in our present schools has not been investgated. The writer has assumed that if the two four-year institutions were overcrowded, unable to accommodate a growing enrollment, that would not be a vital argument in favor of establishing junior colleges. If our two state institutions need additional facilities, this in no way affects the junior college problem. The point of emphasis here is that junior colleges cannot legitimately be recommended as merely taking care of the overflow from the present colleges. They must be recommended on the basis of inherent need in the district or districts.

After a study was made of the present college enrollment in Utah, and the high school population, the standards proposed by other states were tabulated, these facts were then studied in the light of physical features in Utah. All sections of the state were studies and the following pages will present what

appear to be feasible junior college districts from the standpoint of need as measured by the tests proposed at the beginning of the study. The specific criteria which will be applied as tests for any junior college district are:

1. Does it now have college facilities?
2. Can it furnish an adequate enrollment?
3. To what extent is transportation feasible?

Starting in the northern part of the state we find Cache County amply provided with junior college facilities at the Utah State Agricultural College. Of course, we can say here, as was stated earlier, that the typical four-year college does not discharge adequately the terminal function proposed for the junior college. Probably other vital deficiencies could be noted. However, we noted that one of the standards by which we judge feasibility is whether there are any college facilities in immediate vicinity. As long as this school continues to follow its present policy of not restricting freshman or sophomore registration, a policy which many large four-year institutions are following, there is no need to propose a separate junior college for the Cache district.

The Rich district to the east of Cache is geographically isolated from college facilities. When we apply the second criterion to this district we find that it falls short of offering any possibility of supporting a junior college.

Boxelder District is now without any college facilities in its own area. Its separation from surrounding colleges was

discussed in chapter 2. Tables III and IV in chapter 3 indicated that this district did not have as large a percentage of its high school population in college as it seemed it could have if nearer college facilities were provided. Table III shows 36.8 per cent of two previous high school graduating classes in junior colleges. Table IV shows 10 per cent of the high school enrollment in the junior college. These percentages are both low compared with many other sections of the state. In the discussion of junior colleges already established in the state it was shown that they were very much local institutions. If students had to stay away from home to go to school they did not choose the small junior college. Hence it was deemed advisable to show in any proposed district what were possibilities for transporting students to a junior college. Figure XIII shows Boxelder District with the location of its two senior high schools. Of course, all students will not be transported from the high schools. They will be transported from the towns that feed the high schools. However, the high schools were taken as centers, and the road situation indicated. This figure indicates that the problem of transportation between the two high schools is not difficult. Whitney shows the median range of influence for forty-seven public junior colleges is about twenty-five miles.[1] Figure XIV shows graphically the total school enrollment for Boxelder District from 1919 to 1929. It also shows the high school enrollment during the same

1. The Junior College in America, 28.

Map of the proposed Boxelder County Junior College District.—Circled figures indicate the location of Senior High Schools. Figures indicate the total 3rd and 4th year high school students. Figures on roads indicate road mileage.
1. Brigham City
2. Garland

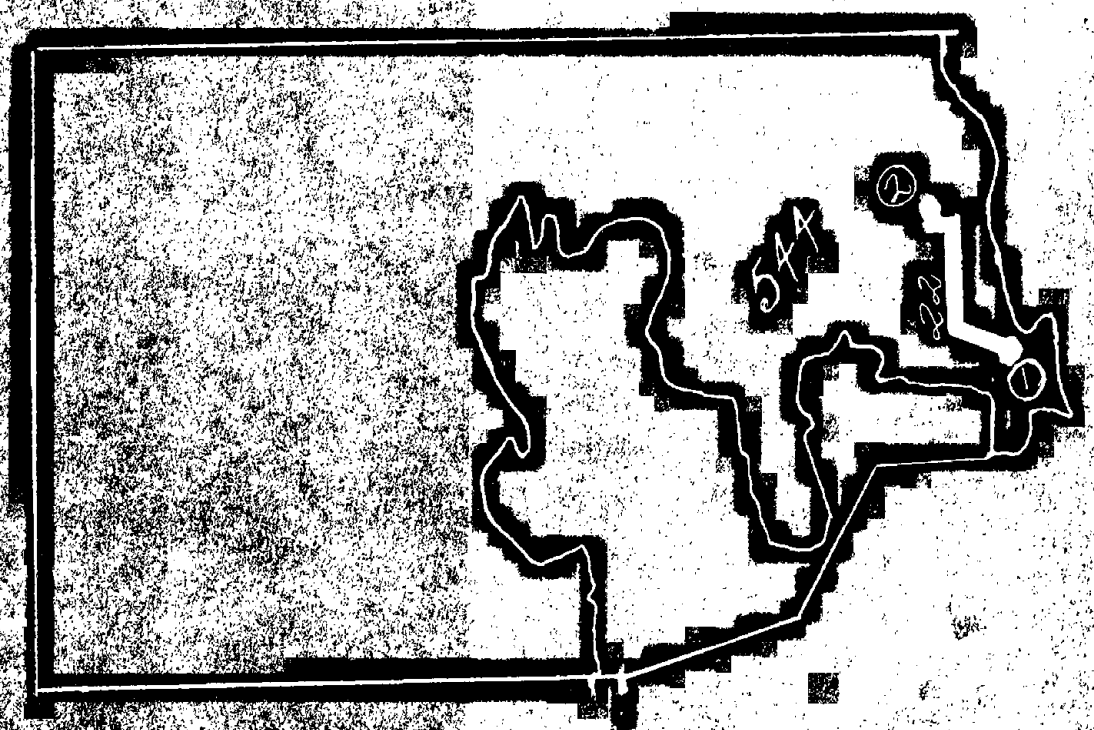

Fig. 111

Paved or Bituminous Treated Roads

6000
5800
5600
5400
5200
5000

← Total School Enrollment

4000

Boxelder District

$P = 631 + 197X - 2.6X^2$

P = High School Population

X = Time in 2 Yr. Intervals

3000

Fig. XIV

2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200

← High School Enrollment

o = Actual Count

1919 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

period, with a prediction made for the succeeding ten years. A comment regarding prediction as undertaken by the writer, is needed here. A prediction of any kind is merely a guess based upon facts. The idea used in this study is that the way to predict anything is through the data of the past in the particular thing one is predicting. Here the thing predicted is high school population. Our criteria for judging the future is the past. In figure XIV a second degree equation seemed to give the best fit to the actual data between 1919 and 1929. This was used to give a trend as to what to expect in the next ten years. Here we should stop and ask: "Is the past ten years indicative of what to expect in the next ten years?" Before 1919 high schools in Utah were almost a zero quantity in many districts. We cannot go beyond this year to get a trend, because of the lack of a definite high school movement, and beginning in 1919 we have had a very unnatural development. Compulsory attendance was introduced in 1919. Extensive transportation systems have been established. A vast building program has been in progress throughout the state. This then complicates the problem of prediction. The writer simply says that the prediction made is as good as can be made on the basis of what has happened in the past. Because the observed period has been an unnatural one the prediction may be faulty. It is probable that it predicts future high school population too high. The curve was worked out correctly from a mathematical

standpoint. But mathematics cannot make inadequate data give adequate predictions. Table II gives, in a measure, what possibility there is for future increase in high school population on the basis of present general population. This table can be used as reference in connection with all predictions. When a junior college district is proposed the question can be asked: "How many junior college students can we expect the district to furnish?" It cannot be answered definitely, however, various criteria have been proposed for estimating. Koos shows that in the area of the North Central States that in communities which have college facilities the percentage of preceding high school graduates enrolled in the junior college years gave a median of 62.6.[2] Communities without college facilities showed a median of 44.per cent. This is a gain of approximately 40 per cent. Table III shows the Boxelder District in 1929 below the figure given by Koos for communities without college facilities. If we increase the present junior college enrollment as shown by table I of Boxelder District by 40 per cent it would give a junior college enrollment of 190 students in 1928-29, instead of 136.

If we use 61 per cent of the preceding graduates, suggested by Koos, and which check very well with Sanpete County as shown by table III, it would give a junior college enrollment of 229 in 1928-29. It was stated in chapter IV as the conclusion of Koos, that when the junior college idea gains general

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2. School Review, Vol. 29, 420.

acceptance we can expect about one-sixth of our high school population to be enrolled in junior colleges. Using this criterion for this district from the 1500 high school students enrolled in 1928-29 we could expect 250 junior college students. Koos also suggests another method of approximation. He suggests that in areas that have local junior colleges the total of the third and fourth year high school students may be used as the mean proportional between the total first and second year students and the unknown total first and second year college students. The 1500 students of Boxelder District were divided into 956 freshmen and sophomores and 544 juniors and seniors. Using this idea of proportion we would have 956:544::544:X. This would give X a value of 309. This would mean that under a well financed junior college program we could expect that out of the 1928-29 high school enrollment we could expect 309 junior college students to be held over into the next two years of college. These predictions indicate that if Boxelder County had junior college facilities in 1928-29 we could expect between two hundred and three hundred students to be in college. Chapter IV mentioned that an "ideal situation would be to have an enrollment from 200 upwards". Olney reports that of California's thirty-one public junior colleges in 1927, nineteen of them had fewer than 150 students.[3] We must

3. The Junior College---Its Organization and Administration, 98.

recognize the fact that although a local junior college in Boxelder District may popularize the basis of the 1928-29 high school enrollment in junior college, we would not expect them all to be in the local junior college. Koos says the holding power of the local junior college varies from 37.8 to 95.8 per cent of those who go on to college. The average percentage found was 70.6.[4]

Concluding the discussion of this district the writer wishes to state that he doesn't consider that what he has said about central tendencies, as found by various writers, can be taken as the final word in any particular district. Each district is a separate problem which needs more detailed analysis than can be given in a state-wide survey. This district has been discussed quite fully to indicate the method of approach used for the different districts. Other districts will not be discussed so fully in the matter of technique. The tables previously given, and the discussion here, can be used to clarify any obscurity that may result from an attempt at brevity.

Weber County. This is the home of the Weber Junior College, one of the L. D. S. school which is to be closed. This county has two separate school districts, Ogden City District and Weber County District. Weber County High School is located in Ogden, this indicates that practically all of the communities are within a small enough radius to make transportation of students into Ogden a relatively easy problem. Figure XV shows in

4. Koos---The Junior College Movement, 389.

TOTAL SCHOOL ENROLLMENT

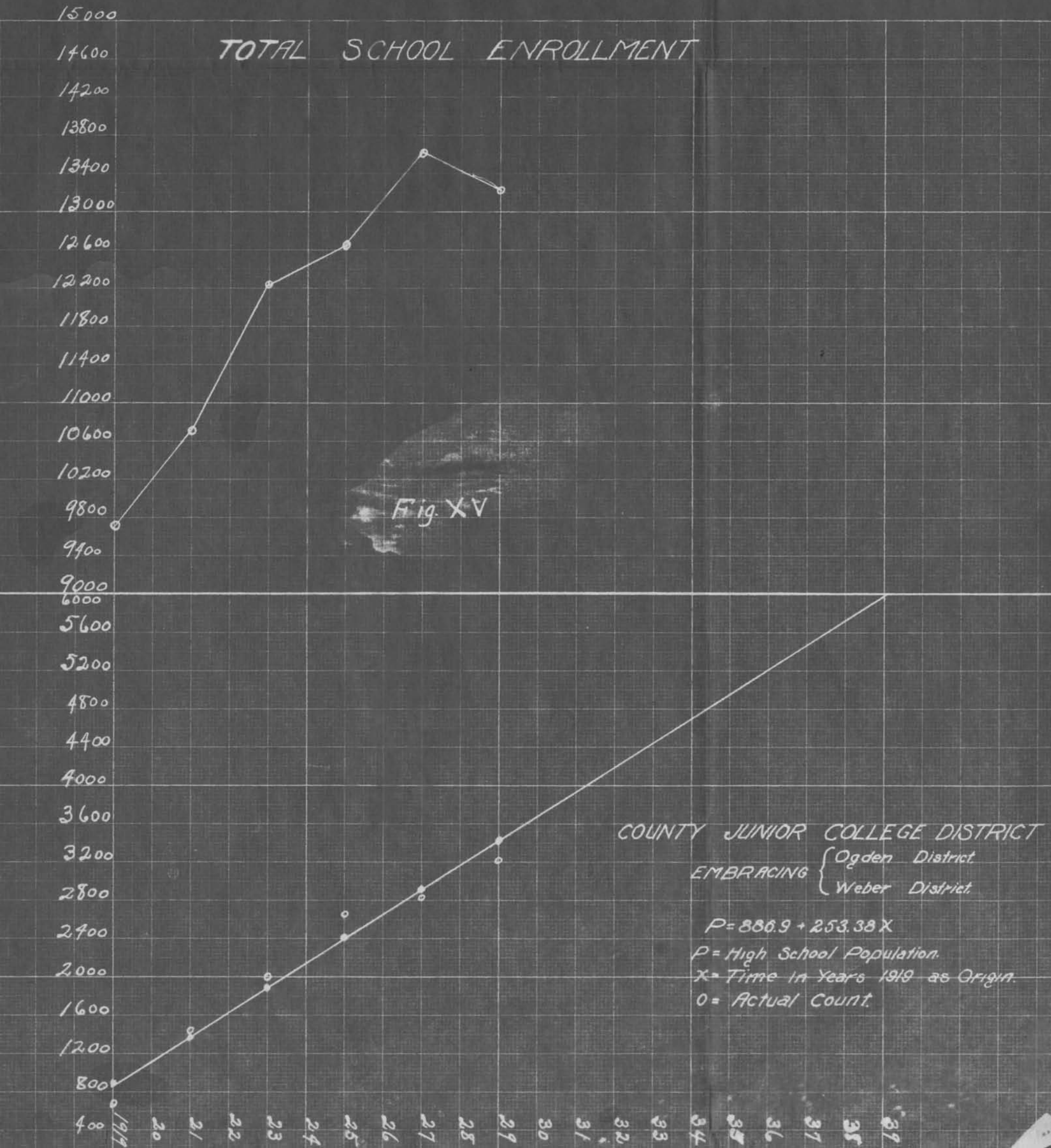

Fig. XV

COUNTY JUNIOR COLLEGE DISTRICT

EMBRACING { Ogden District.
Weber District.

$P = 886.9 + 253.38X$

P = High School Population.

X = Time in Years 1919 as Origin.

0 = Actual Count.

graphic form the school enrollment situation in this county. The equation for a straight line seemed to fit the observed data as well as any other type of equation. The cautions which were given in connection with the prediction in Boxelder County are applicable to this one also.

The need for a junior college in this area seems very apparent. All of the criteria proposed as tests at the beginning of this chapter can be answered favorably to a junior college. The fact that the present private school now maintained here has an enrollment of upwards of 400 students is in itself sufficient justification for continuing junior college work when the private school is discontinued.

To the southeast of Weber County is Morgan County. Data given in previous tables readily show that this county cannot furnish an adequate junior college student body. Table I shows that this district sent fifteen students to Weber College in 1928-29. It sent more than this to all other junior colleges. The community of Morgan is approximately 25 miles from Ogden. Because of natural barriers it is very doubtful if transportation is feasible. It is because of these considerations that Morgan County has not been considered in the proposed Weber Junior College District.

Davis County joins Weber on the South. It has previously been stated that this county, though it has no junior college in its midst, is sending about as large a percentage of its high school population to college as those districts which have

colleges. Some explanations were given which seem to account for this fact. This county does not seem to have a sufficiently large school population to justify a county junior college. Our first test proposed would rule out a junior college in this area.

Salt Lake County now has three schools giving junior college work. The L. D. S. junior college is one of those slated to be closed. There may be some financial considerations, or considerations having to do with junior college functions, why there should be a public junior college in Salt Lake County. However, from the standpoint of having ample college facilities this county is well taken care of.

Tooele County to the West of Salt Lake cannot furnish an adequate student body for a junior college by itself. The University of Utah is the most natural center for the students of this county.

Summit County and Wasatch County have been combined into a joint county junior college district. Summit County has three separate school districts. These are---North Summit, South Summit, and Park City. Wasatch County is coterminous with the Wasatch School District. Figure XXI shows the location of the four communities in which there are senior high schools. The number of third and fourth year high school students in each district is also given. Road conditions are indicated to see what the possibilities are for transporting students to a common center. Park City seems to be the most central location,

Map of the proposed Summit-Wasatch Joint County Junior College District, showing location of Senior High Schools. 1. Coalville 2. Park City 3. Kamas 4. Heber City. Figures indicate total 3rd and 4th year high school students. Figures on roads indicate road mileage

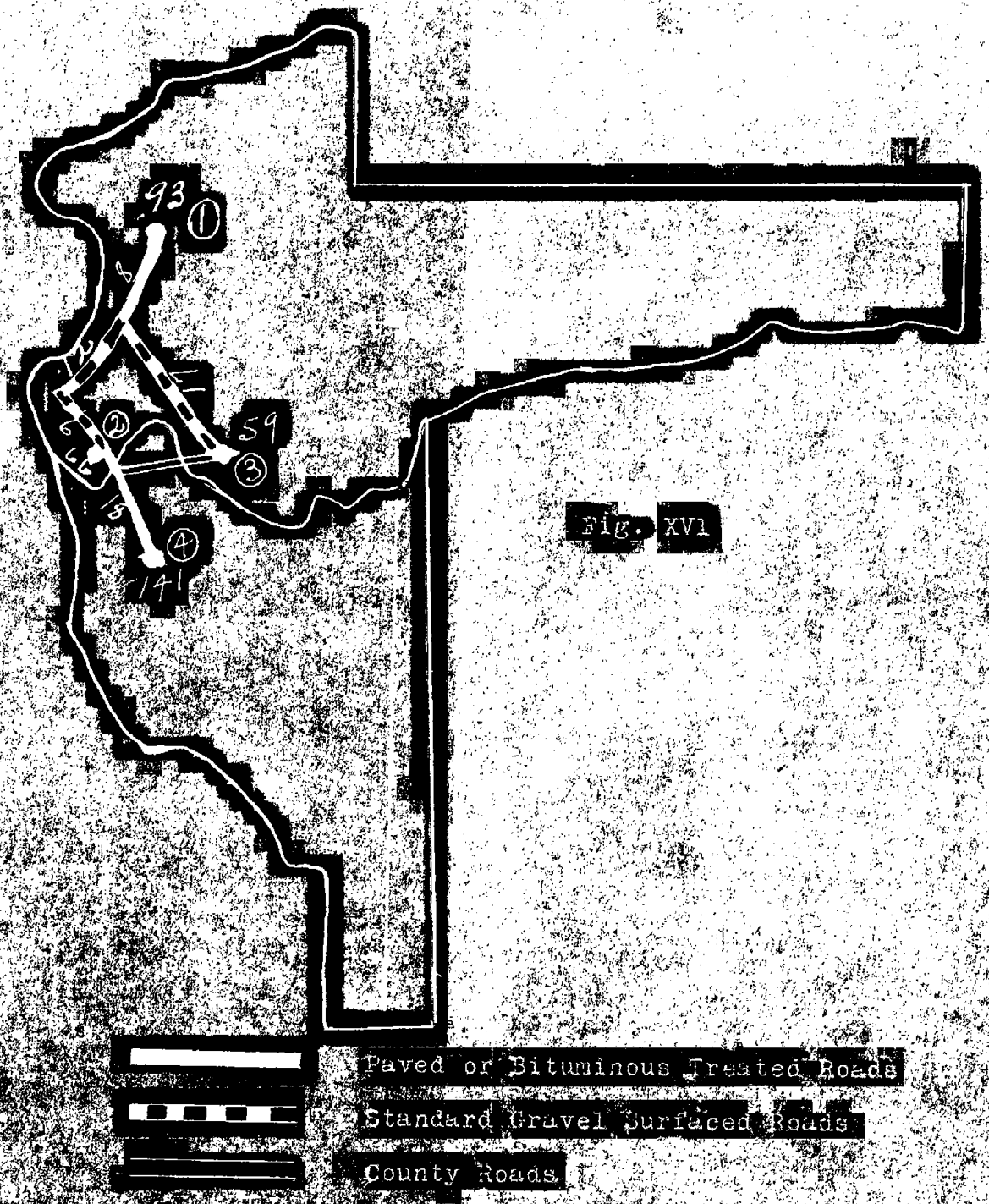

Fig. XVI

TOTAL SCHOOL ENROLLMENT

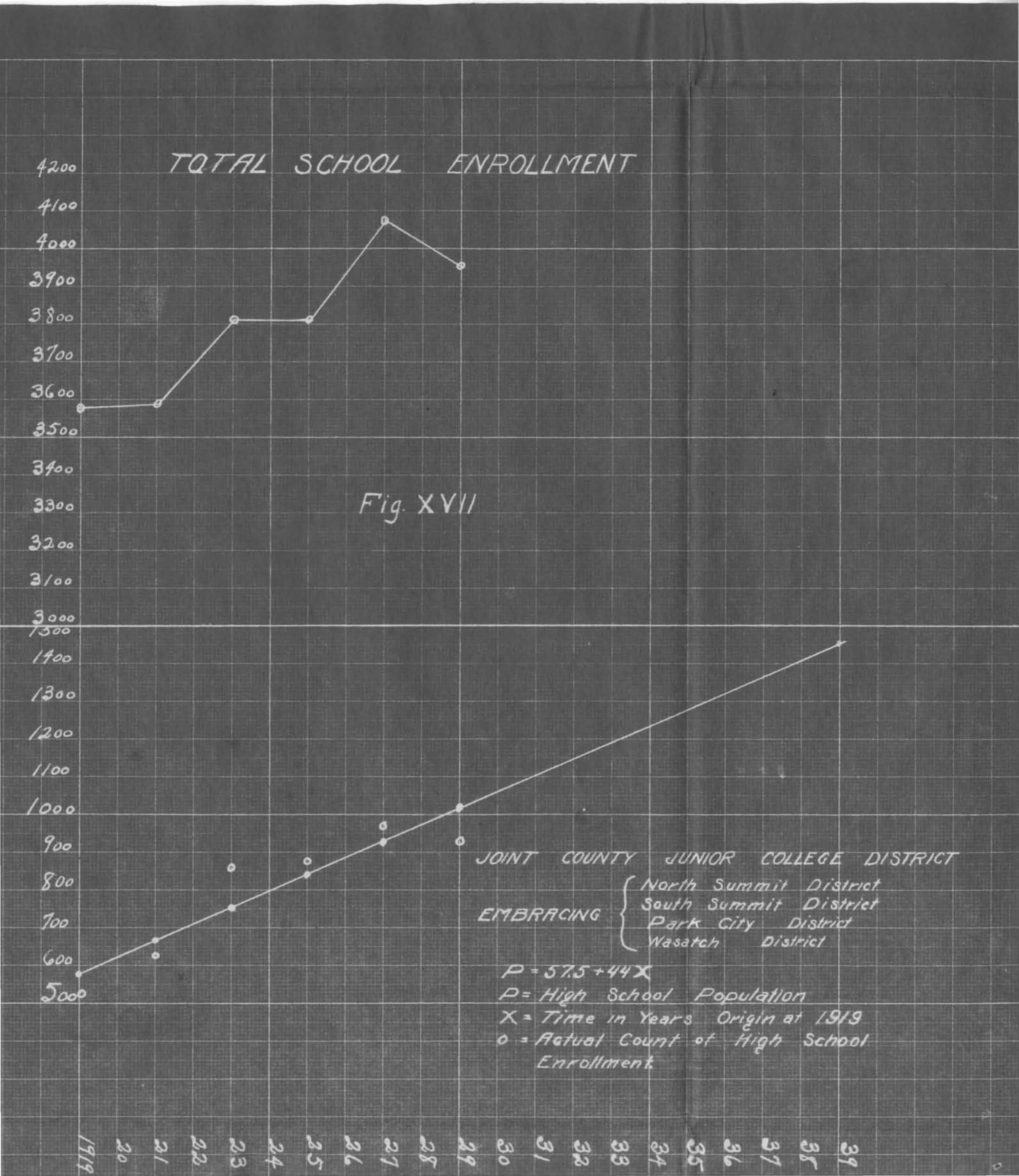

Fig. XVII

although the Wasatch County High School is much the largest of the four schools. Transportation seems to be feasible so far as distance and the condition of high ways serve as criteria. Figure XVII shows that this joint district had between 900 and 1000 high school students in 1928-29. This compares quite favorably with the standards given in chapter IV. Tables III and IV show that these districts are sending a very small percentage of their high school graduates and high school enrollment to junior colleges. Using the same bases for determining the size of a student body that could be expected in this area as was used in connection with Boxelder County, an estimate of from 110 to upwards of 200 is found on the basis of 1928-29 conditions. Because of being a rather heterogeneous area it is doubtful whether this area could get as high a percentage of its high school students in junior college with a local college as is found in one county unit.

This area seems to need a junior college, and has the possibilities of furnishing an adequate student body to justify establishing a school. The enrollment would undoubtedly be smaller than what is considered to be ideal as suggested by Koos.

Utah County has the Brigham Young University. What the future policy of this school will be is not known. Certainly this is a natural college area. As long as the established school continues its present policy the needs of Utah County seem to be well cared for.

Juab County has two school districts---the Juab County

District and the Tintic District. These districts show low percentages in tables III and IV. Yet when measured by tests proposed for a junior college district, it would be deemed unwise to establish a junior college in Juab County.

Sanpete County has the Snow Junior College. This undoubtedly will be discontinued as a private institution. The present enrollment of this school, drawn largely from Sanpete County, is justification for a junior college in this area. Figure XVIII shows the same type of information about senior high schools as has been shown for other proposed districts. It seems reasonable to expect a larger number of students from the North Sanpete District to attend a public junior college, with the consequent local financial support, than are now attending the private school where local financing means nothing. Another important consideration, in connection with the Sanpete Junior College, is Millard County. This county joins Sanpete on the west. Millard has three senior high schools with a rather large combined enrollment. However, the two largest high schools are separated forty miles apart. This, coupled with the fact that when this district is subjected to the second criterion proposed falls low, accounts for the fact that it has not been proposed as a possible junior college district. If public junior colleges are established it will require some very definite financial arrangements regarding students who go to college from districts that have no colleges. For example,

Map of the proposed Sanpete County Junior College District. Showing location of Senior High Schools. 1. Mt. Pleasant 2. Moroni 3. Ephraim 4. Manti 5. Gunnison. Figures indicate total 3rd and 4th year high school students. Figures on roads indicate road mileage.

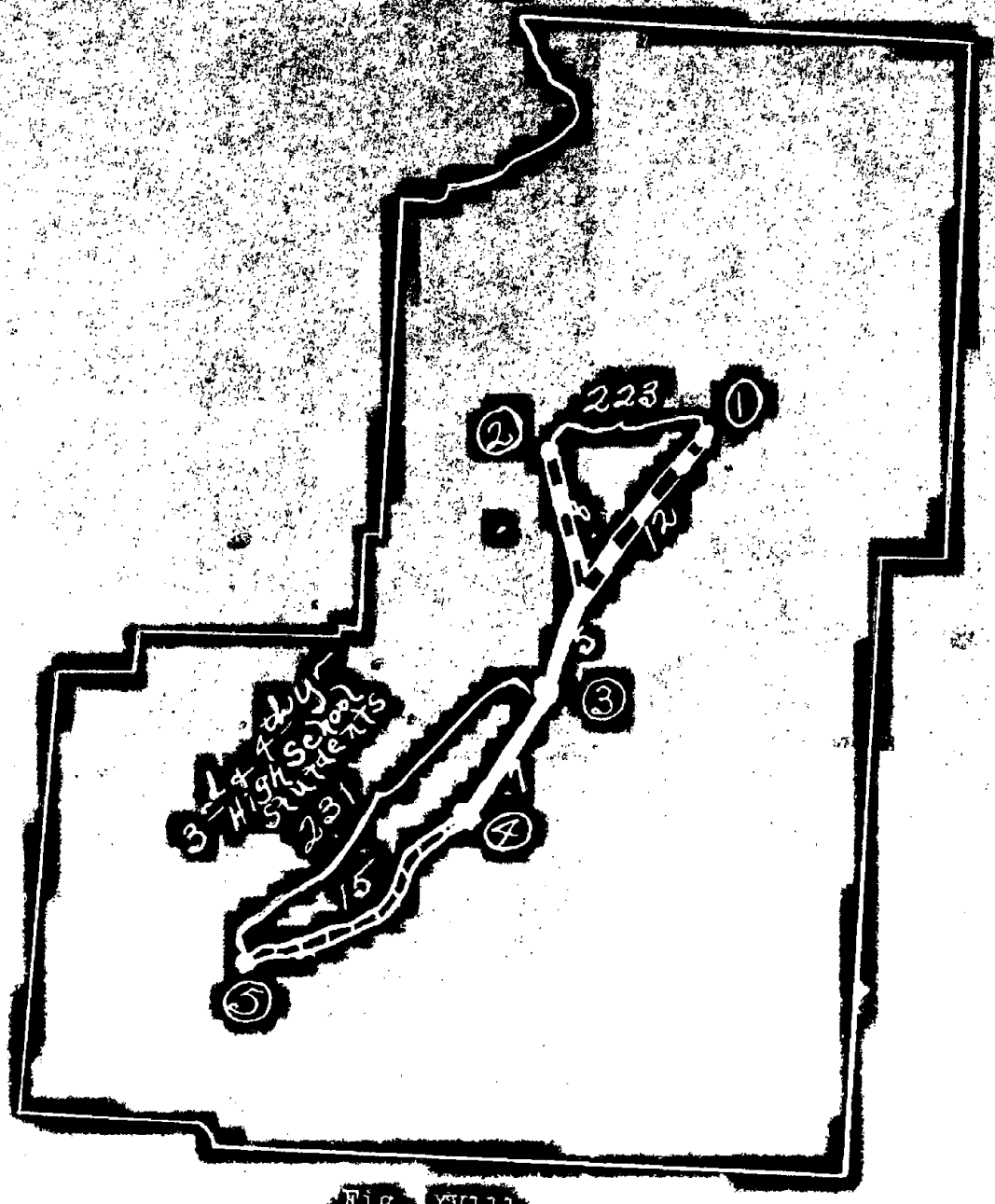

Fig. XVIII

Paved or Bituminous Treated Roads

Standard Gravel Surfaced Roads

Improved Roads--Generally Good

TOTAL SCHOOL ENROLLMENT

5400
5200
5000
4800
4600
4400
4200
4000
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500

Fig. XIX

COUNTY JUNIOR COLLEGE DISTRICT

Embracing { North Sanpete District
South Sanpete District

$P = 712.6 + 55.1X$

P = High School Population

X = Time in Years 1919 as Origin.

O = Actual Count.

if Sanpete County has a junior college and Millard County hasn't, it would seem a desirable arrangement for Millard County to pay to other junior colleges a stipulated amount for each student attending from that county. If such an arrangement is made then it would be reasonable to expect the Sanpete Junior College to draw a rather large number of students from Millard County.

Carbon County and Emery County have been combined into a joint county district. This is an area rather far removed from any of the present colleges. Figure XX is a picture of this proposed district. These two districts have a low percentage of their high school enrollment and high school graduates now in college. In fact, when judged from the number of students now going to junior colleges this joint district cannot be justified. However, from figure XXI it is seen that in 1928-29 this district had a combined high school enrollment of more than 1200 students.

Figure XX shows that the high schools of this district are rather widely scattered. Transportation from Green River to any of the other centers would be impossible. This study does not propose to answer definitely where each junior college should be located. In this district Huntington or Castledale is the most central when only distance is considered. However, the high school at Price is so much larger than any of the others that Price is probably the most logical center.

Map of the proposed Carbon-Emery Joint County Junior College District. Showing location of Senior High Schools. 1. Price 2. Huntington 3. Castledale 4. Ferron 5. Green River Figures indicate total 3rd and 4th year high school students. Figures on roads indicate road mileage.

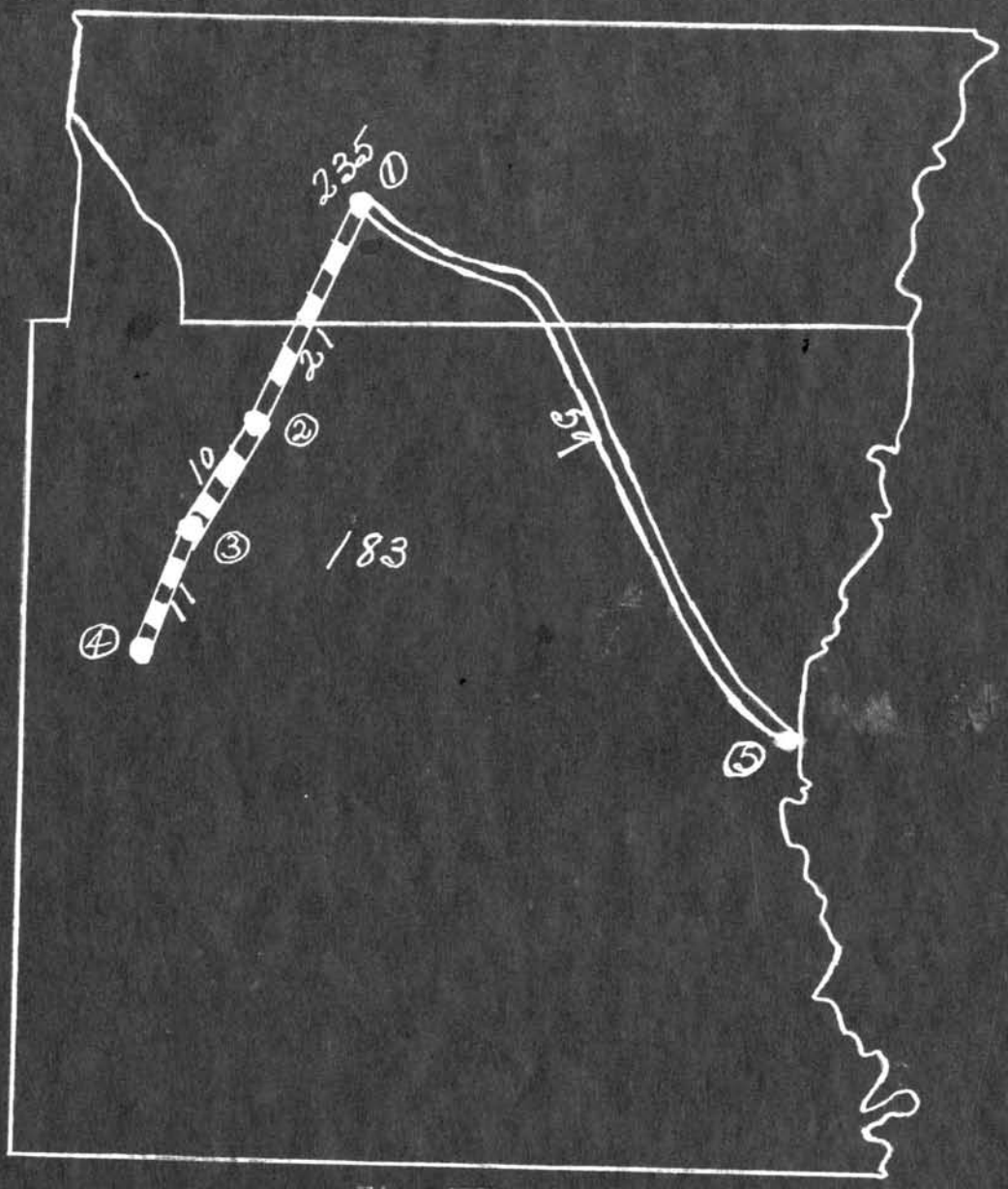

Fig. XX

Standard Gravel Surfaced Roads

Second Class Earth Roads

TOTAL SCHOOL ENROLLMENT

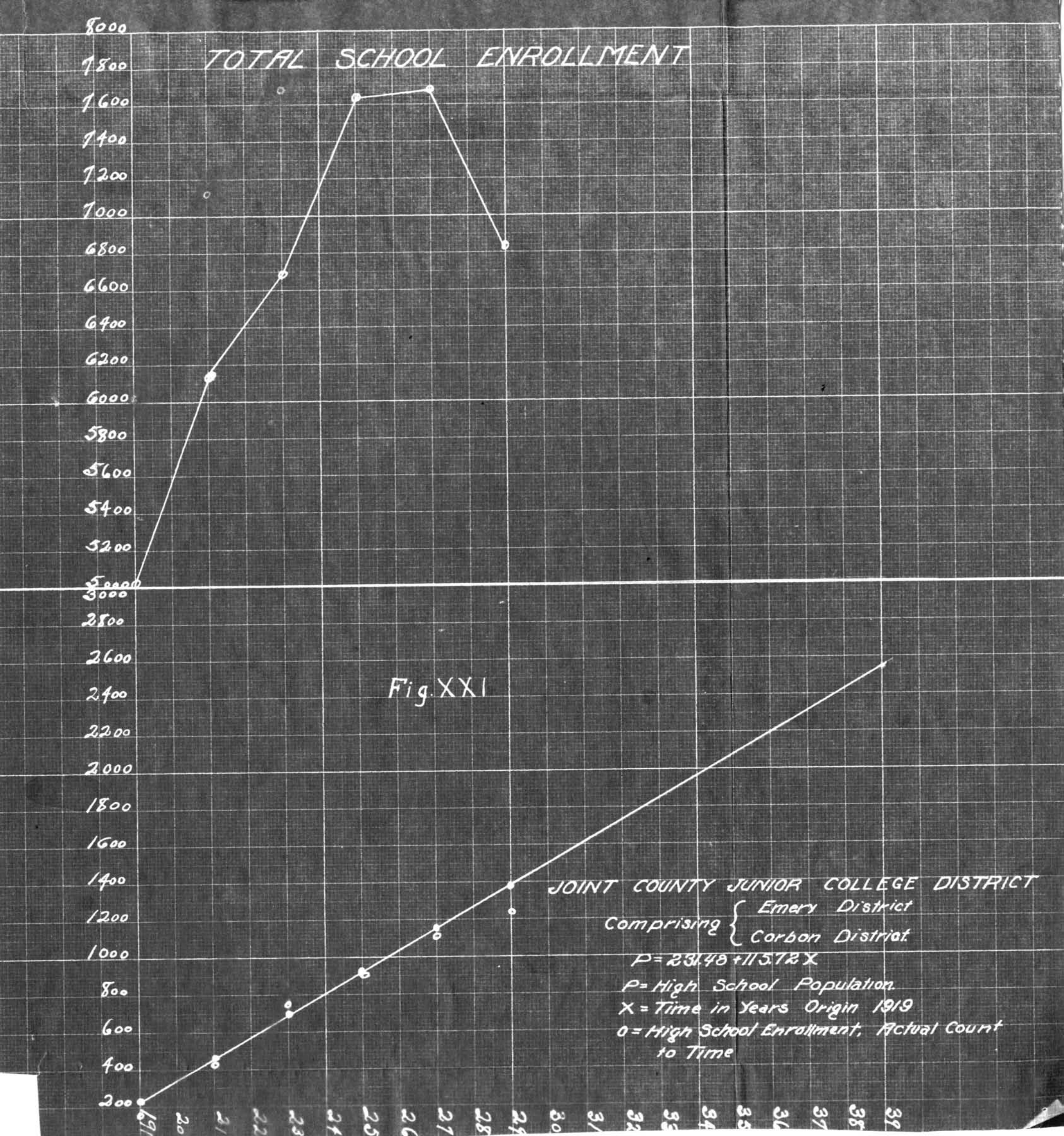

Fig. XXI

JOINT COUNTY JUNIOR COLLEGE DISTRICT

Comprising { Emery District
Carbon District

$P = 231.48 + 115.72X$

P = High School Population.

X = Time in Years Origin 1919

O = High School Enrollment, Actual Count to Time

The prediction of high school population for this district does not seem to be unduly high when all factors are considered. If reference is made to table II it is seen that Carbon County can very greatly increase her high school enrollment even if the general school population remains constant.

Using criteria previously referred to it seems that a junior college in this district would have an enrollment upwards of 150 students. If normal increases occur this area seems to have possibilities for a very acceptable junior college enrollment within a few years after it is established.

Sevier County has been used for purposes of comparison in previous discussions in this study. It has been shown that this county does not compare favorably with other counties, of similar conditions, in the matter of students sent to junior colleges. Yet in 1928-29, figure I shows, 115 students were enrolled in junior colleges from this county. Piute and Wayne counties which border Sevier on the south, have been combined with Sevier into a joint county junior college district. Figure XXII shows that the high school centers of these counties are quite far removed from Richfield, the geographical center of Sevier County. Transportation for students is probably impracticable from these counties to Richfield. However, this is the most logical center for students from these sparsely settled counties. Figure XXIII shows that this proposed district had a high school enrollment of approximately 1200 in 1928-29.

Map of the proposed Sevier-Piute-Wayne Joint County Junior College District, showing location of Senior High Schools. 1. Salina 2. Richfield 3. Monroe 4. Marysvale 5. Circleville 6. Bicknell. Figures indicate total 3rd and 4th year high school students. Figures on roads indicate road mileage

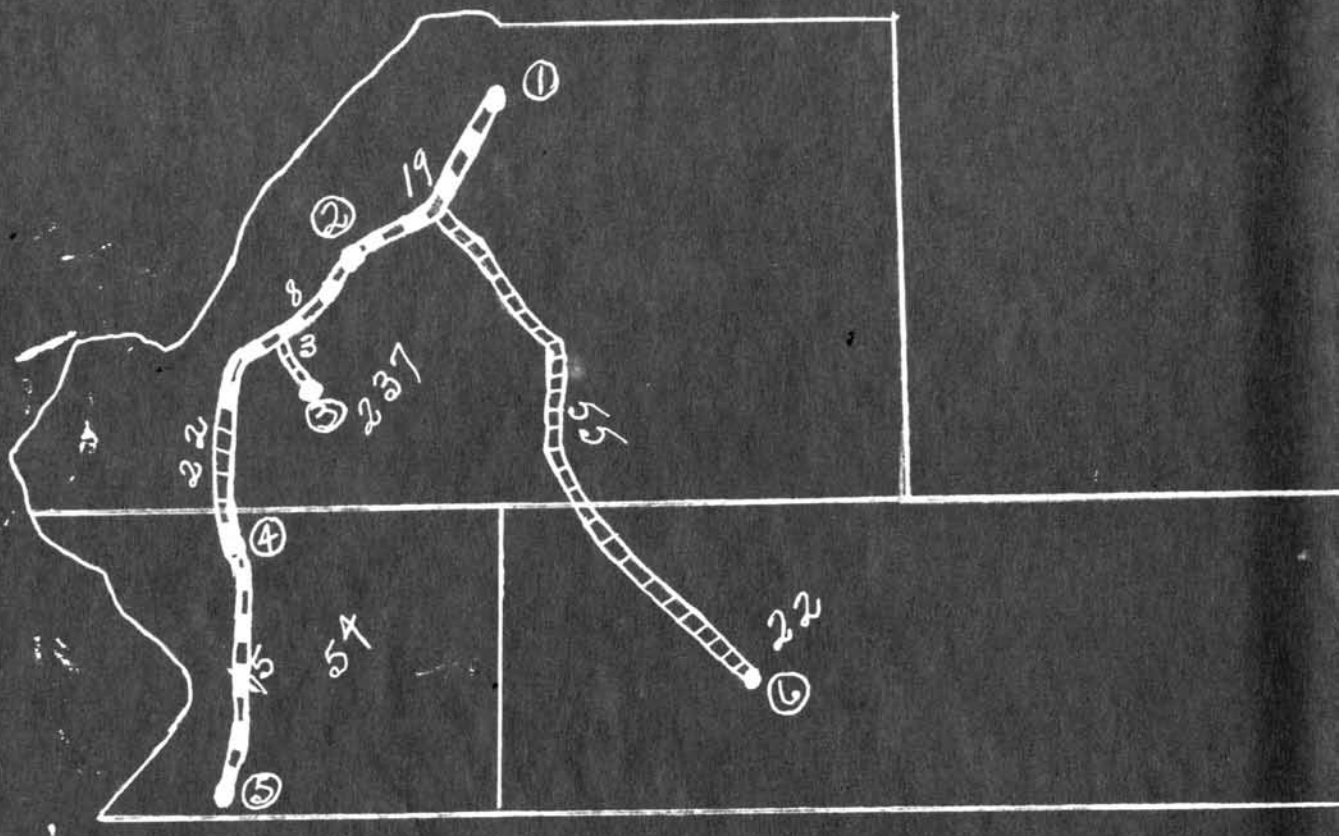

Fig. XXII

Standard Gravel Surfaced Roads

Improved Roads--Generally Good

TOTAL SCHOOL ENROLLMENT

8000
7800
7600
7400
7200
7000
6800
6600
6400
6200
6000
5800
5600
5400
5200
5000
3000
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200

Fig. XXI

JOINT COUNTY JUNIOR COLLEGE DISTRICT

Comprising { Emery District
Carbon District

$P = 231.48 + 115.72X$

P = High School Population.

X = Time in Years Origin 1919

0 = High School Enrollment, Actual Count to Time

On the basis of comparisons that have been made with other counties, and the bases that were described in quite a detailed manner in connection with Boxelder County, it seems a conservative estimate to say that a junior college established in this district would have an enrollment of at least 150 students on the basis of the high school and junior college situation in 1928-29.

Down in the southwest part of the state there are now two junior colleges operating. The Branch Agricultural College at Cedar City and the Dixie College at St. George. The Dixie College is one of the L. D. S. schools that is to be discontinued. Both of these schools are now operating in connection with high schools. Table I shows that in 1928-29 the Branch Agricultural College had 96 college students, and Dixie had 71. Both of these schools have been in operation several years.

Figure VII shows that the Branch Agricultural College in 1928-29 drew its college enrollment from quite a wide area, confined largely, of course, to the southwest corner of the state. Figure X shows that the college enrollment of Dixie College came largely from the vicinity of St. George.

In this part of the state communities are rather far apart. Transportation of school students from one community to another is impracticable in most cases. One junior college district is proposed for this part of the state. The district

proposed embraces Beaver County, Iron, County, Washington County, Kane County, and Garfield County. Cedar City seems to be the most logical center for a school in this area. Figure XXIV shows this joint district with the location of the towns that are doing senior high school work. Transportation of students from these towns is almost impossible. However, there seems to be evidence that this area can support one junior college. It will not be taking the college very near to the students but on the basis of present and immediate future conditions to establish more than one public junior college in this area would be a mistake.

So far the following counties have not been mentioned in this survey of proposed districts---Duchesne, Uintah, Grand, and San Juan. If reference is made to previous tables, especially table II, it will be seen that only one of these, Uintah, has a large enough high school enrollment to be considered as having population sufficient to justify a junior college. And Uintah falls far below a minimum standard. The only conclusion which can be made regarding these counties is that they are too far isolated and too sparsely settled to be considered in any junior college district. Their students who go on to college will be distributed in the other colleges, the home county contributing in finance to the college to which the students enroll.

Map of the proposed Beaver-Iron-Washington- Kane-Garfield Joint County Junior College District. Circled figures indicate location of Senior High Schools.
1. Milford 2. Minersville 3. Beaver 4. Parowan
5. Cedar City 6. Enterprise 7. St. George 8. Hurricane
9. Kanab 10. Orderville 11. Panguitch 12. Escalante
Figures indicate total 3rd and 4th year high school students
Figures on roads indicate road mileage

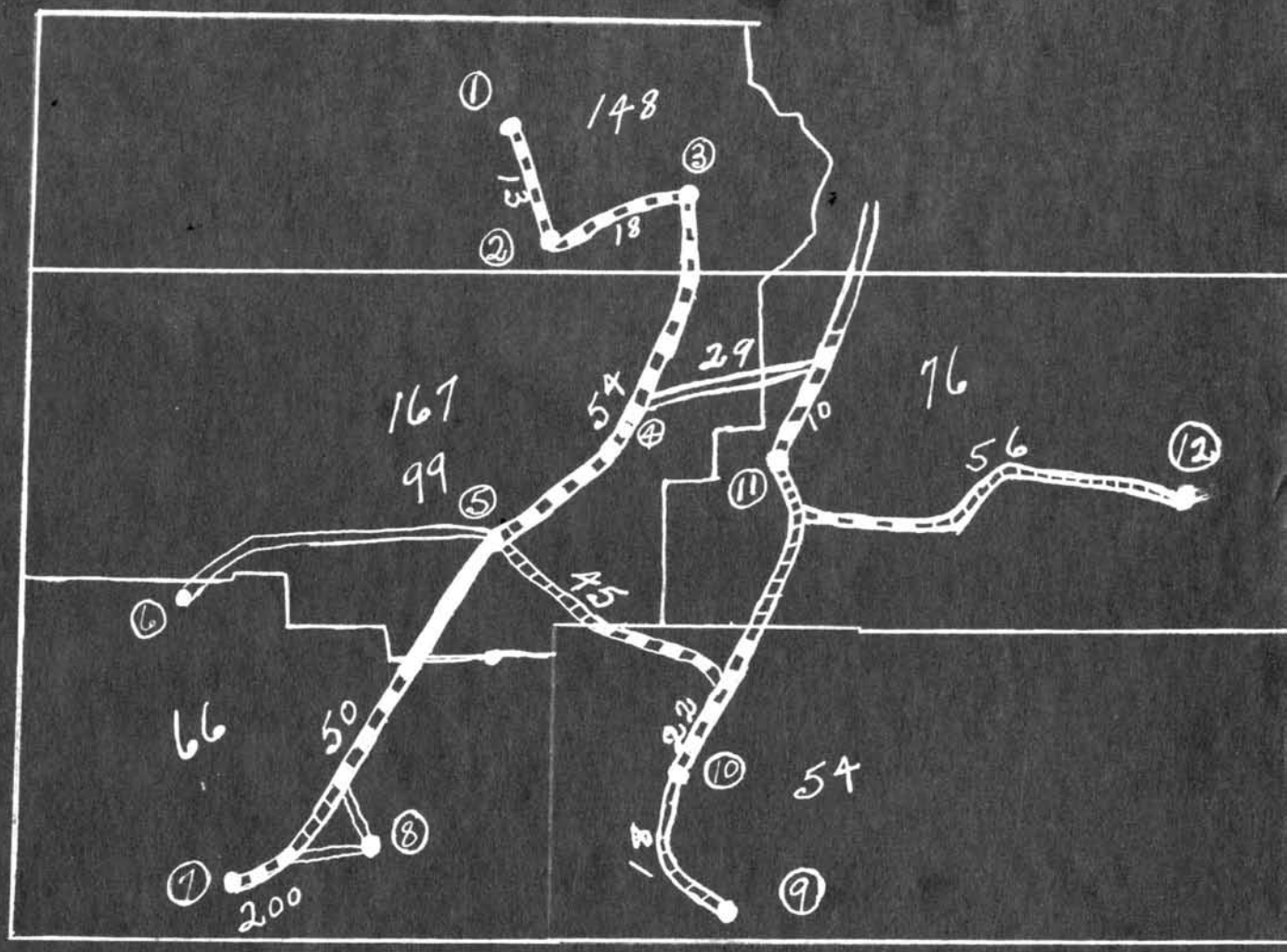

Fig. XXIV

Paved or Bituminous Treated Roads

Standard Gravel Surfaced Roads

Second Class Earth Roads

TOTAL SCHOOL ENROLLMENT

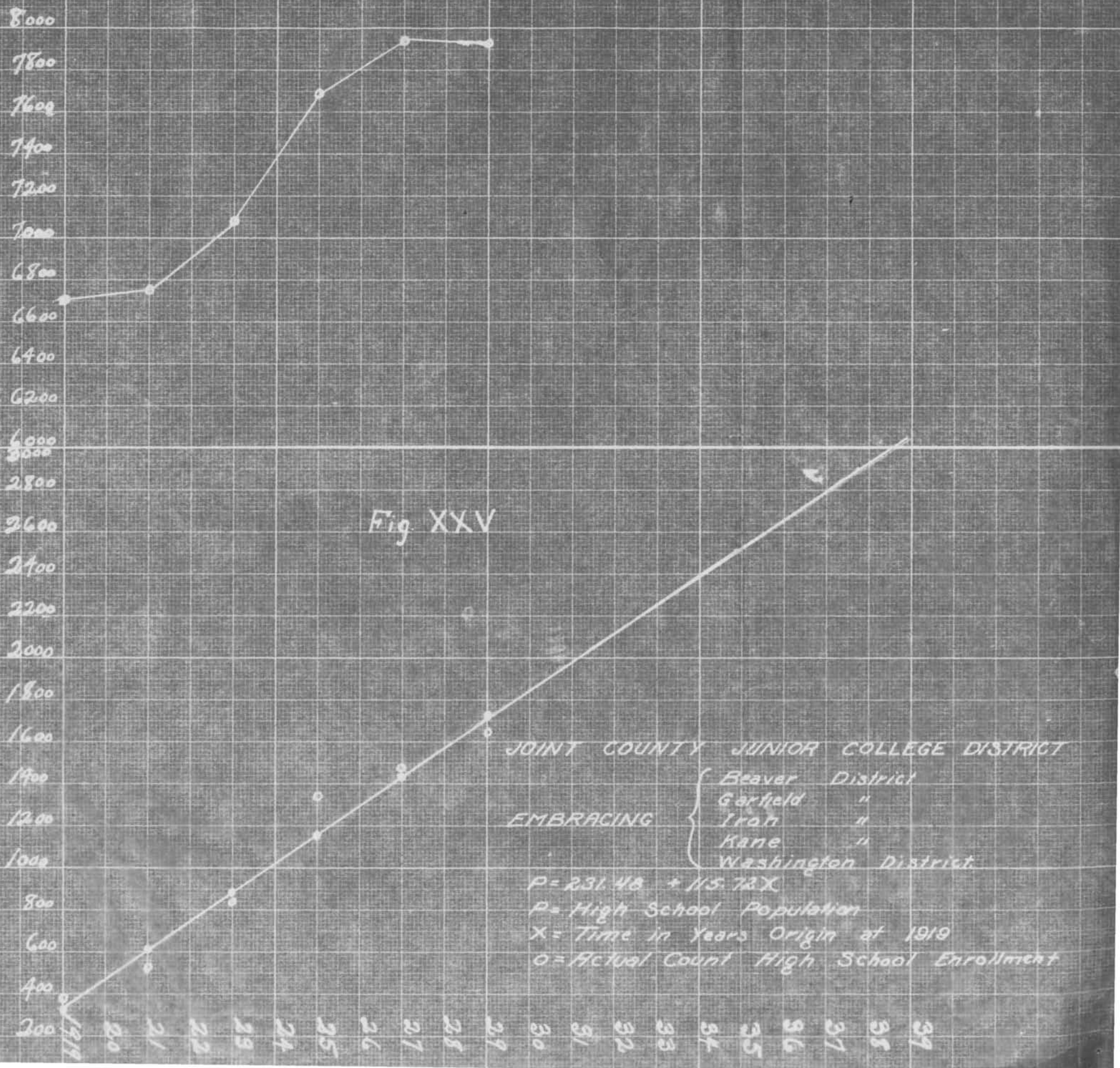

Fig. XXV

JOINT COUNTY JUNIOR COLLEGE DISTRICT

EMBRACING
- Beaver District
- Garfield "
- Iron "
- Kane "
- Washington District

$P = 231.48 + 115.72X$

P = High School Population

X = Time in Years Origin at 1919

O = Actual Count High School Enrollment

Summary. This chapter has now proposed seven public junior college districts for Utah. The proposals have grown out of a general survey of three fields---the present college situation of Utah, the present high school situation, and existing junior college standards as found in several other states. Accompanying the discussion of each proposed district has been a map picturing the high school centers, road conditions, and the number of third and fourth year high school students in each district. The total school enrollment and high school enrollment for each district has been pictured graphically. Prediction lines have been drawn for each district covering the succeeding ten years. These lines are practically all of the straight line type. Caution has been given that these predictions are the probably too high due to the unnaturalness of the ten years of data on which predictions were made.

A general brief summary of the whole study will follow these proposals.

Chapter 6.

Summary and Conclusions.

This study was undertaken to answer the question Does Utah Need Junior Colleges? If so, where? The investigation has followed four major trends of thought. Chapter 1 was written to give a perspective to the junior college as a new developing institution. This was considered pertinent to the study because of the philosophy which lies back of this new school unit. If this point is not considered then it could be said dogmatically that Utah has college facilities. If these facilities are overcrowded all that is needed is an enlargement of the present college plants. Chapter 1 indicated that public junior colleges have very definite distinctive functions to perform. It is not a narrow neck of land connecting two larger bodies of land.

Chapter 2 was an attempt at a rather detailed analysis of the present junior college student bodies in Utah. It aimed to answer in quite a detailed manner from what areas did such of the present junior colleges in Utah secure its enrollment. The school year 1928-29 was used as a typical year. This chapter showed quite conclusively that the present colleges are very largely local institutions. This applies very much more to the private junior colleges and junior colleges separated from four year institutions than it does to the junior college years of the four year institutions. The present junior col-

leges in Utah draw upwards of sixty per cent of their students from a 25-30 mile radius. If students are forced to be away from home to attend college they go, as a general rule, to the larger four year institutions rather than to a closer junior college.

Chapter 3 was written to indicate what the high school situation is in Utah in 1928-29. The junior colleges secure practically their entire enrollment from the high schools. In this chapter comparisons were drawn to indicate whether there were any wide differences existing among the various school districts in the percent of the high school population that went on to college. These comparisons clearly indicated that the presence of a college greatly popularized college education. When comparable districts were compared it was discovered that several districts were low in the percentage of high school students who went on to college.

Chapter 4 is aimed clearly to show that junior colleges should not be advocated in wholesale fashion to satisfy local enthusiasm or to serve a very limited possible enrollment. Standards of various states, standardizing agencies, and authorities in the field of junior college education were listed in this chapter. Standards relating to size of the student body were the ones that were considered. Since there is no authentic on general population in Utah since the 1930 census, standards relating to general population were largely omitted. This

chapter shows that a public junior college should have upwards of 150 students enrolled. Two hundred students is considered an ideal beginning point. To secure this enrollment a high school student body of upwards of 1300 is necessary under ordinary conditions.

Chapter 5 contains the composite results of chapters II, III, and IV. In addition to the present four year institutions in Utah, three in number, seven public junior colleges are recommended. Three of these are in the same localities as junior colleges now operating. Two of the three are private schools and are to be closed according to information given in this study. These seven junior college districts are:

1. Boxelder District.
2. Weber District, comprising Ogden City District and Weber County District.
3. A joint county district comprising Summit and Wasatch Counties which include the North Summit School District, the South Summit District, the Park City District, and the Wasatch District.
4. The Sanpete District, embracing the North Sanpete School District and the South Sanpete School District.
5. A joint county district embracing Carbon County and Emery County.

6. A joint county district embracing Sevier County, Wayne County and Piute County.

7. A joint county district embracing Iron County, Beaver County, Washington County, Kane County and Garfield County.

These districts have been proposed on the following bases: (the criteria proposed are here sub-divided)

1. Number of students now found in junior colleges.
2. Number of students now found in high schools.
3. Physical conditions existing in Utah.
4. Possible future high school population.
5. What a junior college is supposed to be and do.

Future Studies. The limitations of this study are clearly evident without a companion study dealing strictly with the financial side of this question. Each of the forty-eight states must stand financially alone for its education. The federal government makes special appropriations for special types of work. Since the amount of money each state can spend for education is limited, any new educational venture must be considered in the light of its effect on the school units already established. Such a study is indispensable to a proper solution of the junior college problem. In addition to this general financial problem, there is need for a very much detailed study in each of the proposed districts. Some of the questions to be

thoroughly analyzed are: If a junior college is established what program of studies would best fit the needs of each district? What are the housing problems in each district? What is the proper solution to the transportation problem in each district? This does not exhaust the list of unsettled questions.

The seven junior college districts have been proposed entirely on the basis of this one study. The writer recognizes that the field investigated was rather narrow. However, this was deemed more desirable than a perfunctory superficial treatment of all phases of the problem. Probably future studies in other phases of the junior college problem in Utah will make it necessary to alter or disregard some of these proposals.

Junior College Enrollment in

Utah Junior Colleges from Utah Communities

Year 1928-29.

	Snow	L.D.S.	Dixie	Wstmnstr.	Weber	B.A.C.
Aurora	2					
Afton			1			
Axtell	2					
Burch Creek					1	
Bear River					1	
Bicknell	2					
Bountiful		2				
Brigham		1			21	
Bingham				1		
Beaver						4
Chester	3					
Cornish					1	
Cannonville	1					
Centerfield	5					
Castledale	4	1				1
Cedarview	2					
Cedar City						36
Devils Slide		1			1	
Delta	1			1		
Elsinore	2					
Eden					6	

	Snow	L.D.S.	Dixie	Wstmnstr.	Weber	B.A.C.
Eureka		1				
Ephraim	52					
Escalante	3					1
Fairview	4					
Farmington		3				
Fountain Green	12					
Ferron	4			2		
Fayette	2					
Farwest					4	
Gunlock			1			
Greenriver				2		
Gunnison	6			1		
Hooper					7	
Hennifer					2	
Honeyville					1	
Hurricane			2			6
Harrisville					5	
Hinckley			1			
Holden	3					
Hatch	1					
Huntsville					7	
Iron Springs						1
Ibapah				1		1
Kingston					1	1
Kanab					4	

	Snow	L.D.S.	Dixie	Wstmnstr.	Weber	B.A.C.
Kaysville					4	
Liberty					3	
Lehi					1	
Loa	1					
Leeds			1			
Layton					2	
LaVerkin			5			1
Lewiston					2	
Huntington	3					
Koosharem	7				10	
Myton				1		
Morgan					13	
Monroe	7			1		
Mayfield	9					
Midvale		1				
Manti	35				1	
Murray		5				
Marriott					2	
Minersville		1				11
Meadow	4					
Milford				5		1
Mt. Pleasant	10			2		
Moroni	8					
Marysvale						1

	Snow	L.D.S.	Dixie	Wstmnstr.	Weber	B.A.C.
New Harmony			1			
New Castle						1
Nephi	1				1	
Orderville			2			2
Orangeville	1	1				
Ogden	2			1	267	
Parowan			1		1	10
Pleasant View					7	
Panguitch			3			3
Plain City					6	
Paragoonah			1			2
Perry					2	
Provo		1		1		
Payson	1			4		1
Peterson					1	
Price	1			2		
Rockville						1
Roy					1	
Randolph		1				
Riverdale					5	
Richfield	4		1	1		
Scipio	5				1	
Sterling	2					
Summit						1
Sunnyside	1					

	Snow	L.D.S.	Dixie	Wstmnstr.	Weber	B.A.C.
St. George			43			
Syracuse					4	
Santa Clara			6			
Spring City	3					
Springville			2			
Salt Lake City		80		20	1	1
Sandy		2				
Salina	2			2		
Tremonton					1	
Tooele		1		1		
Taylor					6	
Tropic						1
Washington			5			
Woods Cross		3				
Wellington						2
Wellsville					2	
Willard					4	
Wilson					6	
West Weber					2	
Warren					3	
Wales	2				10	

Junior College Enrollment in
Utah Senior Colleges from Utah Communities
Year 1928-29.

	U.S.A.C.	U. of U.	B.Y.U.
American Fork		8	23
Avon	1		
Annabelle			1
Antimony		1	
Aurora	1	1	3
Abraham		1	
Alton	1		
Beaver	1	4	6
Bountiful	3	18	
Brigham	34	9	1
Benjamin			2
Boulder	2		
Bicknell	1		
Bacchus			
Bear River	1	3	
Bingham		7	1
Blanding		3	2
Bloomington			1
Cottonwood		1	
Cedar	1	4	2
Clover		2	
Castledale		1	3

	U.S.A.C.	U. of U.	B.Y.U.
Coalville	7	4	1
Cleveland			1
Clawson	1		
Clarkston	1		
Cove	1		
Cornish	3		
Clearfield	1		
Circleville		1	
Centerfield	1	1	
Centerville		2	2
Corinne	1	1	
Deweyville	2	1	
Draper		1	9
Delta		3	4
Deseret			2
Devils Slide		1	
Duchesne		2	
Eureka	5	12	4
Ellwood	1		
Elsinore			1
Ephraim		4	
Echo	2		
Enterprise		1	
Elberta		1	

	U.S.A.C.	U. of U.	B.Y.U.
Enoch			1
Fillmore		2	11
Farmington	3	14	9
Fielding	1	1	
Fountain Green	1		6
Ferron		4	5
Fairview		3	7
Garland	14	4	
Grantsville	1	17	1
Gunnison	2	2	3
Greenriver	1	6	
Greenwood	4		2
Garden City	4	1	
Greenville	2		
Goshen		3	4
Garfield		2	
Glenwood		1	
Heiner		1	
Hyrum	5		
Heber	7	6	8
Hyde Park	1		
Holliday		3	
Honeyville	4	1	

	U.S.A.C.	U. of U.	B.Y.U.
Huntington		3	6
Hinckley	4		9
Helper		7	2
Hayden		1	
Hatton		1	
Hoytsville		2	2
Holden			2
Ibapah	1		
Jensen	1		
Joseph			1
Kanab	1	1	
Kaysville	9	6	
Kamas	1	2	2
Kenilworth		4	
Kanosh		2	2
Koosharem		1	
LaVerkin			1
Layton	4	10	
Logan	294	2	
Leamington		1	
Loa			2
Lehi	5	7	15
Levan		1	3
Lewiston	9	1	

	U.S.A.C.	U. of U.	B.Y.U.
Lyndyl		1	
Laketown	7	2	
Leota	1	1	
Lasalle	1		
Lapoint			1
Myton		1	
Mona			4
Mammoth		3	
Manila			1
Monticello		1	
Mapleton			6
Magna	3	18	2
Marion			1
Moroni	3	1	4
Moab		4	1
Mendon	3		
Midvale	1	7	1
Millville	1		
Meadow			2
Murray	3	45	3
Mohrland		1	1
Morgan	3	2	6
Manti	2	1	

	U.S.A.C.	U. of U.	B.Y.U.
Mayfield	2		
Mt. Emmons	1		1
Milford	2	1	1
Mt. Pleasant	3	6	5
Monroe	3	1	4
Marion	1		
Midway	2		2
Newton	9		1
Nephi	7	5	10
New Harmony	1		
Neola			1
Oak City	1		3
Ogden	21	64	10
Ophir		1	
Orangeville			2
Paragoonah			2
Promontory		1	
Price	3	11	7
Paradise	3		
Panguitch	5	6	4
Parowan	1	4	
Providence	18		
Peterson	2	1	
Provo	3	7	187

	U.S.A.C.	U. of U.	B.Y.U.
Payson	2	4	24
Pleasant Grove	10	1	36
Park City	1	10	1
Rossette	1		
Roy		1	
Richmond	17	1	2
River Heights	4		
Richfield	6	13	16
Redmund	1	1	1
Roosevelt	1	7	2
Randolph	1	2	
Rolapp	1		
Riverton		4	1
Salem			4
Sevier		1	
Sandy	1	20	4
Springville	6	2	38
Santa Clara			1
Salt Lake City	27	1280	12
Spanish Fork	2	5	49
Smithfield	22	2	
Scofield			
Summit	1		

	U.S.A.C.	U. of U.	B.Y.U.
Sweet Mine		1	
Santaquin	1	1	3
Silver City			2
Spring Canyon		1	2
Sigurd		1	2
St. John		2	
Sunnyside		3	
Scipio		1	1
St. George		3	5
Stockton		1	
Tooele	11	13	2
Tremonton	14	6	
Trenton	1		
Taylorsville		1	
Vernal	11	5	16
Venice	6	1	3
Woods Cross	2	10	
Wellsville	9		
Woodruff	3	2	
Willard	1	1	
Washakie	1		
Wendover		1	
Wallsburg			3

Total College Enrollment in

Utah Colleges from Utah Communities

Year 1928-29.

	Junior College	Senior College
American Fork	31	8
Avon	1	
Annabella	1	
Antimony	1	
Aurora	7	
Abraham	1	
Alton	1	
Afton	1	
Axtell	2	
Beaver	15	7
Bountiful	23	5
Brigham	66	25
Benjamin	2	2
Boulder	2	
Bicknell	3	
Bacchus		1
Bear River	5	
Bingham	9	4
Blanding	5	2
Bloomington	1	1
Burch Creek	1	
Cottonwood	1	

	Junior College	Senior College
Cedar City	43	8
Clover	2	
Castledale	10	
Coalville	12	5
Cleveland	1	1
Cache Junction		1
Clawson	1	1
Clarkston	1	
Cove	1	
Cornish	4	1
Clearfield	1	
Circleville	1	1
Collinston		2
Charleston		1
Centerfield	7	
Centerville	4	
Corinne	2	
Chester	3	
Cannonville	1	
Cedar View	2	
Deweyville	3	
Draper	10	3
Delta	9	3
Deseret	2	1

	Junior College	Senior College
Devils Slide	3	
Duchesne	2	
Eureka	22	12
Ellwood	1	
Elsinore	3	2
Ephraim	56	15
Echo	2	
Enterprise	1	
Elberta	1	
Enoch	1	
Escalante	4	
Eden	6	
Fillmore	13	6
Farmington	29	9
Fielding	2	2
Fountain Green	19	3
Ferron	15	3
Fairview	14	4
Fairfield		1
Forrest		1
Fayette	2	
Far West	4	
Garland	18	6
Grantsville	19	1

	Junior College	Senior College
Gunnison	14	
Greenriver	9	3
Greenwood	7	1
Garden City	5	
Greenville	2	
Goshen	7	2
Garfield	2	7
Gunlock	1	
Huntsville	7	1
Heiner	1	1
Hyrum	5	7
Heber	21	6
Hyde Park	1	3
Hooper	7	2
Holliday	3	8
Honeyville	6	3
Huntington	12	5
Hinckley	14	5
Helper	9	4
Hayden	1	
Hatton	1	
Hoytsville	4	
Holden	5	

	Junior College	Senior College
Hatch	1	
Harrisville	5	
Hurricane	8	
Hennifer	7	
Ibapah	3	
Iron Springs	1	
Jensen	1	1
Joseph	1	1
Kanab	5	1
Kaysville	19	7
Kamas	5	2
Kenilworth	4	
Kanosh	4	
Koosharem	8	7
Kingston	1	
LaVerkin	7	
Layton	16	7
Logan	296	171
Leamington	1	
Loa	3	1
Lark	2	
Lehi	28	5
Levan	4	1
Lewiston	12	

	Junior College	Senior College
Lyndyl	1	
Laketown	9	1
Leota	2	
LaSalle	1	
Lapoint	1	1
Liberty	3	
Leeds	1	
Myton	2	1
Mona	4	
Mammoth	3	
Manila	1	1
Monticello	1	
Mapleton	6	2
Magna	25	2
Marion	1	
Moroni	16	1
Moab	5	
Mendon	3	2
Midvale	10	4
Millville	1	
Meadow	6	
Murray	56	19
Mohrland	2	
Morgan	24	8

	Junior College	Senior College
Manti	59	9
Mayfield	11	2
Mt. Emmons	2	
Milford	10	2
Mt. Pleasant	26	7
Monroe	16	3
Marion	1	
Midway	4	1
Marriott	2	
Minersville	12	
Marysvale	1	
Newton	10	7
Nephi	24	12
New Harmony	2	
Neola		1
New Castle	1	
Oak City	4	2
Ogden	365	76
Ophir	1	2
Orangeville	4	
Orderville	4	
Paragoonah	5	
Promontory	1	
Price	24	8
Paradise	3	

	Junior College	Senior College
Panguitch	21	5
Parowan	17	4
Providence	19	8
Peterson	8	
Provo	189	113
Payson	35	12
Pleasant Grove	47	24
Park City	12	
Pleasant View	7	
Plain City	6	
Perry	2	
Rosette	1	
Roy	2	
Richmond	20	10
River Heights	4	
Richfield	41	12
Redmund	3	3
Roosevelt	10	5
Randolph	4	1
Rolapp	1	
Riverton	5	2
Rockville	1	
Riverdale	5	

	Junior College		Senior College
Salem	4		
Sevier	1		
Sandy	27		10
Springville	48		20
Santa Clara	7		6
Salt Lake City		1896	
Spanish Fork	56		25
Smithfield	24		1
Scofield	2		
Summit	2		
Sweet Mine	1		
Santaquin	5		2
Silver City	2		
Standardville			1
Spring Canyon	3		
Sigurd	3		
St. John	2		
Sunnyside	4		3
Scipio	8		
St. George	51		9
Stockton	1		
Sterling	2		
Syracuse	4		
Salina	4		
Tooele	28		9

	Junior College	Senior College
Tremonton	21	5
Tridell	1	
Trenton	1	1
Tropic	1	1
Taylorsville	1	
Toequerville		1
Taylor	6	
Vernal	32	10
Venice	10	
Woods Cross	15	4
Wellsville	11	11
Woodruff	5	
Willard	6	5
Washakie	1	
Wendover	1	
Wallsburg	3	
Washington	5	
Wellington	2	
Wilson	6	
West Weber	2	
Wales	2	
Warren	3	

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