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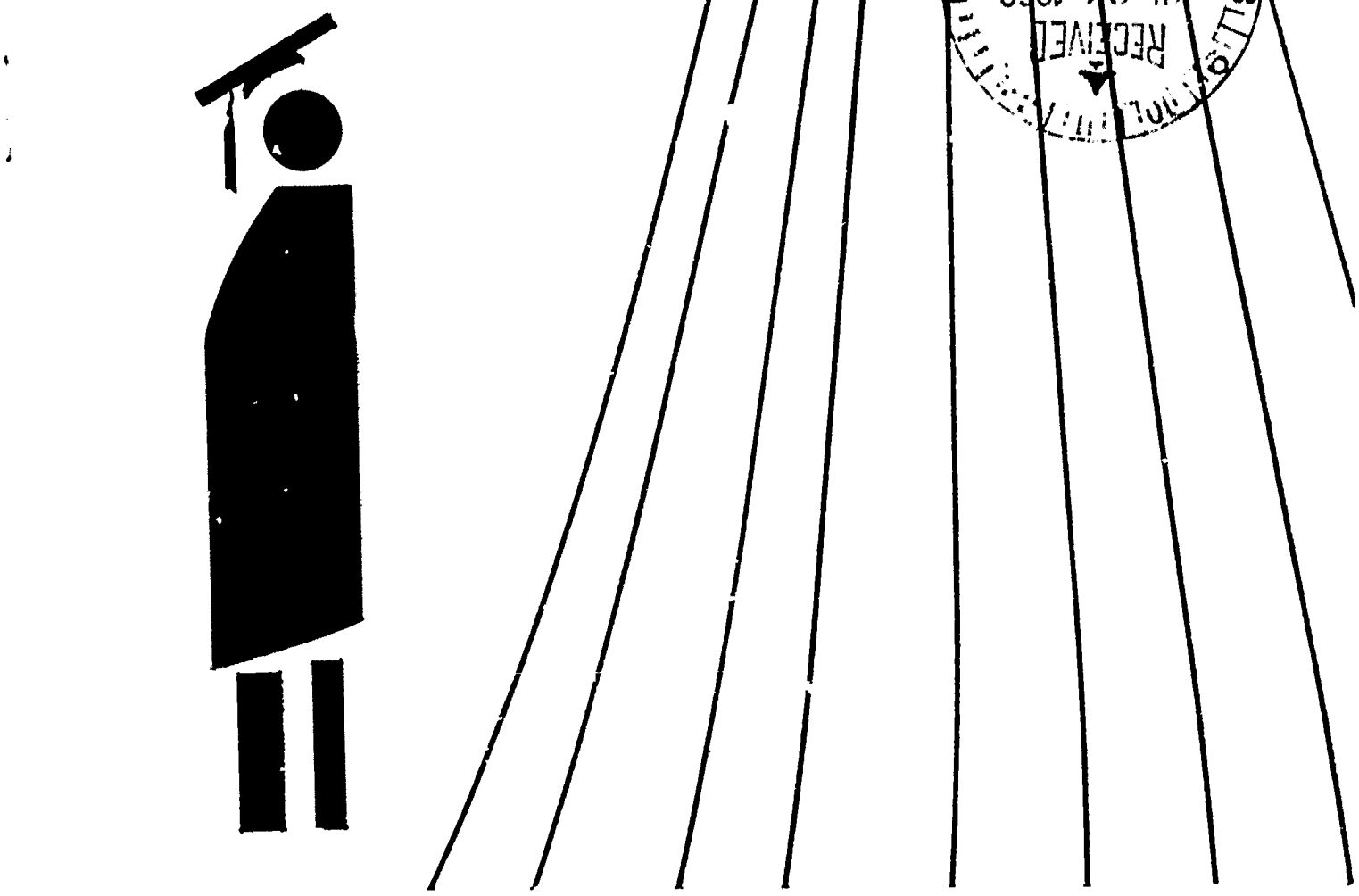
Past and present trends and future projections of student enrollments and total population are presented in terms of numbers, distribution, and school level attainment. Such characteristics as death rates, birth rates, migration, age, income, occupation, and education are examined in an effort to (1) evaluate their effect on the educational climate of a once predominately rurally organized state, and to (2) arrive at future projections of populations and enrollments in the colleges and universities of a state approaching urban classification. Background information and statistical data are provided for leaders and citizens of the state to use in aiding them to make decisions concerning educational needs of the future. (SW)



Population and Higher Education In Missouri 1960-1975

POPULATION AND HIGHER EDUCATION

IN MISSOURI

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

Rex R. Campbell

University of Missouri

December, 1967

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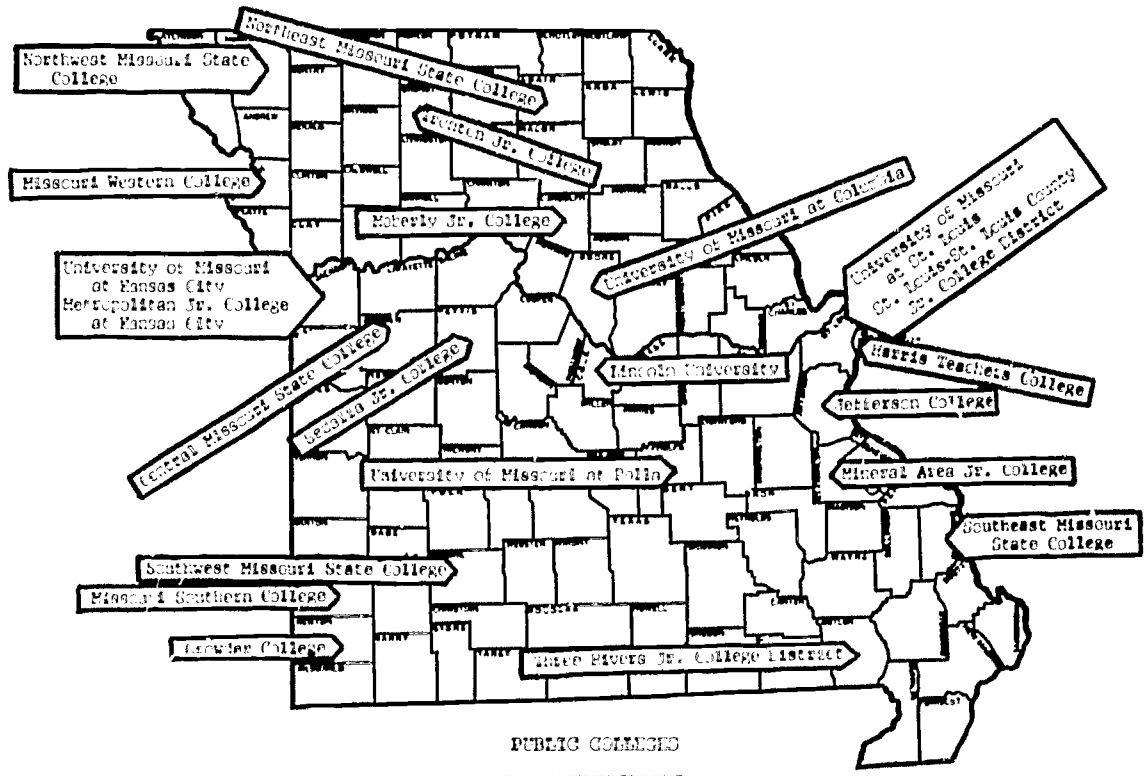
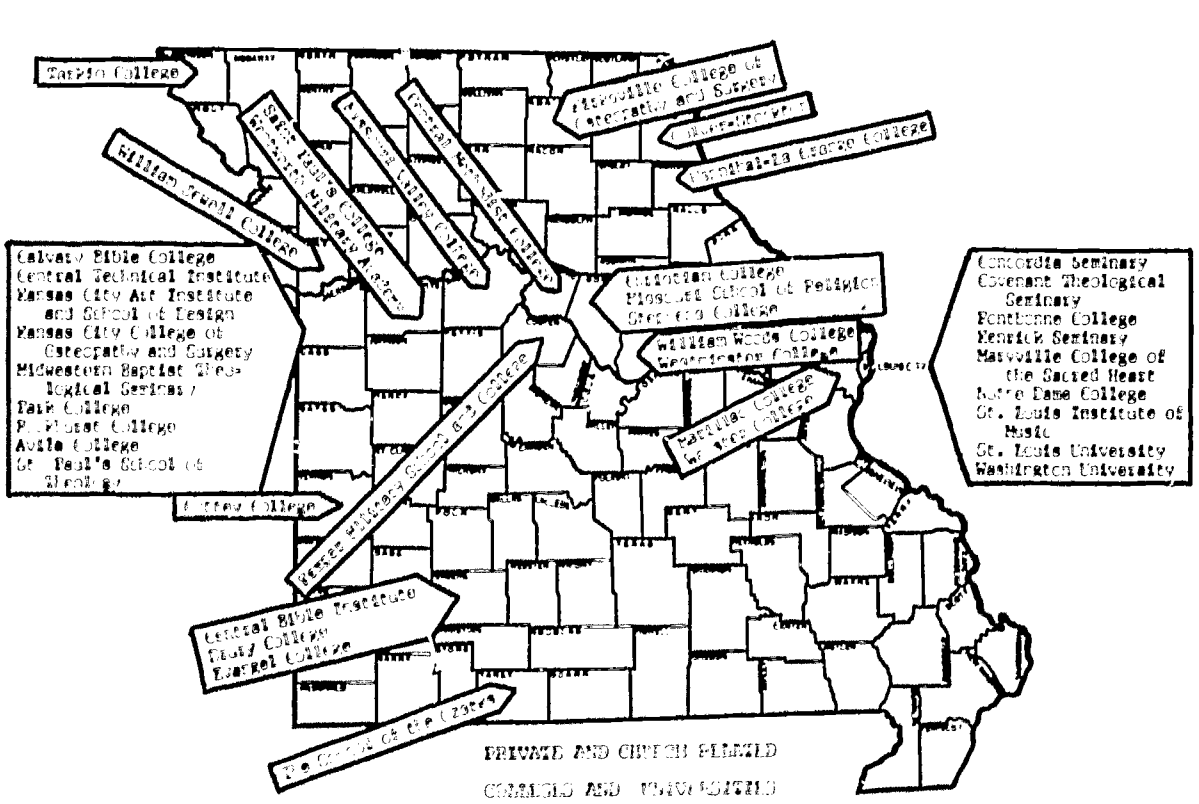


PUBLIC COLLEGES

AND UNIVERSITIES



PRIVATE AND CHURCH-RELATED

COLLEGES AND UNIVERSITIES

F.T.E. ENROLLMENT
MISSOURI INSTITUTIONS OF HIGHER EDUCATION
FALL, 1966

	Fresh-men	Sopho-more	Junior	Senior	Graduate	Pro-fessional	Total FTE
M.U. Columbia	4752	3107	2260	1488	2879	3093	17,579
M.U. Rolla	1312	181	118	115	576	2230	4,532
M.U. Kansas City	1870	879	741	536	1300	845	6,171
M.U. St. Louis	2469	1298	630	224	-	-	4,621
Central Mo. State	3478	2089	1478	1105	487		8,637
Northeast	1599	1507	819	705	357		4,987
Northwest	1426	1007	595	666	16		3,710
Southeast	3111	1124	691	548	42	55	5,571
Southwest	2857	1044	854	684	43	57	5,539
Lincoln University	857	431	285	339	28		1,940
Harris	----- This information not reported----------						1,088
Sub Total 4 Yr. Pub.	23,731	12,667	8471	6410	5728	6280	64,375
Crowder Jr. College	301	117					418
Jefferson Co. Jr. College	632	172					804
Kansas City Jr. College	2431	1128					3,559
Mineral Area	536	174					710
Missouri Southern	1067	479					1,546
Missouri Western	674	292					966
Moberly Jr. College	119	49					168
St. Louis Jr. Col. Dist.	5711	1010					6,721
Trenton Jr. College	120	61					181
Sub Total 2 Yr. Pub.	11,591	3482					15,073
Avila	118	67	56	62	-	-	303
Cardinal Glennon	87	72	46	41	-	-	246
Central Methodist	310	279	186	165	-	-	940
Culver Stockton	327	212	149	123	-	-	807
Drury	575	445	273	231	55	-	1,579
Evangel	312	204	164	123	-	-	803
Fontbonne	240	230	189	171	-	14	844
K. C. Art Institute	164	136	92	63	-	-	455
Lindenwood	337	197	138	132	-	-	804
Marillac	70	43	60	44	-	108	325
Maryville	115	138	126	132	-	-	501
Missouri Valley	309	219	180	172	-	-	880
Notre Dame	102	59	53	59	-	-	267
Park College	366	120	54	111	-	-	651
Immaculate Conception	185	76	78	45	-	-	384
St. Louis Col. of Pharm.	-	-	-	-	-	415	415
St. Louis University	1368	935	1077	955	2187	1554	8,126
Stephens	1006	755	60	77	-	-	1,898
Tarkio	396	178	85	56	-	-	715
Washington University	999	951	975	620	3046	722	7,313
Webster	203	213	185	177	48	-	826
Westminster	228	205	122	113	-	-	668
William Jewell	300	287	216	189	-	-	992
William Woods	301	202	87	62	-	-	652

	Fresh-men	Sopho-more	Junior	Senior	Graduate	Pro-fessional	Total FTE
Southwest Baptist	545	301	175	137	-	-	1,158
School of the Ozarks	311	161	107	77	-	22	686
Christian College	335	225	-	-	-	-	560
Cottey College	247	117	-	-	-	-	364
Hannibal LaGrange	311	155	-	-	-	-	466
Kemper Military School	181	108	-	-	-	-	289
Mercy Jr. College	92	39	-	-	-	-	131
St. Mary's O'Fallon	124	47	-	-	-	-	171
St. Paul's College	135	129	-	-	-	-	264
Wentworth	----------		Not Reported				310
Rockhurst	392	374	348	288	-	-	1,402
Sub-Total Private	11,099	7,913	5,277	4,425	5,336	2,835	37,195
Grand Total - All Institutions	46,421	24,062	13,748	10,835	11,064	9,115	116,643

CHAPTER I

INTRODUCTION

Youth in Missouri today face difficult challenges before entering an occupation. The demands by industry, government, and other employers create a need for today's youth to have much higher levels of vocational and social skills than existed for the youth of yesteryear. At the turn of the century, the standard education need was eight years, or perhaps with some high school. In the succeeding decades, this need rose to a high school education. Today, it is for at least some college, and preferably four years of college education. Increasing numbers of young and not so young people are pursuing advanced degrees in Missouri's private and public universities. This increased need coupled with an increased number in the college-age population has created unprecedented challenges for Missouri's colleges and universities.

The purpose of this report is to examine the present and recent past in terms of the number and characteristics of students and the total population, and to examine some future projections of populations and enrollments in the colleges and universities of the state. Thus, this publication will attempt to provide background information from which the leaders and citizens of the state may develop adequate knowledge to make the necessary decisions concerning future higher educational needs in Missouri. It is recognized that any single publication cannot supply all of the necessary information. This publication will concentrate on demographic characteristics of the population, a knowledge of which is an important part of such decision-making.

The only way to look to the future is to view the past and assume that the future will be a continuation of the present and the past. This perspective has many limitations since the future does not always follow the same pattern as in the past. However, it is the most systematic approach available. In this publication the past trends and the present situation will be examined; then projections into the future will be made. These past, present, and future changes and characteristics of the

This publication was developed in large part as a result of a continuing grant made by the Missouri Commission on Higher Education to the University of Missouri. For additional information on Missouri's colleges and universities the reader should see: *First Biennial Report of Missouri Commission on Higher Education, First Coordinated Plan for Missouri Higher Education, Missouri Commission On Higher Education,* Allan O. Pfinster and Gary Quehl, *Report on the Status of Private Higher Education in the State of Missouri,* additional statistical reports published yearly by the Commission, and numerous reports and publications from the individual colleges and universities.

general population will be covered first, and then a description of the colleges' present and past enrollments.

A Note to the Reader

The text of this publication has been kept short. It would be difficult to describe in any detail most of the statistical material which is included in this report. The state includes 114 counties and St. Louis City. If I had attempted to describe each of these units, I believe you, the reader, would have been forced to wade through a large amount of uninteresting facts and figures. Therefore, I will limit my remarks to general statements which are meaningful to the entire state. You should select from the maps and tables the information pertaining to the portion of the state of most interest to you.

Part of the material and information included in this publication resulted from making a series of projections of numbers of students in higher education in Missouri over a period of several years. A companion report entitled: *Plans of Missouri High School Seniors to attend College,* is currently being prepared. The latter publication will report the results of a study of over 1200 seniors in 13 high schools and will attempt to answer such questions as: How many seniors plan to go to college? Who are they—in terms of place of residence, grades, parent's income, occupation, etc.? Where do they plan to go to college? Publication is expected in January.

CHAPTER II

POPULATION TRENDS: PAST AND PRESENT

Trends in Numbers

The major settlement of Missouri started about 1800 and continued at a rapid pace until about the time of the Civil War. In 1810, Missouri's population was slightly less than 20,000, increasing during the next 50 years to well over a million. This rapid population growth was the result of two things: inmigration and a high birth rate.

The growth of Missouri's population throughout the 20th century has been slow, maintaining a gain of about 5 percent per decade (See Table 1). The major exception to this was in the 1950's when an increase of 9 percent occurred: this was an increase from 3.1 million in 1950 to 4.3 million in 1960. The population of Missouri for July 1, 1966 was estimated by the Census Bureau to be 4,508,000, a gain of 200,000 in 6 years. The rate of increase has declined slightly from the 9 percent for the 1950-1960 decade to about 7 percent per decade. The rate of population increase in Missouri has been considerably less than for the United States during most of this period, the lower rate of increase resulting not from lower birth rates, but from a steady outmigration. More people have been moving out of Missouri than have been moving in. A net loss of 733,000 was revealed in the 1960 census. This was determined by comparing the number of persons who said they had been born in Missouri and were living elsewhere in 1960 to those who had been born in some other state and were living in Missouri in 1960. This net out-movement has been occurring at about 100,000 net loss per decade.[2]

Trends in Distribution

The early settlement of Missouri was along the banks of the Mississippi River and the Missouri River. These settlements then spread from the rivers into the Ozarks and the rolling prairies of North Missouri. By 1840 the entire state was settled and the frontier had moved onward into what is now Kansas. The agricultural-based population was rather uniformly distributed over the entire state, and there were almost no towns, except St. Louis, of any size during this early period. The majority of the rural counties reached a peak in population

[2]For a more detailed description of population changes, see: Campbell, Rex R. and John J. Hartman, *Missouri: Population Characteristics and Changes,* Columbia, Agricultural Experiment Station, Bulletin 765, University of Missouri, 1964.

TABLE 1

TOTAL, RURAL AND URBAN POPULATIONS

1830-1966

	NUMBER			PERCENT CHANGE		
YEAR	TOTAL	RURAL	URBAN	TOTAL	RURAL	URBAN
1830	140,455	135,478	4,977	-----	-----	-----
1840	383,702	367,233	16,469	173.2	171.1	230.9
1850	682,044	601,486	80,558	77.8	63.8	389.1
1860	1,182,012	978,525	203,487	73.3	62.7	152.6
1870	1,721,295	1,291,717	429,587	45.6	32.0	111.1
1880	2,168,380	1,622,387	545,993	26.0	25.6	27.1
1890	2,679,185	1,822,219	856,966	23.6	12.3	57.0
1900	3,106,665	1,978,561	1,128,104	16.0	8.6	31.6
1910	3,293,335	1,899,630	1,393,705	6.0	-4.0	23.5
1920	3,404,055	1,817,152	1,586,903	3.4	-4.3	13.9
1930	3,629,367	1,770,248	1,859,119	6.6	-2.6	17.2
1940	3,784,664	1,823,968	1,960,696	4.3	3.0	5.5
1950	3,954,653	1,769,351	2,185,302	4.5	-3.0	11.5
1960	4,319,813	1,443,256	2,876,557	9.2	-5.2	18.2
1966 (est.)	4,508,000	---------	---------	-----	-----	-----

between 1900 and 1910 and have had a continuing decline since that time (See Figure 1).

The concentration of population started in the mid 1800's and is still continuing. Even in the comparatively short period from 1940 to 1960, considerable variation occurred in the distribution of the population. In 1940 the state's population resided about equally divided between rural and urban areas.[3] By 1960 two thirds were in urban areas and one third in rural. At the present time this proportion has probably increased to 70 percent urban. One half of the 1960 population was found in cities of over 50,000 in the state, with St. Louis and Kansas City making the bulk of this population. Today these two cities, their suburbs, and their fringes contain the majority of the population in Missouri (See Table 2). This concentration of population is expected to rapidly continue in the future.

[3]A rural area is a town of less than 2500 persons of the open country. An urban area is a town of 2500 persons or more.

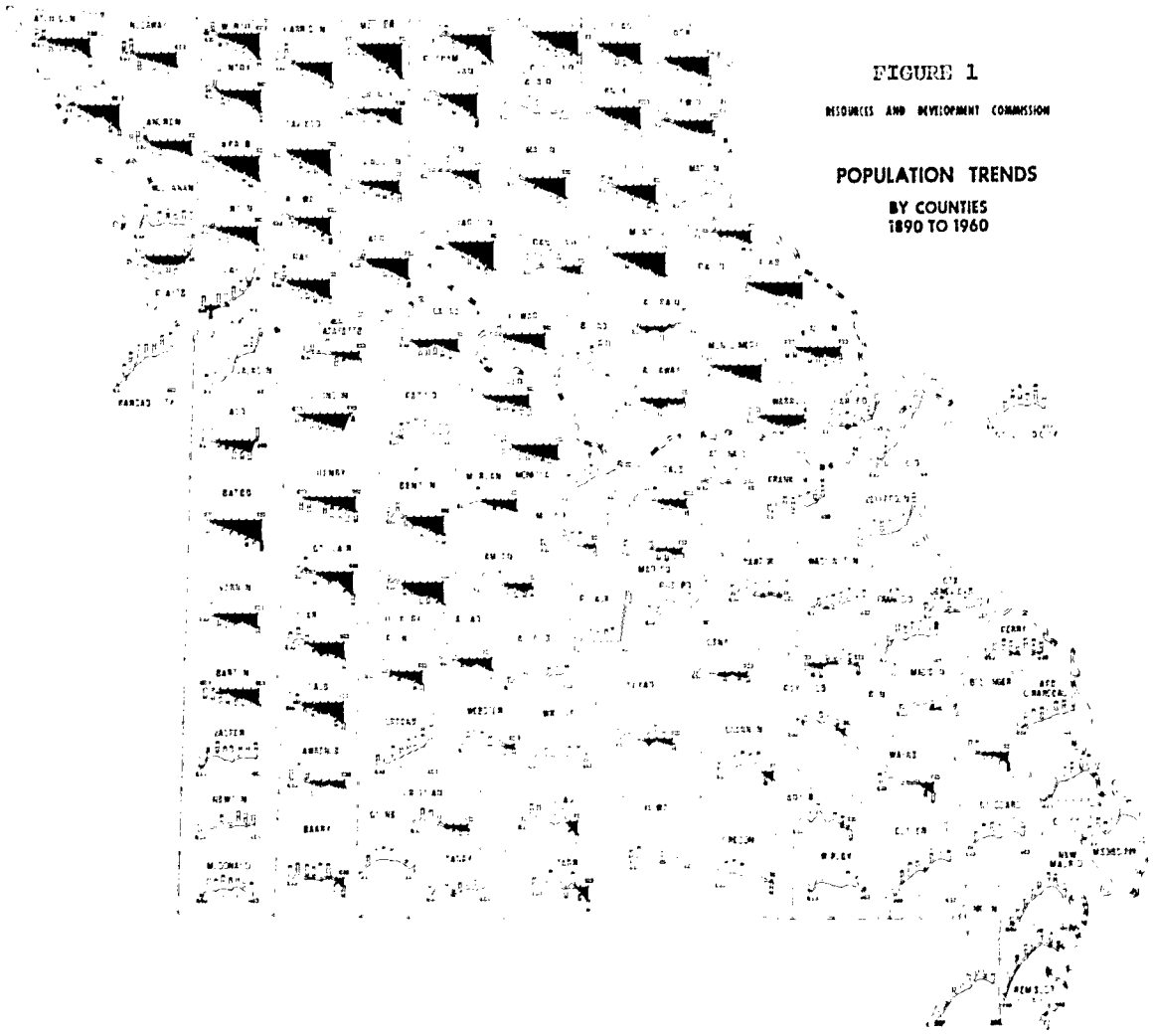


FIGURE 1

RESOURCES AND DEVELOPMENT COMMISSION

POPULATION TRENDS

BY COUNTIES
1890 TO 1960

This has been graphically demonstrated in Figures 2 and 3. The areas of the counties are in proportion to the percentage of the state population that each county contains.[4]

Even outside the two major metropolitan areas the population has become more concentrated (See Figures 4 and 5). If a city had over 10,000 population in 1950, it was more likely to have a higher rate of increase in its population than cities of a smaller size. The smaller cities and towns were likely to hold their population if their size was above 3,000. Towns less than this size have often experienced a slow decline. This decline in population in the small towns has resulted largely from the declining agricultural community.

The open country areas of the state have been declining rapidly in population. This has resulted for the most part from the consolidation of farms. Losses of population from 1950 to 1960 were from 10 to 20 percent in most rural counties and as high as 25 percent in others. The 1964 Census of Agriculture indicated that this trend is continuing or

[4]Campbell, Rex R. "Redistribution of Missouri's Population," *Business and Government Review, VI,* School of Business and Public Administration Research Center, University of Missouri, Columbia, Missouri, March-April, 1965, pp. 23-29.

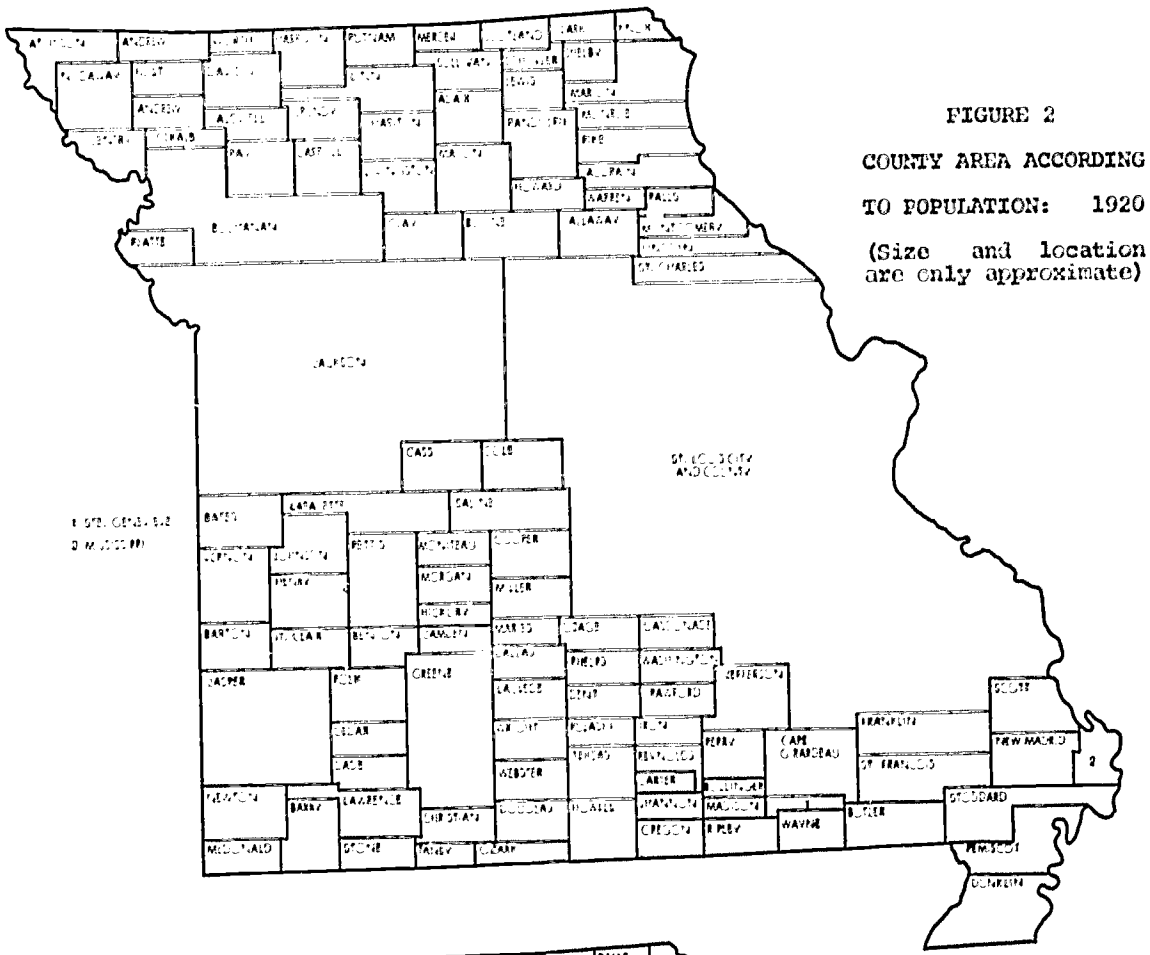


FIGURE 2

COUNTY AREA ACCORDING TO POPULATION: 1920

(Size and location are only approximate)

FIGURE 3

COUNTY AREA ACCORDING TO POPULATION: 1960

(Size and location are only approximate)

TABLE 2

POPULATION OF MAJOR METROPOLITAN AREAS
1940-1960

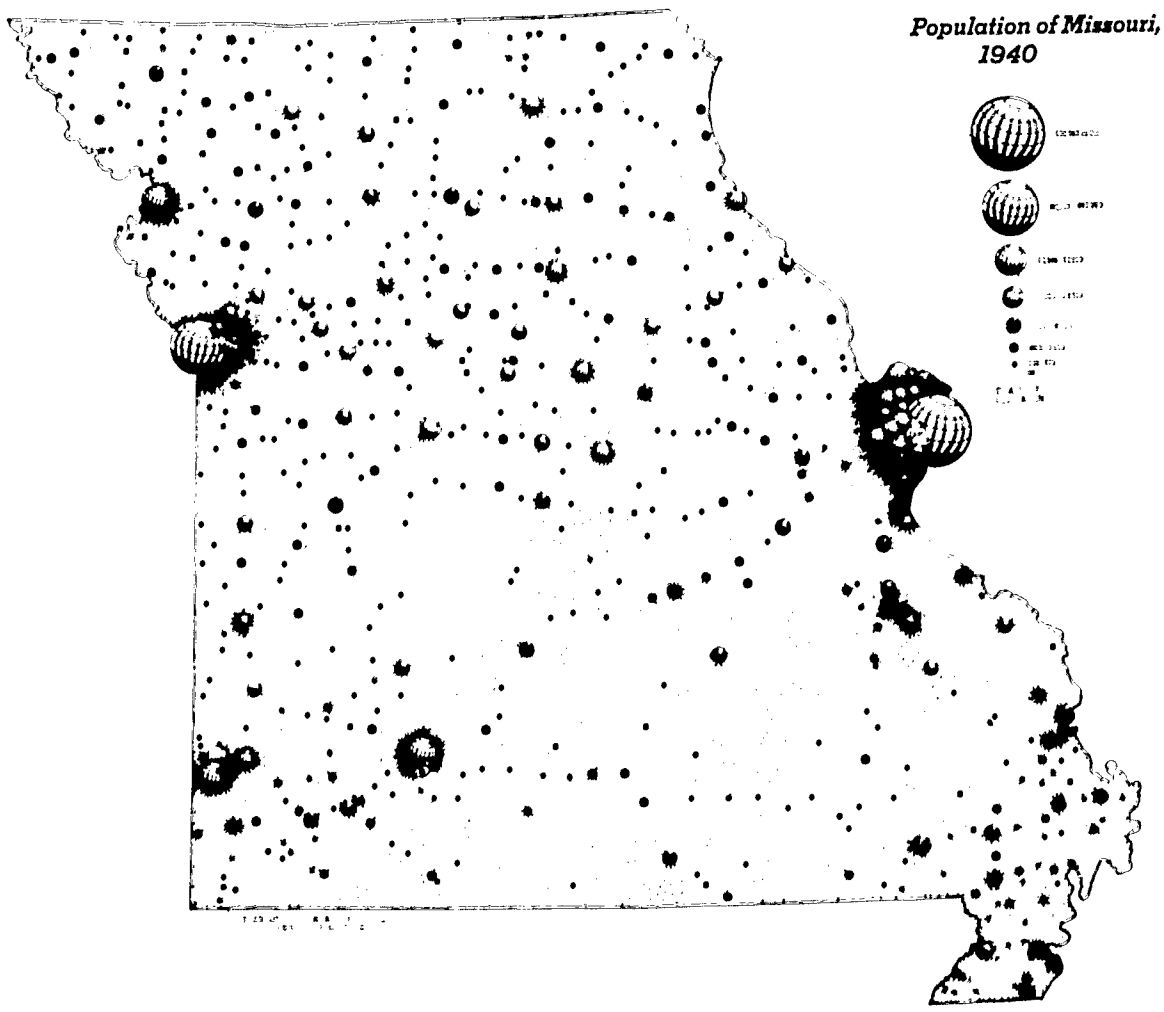
Area	Population		Percent Change 1940-1960
	1940	1960	
State	3,784,664	4,319,813	14.1
Metropolitan Total	1,840,716	2,499,968	35.8
Kansas City Area	508,245	710,206	39.7
Clay County	30,417	87,474	187.6
Jackson County	477,828	622,732	30.3
St. Joseph Area			
Buchanan County	94,067	90,581	- 3.7
St. Louis Area	1,147,863	1,572,905	37.0
Jefferson County	32,023	66,377	107.3
St. Charles County	25,562	52,970	107.2
St. Louis County	274,230	703,532	156.5
St. Louis City	816,048	750,026	- 8.0
Springfield Area			
Greene County	90,541	126,276	39.5

may have even speeded up in some sections of the state. Therefore, continued relatively large losses of population can be expected in the primarily agricultural sections of the state.

In 1960, the counties had a very wide range in distribution and population in terms of numbers and in density. Worth, in the extreme north, had only 3.9 thousand population and St. Louis County had over 700 thousand (See Figure 6). The very wide variation in total population is becoming even greater since it was the counties with the smallest populations which had lost the largest percentages, and some of the counties with the greatest population had increased the largest proportion (See Figure 7). See Chapter III for a description of future populations.

FIGURE 4

Population of Missouri, 1940



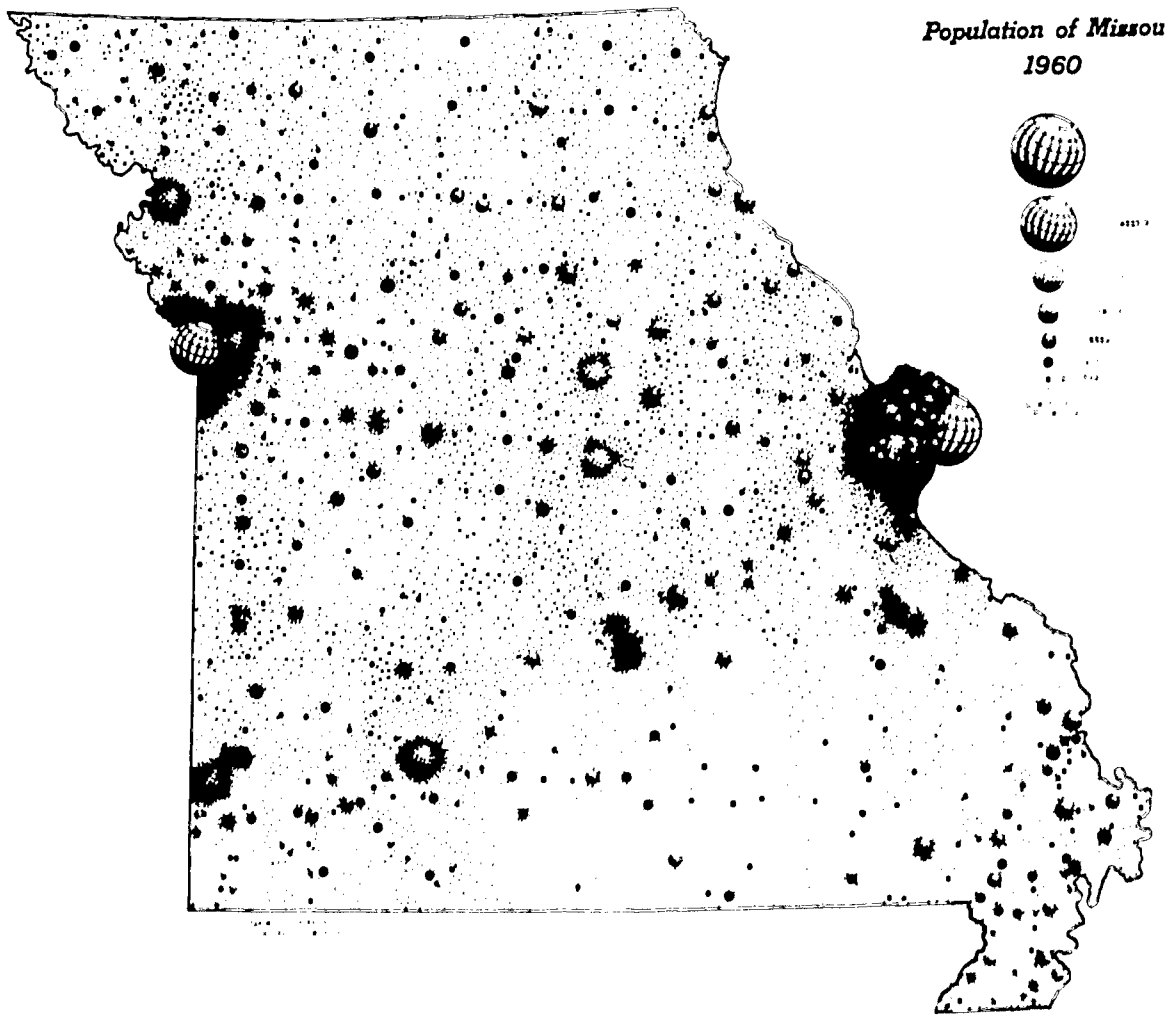
Trends in Characteristics

The number of people in the state may change by only three processes: births, deaths, or migration into or out of the state.

Death Rates. With the reduction of infant and childhood deaths, the death rates for children from birth to college age are very low. About two and one-half percent of the infants in Missouri die during the first year of life. With the exception of these deaths, the statement can be made that almost every baby born in Missouri will live to attain college age. Measles, diphtheria, and chicken pox have been greatly reduced as potential threats to the lives of children in Missouri. The only major threat to young people which has been increasing is the rate of deaths from accidents, especially motor vehicle accidents. The rate of deaths from motor vehicle accidents reaches its peak during college age (20-24). It is also high in the 15 to 19 year old category. Because the death rate for pre-college age population is so low, no major changes in the rates which would influence the college age population will be assumed to occur in the near future (See Table 3 for the death rates for the total population).

FIGURE 5

Population of Missouri
1960



Birth Rates. The time lag between birth and entrance into college is about 18 years. By 1960, the entering freshmen were born for all of the classes up to 1978. From this viewpoint birth rates are unimportant for higher education institutions in the near future. However, such institutions change slowly. For example, it has been established at one higher education institution that the time lag between the conception of the need for a building and the completion of the building averages almost 10 years This suggests that plans for capital improvements or construction of new campuses or colleges must be on a long-term basis. It is for this reason the following discussion of birth rates is presented.

The number and rates of births in Missouri have fluctuated widely. The lowest rates were reached during the depression and the highest (since 1900) were reached shortly after World War II and in the early 1950's (See Table 3).

Since 1958, birth rates in Missouri and the United States have been and are declining. Where these will level off and what the future birth rates will be are matters of speculation. Two important items which will influence future rates should be noted. The first is the increased use of oral contraceptives which have provided relatively inexpensive, effec-

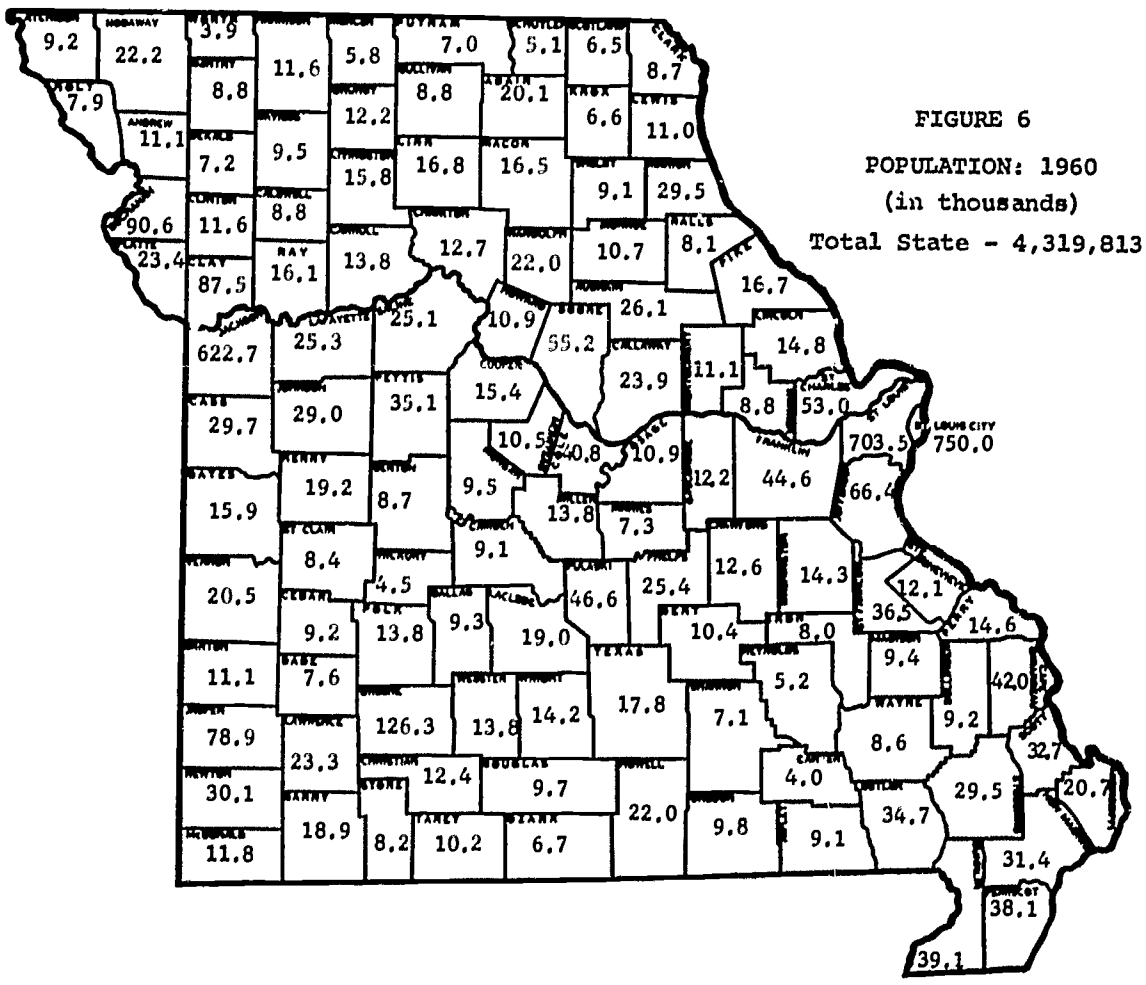


FIGURE 6

POPULATION: 1960

(in thousands)

Total State - 4,319,813

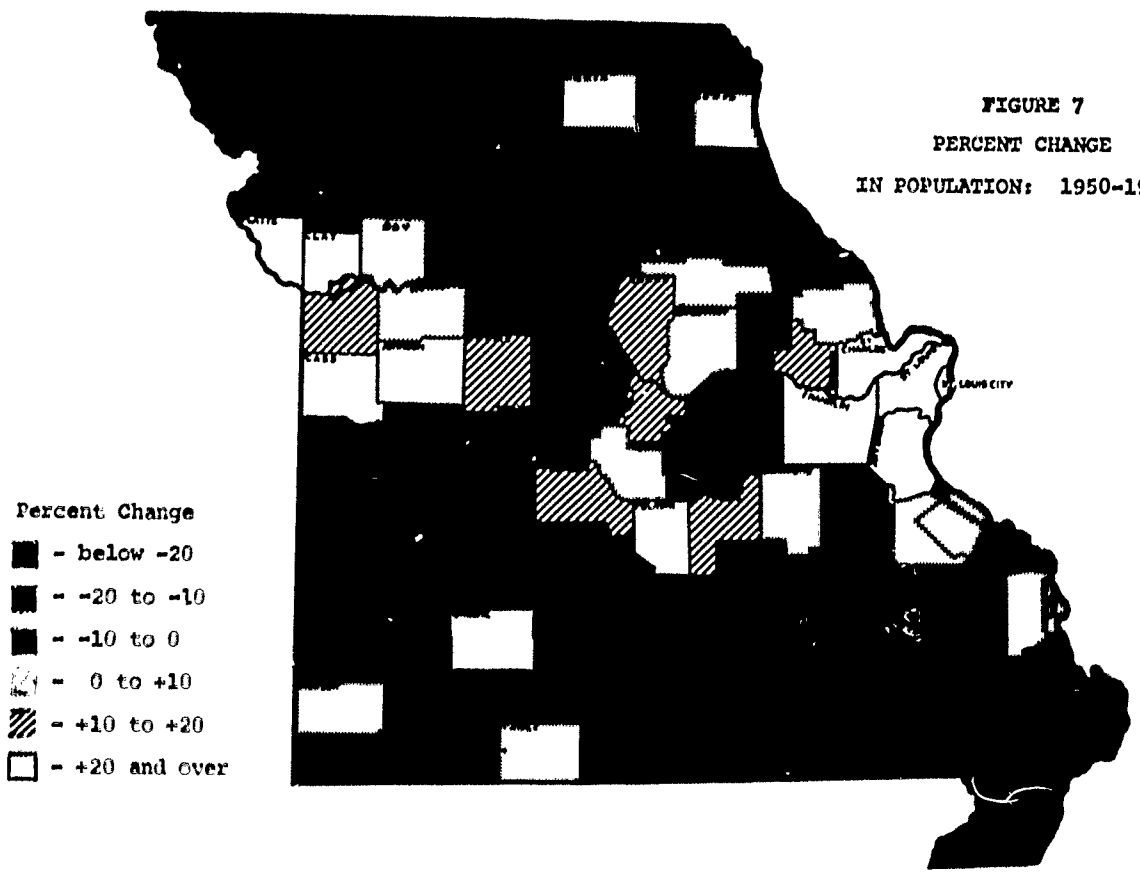


FIGURE 7

PERCENT CHANGE

IN POPULATION: 1950-1960

TABLE 3

CRUDE BIRTH AND DEATH RATES
(number of births or deaths per 1000 population)

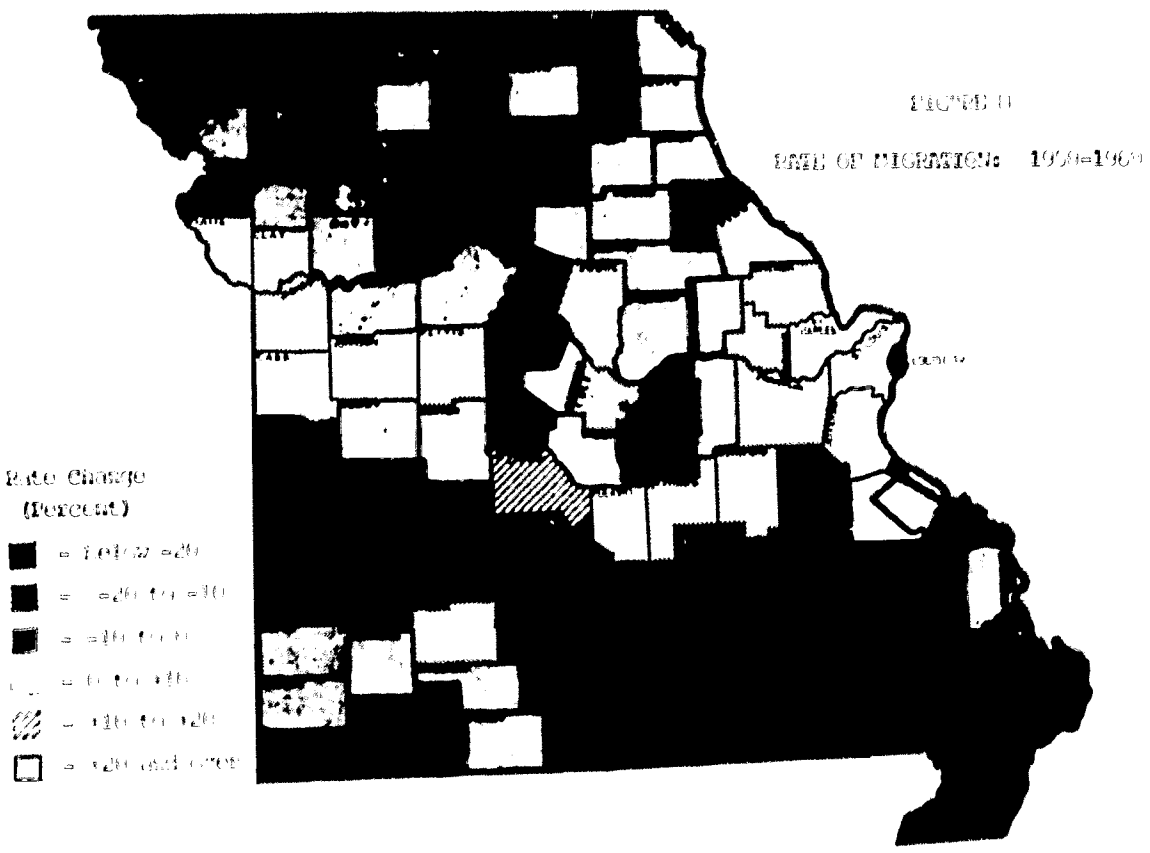
Year	Crude Birth Rates	
	United States	Missouri
1920	27.7	19.2
1930	21.3	17.0
1940	19.4	16.5
1950	24.1	21.6
1960	23.7	22.6
1965	19.4	18.7
	Crude Death Rates	
	United States	Missouri
1920	13.0	12.5
1930	11.3	11.8
1940	10.8	11.6
1950	9.6	11.0
1960	9.5	11.2
1965	9.4	11.3

tive, and convenient methods of family planning. Conversely, the other item is a large female population approaching childbearing age. This results from the high birth rates after World War II. In Missouri the present average age of female at first marriage is 20 years. She has her first child a year or two years later, and the highest birth rates are for females around 25 years of age. By age 30, most women have had all the children they desire. This means, then, if the highest birth rates are reached in the late 40's and early 50's, these post-World War II babies will be having children in the largest numbers in the mid 1970's. The sheer magnitude of these potential mothers will undoubtedly increase the presently low birth rates.

The only absolutely certain statements that can be made concerning future birth rates are that the size of the American family is decided upon by choice, and this choice is influenced by fads. In the past two decades the ideal family was considered to be three or four children. At present the ideal is two or three children. In the future the ideal could go back to three or four children or could drop lower.

Migration. The population of Missouri and of the United States is very mobile. No longer is it the custom of a person to live in the same house for his entire lifespan. Rather the typical Missouri family moves every four to five years. Some families, of course, never move and others move yearly or even more frequently (See Figure 8). Some move to the house next door and others across the country. The people who reside in the cities are more mobile than those in rural areas. Younger people are more mobile than older persons. Those with higher education and/or white-collar jobs are more mobile than those with lesser education and/or blue-collar or less skilled occupations.

A large part of the movement of people in most communities or states is a balancing act, that is, one person or family will move to another community and some person or family from the latter or another community will move to the first community. This is especially true on the state level. There are vast numbers of people moving into Missouri and even larger numbers are moving out. Migration normally occurs first after high school or more frequently after college has been completed. This fact has implications both for Missouri's economy and for higher education institutions. It suggests that a large number of the college age youth will migrate away from their homes to attend college or to find employment. An even larger number will move after completion of college. If every community in the state had a college located



in it, it would reduce, but not eliminate, this movement (the same statement can be made concerning employment—see section on occupation). Boone County, which includes the Columbia campus of the University of Missouri and two private colleges, has a fairly large number of college students going elsewhere for their education. This movement is partly because of the desire of students to attend colleges offering courses of study not available locally and partly a traditional desire by the students (and sometimes by the parents for the students) to leave the home community. This movement would suggest some caution in the planning of colleges. In higher income areas, the economic ability to attend colleges elsewhere and the desire for more specialized courses of study (professional schools such as law, medicine, etc.) would indicate that a larger proportion of college bound students would leave the home community than in lower income areas.

Age. Missouri, like most mid-western states, has comparatively large numbers of persons in the younger and in the older age groups and a smaller proportion in the middle age groups. The slightly lower proportion of persons who are in the working ages is the result of a net outmigration of young adults to other states and the low birth rates of the depression years. Thirty-four percent of Missouri's population was under 18 in 1960, that is, they were under college age. For the United States, this figure was 36 percent. At the other end of the age scale, Missouri had 12 percent of its population over 65 as compared to 9 percent for the United States (See Figure 9 for Missouri's age structure).

The percentage distribution in the older age groups varies widely over the state. The rural counties, especially those in the north central and west central portions of the state, have very heavy loadings in the upper ages while the suburban and metropolitan areas have a larger proportion in the middle aged group (For two examples of such distributions see Figures 10 and 11).

Since we are primarily interested in the pre-college-age population or those who are under college age (18), the remainder of this discussion will concern itself with this group. Thirty-one percent of the population is pre-college-age in the small towns and open country and also in the cities of St. Louis, Kansas City, and Springfield, while 38 percent are pre-college-age in the suburbs. On the county basis there is more variation; the ranges are from a low of 28 percent in such counties as Adair, Cedar, Grundy, and Macon, to a high of 45 percent in New Madrid and other counties in Southeast Missouri. The suburban counties around Kansas City and St. Louis are the next highest in proportion of pre-college-age population.

FIGURE 9
MISSOURI - 1960
AGE DISTRIBUTION

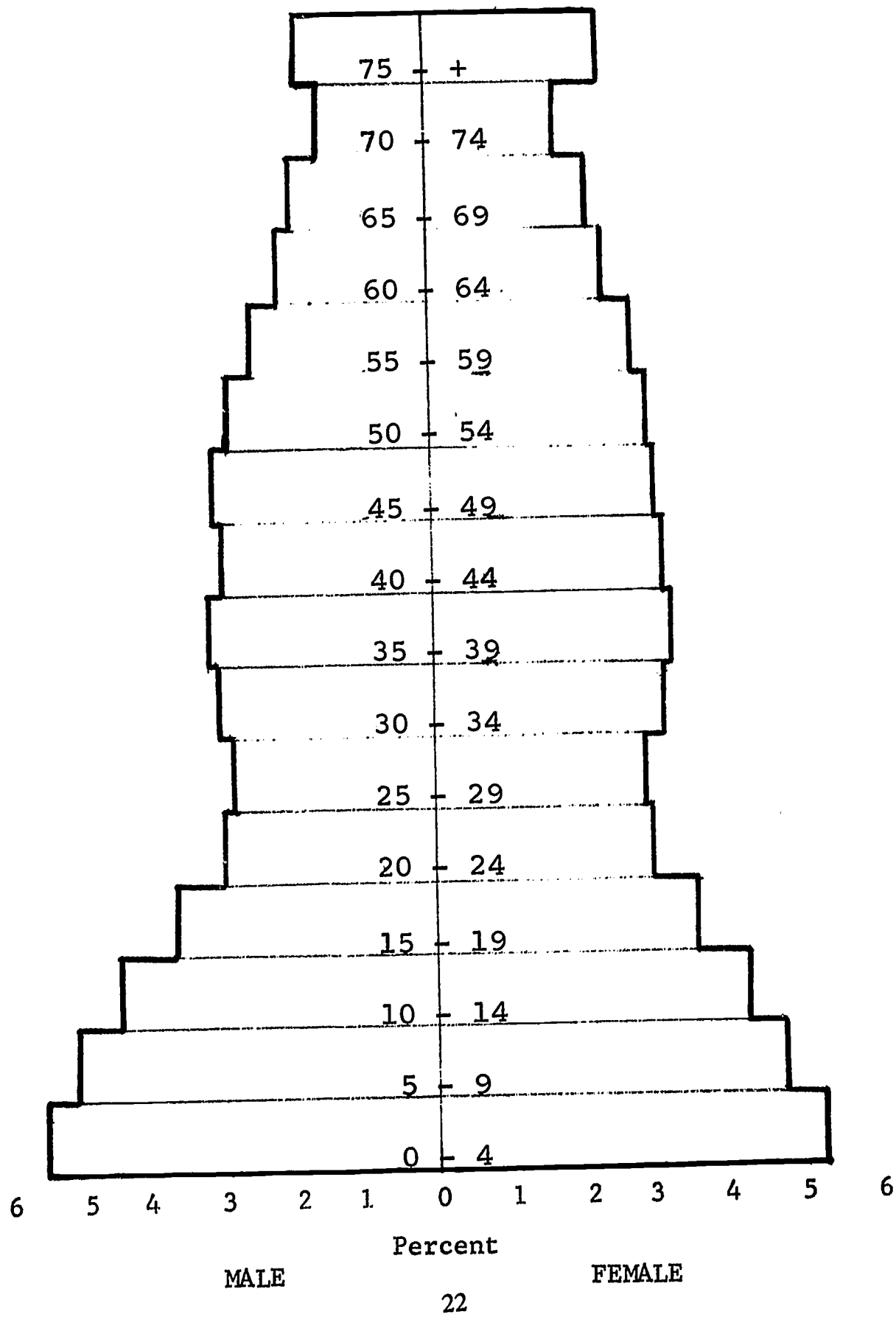


FIGURE 10
CALDWELL COUNTY - 1960
AGE DISTRIBUTION

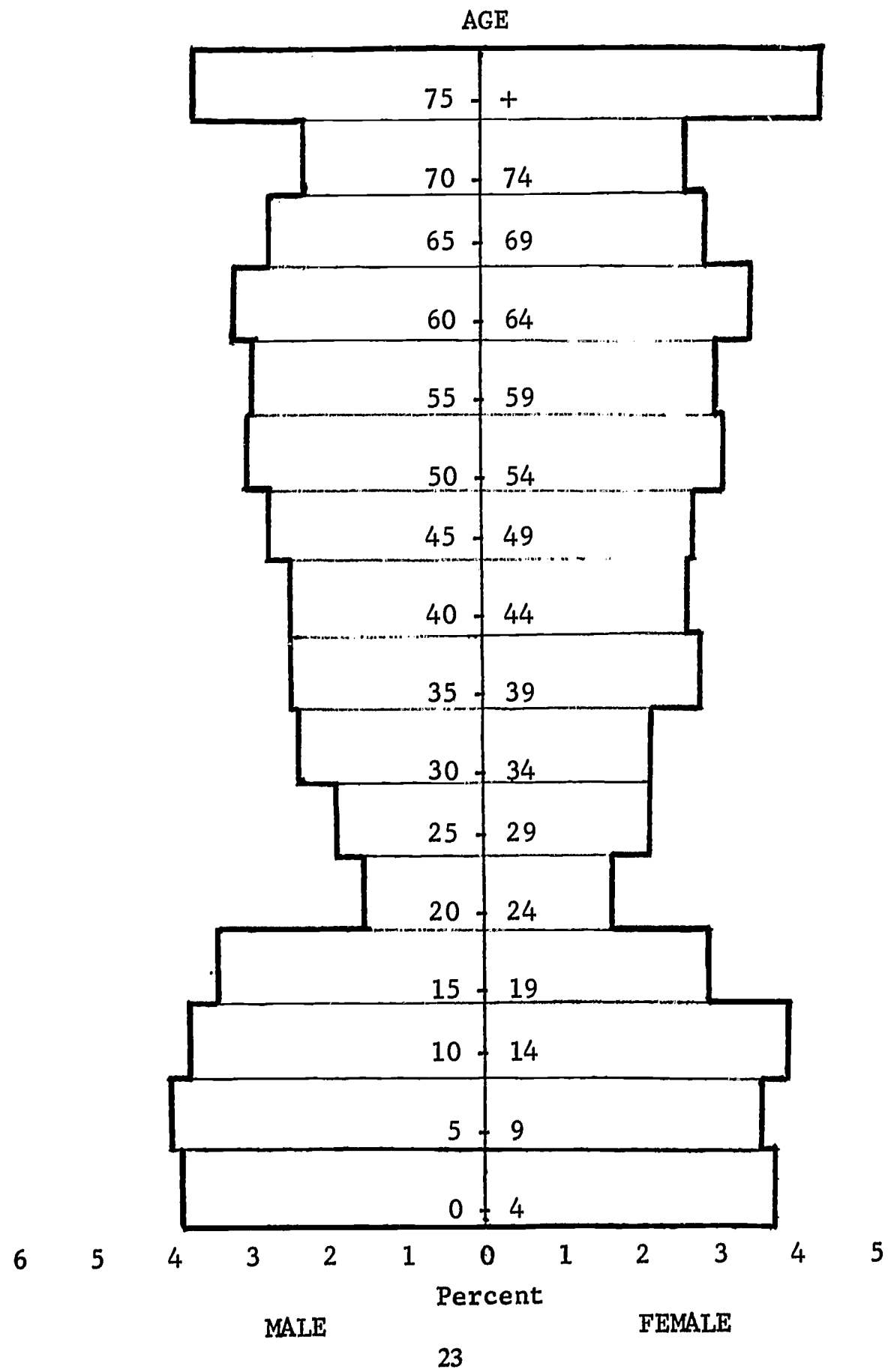
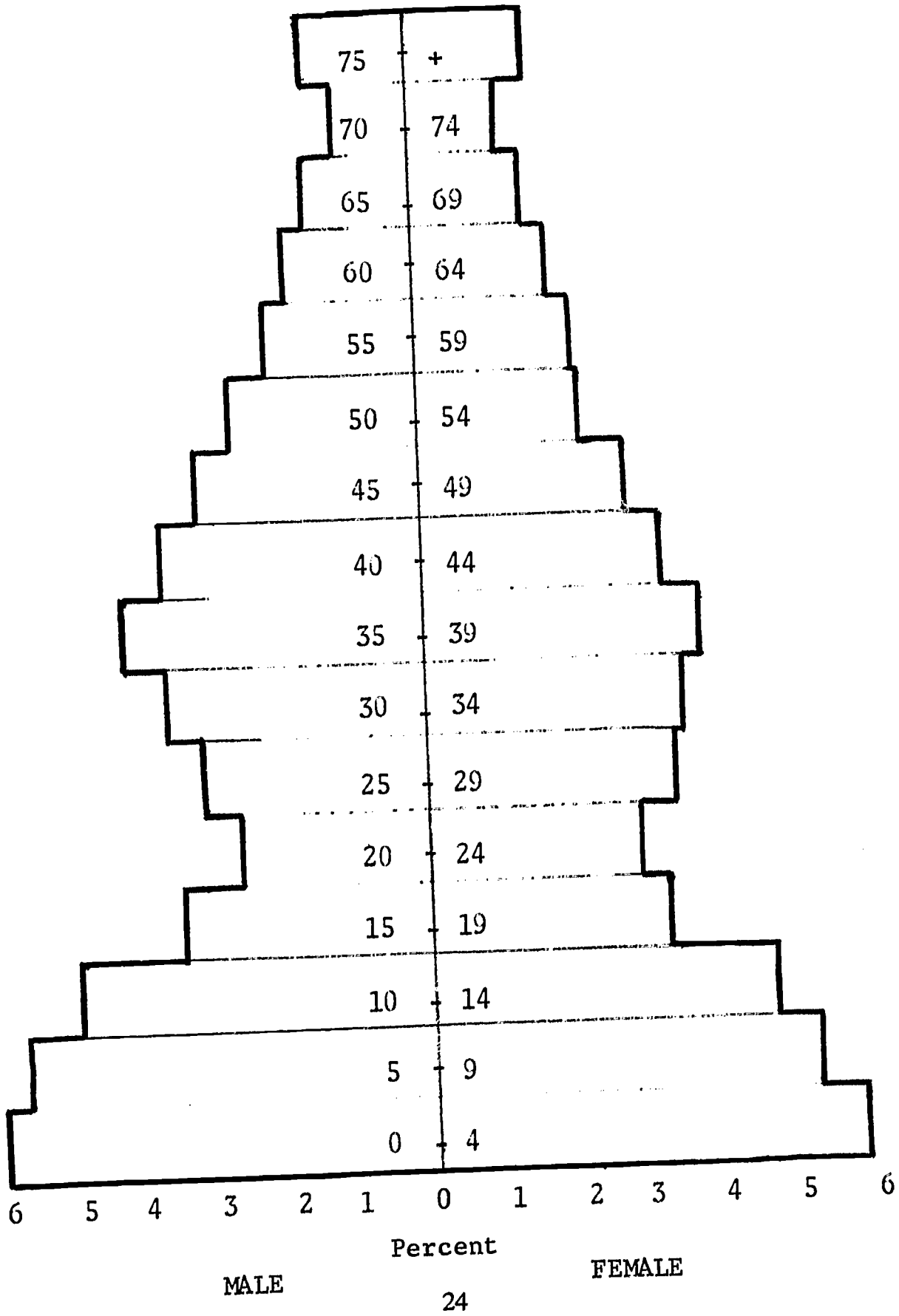


FIGURE 11
PLATTE COUNTY - 1960
AGE DISTRIBUTION



Income. Income is an important element to be considered in any decision of college enrollments for two reasons. First, it is an indication of potential college students' economic resources. Second, it offers some indication of the importance placed upon college education by the people residing in an area. It has been found by sociological research that the value placed upon education in families having lower incomes is less than that in families with higher incomes. This is, unfortunately, a cycle. Low education of the parents normally contributes to a lower family income and the parents, in turn, often place a low value upon education. It is an interesting question as to how this cycle can be broken but one which cannot be considered here.

Today's rising costs of college education requires a major income commitment by the parents of college students. The University of Missouri estimates that the minimum basic cost is over $1,500 per year now and is likely to be over $2,000 per year within a few years. This cost per year is higher for some private colleges and universities in the state and lower for state colleges and junior colleges and perhaps some private colleges.

It takes a major expenditure by the family to put a youth through four years of college. This is likely to be $8,000 to $10,000 in direct costs by 1970 and more if the student continues into graduate or professional school. The direct influence of income on who goes to college has been lessened by government and other financial aid programs such as the work-study program, National Defense Education Act loans, increased availability of part time employment, and other financial support.

The per capita income for the state of Missouri in 1965 was $2,628, compared to the United States' average of $2,724. The per capita income has been increasing slightly faster in recent years in Missouri than it has in the United States. If this trend continues, in the near future the per capita income in Missouri will be at least as much as the average for the United States. In comparison to surrounding states, Missouri is in a favorable position, that is, the per capita income is higher than those of the contiguous states with the exception of Illinois. Comparatively speaking, this suggests that Missouri's population is capable of supporting higher education at a much higher level than it now does. Missouri's per capita expenditures for higher education in 1966 ranked about 38th in the nation, well below the national average.

The latest family income figures available were for 1959, at which time the median family income was $5,127. This median income has increased rapidly since that time and is now estimated to be over $6,000 per family. The range of variation by county within the state

was very large in 1960 with almost one-half of the counties in the state, especially those in the Ozarks and southeast portions of the state, having a median family income of under $3,000. The comparatively large median family incomes were found in St. Louis County which had a $7,500 family income, Clay which had a $6,600 income, and a limited number of other suburban or urban counties (See Figure 12). The income of the families in an area is of special importance to community colleges. Because of the low income, a junior college in Southeast Missouri would have considerably less enrollment unless large amounts of financial aid to students were made available. Despite the comparatively large number of youth, this lower enrollment would be partially due also to a lower value placed upon college education by many families in Southeast Missouri.

Future projections of family income have not been made for the individual counties in the state, and it would be very difficult to make such projections. However, it is safe to predict that the rural areas will continue to lag behind the urban areas, especially the metropolitan areas, in income levels, and that this will continue to be one factor in the differences in college enrollments between areas.

Occupation. Closely associated with income are the predominate occupations found in the various areas of the state. As with income, the

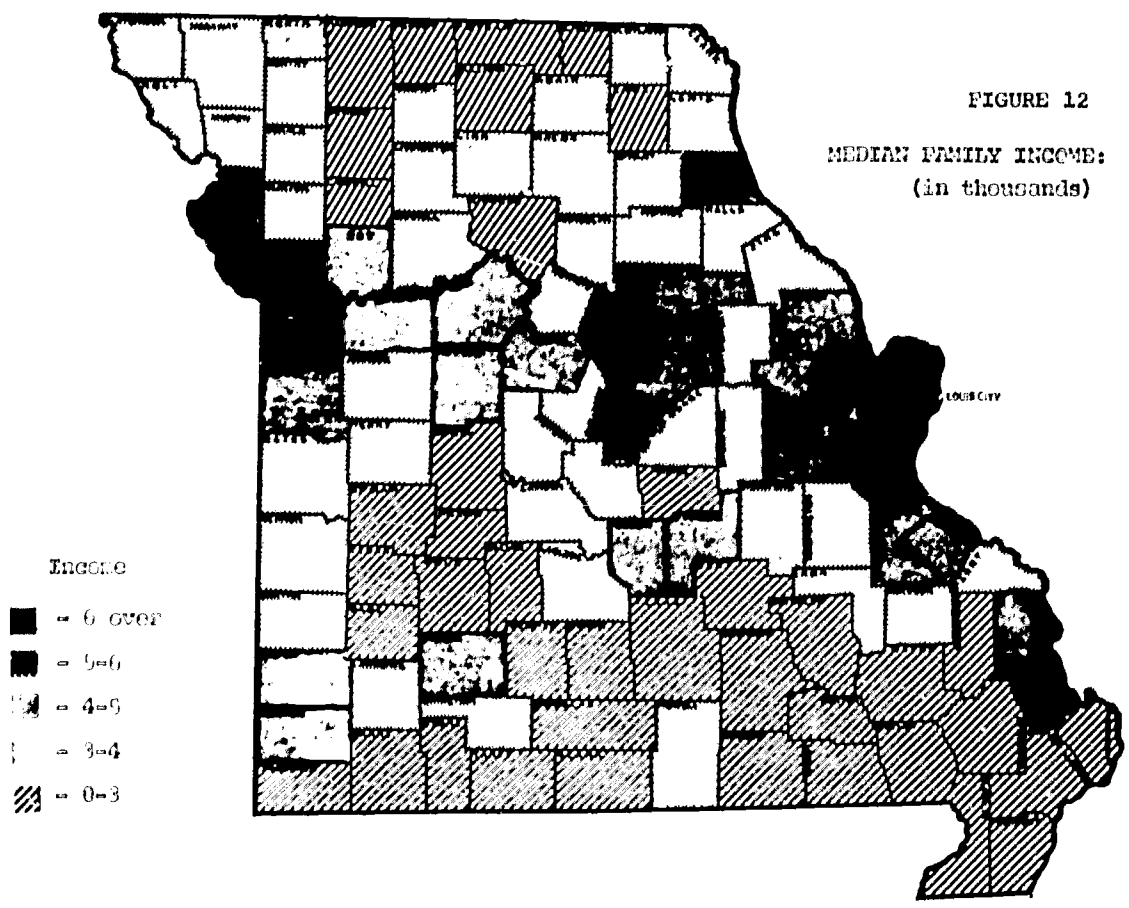


FIGURE 12

MEDIAN FAMILY INCOME: 1959
(in thousands)

type of occupation is concomitant with education, that is, some occupations require higher or more specialized education than others. Consequently, persons in the occupations requiring higher education normally place a higher value upon education. This value is normally transmitted to the children. For example, a professional person such as the physician, attorney, or dentist is likely to strongly encourage his children to attend college, and at the same time, normally has the economic means with which to implement this activity.

Since there is a variation in types of occupations by areas of the state, then it becomes important for area-based colleges such as community colleges to consider the potential college enrollment in relation to the predominate occupations found in the area. The easiest way to differentiate occupations within areas is into agricultural and non-agricultural categories. In most rural areas the predominate occupation is agriculture (See Figure 13). Traditionally farm families have not placed as strong an emphasis upon college education as have persons in other occupations, especially those in professional and highly skilled occupations. Thus, the proportion of students enrolling in college from rural areas has been lower in the past than it has been from the cities of the state. This is only in part a result of different value placed upon education. It is also influenced by lack of economic resources, the lack of the close proximity to a college, and the relatively inferior primary and secondary schools found in many of the rural areas of the state. To de-

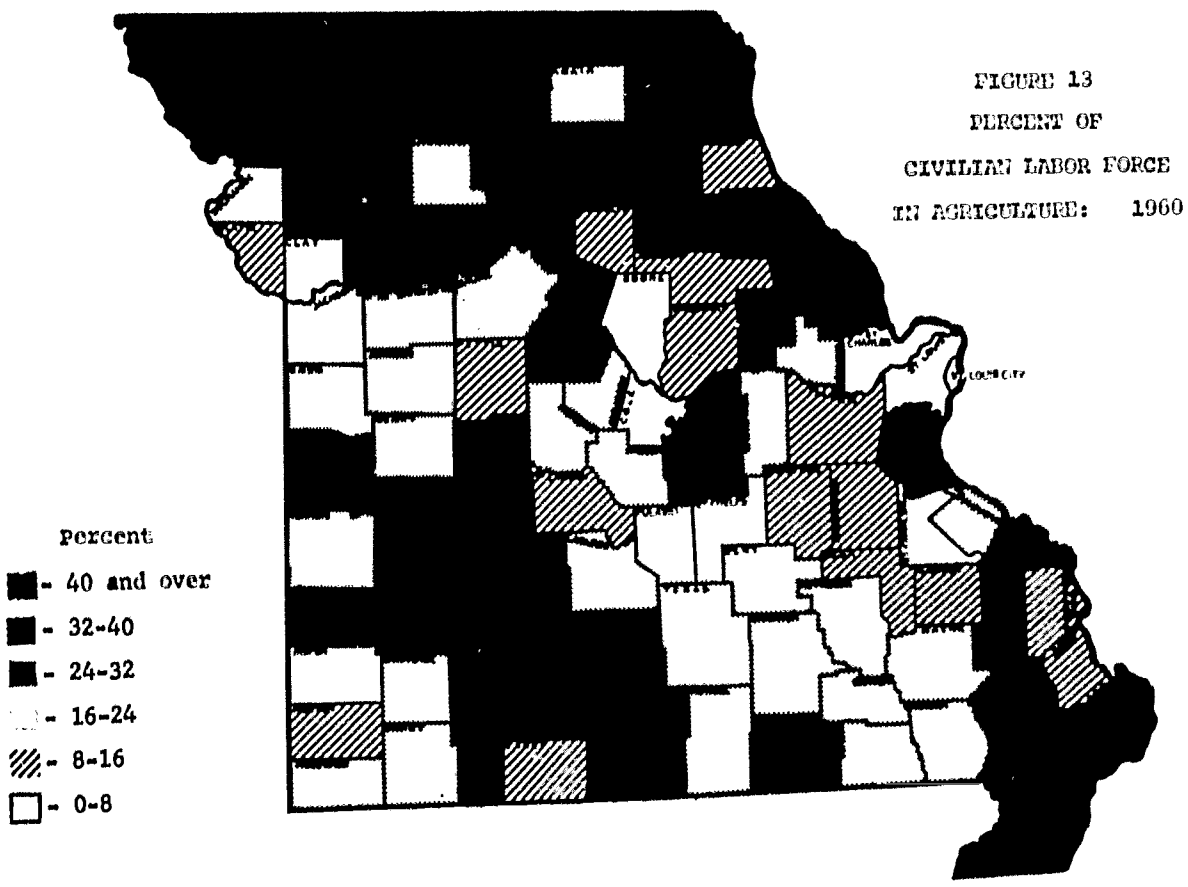


FIGURE 13
PERCENT OF
CIVILIAN LABOR FORCE
IN AGRICULTURE: 1960

termine which one of these, if any, is the most important or the causal factor is like trying to determine which came first, the chicken or the egg. The important point is that they (low economic resources, low value on education, poor quality of primary and secondary schools, lack of a college, and low college attendance) are often found together.

Education. There is considerable variation in the value placed upon college education among the rural areas of the state. The families in North Missouri have been more likely to encourage and be able to financially help their children go to college than have those in the southern or southeastern part of the state. These patterns of college enrollments will be difficult to change and will take a long period of time to change in the rural areas, especially those in the southeast part of the state, in the Ozarks, and in the metropolitan ghettos.

In 1960, the average person in Missouri who had completed his education (persons 25 years of age and older) had 9.3 years of schooling. This is between the freshman and sophomore levels of high school, and a student would have barely reached his 16th birthday before dropping out of school. Females have a higher average attainment than males (9.9 versus 9.3), and whites have a higher attainment than nonwhites (9.8 and 8.7 respectively). Only about 14 percent of the adult population has completed one or more years of college, and only 6 percent has completed 4 or more years. Sixteen percent of the United States' population has 1 or more years of college. These comparatively small attainment figures in the state are in large part a reflection of the patterns of school attendance in the earlier years. Many more of today's youth enroll in college. A survey of high schools over the state indicated that over one half of the 1967 high school seniors planned to attend college while another 10 percent hadn't made up their minds. The proportion planning to attend ranged from 33 percent in some high schools in the Ozarks and southeast Missouri to over 95 percent in one suburban high school.

Within the state there is a wide variation in the average number of years of schooling completed. This runs as low as under an 8th grade average in three counties of Southeast Missouri to two counties (Boone and Clay) with slightly over 12 years. The majority of the Ozark counties average between 8 and 9 years except for Pulaski which includes Fort Leonard Wood. The Kansas City metropolitan area and St. Louis County average between 11 and 12 years (See Figure 14).

This variation in educational achievement will continue into the future because a smaller percentage of the youth aged 14-17 were enrolled in school in 1960 in the low average completion counties (See Figure 15). Here again we see more evidence of the low value placed

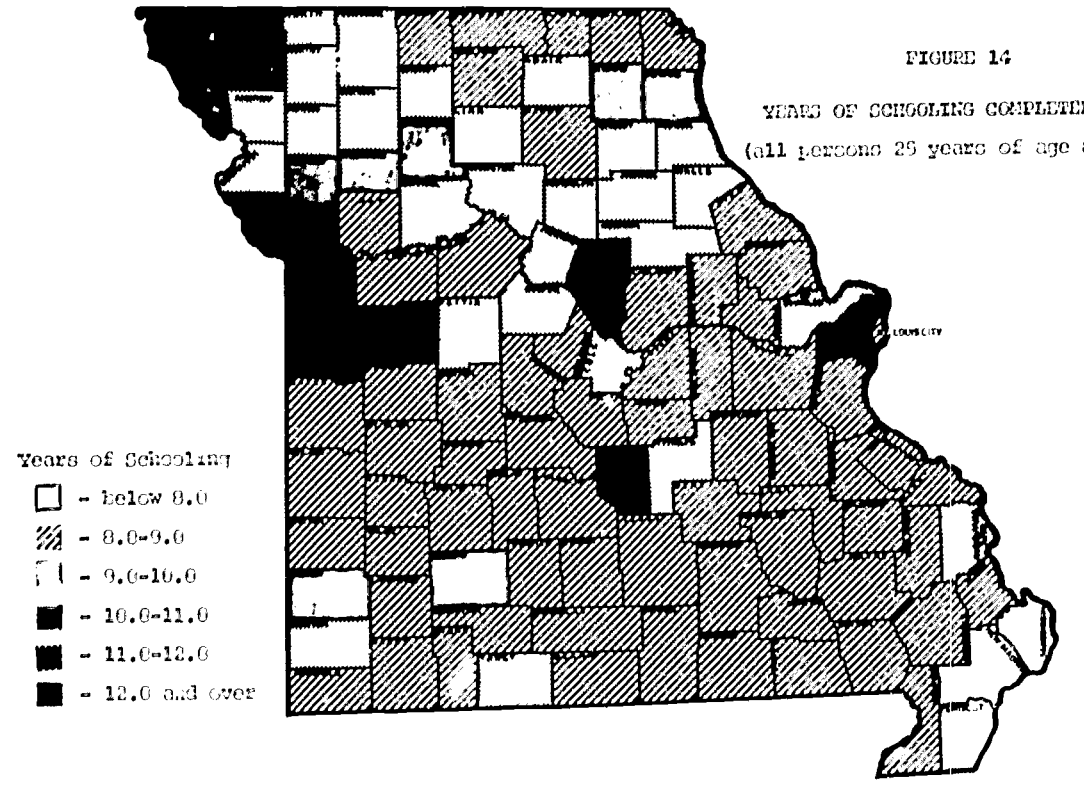


FIGURE 14

YEARS OF SCHOOLING COMPLETED: 1960

(all persons 25 years of age and over)

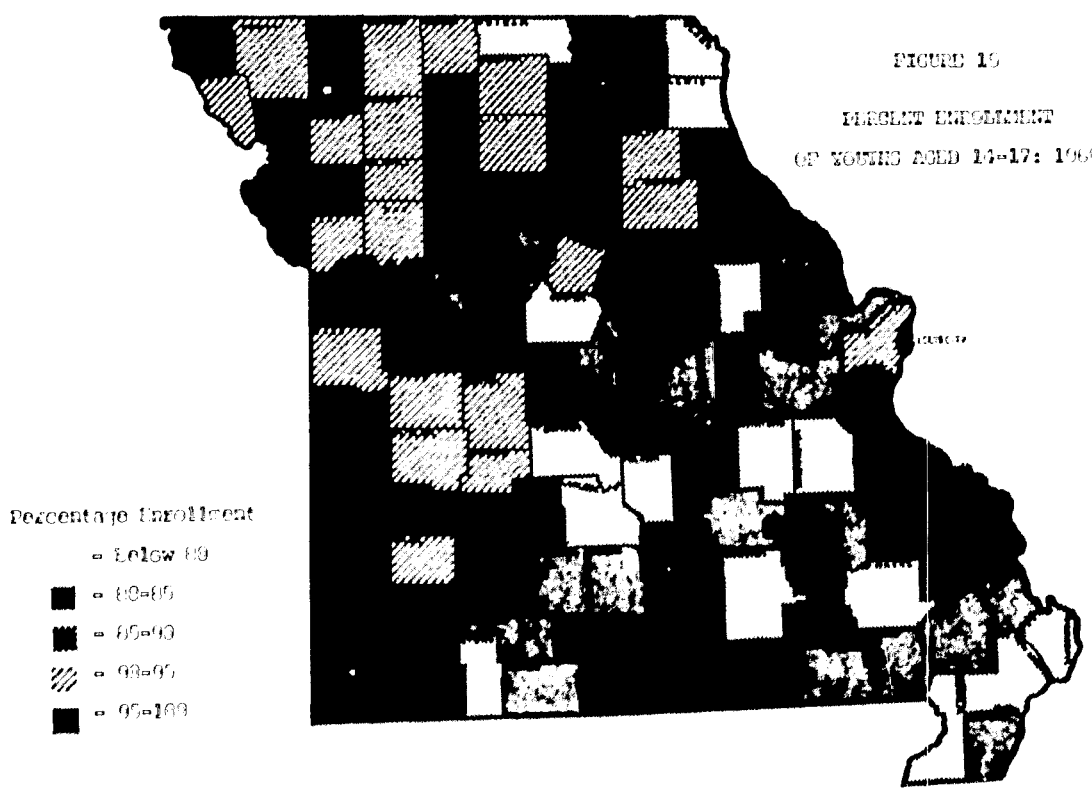


FIGURE 15

PERCENT ENROLLMENT

OF YOUTHS AGED 16-17: 1960

upon education, low income syndrome which we have described before. And again, we must add the caution that the simple addition of a college to an area will not correct it. If the Coleman report[5] is correct, then questions must be raised as to the net effect of improving the primary and secondary school systems. The changes must start with the parents, with the primary and secondary schools, and then with the colleges.

[5]Coleman, James S. and Ernest Q. Campbell, Carol J. Hobson, James McPartland, Alexander M. Mood, Frederick D. Weinfeld, and Robert L. Yorte, *Equality of Educational Opportunity,* Washington, D.C., U.S. Government Printing Office, 1966, vol. 737.

CHAPTER III

THE FUTURE POPULATION

Number and Distribution of Total Population

When a person such as I attempts to predict the future, to state that he is or I am "on thin ice" is obvious. The projections of future populations which are presented below were prepared by myself and James Pinkerton[6], and basically used a continuation of past trends for the projections. The component projection procedure takes into account the rates of births, deaths, and migration for each sex and age category in each county. After this procedure was completed, counties which were expected to depart from these trends on the basis of recent evidence were selected for special treatment. These included most of the counties with larger cities, suburban counties, recreational counties, mining counties, and a few others.

If any criticism can be made of the projections, it is that in total they are too high. Which counties are too high or too low is difficult to determine. I might note as an experienced demographer that normally 90 percent of the comments made about any projections are that the person's home area is projected too low.

Missouri's population is projected to continue growing. The projected population in 1967 for Missouri was 4,590,000. By 1975 this is expected to grow to approximately 5,300,000. The majority of Missouri's growing population will occur in the four metropolitan areas (St. Louis, Kansas City, Springfield, and St. Joseph). With a few exceptions, the remainder of the state will continue to lose population. Some of the major exceptions are: Boone County (University of Missouri), Cole County (State Capitol), the iron and lead mining area in the Eastern Ozarks, and counties which have towns of over 10,000 population. This leaves the majority of the counties that will continue to lose population (See Figures 16 and 17).

By 1990, 73 percent of the population will be located in ten counties and St. Louis City, which are only 8.6 percent of the state's land area. The eleven units are Buchanan, Cass, Clay, Franklin, Greene, Jackson, Jefferson, Platte, St. Charles, and St. Louis counties and St. Louis City. The addition of five more counties, which includes all counties with over 60,000 population in 1990, brings the percentage of the state's population to 80 percent, while increasing the land area included to only 13 percent. These five are: Boone, Cole, Jasper, Johnson,

[6]*Data for Missouri Counties,* "Population Projections–1967, 1975 and 1990" University of Missouri, Extension Division No. 110.

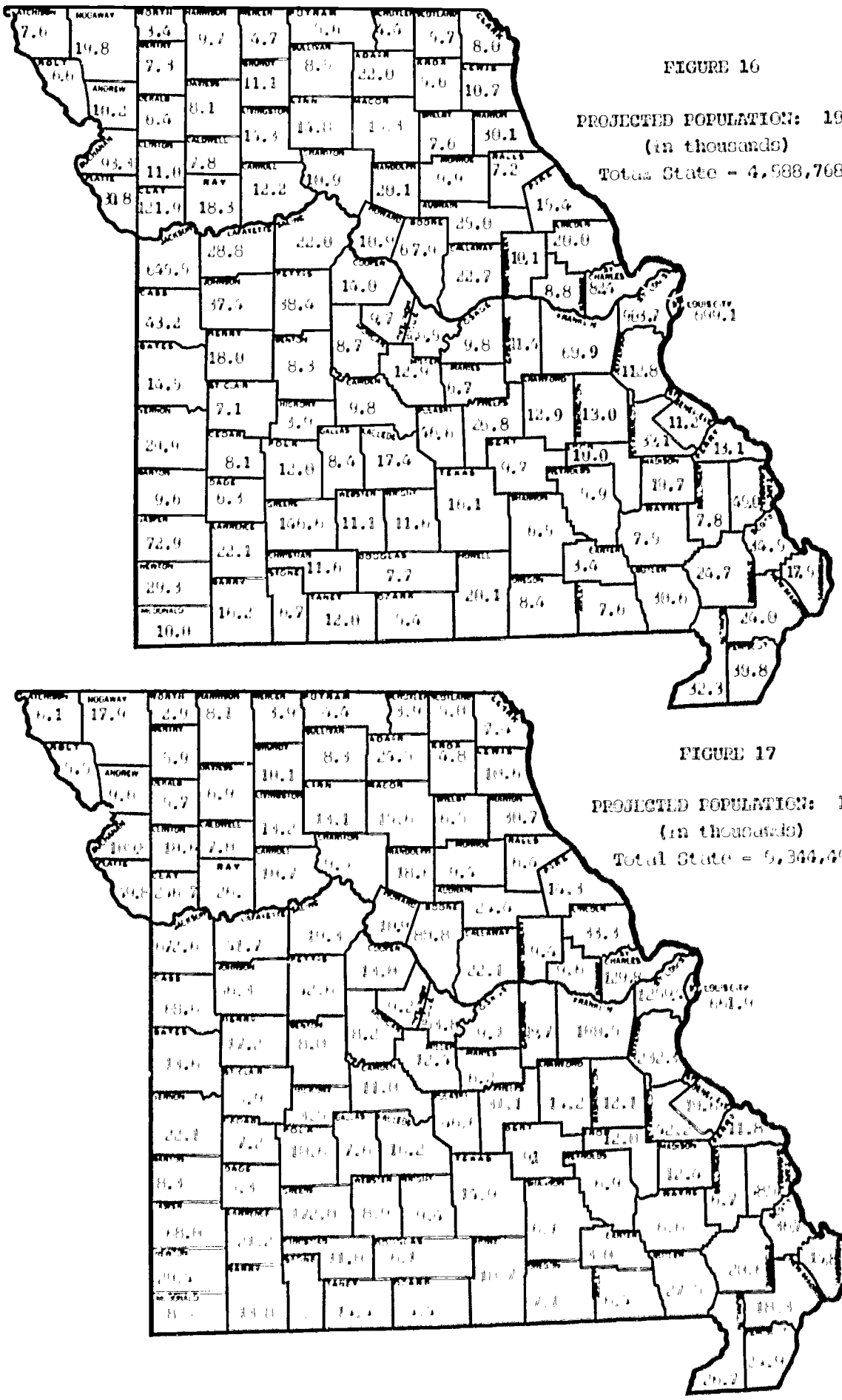


FIGURE 16

PROJECTED POPULATION: 1967
(in thousands)
Total State = 4,988,768

FIGURE 17

PROJECTED POPULATION: 1975
(in thousands)
Total State = 5,344,404

and Lafayette. These statistics strongly emphasize the continuing trend toward concentration of population in the state (See Figure 18).

The redistribution of the population in Missouri and the United States which is reflected in these projections may be altered in the next few decades as a result of the problems (racial, economic, transportation, and others) that the cities are facing today. If these problems continue for the next few years without noticeable progress toward solution, the pattern of population distribution could change. One probable occurrence is for the outward movement from the central cities to increase. The suburbs which have been "creeping" outward will explode outward. The middle class, both white and Negro, will flee the central cities even faster. Possibly, the rural to urban migration may decline. However, all of this is speculation, and the reader is cautioned that any projections should be used only as guide lines and not as absolute numbers.

Numbers of College-Age Population

To establish a trend in the size of college age cohorts, we can begin with the largest of post-World War II baby boom cohorts which became of college entrance age (18 years old) in 1965. The next group was

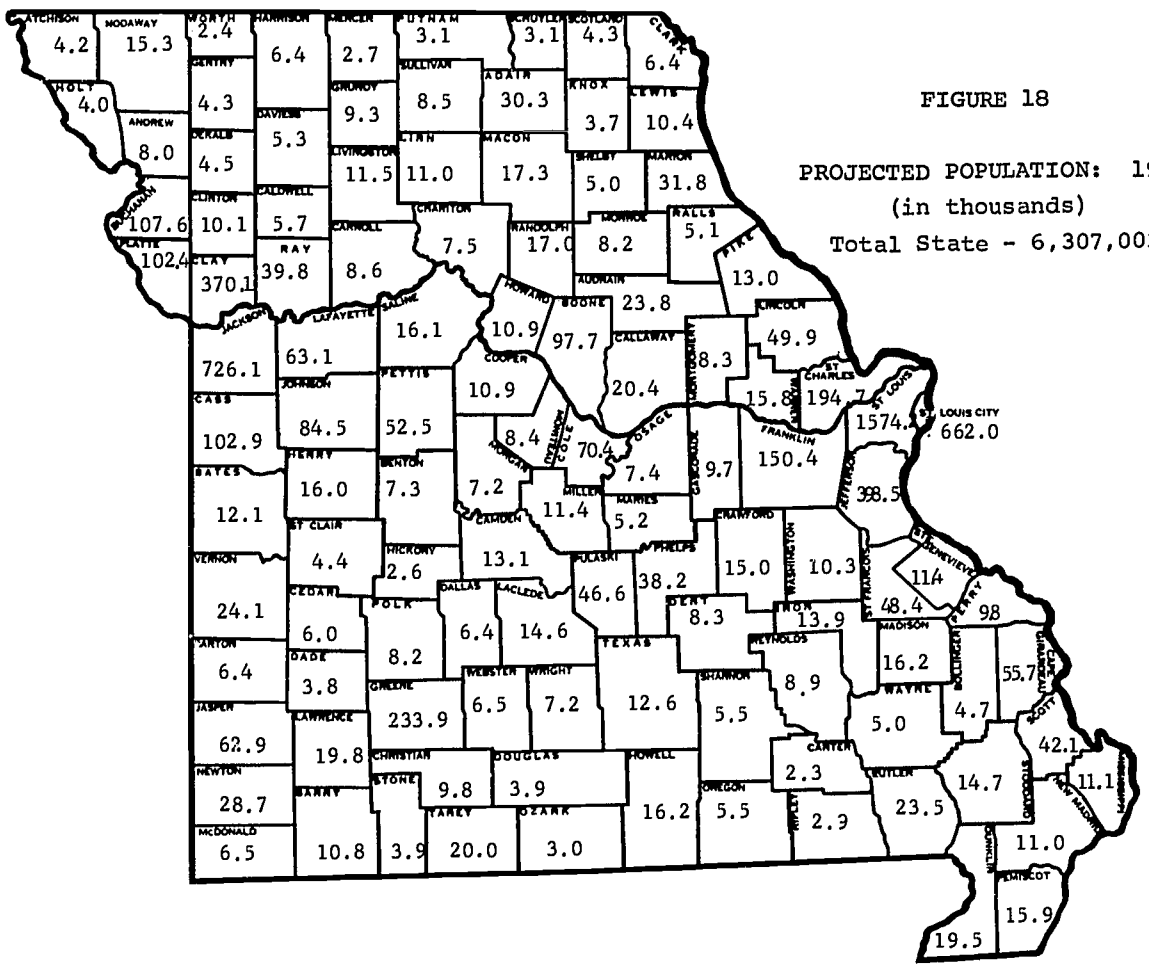


FIGURE 18

PROJECTED POPULATION: 1990
(in thousands)
Total State - 6,307,003

slightly larger in size while the cohorts reaching age 18 in 1967, 1968, and 1969 all decline slightly in size. Starting in 1970, and going through 1978, the compilations will all increase, that is, each succeeding year will find a larger group of potential college students. The size of the cohort reaching age 18 was 60,000 in 1960. The 1965 cohort increased in size to 79,000. The 1970 cohort will be 83,000 and the 1978 will be 95,000. There will be some decreases in the actual size of the 1965, 1970, and 1978 groups which will reach age 18 in Missouri because of deaths and migration out of the state. However, the crude numbers indicate an increase of over 50 percent from the 1960 to 1978 cohorts (See Table 4). As we will discuss in later sections, this number does not take into account changes in college students resulting from an increasing proportion of youth going to school, completing high school, entering college, or staying in college. These all have a compounding effect upon the numbers of college students.

Number of High School Graduates

The 1965 total high school graduating class was slightly over 58,000 students. Figure 19 shows the distribution of 1966 high school graduates. As one would expect, the majority of these graduates are located in the metropolitan areas with a significant number also in Southeast Missouri, Jasper, Boone, and Cole Counties. The vast majority of the counties of the state had less than 300 graduates in 1966, with a sizable number having less than 100. Included in the latter category were such counties as Hickory, Shannon, Scotland, Schuyler, Putnam, Sullivan, Mercer, Worth, Ralls, Pike, and Carter.

The proportion of the public school second graders who graduate from a public high school in the state is relatively low. Some of this is due to intervening deaths, and a net outmigration from the state. The majority is the result of dropouts, i.e., the student quits school before graduation. In the 1950-51 high school graduating class, the proportion of the second graders who reached graduation was 44.4 percent. Ten years later in 1960-61, this had increased to 51.7 percent with a considerable amount of fluctuation in the intervening years. By 1965-66, the percentage had increased to 66.2 percent. Because of the fluctuations from year-to-year, two series of projections which are given in the bottom half of Table 5 are based upon two different starting points. Series A uses a lower percentage of 62.5 percent graduating from high school and Series B, a higher base of 67.2 percent.[7]

[7]Data on the numbers of second graders and high school graduates are taken from *1950-51* to *1965-66 Annual Reports,* Department of Public Education, State of Missouri, Jefferson City.

TABLE 4

NUMBER OF YOUTHS REACHING 18 YEARS OF AGE

	Unadjusted		Adjusted For Future Deaths and Migrations	
	N	% of 1960	N	% of 1960
1960	60,473			
1961	66,424	110	66,225	110
1962	65,072	108	64,682	107
1963	62,657	104	62,093	103
1964	62,218	103	61,471	102
1965	78,891	130	77,708	128
1966	80,193	133	78,750	130
1967	78,047	129	76,408	126
1968	77,853	129	75,985	126
1969	77,837	129	75,736	125
1970	82,970	137	80,481	133
1971	84,686	140	81,891	135
1972	86,468	143	83,355	138
1973	90,044	149	86,532	143
1974	91,317	151	87,482	145
1975	91,840	152	87,707	145
1976	93,243	154	88,767	147
1977	94,581	156	89,757	148
1978	94,780	157	89,662	148
1979	99,958	165	94,560	156
1980	99,433	164	93,074	154
1981	95,705	158	90,537	150
1982	91,675	152	86,725	143
1983	89,100	147	84,289	139

While the rate of high school graduates has been increasing, the number of second graders has also been increasing. This compounds the increase in graduates. In 1940-41, there were 63,404 second graders, and in 1965-66, there were 84,713, an increase of almost 20,000. For

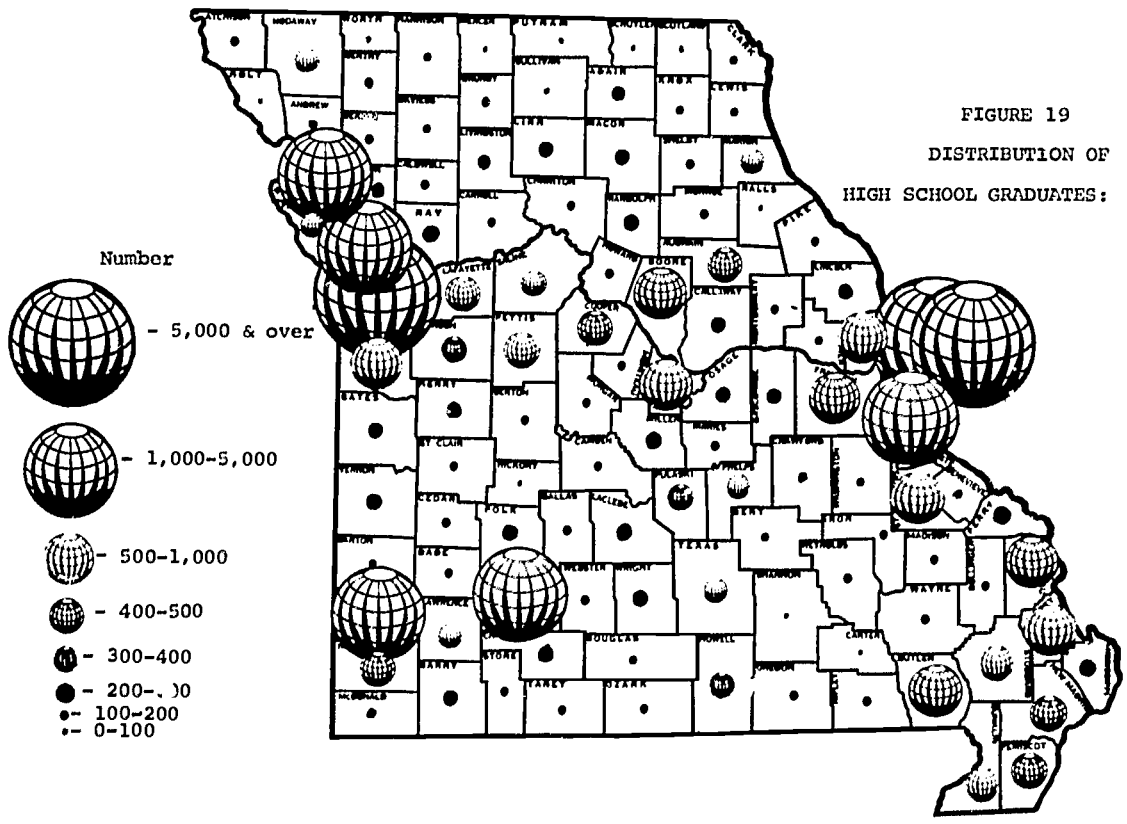


FIGURE 19

DISTRIBUTION OF

HIGH SCHOOL GRADUATES: 1966

the same time period, high school graduates increased from 28,207 to 65,052, or an increase of almost 37,000 (See Table 5).

A significant percent of the high school students in the state are enrolled in private or church related schools. The proportion of graduates from such schools has been about 13-15 percent of the public high school graduates. For purposes of projections of the number of future high school graduates, the proportion of graduates from the non-public schools was assumed to remain the same (See Table 6).

TABLE 5

RELATIONSHIP OF PUBLIC 2nd GRADERS

TO PUBLIC HIGH SCHOOL GRADUATES

1940 - 1976

Second Graders		High School Graduates				
			Percent		Percent	
Year	Number	Year	graduating	Number	graduating	Number
1940-41	63,464	1950-51	44.4	28,207		
1941-42	64,076	1951-52	41.7	26,726		
1942-43	63,353	1952-53	45.1	28,579		
1943-44	59,624	1953-54	45.3	27,006		
1944-45	58,890	1954-55	49.4	29,106		
1945-46	60,841	1955-56	47.4	28,851		
1946-47	61,011	1956-57	52.9	32,294		
1947-48	61,374	1957-58	51.9	31,838		
1948-49	63,834	1958-59	54.1	34,538		
1949-50	66,775	1959-60	55.0	36,728		
1950-51	69,996	1960-61	52.3	36,607		
1951-52	65,593	1961-62	51.7	33,881		
1952-53	63,661	1962-63	58.1	36,973		
1953-54	70,961	1963-64	62.8	44,547		
1954-55	80,025	1964-65	64.2	51,378		
1955-56	75,624	1965-66	66.2	50,047		
			High Projections Series B		Low Projections Series A	
1956-57	73,581	1966-67	67.2	49,459	62.5	45,980
1957-58	72,723	1967-68	69.6	50,623	63.7	46,325
1958-59	74,624	1968-69	68.7	51,269	64.9	48,434
1959-60	75,534	1969-70	71.3	53,882	66.2	50,004
1960-61	75,962	1970-71	73.5	55,819	67.4	51,198
1961-62	76,759	1971-72	74.8	57,429	68.6	52,657
1962-63	79,150	1972-73	75.0	59,343	69.8	55,247
1963-64	82,293	1973-74	76.0	62,528	71.0	58,428
1964-65	84,550	1974-75	74.0	62,609	72.2	61,045
1965-66	84,713	1975-76	76.8	65,052	73.4	62,179

TABLE 6

TOTAL NUMBER OF HIGH SCHOOL GRADUATES

1965-1974

Year	Number
Actual	
1964-65	61,527
1965-66	58,187
Projected	
1966-67	59,556
1967-68	60,316
1968-69	63,391
1969-70	65,669
1970-71	67,561
1971-72	69,805
1972-73	73,562
1973-74	73,658

CHAPTER IV

HIGHER EDUCATION IN MISSOURI

College Enrollment

According to the U.S. Office of Education, in 1965, Missouri had 64 institutions of higher education with a total enrollment of 133,806 of whom 83,203 were males and 50,603 females. 40,216 were first time freshmen. These same institutions had 11,866 faculty members in 1964 and conferred 12,878 Bachelors' degrees, 2605 Masters' or second level degrees and 301 Doctorates in 1965.

The institutions of higher education were valued at $536,129,000 in 1965. Operation expenditures were $183,006,000 and $44,750,000 went for plant expansion. Because of these large expenditures, higher education is a major growth industry in the state. In other research, I found that location of higher education institutions greatly influences population growth in out-state Missouri.[8]

The Commission on Higher Education has summarized data for 54 Missouri colleges and universities for the 1966-67 school year. Since then, two new junior colleges have been added. The Commission's report for 1966 showed a total FTE[9] enrollment of 116,643 students and a total head count of 135,215.[10]

While this was an enrollment increase of 10 percent over 1965, the rate of growth was less than the previous year's 13 percent increase. The largest growth was 20 percent in the public junior colleges. The 34 private and church colleges increased the least at only 6 percent.

The majority of the state's college students attend one of the four-year public institutions. In the fall of 1966, over 64,000 students or 55 percent of the FTE college students were in one of these institutions.

A class breakdown showed 39 percent freshmen, 20 percent sophomores, 12 percent juniors, 9 percent seniors, 8 percent graduates, 8 percent professional, and 3 percent special and unclassified. This distribution reflects the increasing cohort size and the attrition of each cohort as it moves through the college ages.

Among the state four-year colleges, the University of Missouri in Columbia is still the largest single unit. However, it is gradually declining

[8]Rex R. Campbell and John J. Hartman. *Migration in Missouri 1950-1960.* Columbia, Agricultural Experiment Station Research Bulletin 887, University of Missouri, 1963.

[9]FTE is a method of equitating for part-time students. By this technique, all enrollments are converted to the equivalent of full-time enrollment (FTE).

[10]Missouri Commission on Higher Education, *Higher Education Statistical Report, 1966-67,* No. I, II, III. Jefferson City, Missouri.

in its relative proportion of the students in the state four-year institutions. In 1964, it had 31.5 percent and in 1966, 27.9 percent of the students. The majority of the increase has been at the St. Louis campus, while other campuses of the University and state colleges are also increasing in numbers at about the same rate (See Table 7). This same phenomena is reflected in Table 8 which shows the rates of increase for each of the last three years.

A much more varied situation is found in the student population where some institutions experienced gains of over 100 percent between 1965 and 1966 while others had losses up to 20 percent. Table 9 containing only a sample of the private colleges in the state reflects the diversity of changes for this particular year. For a more detailed description of the private colleges, the reader should refer to Pfnister and Quehl, *Report on the Status of Private Higher Education in the State of Missouri* (available from the Commission on Higher Education).

Table 7

DISTRIBUTION OF STUDENTS AMONG

FOUR-YEAR STATE INSTITUTIONS OF HIGHER EDUCATION

	1964 (percentage)	1965 (percentage)	1966 (percentage)
University of Missouri:			
Columbia	31.5	29.6	27.9
Rolla	8.1	7.4	7.2
Kansas City	8.0	9.1	9.2
Saint Louis	3.4	5.6	7.3
Lincoln University	3.3	3.1	3.2
State Colleges:			
Central	13.7	12.9	13.7
Northeast	8.3	6.4	7.9
Northwest	6.6	8.8	5.8
Southeast	8.9	8.6	8.8
Southwest	8.2	8.5	8.8
Total	100.0	100.0	100.0

Table 8

PERCENT INCREASE IN ENROLLMENT OVER PRECEDING YEAR AT FOUR STATE INSTITUTIONS OF HIGHER EDUCATION

	1963-1964 % increase	1964-1965 % increase	1965-1966 % increase
University of Missouri:			
Columbia	11.7	11.2	2.8
Rolla	11.1	8.3	5.5
Kansas City	17.6	35.4	9.8
Saint Louis	145.1	96.2	43.0
Lincoln University	12.3	10.7	11.2
State Colleges:			
Central	25.3	11.4	16.3
Northeast	13.5	19.4	3.6
Northwest	13.9	14.9	.02
Southeast	10.2	17.5	9.2
Southwest	10.4	23.6	12.1
Total	16.0	18.3	9.2

The junior colleges also had a fairly wide variation in rate changes between the 1965 and 1966 school years. The relatively new Jefferson Junior College had an increase of 80 percent, while some of the older junior colleges had a slight decrease or remained relatively steady (See Table 10). The Commission on Higher Education is currently sponsoring a study of the junior colleges and a report will be published in late 1968.

The number of first time freshmen in Missouri in the fall of 1966 was 35,460. When adjusted for the net inmigration of out-of-state students, it was found that almost 57 percent of the high school students are going on to college.

Not all but most of the academically able are currently going to college. However, many of the bright persons in the ghettos, the Ozarks, and Southeast Missouri are not going to college. Certainly, these areas need programs to encourage college attendance. However, to reiterate, much of the greater ability is now entering college.

Table 10

1965-1966 ENROLLMENT AND

PERCENT INCREASE IN JUNIOR COLLEGES

Junior College	1965	1966	% Change
St. Louis County District	4,729	6,856	45.4
Metropolitan Jr. Kansas City	3,670	3,568	-3.0
Trenton Junior	137	165	20.4
Moberly	185	185	0.0
Missouri Western Jr.	953	1,082	13.5
Missouri Southern Jr.	1,337	1,603	20.0
Mineral Area Jr.	517	632	22.2
Jefferson College	480	868	80.1
Crowder College	438	400	-8.8
Total	12,446	15,351	23.3

Table 9

1965 AND 1966 ENROLLMENTS AND

PERCENT INCREASE FOR SELECTED PRIVATE COLLEGES

	1965	1966	% Change
Kansas City Art Institute and School of Design	407	455	11.8
The School of the Ozarks	526	686	30.4
Cottey	360	364	1.1
Christian	468	560	19.7
Drury	1,422	1,151	-19.1
Park	618	651	5.3
Notre Dame	264	267	1.1
Fontbonne	814	790	- 2.9
William Woods	656	652	- .6
Total	5,535	5,576	.7

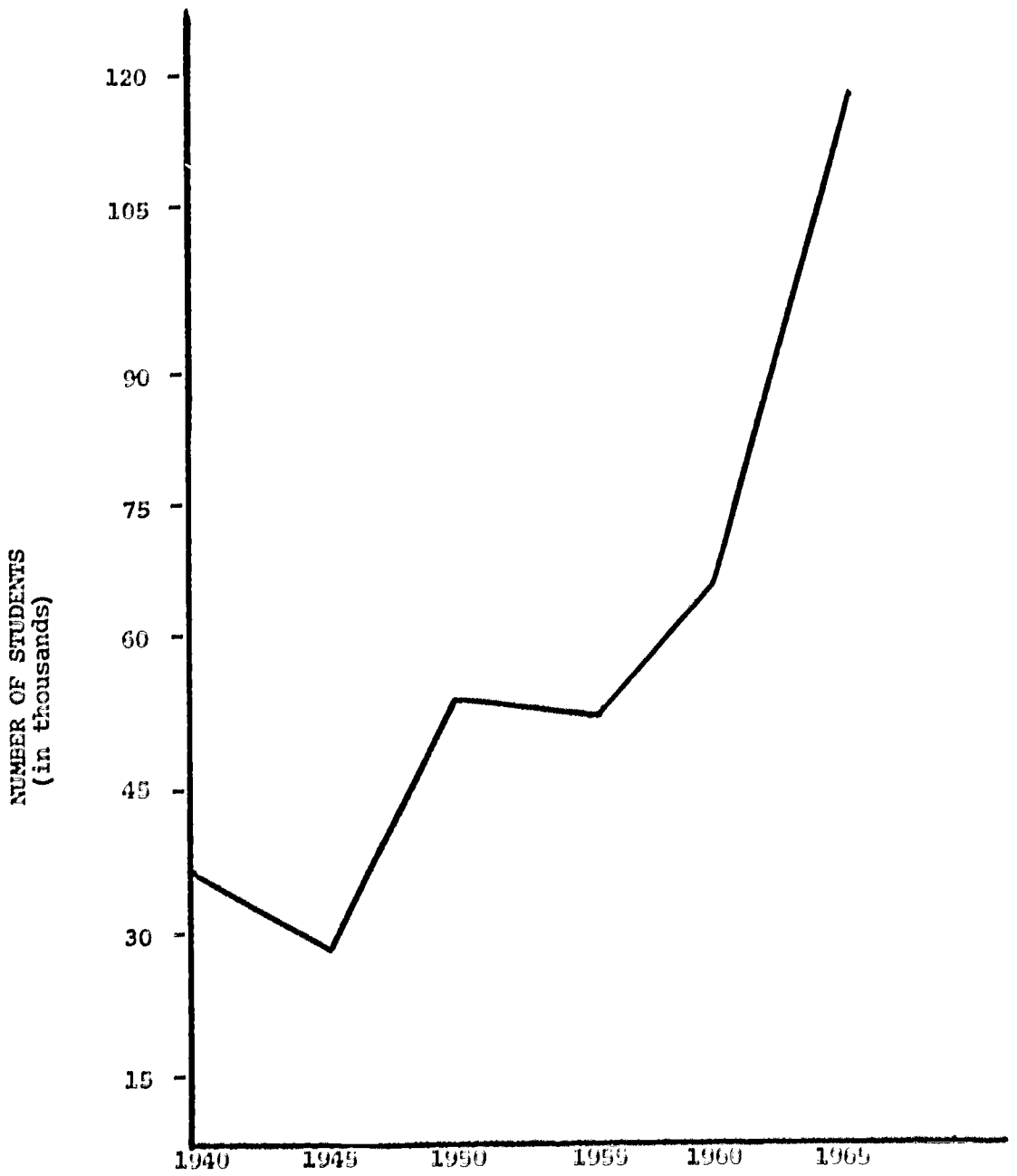
Most of the college increases must result from increases of college age cohorts, from the proportion of entering freshmen graduating, and graduate school enrollments. However, the proportion of high school graduates going to college will not increase as rapidly as in recent years. The rate of increase will largely depend upon three principle factors: (1) the increase in junior college enrollment, (2) the development of vocational and technical education, and (3) the provision of adequate financial support. Not to be overlooked is the need for improvement of the primary and secondary school systems as well as greater recognition of higher education by the parents.

Past Trends in Enrollments

The following graphs are presented to provide the reader with an historical perspective of growth for selected institutions and combinations of institutions in the state. The basic data used to prepare these charts was the total headcount rather than full-time equivalent, which are not available for most institutions prior to 1960.

The growth pattern of most institutions of higher education reflects a decline during World War II, and increase of GI students after the war, a decline in the mid-fifties and a period of rapid growth since then (See Figure 20). The charts would indicate a more uneven enrollment pattern had they been constructed on a 1-year basis instead of a 5-year period. This perspective must be considered when the projections are examined. The enrollments fluctuate considerably on a year to year basis. This results from a large number of factors including changes in age cohort size, economic conditions, armed forces size, special programs, and others.

The University of Missouri has a pattern of growth which closely corresponds to the overall growth curve (See Figure 21). The four-year private colleges have grown at a slower rate (See Figure 22). The junior colleges started slowly but grew rapidly after 1960 with the aid of enabling legislation (See Figure 23). The state colleges experienced more growth during the 1950's (perhaps as a result of the lack of junior college growth) and have not increased as rapidly since 1960 as the total enrollment in all colleges (See Figure 24). Among the state colleges, Central has made the largest gains. This probably has resulted from its close proximity to the Kansas City metropolitan area and to the relatively slow growth of the junior college system in the area (See Figure 25). The slowest growing state college has been Northwest which lacks the population base from which to draw students. In addition, high school graduates from that area have been going to college in larger proportion than other areas for a number of years, thus reducing potential

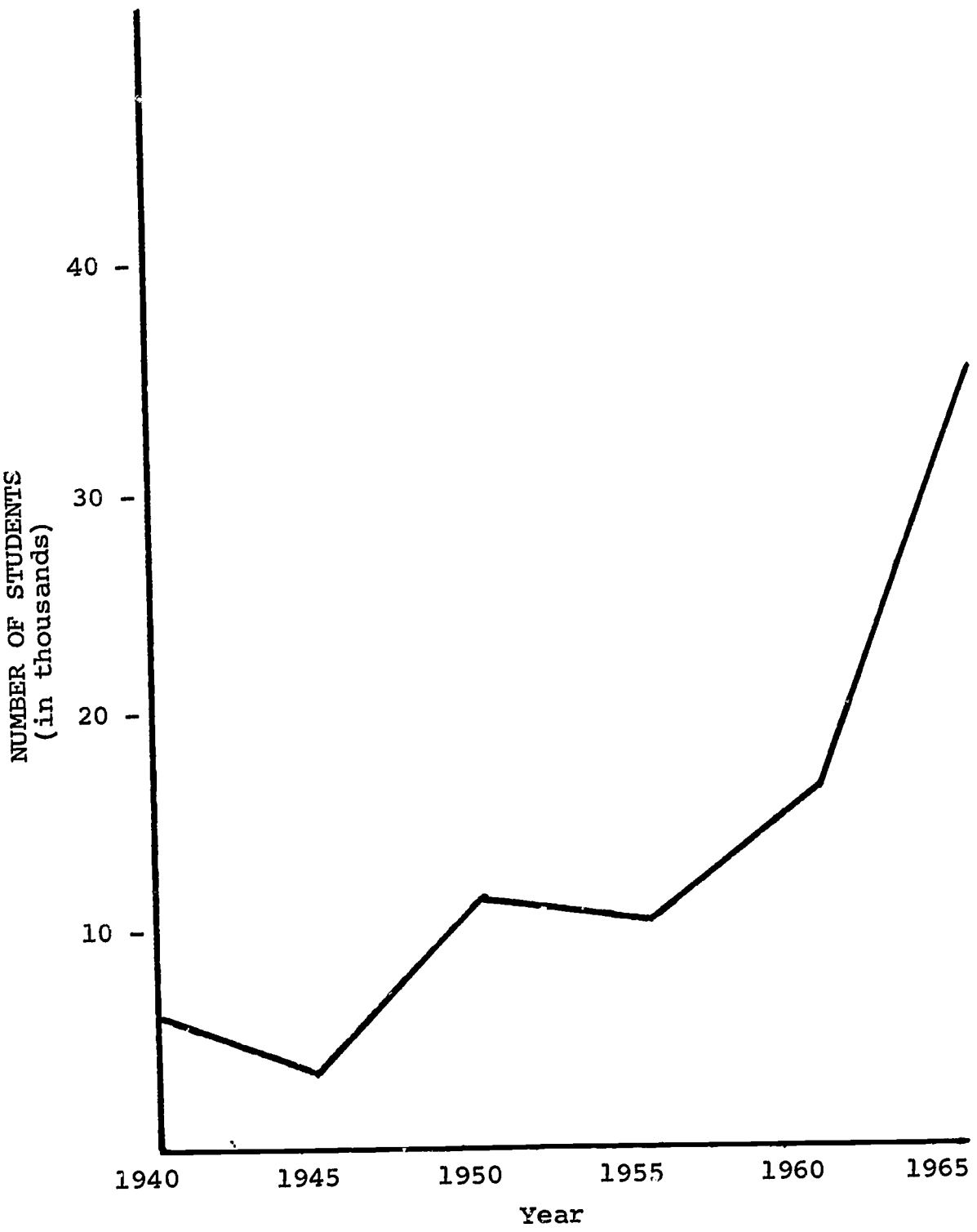


ENROLLMENT IN ALL COLLEGES AND
UNIVERSITIES IN MISSOURI

Figure 20

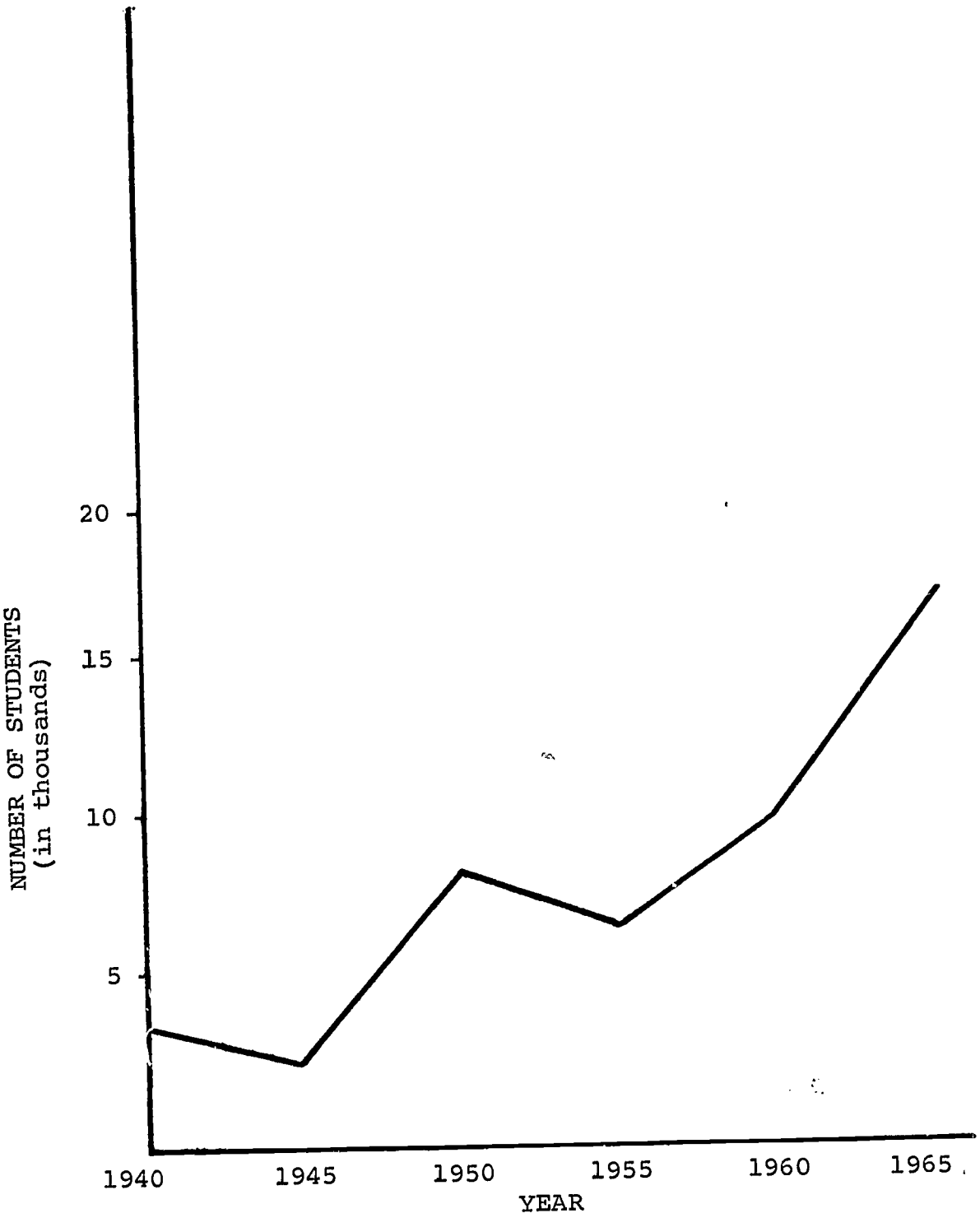
for growth. This lack of growth has been and will be compounded by the development of Missouri Western at St. Joseph (See Figure 26, 27, 28, and 29).

Lincoln University has had the slowest rate of growth of any of the state institutions. This time period has been a period of transition for Lincoln and perhaps a redefinition of its role (See Figure 30).



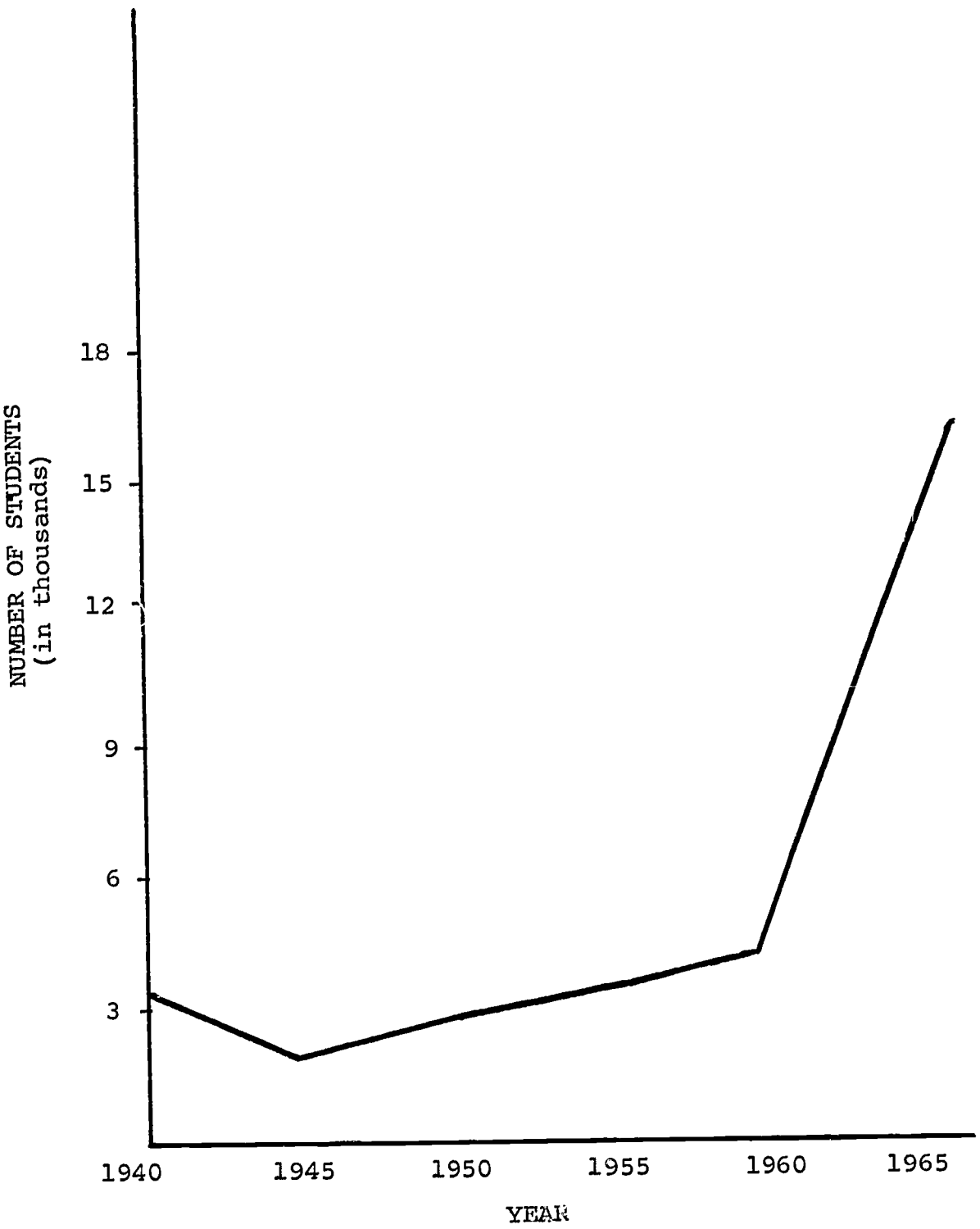
UNIVERSITY OF MISSOURI - ALL CAMPUSES

Figure 21



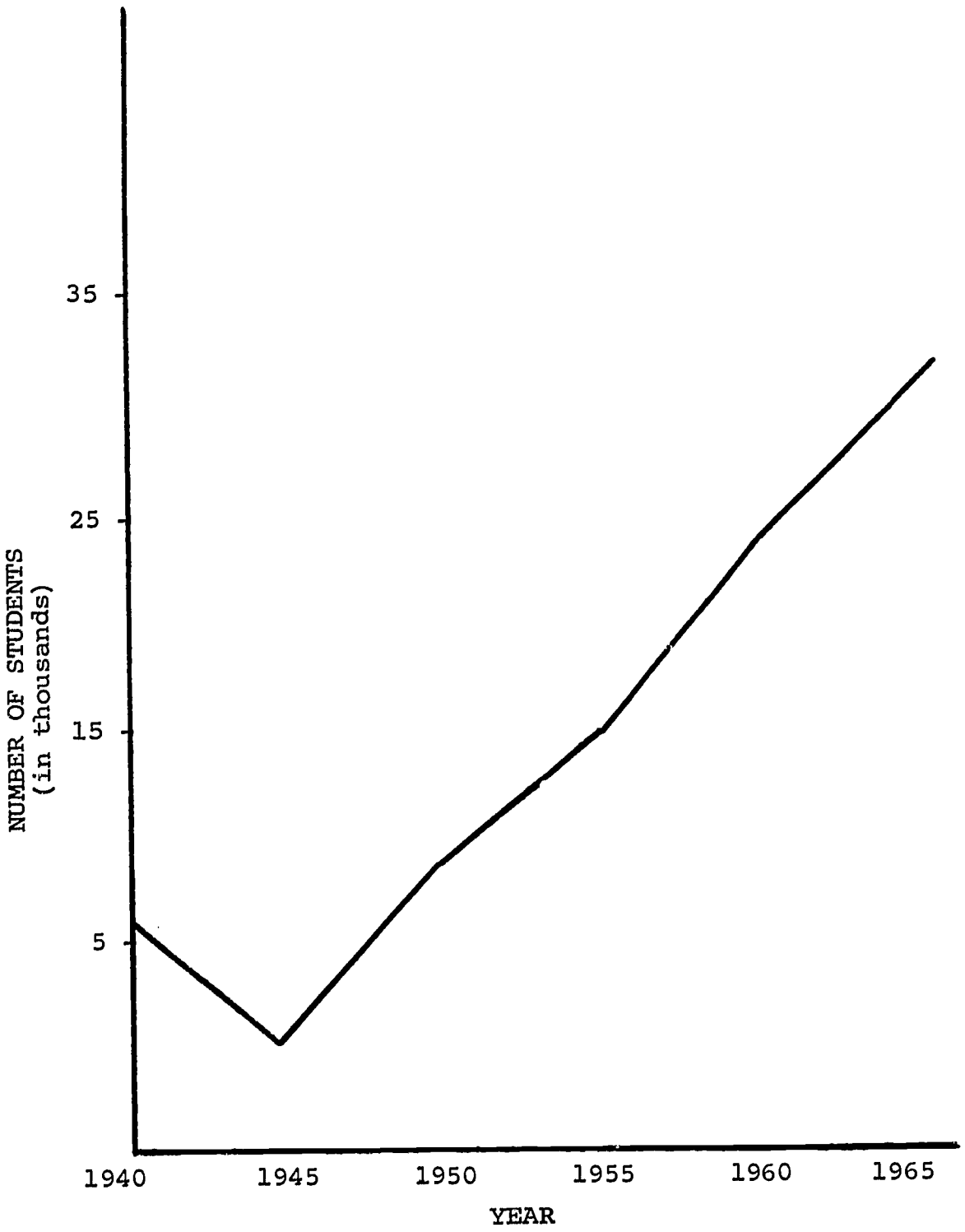
MISSOURI FOUR-YEAR PRIVATE COLLEGES

Figure 22

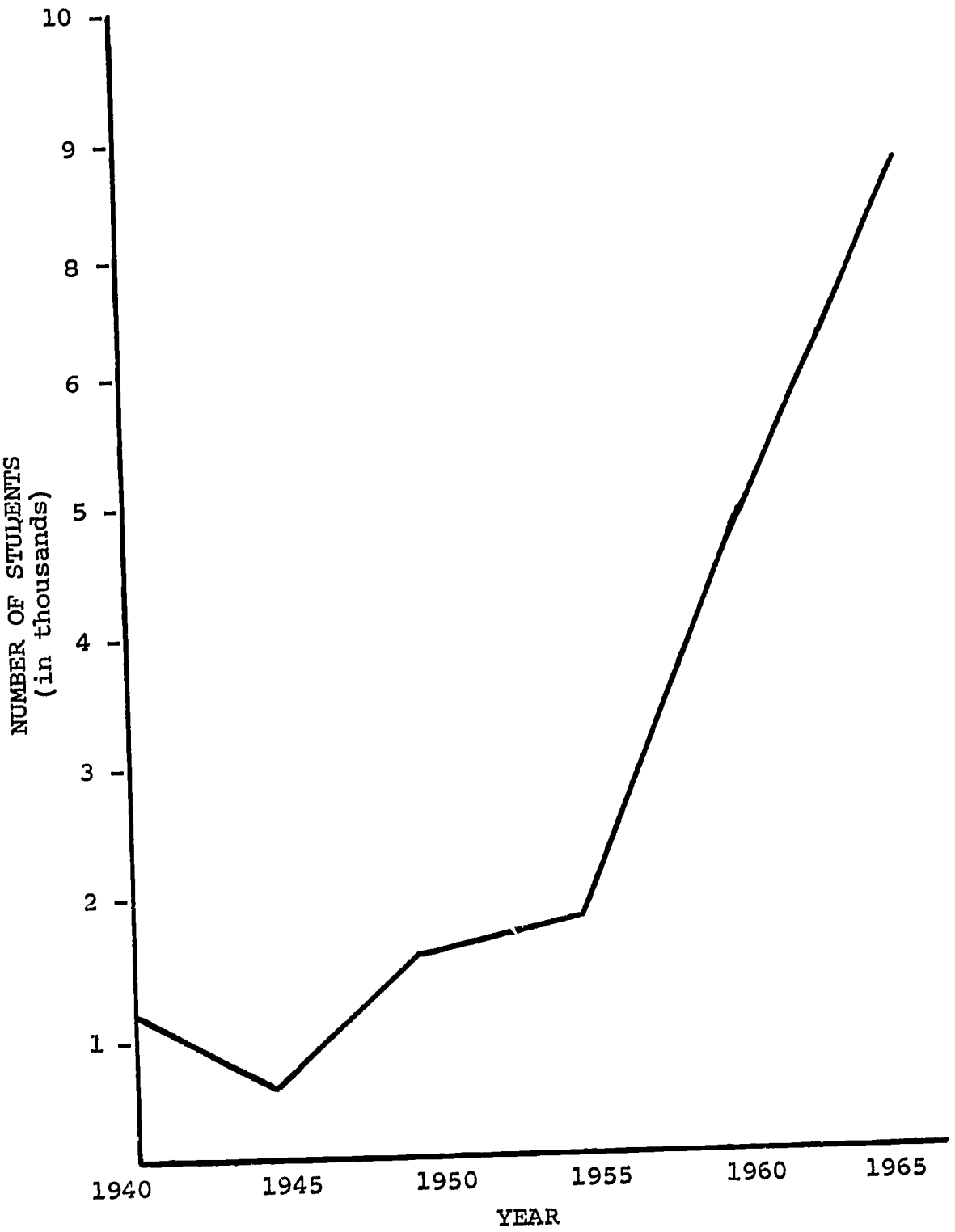


MISSOURI PUBLIC JUNIOR COLLEGES

Figure 23

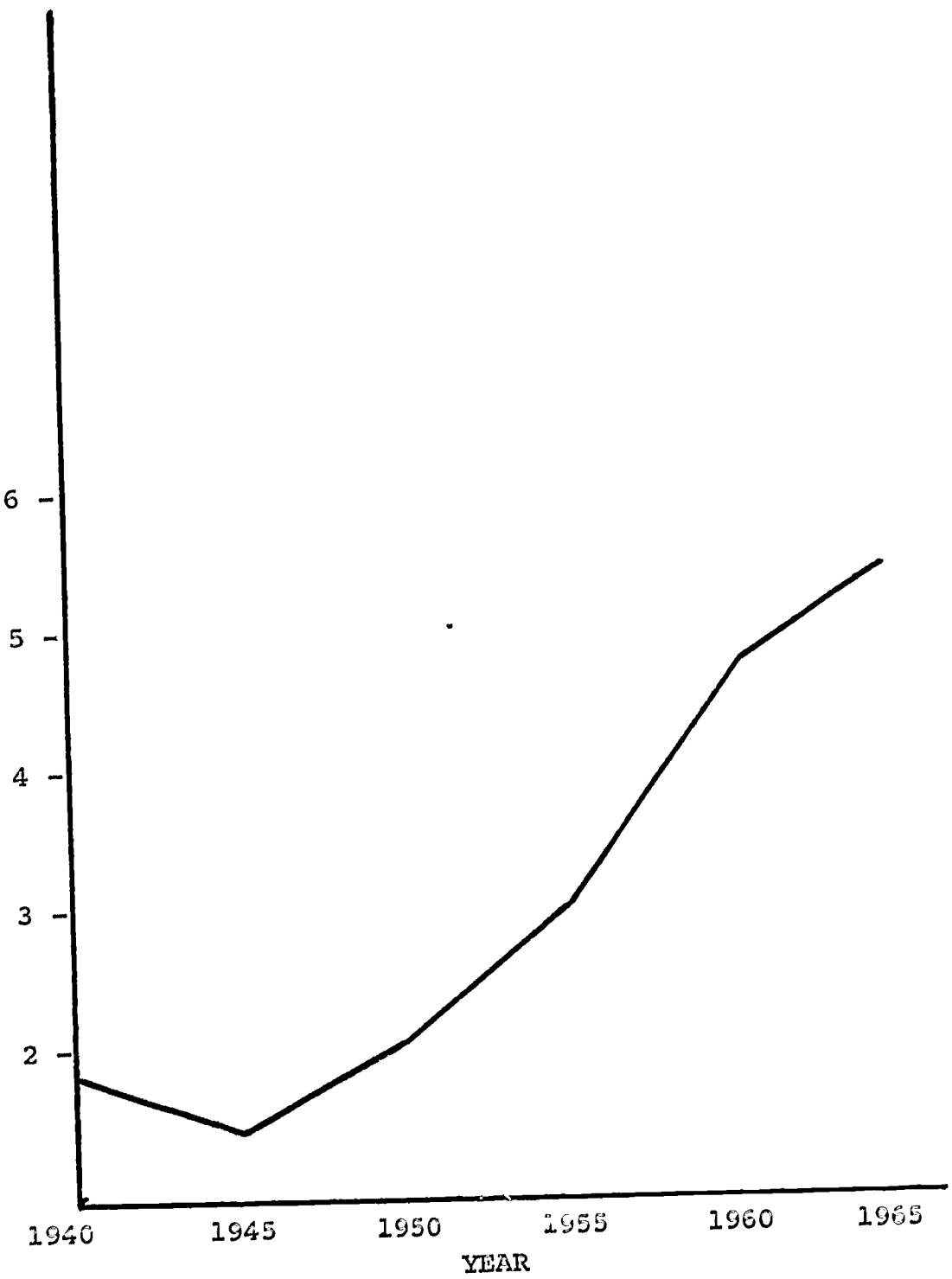


MISSOURI STATE COLLEGES
(total for the five state colleges)
Figure 24



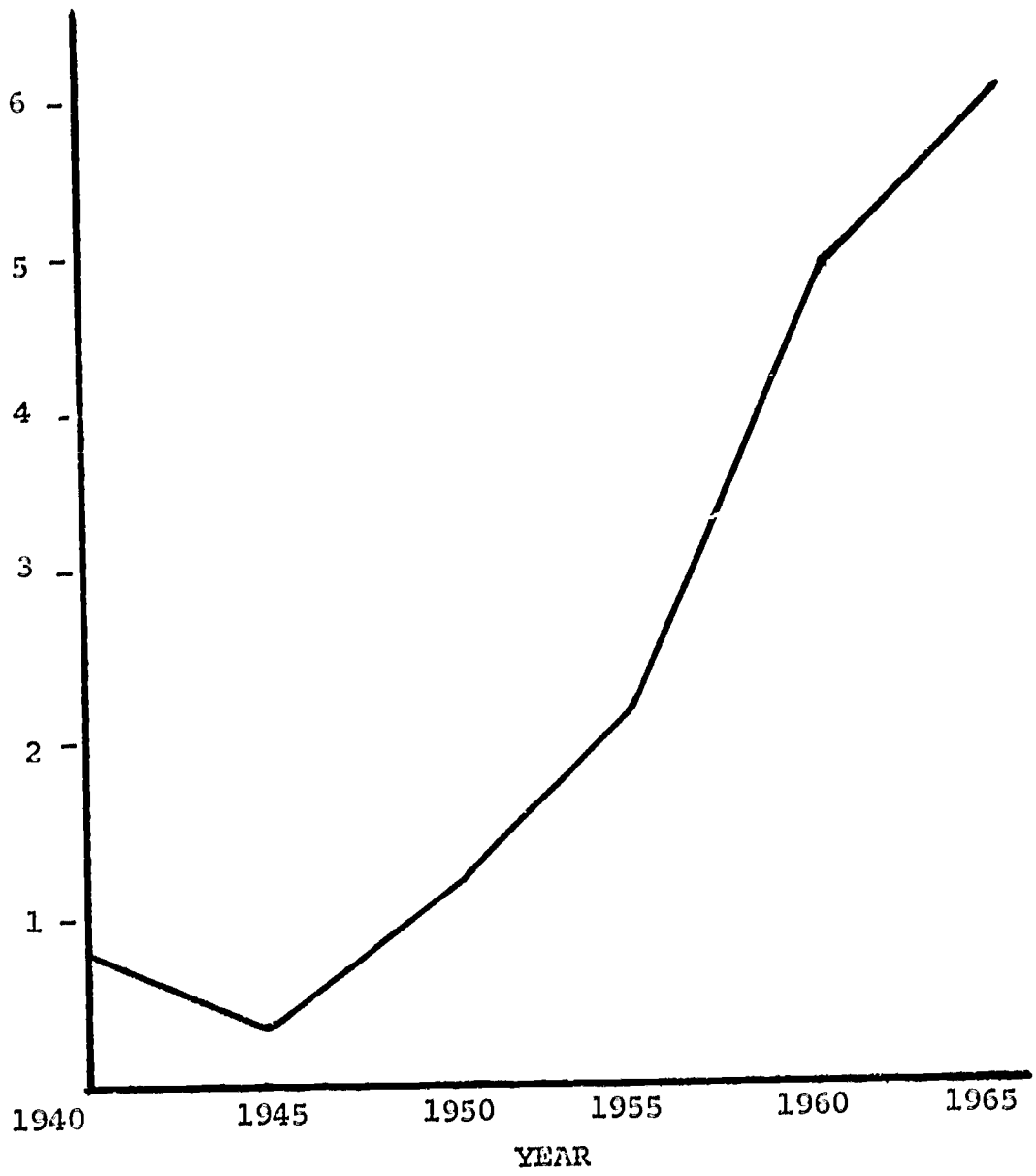
CENTRAL MISSOURI STATE COLLEGE

Figure 25



NORTHWEST MISSOURI STATE COLLEGE

Figure 26

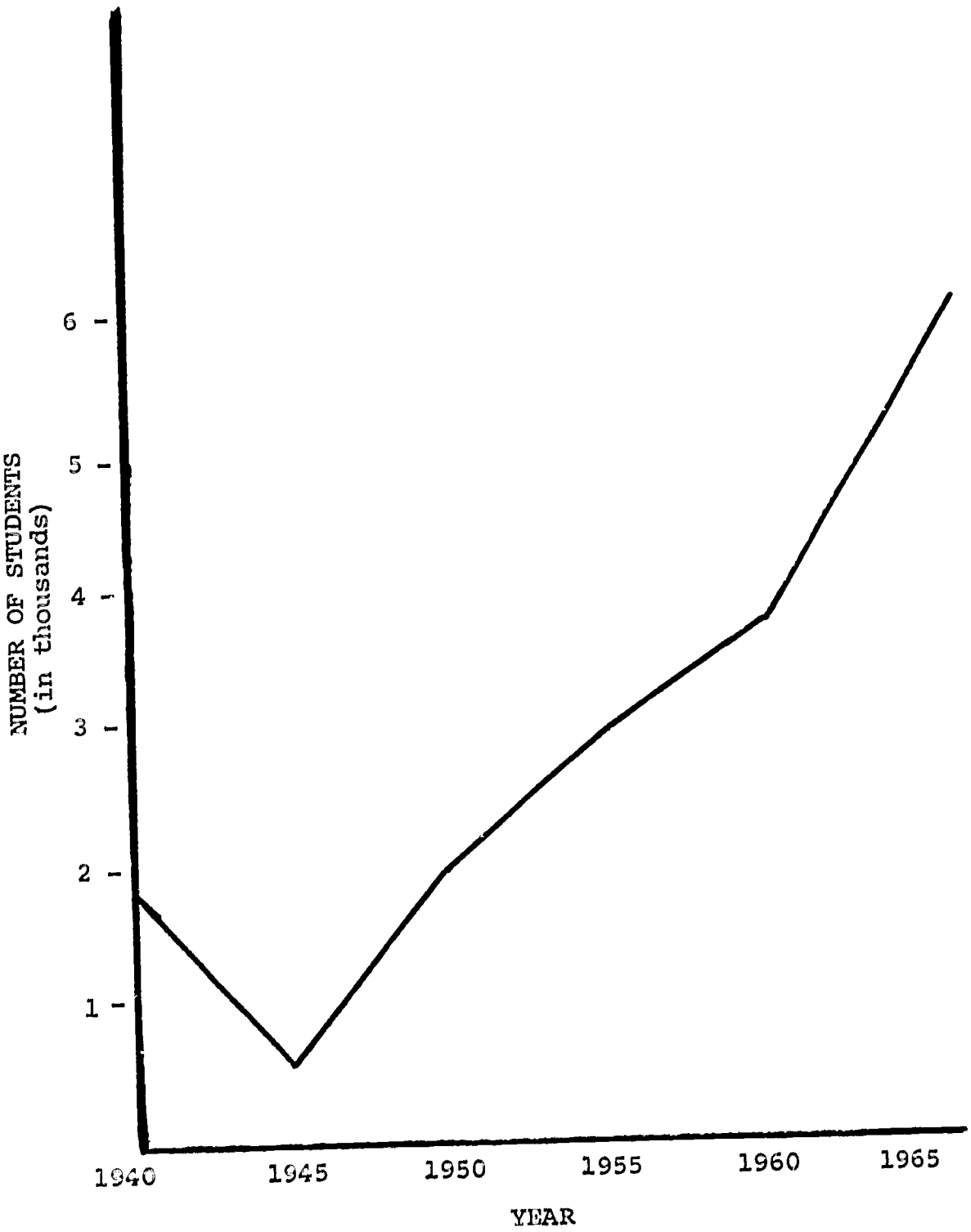


NORTHEAST MISSOURI STATE COLLEGE

Figure 27

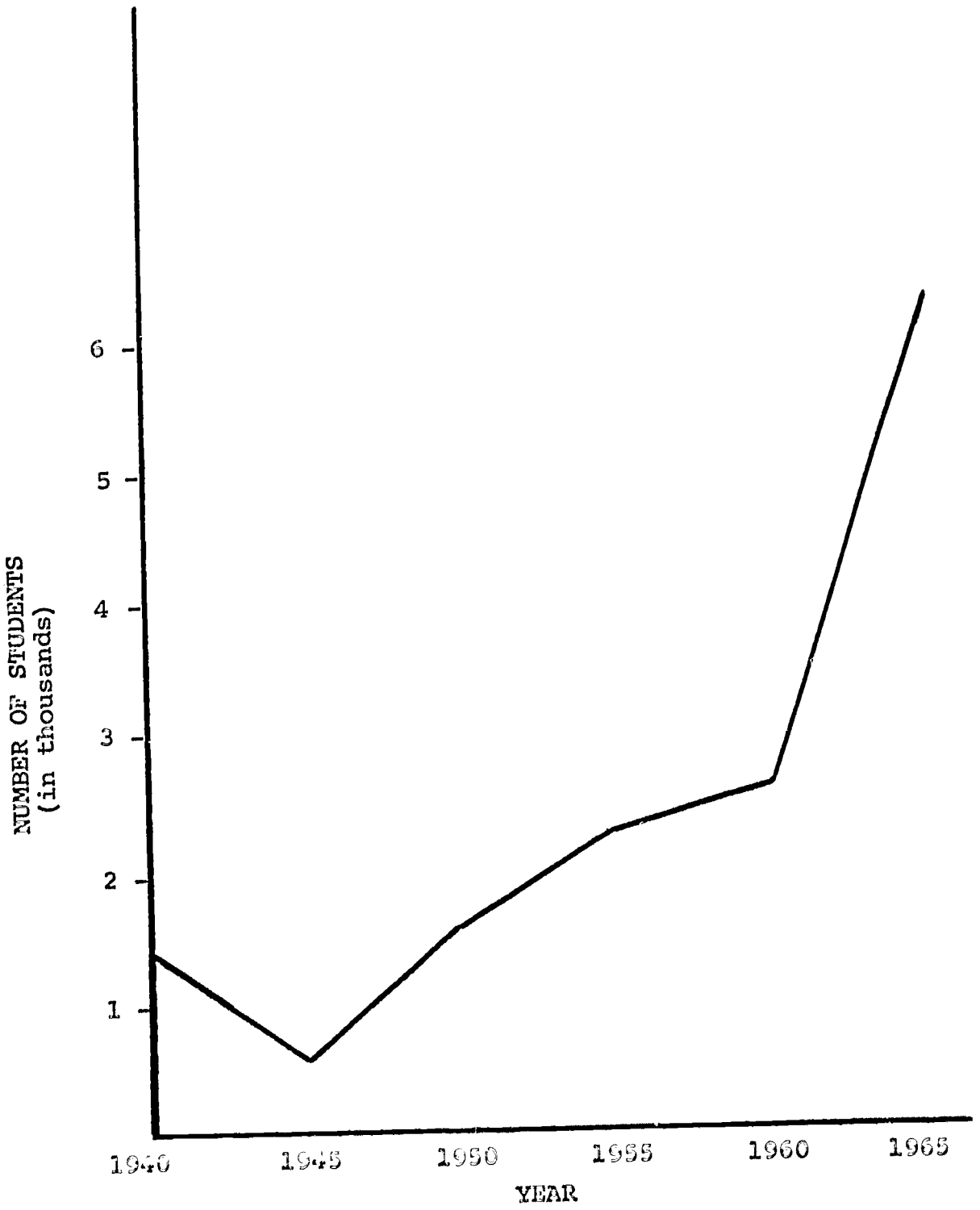
Patterns of Enrollment

The distribution of students enrolled in colleges is biased (as compared to the distribution of high school graduates) by two major factors: (1) The potential enrollment discussed in the section on future high school graduates; and (2) the location of institutions of higher education, especially graduate institutions. The latter bias in distribution results from an increasing number of graduates and married undergraduates moving to the location of higher education institutions and establishing permanent residence there (See Figure 31).



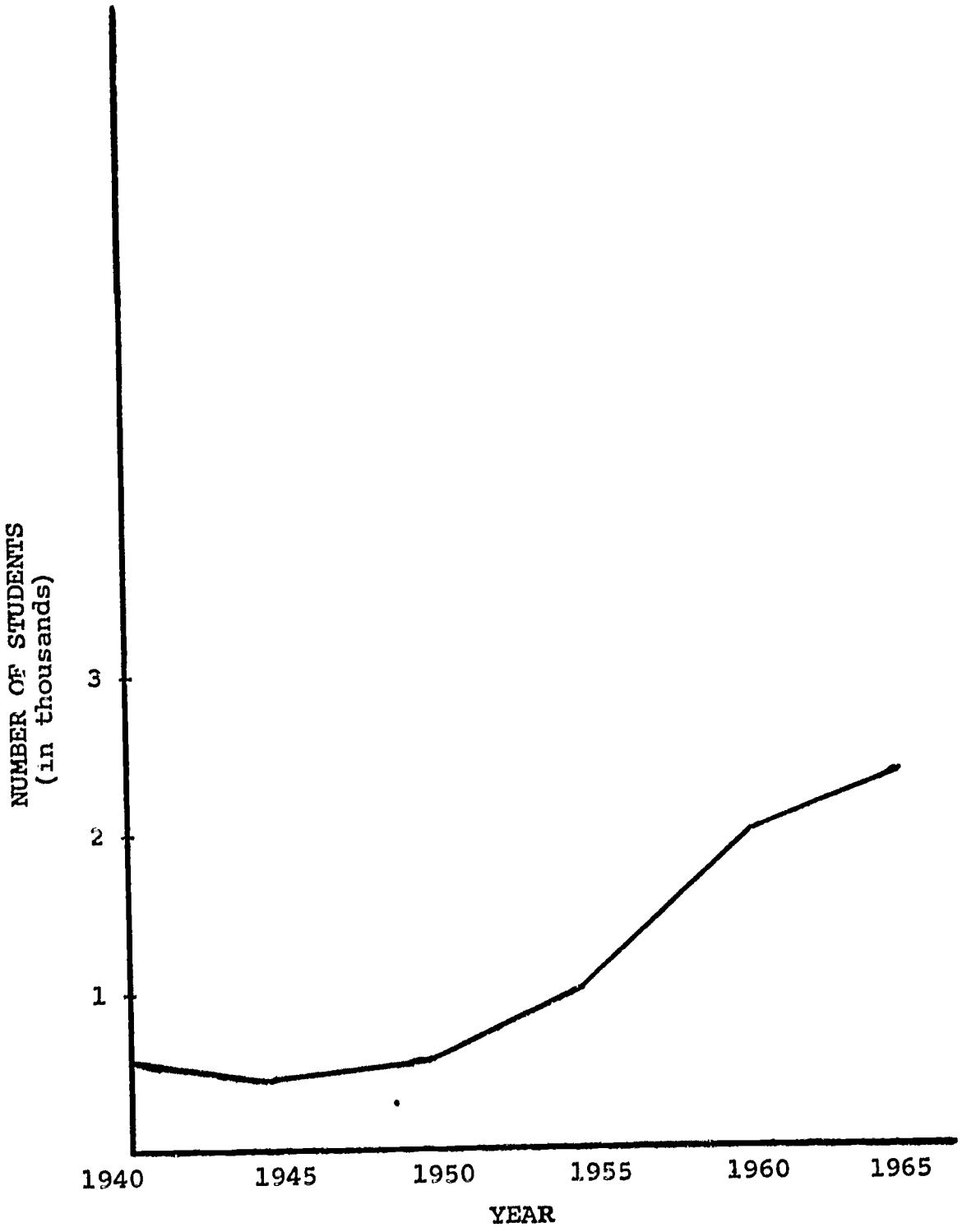
SOUTHEAST MISSOURI STATE COLLEGE

Figure 28



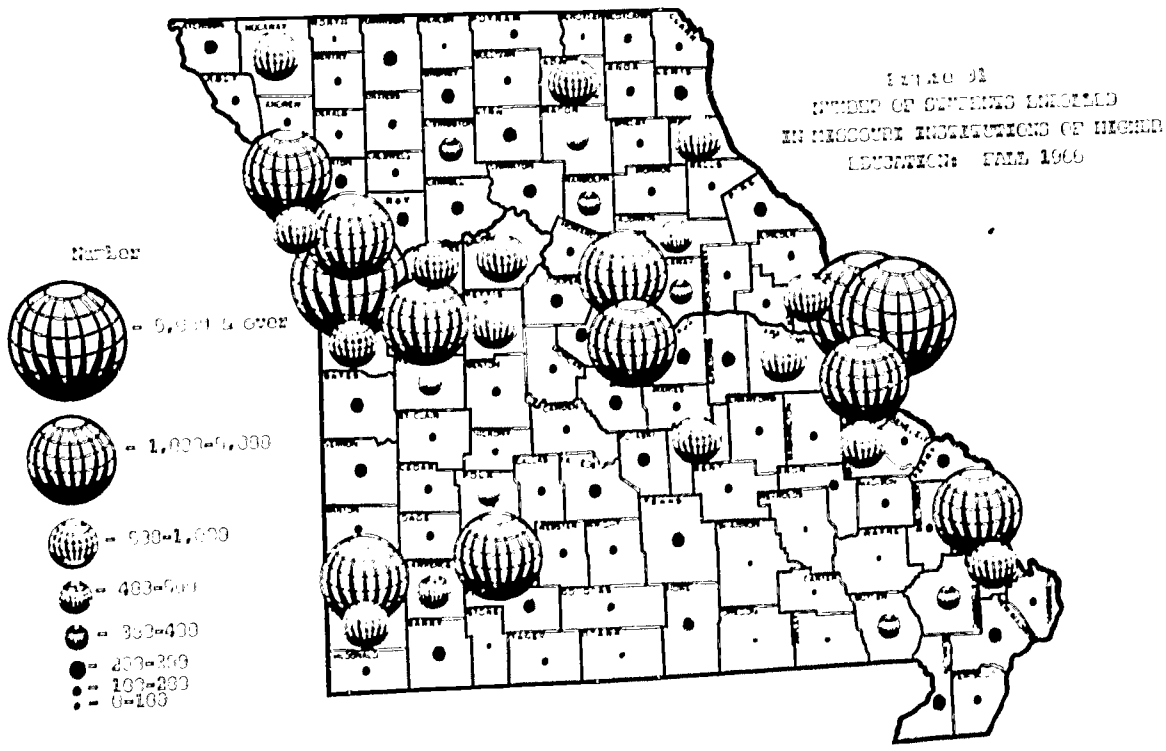
SOUTHWEST MISSOURI STATE COLLEGE

Figure 29



LINCOLN UNIVERSITY

Figure 30



A better reflection on the proportion of the potential students who enter college is the ratio of high school graduates to first time college freshmen (See Figure 32). Most of these figures are low because Missouri students who go to out-of-state colleges are not recorded in this figure. The patterns which were revealed in the school attainment, income, occupation, concentration of population, and others are again indicated here. An attempt will be made to summarize all of these in a later section.

State Four-Year Institutions. This section concentrates on enrollment patterns in the public four-year institutions in the state. Not included, but very important are the private colleges and universities and the public junior colleges.

The University of Missouri at Columbia has the widest coverage of any single college or campus. The largest proportion of students come from the metropolitan areas and central Missouri. The University does not draw heavily from the Ozarks or Northcentral Missouri, due partly to the comparatively small potential in these areas (See Figure 33).

The Kansas City and St. Louis campuses are almost entirely community colleges in the sense that almost all of their students come from their respective metropolitan areas. The Kansas City campus draws more heavily from out-of-state than does the St. Louis campus (See Figure 34 and 35).

The University of Missouri at Rolla has three major clienteles: the local area (Phelps County), St. Louis metropolitan area (principally St. Louis County), and out-of-state students. The campus draws lightly

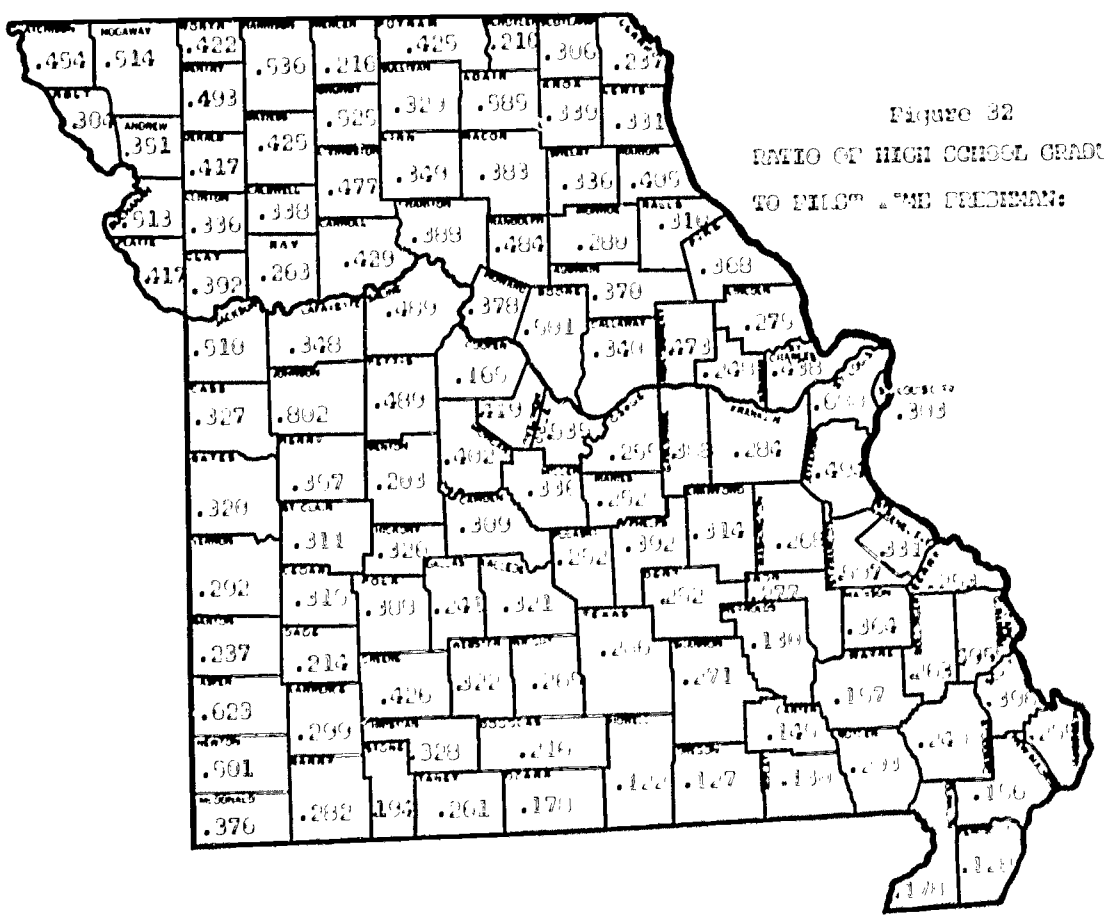
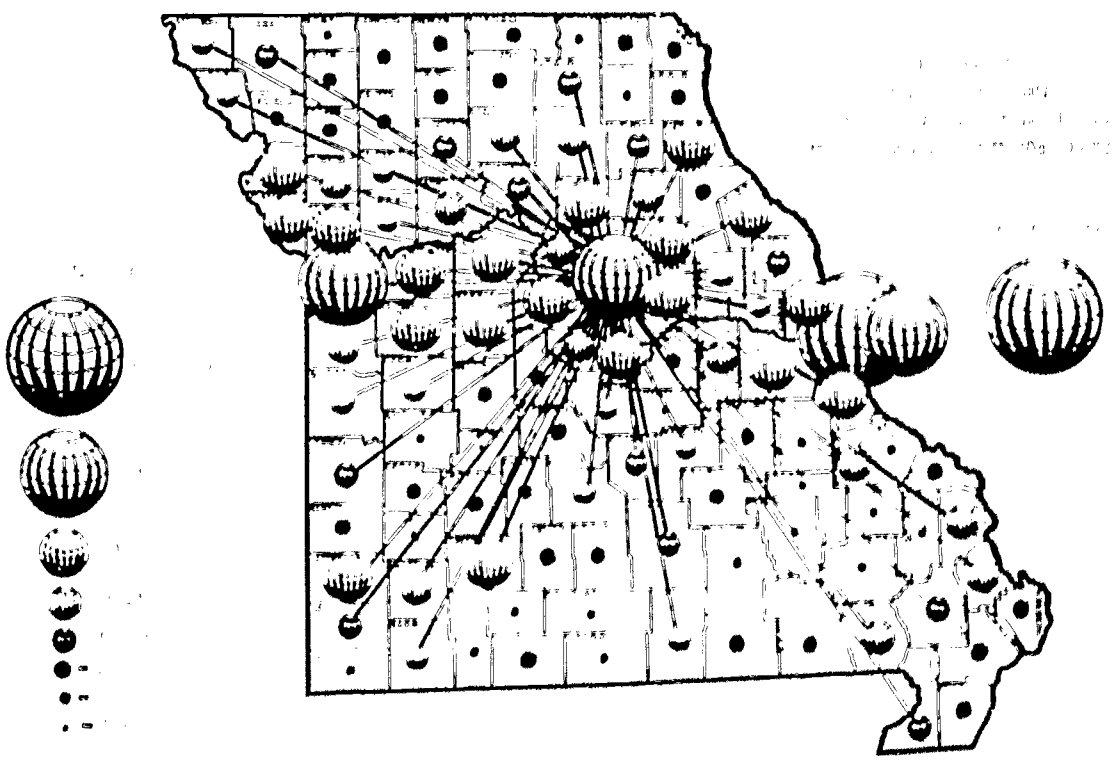


Figure 32

RATIO OF HIGH SCHOOL GRADUATES

TO FIRST TIME FRESHMAN: 1966



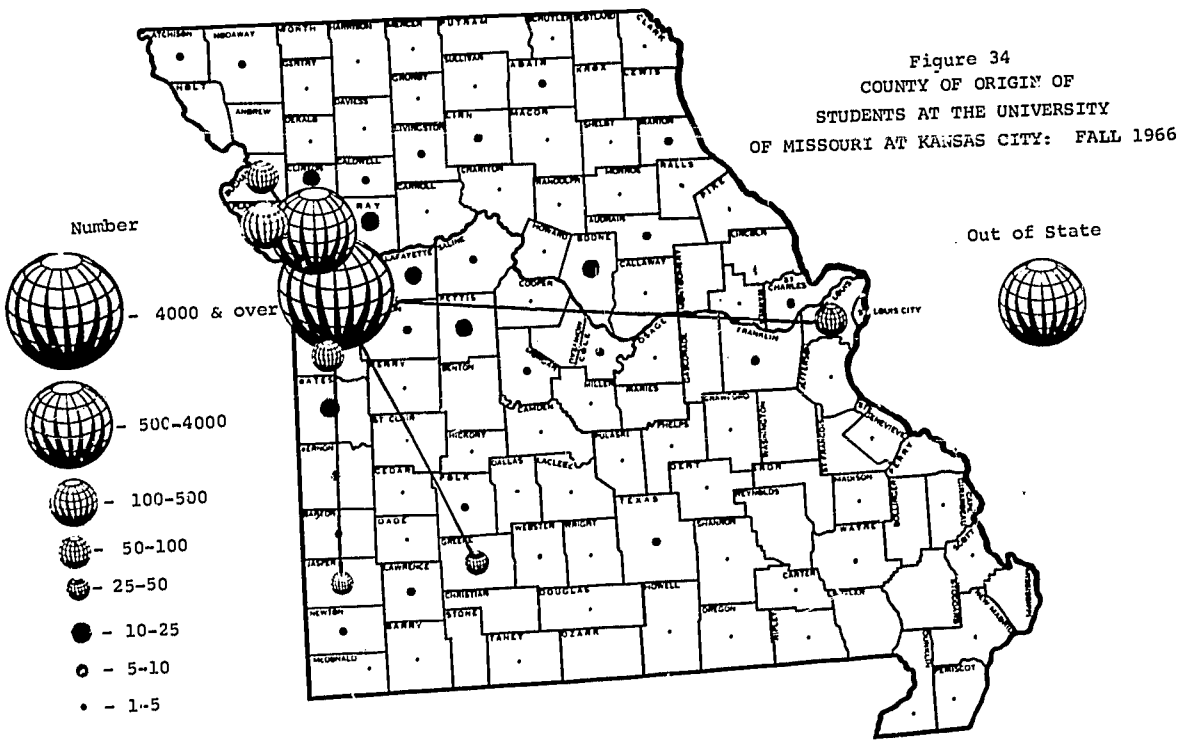


Figure 34
COUNTY OF ORIGIN OF
STUDENTS AT THE UNIVERSITY
OF MISSOURI AT KANSAS CITY: FALL 1966

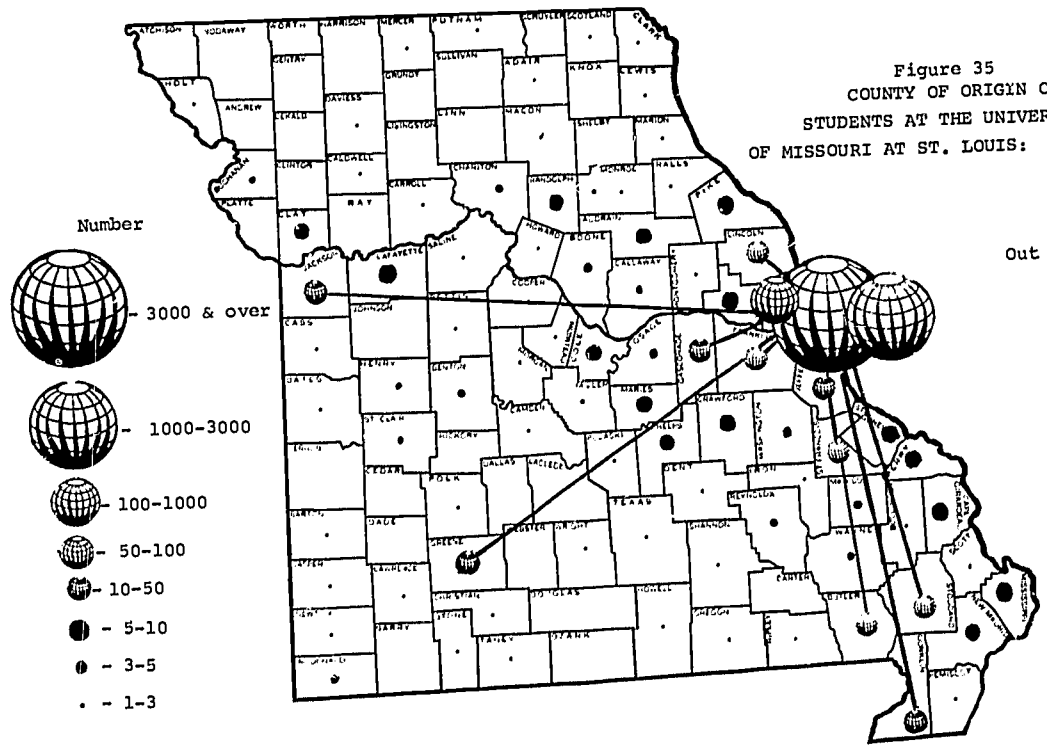


Figure 35
COUNTY OF ORIGIN OF
STUDENTS AT THE UNIVERSITY
OF MISSOURI AT ST. LOUIS: FALL 1966

from the remainder of the state, with many of the counties having less than five students enrolled (See Figure 36).

Lincoln University is almost markedly a community college serving Cole County with limited clienteles drawn from St. Louis and Kansas City (See Figure 37).

State Colleges. The state colleges primarily serve the students from the immediate locality, drawing some from the nearest metropolitan

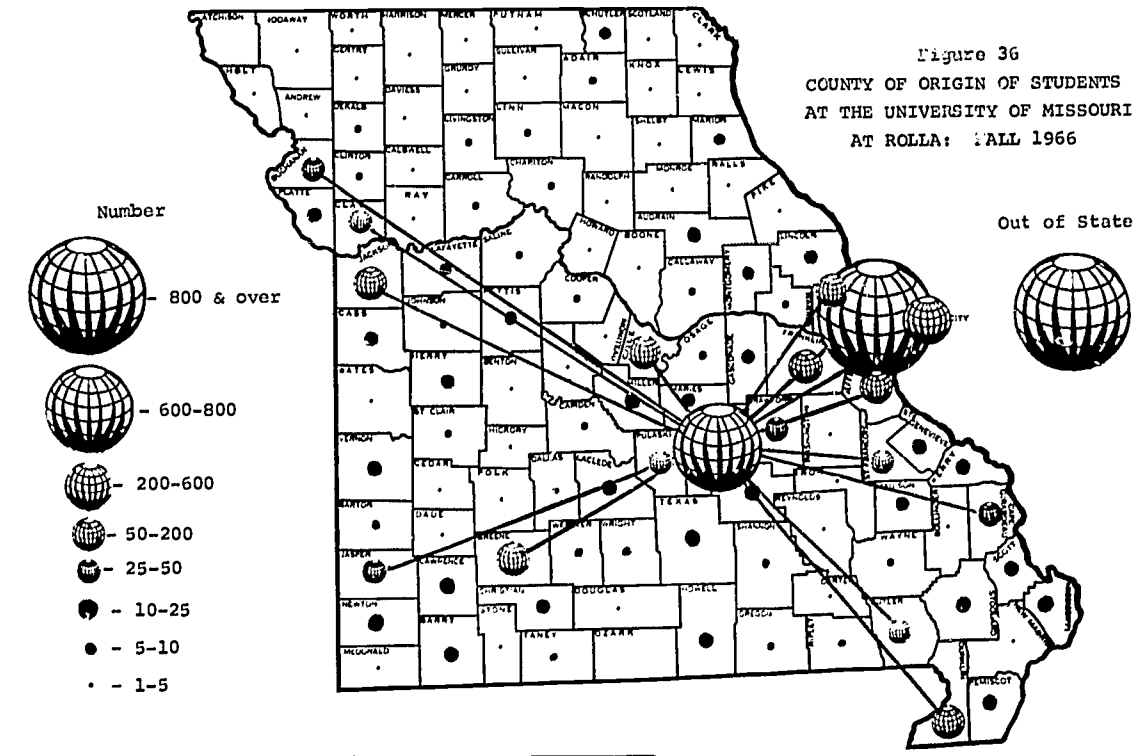


Figure 36
COUNTY OF ORIGIN OF STUDENTS
AT THE UNIVERSITY OF MISSOURI
AT ROLLA: FALL 1966

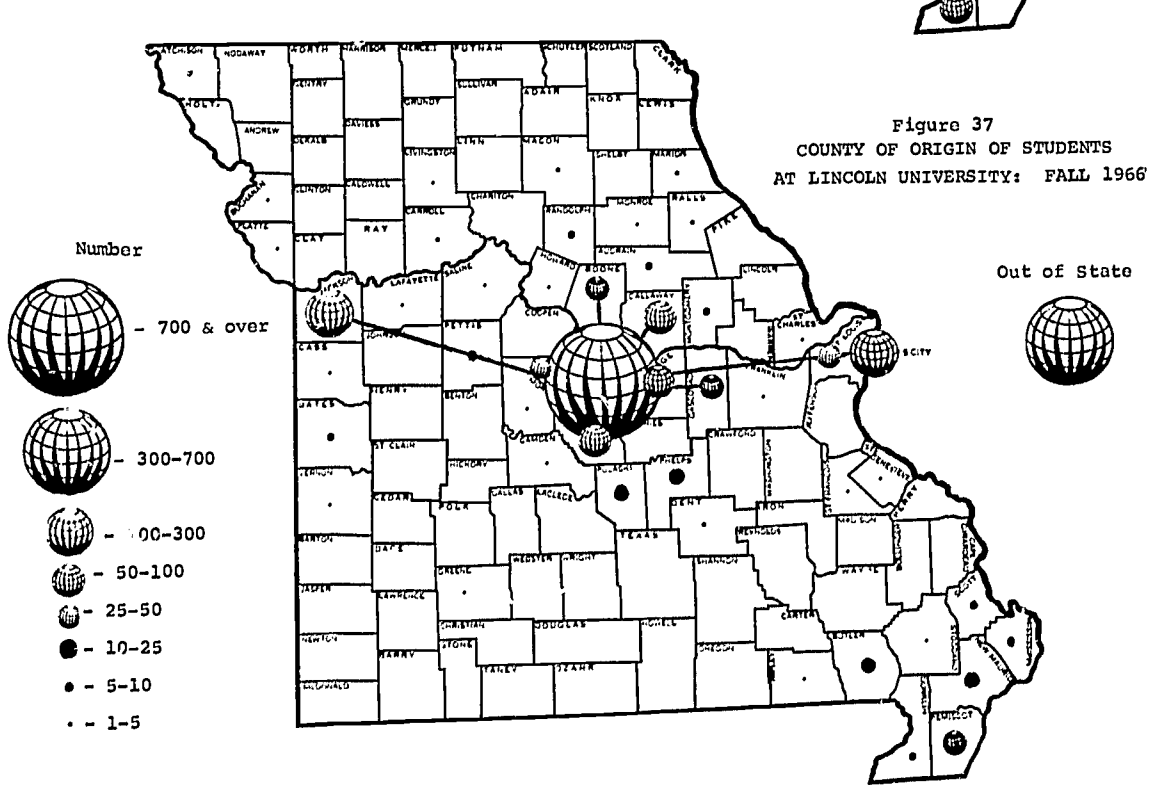


Figure 37
COUNTY OF ORIGIN OF STUDENTS
AT LINCOLN UNIVERSITY: FALL 1966

area. For example, Northeast Missouri in Kirksville, Adair County, receives the largest single group of students from Adair County and the third largest from St. Louis (See Figure 38). The second largest group is from out-of-state. Correspondingly, Northwest Missouri in Maryville, Nodaway County, serves primarily students from Nodaway County and contiguous counties. It also draws a significant number of students from out-of-state. (See Figure 39). For both Northwest and Northeast Missouri, the largest group of out-of-state students comes from Iowa.

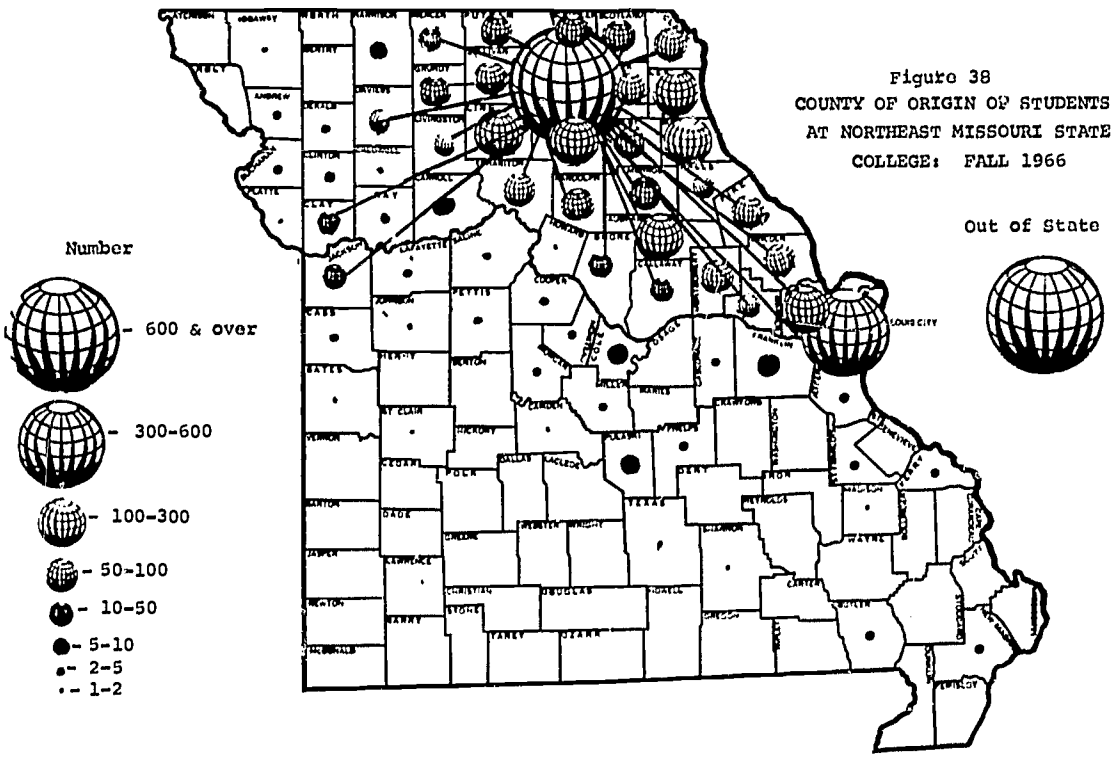


Figure 38
COUNTY OF ORIGIN OF STUDENTS
AT NORTHEAST MISSOURI STATE
COLLEGE: FALL 1966

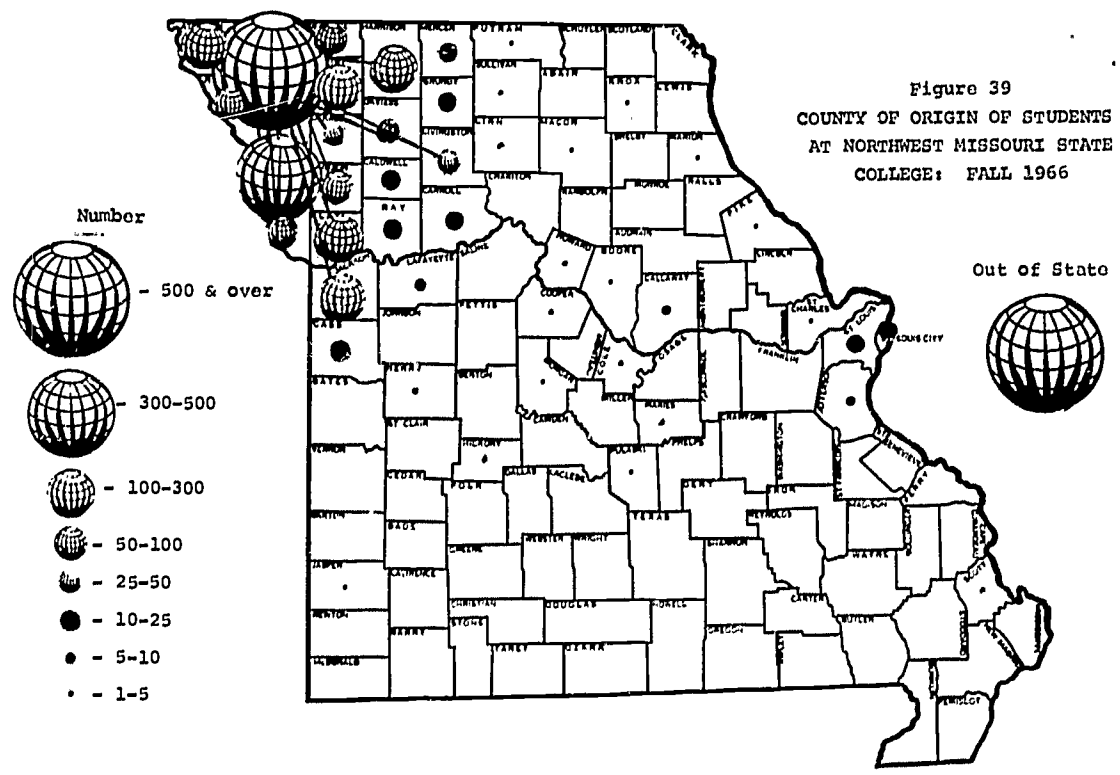


Figure 39
COUNTY OF ORIGIN OF STUDENTS
AT NORTHWEST MISSOURI STATE
COLLEGE: FALL 1966

Central Missouri State College at Warrensburg, Johnson County, is somewhat unique in that the largest single group of students does not come from the county in which it is located; rather, the largest group of students come from Jackson County, the second largest from Johnson, and the third from out-of-state. Central Missouri draws a significant number of students from the St. Louis area (See Figure 40). Similar to Central Missouri is Southeast Missouri at Cape Girardeau, Cape

Girardeau County, where the largest group of students comes from the St. Louis metropolitan area, and the second largest from the home county. Southeast Missouri also attracts a substantial number of students from the counties of Southeast Missouri (See Figure 41).

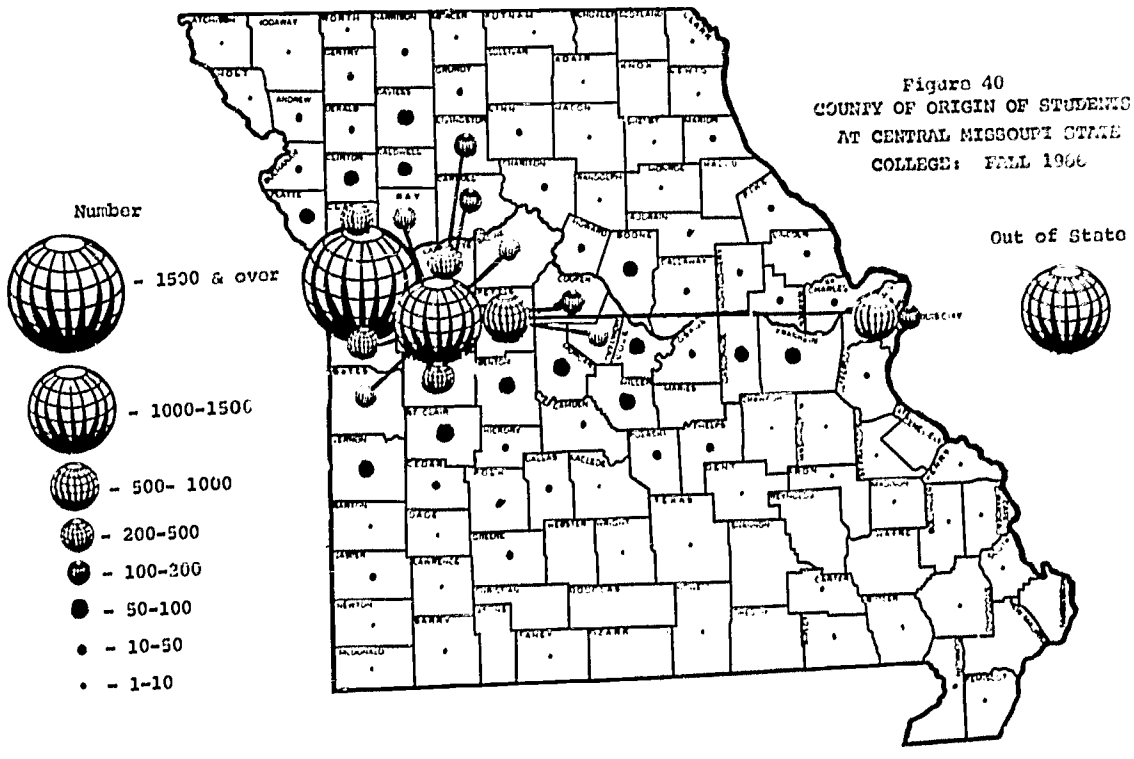


Figure 40
COUNTY OF ORIGIN OF STUDENTS
AT CENTRAL MISSOURI STATE
COLLEGE: FALL 1966

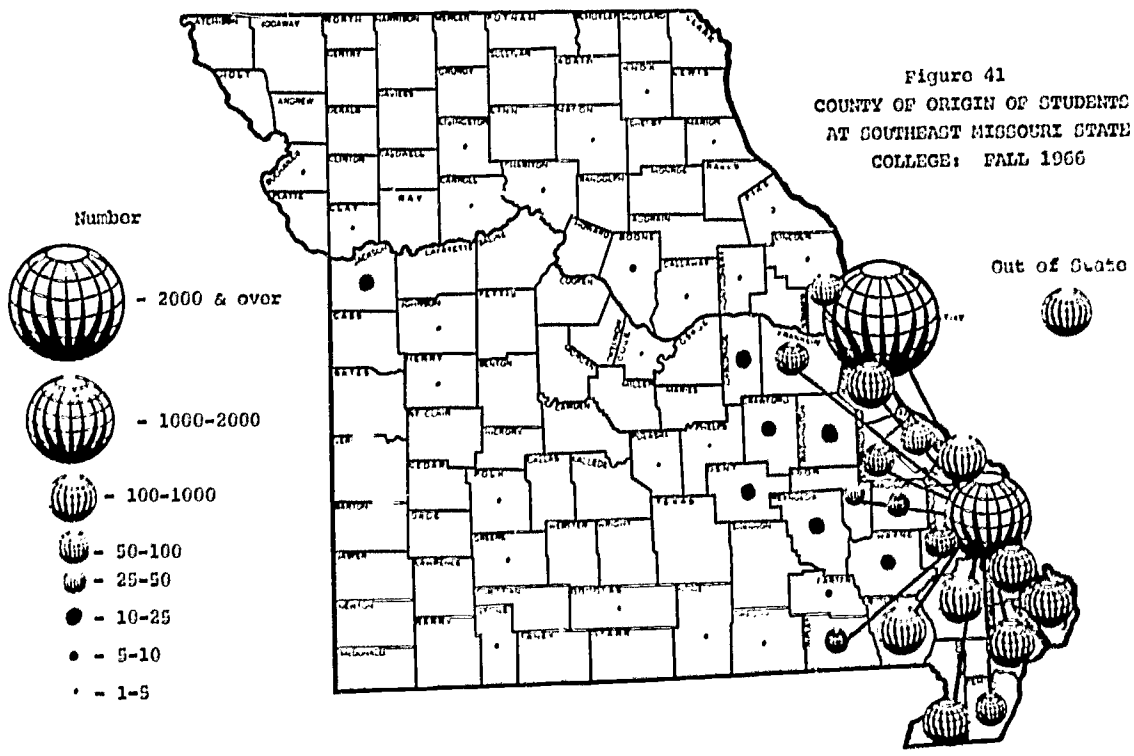


Figure 41
COUNTY OF ORIGIN OF STUDENTS
AT SOUTHEAST MISSOURI STATE
COLLEGE: FALL 1966

Southwest Missouri's primary clientele come from the Springfield metrolpolitan area, Greene County, and thus it serves some of the functions of a community college. Second only to the University of Missouri at Columbia, the Southwest Missouri State College serves the Ozarks. It also draws significant numbers of students from the Kansas City and St. Louis metropolitan areas, with a very limited out-of-state clientele (See Figure 42).

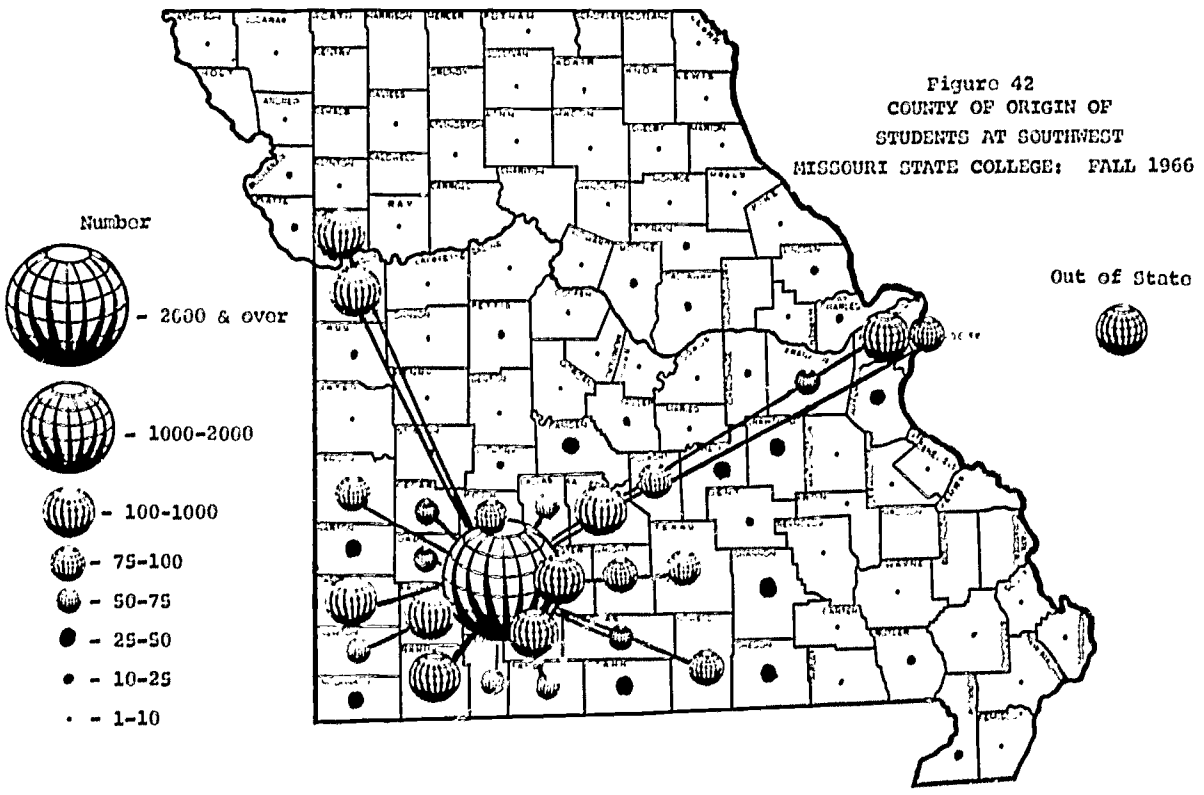


Figure 42
COUNTY OF ORIGIN OF STUDENTS AT SOUTHWEST MISSOURI STATE COLLEGE: FALL 1966

Characteristics of Youth Who Do Not Go To College

I have already stated that high school graduates who go to college are not typical of all graduates, but that the "typical" college student is atypical. It is very difficult to characterize who goes to college because the characteristics vary widely from one college to another, from one area to another. Realizing all of these variations, let me briefly describe some of the characteristics of those *less* likely to go to college:

1. low income families
2. Negro families
3. rural families
4. families headed by parents with less skilled occupations and/or lower education
5. the lower portions of their high school class
6. lower academic ability groups (as measured by such tests as the Ohio Psychological)
7. small high school
8. the female sex

To re-emphasize a point made previously, the characteristics often exist in combination and may reflect in part the same thing. However, if a youth possesses several of these characteristics, then the probabilities are increased that he or she will not go to college. The influences of each characteristic vary. For example, being a female is not as important on college attendance as being from a poorly educated home. Many of these factors have an ecological distribution. The Ozarks, Southeast Missouri, and the ghettos of St. Louis and Kansas City, all hold disproportionate shares of families and youths with these characteristics. These distributions must be taken into account in the location of future colleges and the establishment of programs aimed at increasing the proportion of any group of high school students who go on to college. No "action" program which takes into account only one of the factors can make more than modest headway toward success.

Migration of College Students into and out of Missouri

In 1963, the last date for which complete data is available for all states, Missouri had more students coming into the state to attend private and public colleges or universities than were going out.[11] The net gain through such movements was 10,365 for that year. This pattern is similar to that found in the majority of midwestern states. Illinois, however, exported a large number over 20,000, to other states. The same is true for many of the eastern states; New Jersey exported 56,000 and New York had 36,000 students going out of the state for college (See Figure 43).

The majority of the students coming into Missouri attend private universities or colleges. They do not enter the publicly supported institutions; only 545 were undergraduate students attending the public institutions (See Figure 44).

Another large proportion of the out-of-state students were professional and graduate students, with a large percentage attending private universities (See Figure 45 for undergraduate–private).

The patterns of in- and out-of-state movement can be summarized as follows: 79 percent of the Missouri high school graduates who go to college attend college in Missouri. (This percentage is similar to that for other midwestern states.) However, only 70 percent of the students in the higher education institutions are Missouri students, reflecting the

[11]The data and the figures used in this section are taken from: Mabel C. Rice and Paul L. Mason, *Residence and Migration of College Students, Fall 1963, State and Regional Data,* U.S. Department of Health, Education, and Welfare, Office of Education, U.S. Government Printing Office, Washington, 1965.

Figure 43

RESIDENCE AND MIGRATION OF COLLEGE STUDENTS:

ALL INSITUTIONS, FALL 1963

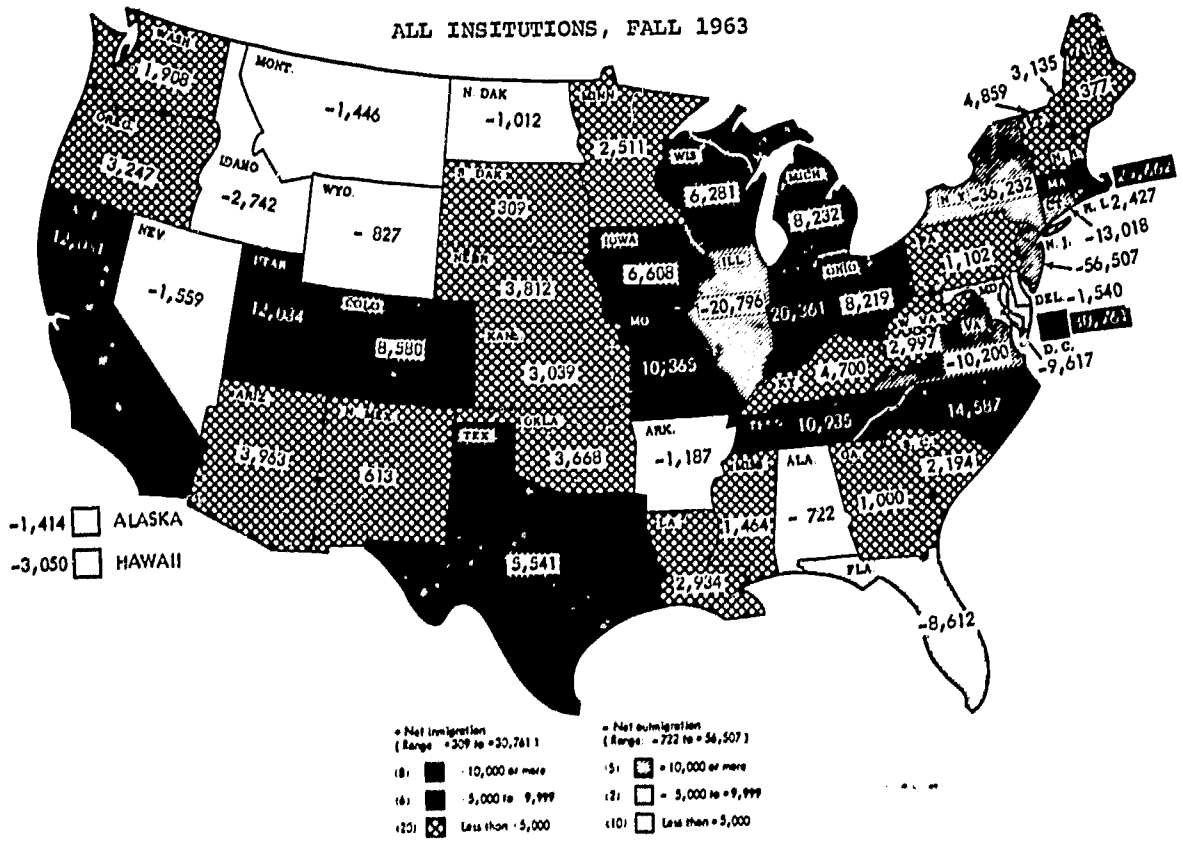


Figure 44

RESIDENCE AND MIGRATION OF UNDERGRADUATE STUDENTS:

PUBLICLY CONTROLLED INSTITUTIONS, FALL 1963

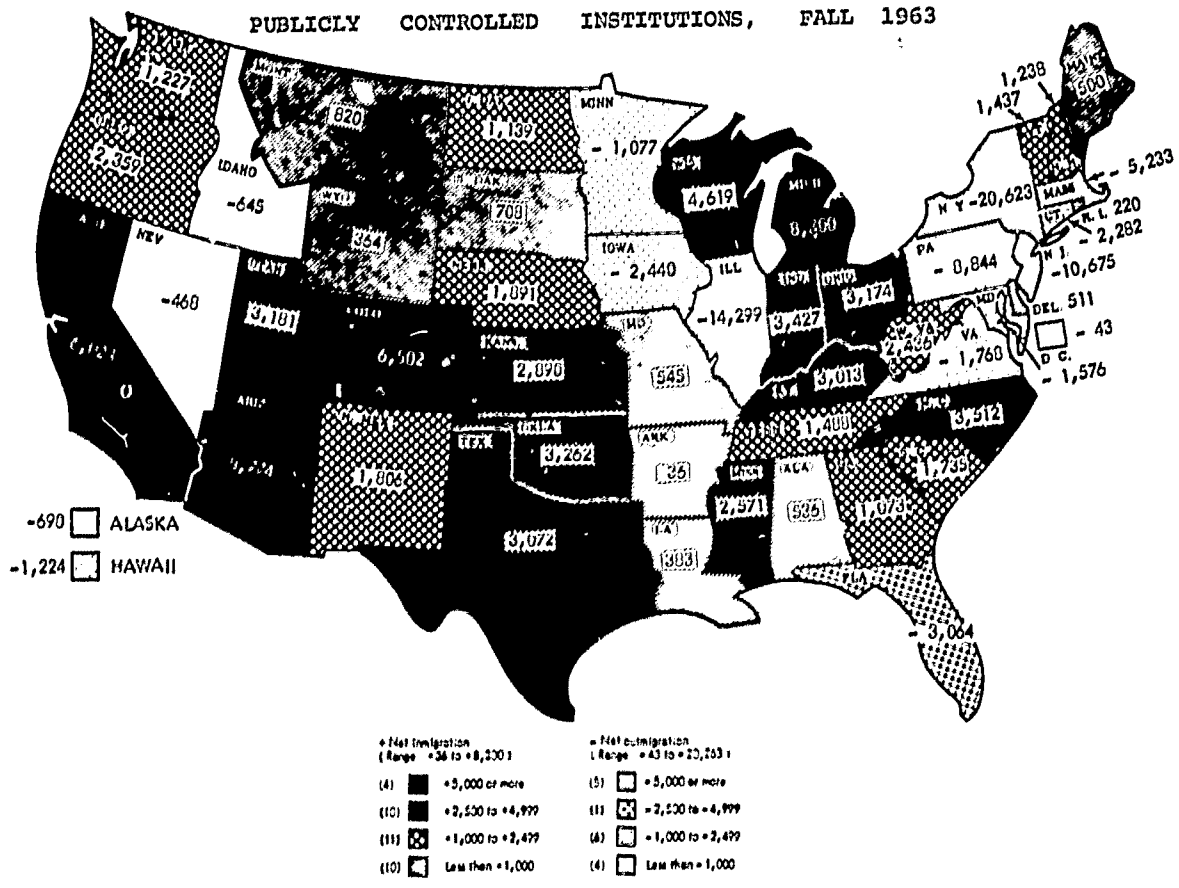
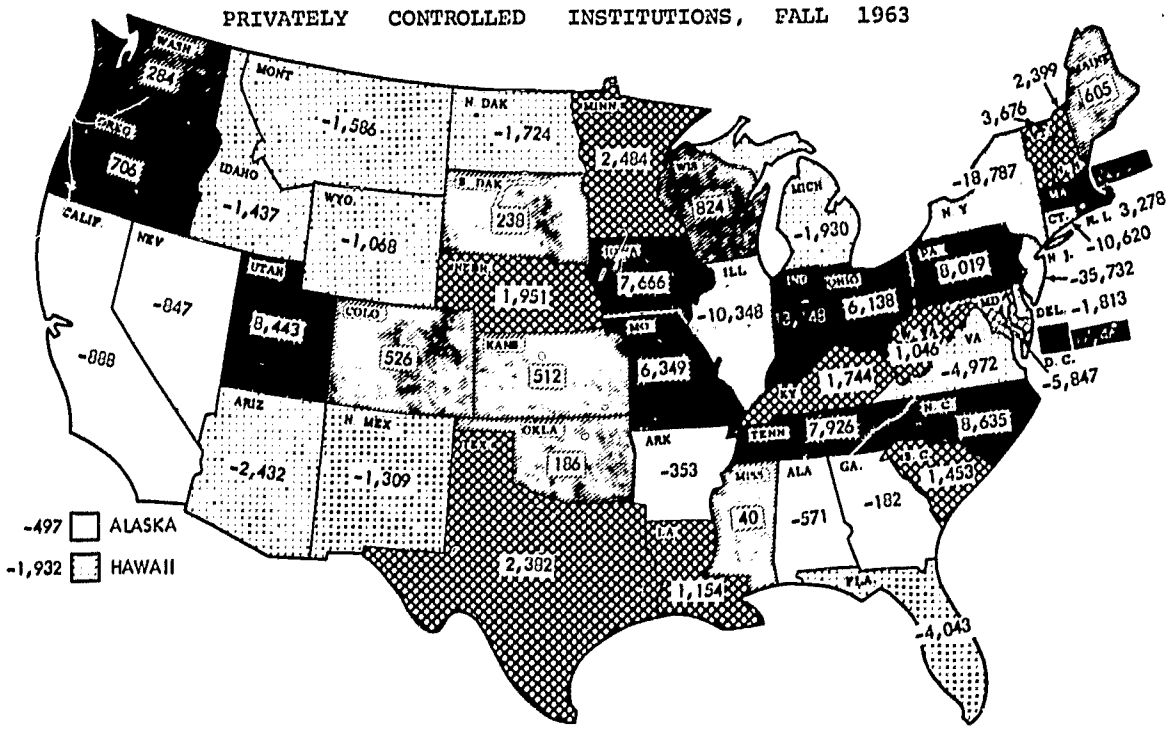


Figure 45

RESIDENCE AND MIGRATION OF UNDERGRADUATE STUDENTS:

PRIVATELY CONTROLLED INSTITUTIONS, FALL 1963



+ Net Immigration (Range +40 to +22,371)

(3) ■ 10,000 or more
(7) ■ 5,000 to 9,999
(10) ⊠ 1,000 to 4,999
(9) ■ Less than 1,000

- Net outmigration (Range -182 to -35,732)

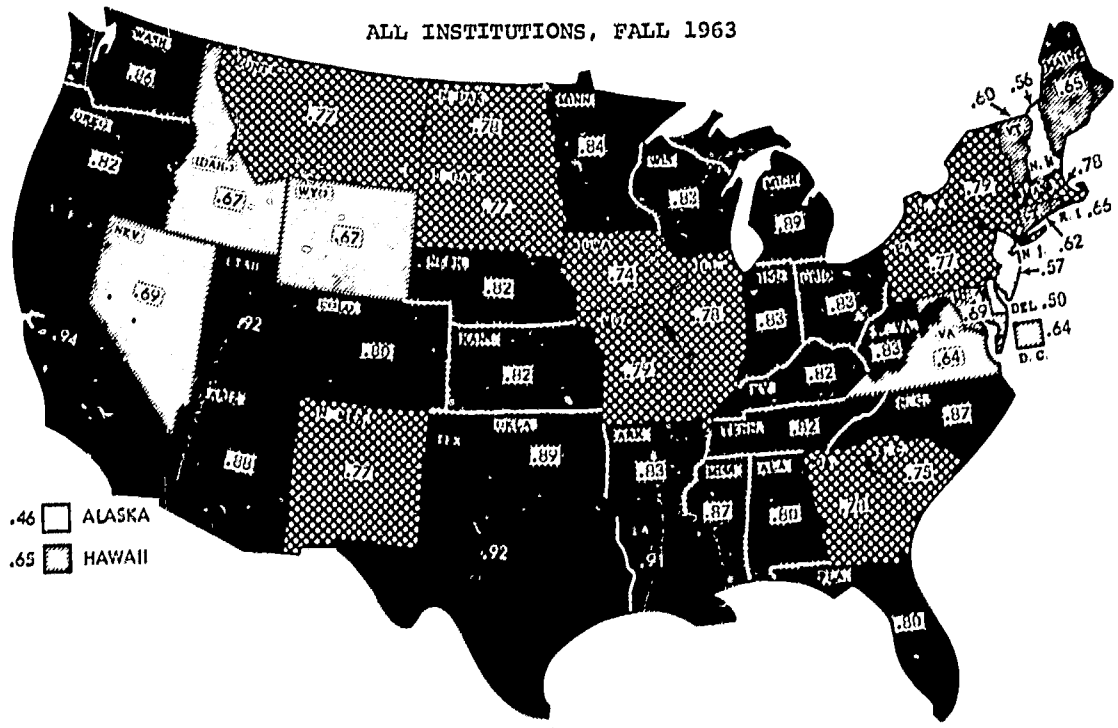
(4) □ 10,000 or more
(1) ⊠ 5,000 to 9,999
(11) □ 1,000 to 4,999
(6) □ Less than 1,000

substantial in-movement to the private institutions (See Figure 46 and 47).

These data supply evidence that the in- and out-movement to public institutions tend to be in balance, and if this continues, it can be disregarded for future projections. If the net in-movement to private institutions continues to increase as it has in recent years, then a substantial increase in the future must be projected for out-of-state students in the private colleges and universities in the state.

Figure 46

RATIO OF ALL STUDENT RESIDENTS REMAINING IN THEIR HOME STATE TO ATTEND COLLEGE TO TOTAL STUDENT RESIDENTS OF THE STATE: ALL INSTITUTIONS, FALL 1963

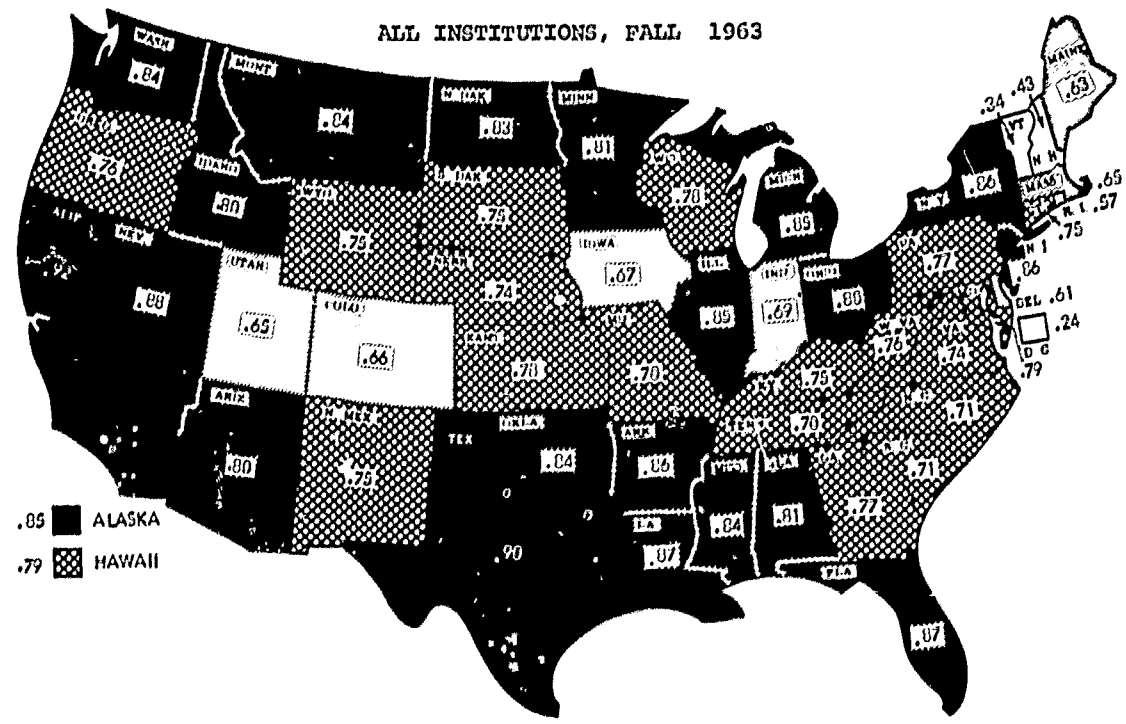


(National average, .81, median State ratio, .79, range of State ratios, .46 to .94)

(1)	Below .50	(12)	.70 to .79
(3)	.50 to .59	(23)	.80 to .89
(11)	.60 to .69	(4)	.90 or over

Figure 47

RATIO OF ALL STUDENT RESIDENTS REMAINING IN THEIR HOME STATE TO ATTEND COLLEGE TO TOTAL ENROLLMENTS IN THE STATE: ALL INSTITUTIONS, FALL 1963



(National average, .83, median State ratio, .77, range of State ratios, .34 to .92)

(3)	Below .50	(19)	.70 to .79
(1)	.50 to .59	(19)	.80 to .89
(7)	.60 to .69	(2)	.90 or over

CHAPTER V

PROJECTED ENROLLMENTS IN HIGHER EDUCATION

Projections for the United States

The Bureau of the Census has made a series of projections for college enrollments up to 1985 for the United States.[12] From 1965 to 1985, the higher series of projections increases from 5,209,000 to 11,575,000 or an increase of 122 percent. The majority of this increase occurs before 1975, when the college enrollments are projected to be 9,120,000. This suggests that about two thirds of the increase will occur within the near future and one third of the increase in the following decade. Even with this large increase, the census estimates that the ratio of males attending college to females will be about two males to one female. They project that the percentage increase in the male college population will be about the same as in the female population, that is, each will be slightly more than double. However, because of the larger male enrollment in 1965, the ratio of men to women students actually increases during the time period.

When these projections are examined by age, it is found that the majority of the increase will occur in the older age groups, mainly in the college students over 21 years of age. The number of such older students increases 159 percent during this time period, while the college age population only increases 35 percent. The majority of the increased enrollment will result from an increase proportion of the high school graduates going on to and remaining in college.

Projections for Missouri

The projections which are presented in this section make several series of assumptions which are presented in detail in Appendix A. It is suggested that the reader carefully evaluate these assumptions.

A note of caution should also be entered that these projections should be regarded simply as *trends* and not as absolute numbers; the assumptions upon which they are based are subject to change. *The projections should only be used as planning guides.* Revised projections will be issued on a continuing basis and should be substituted for these projections as they are available. Obviously, the more distant the year for which the projections are made, the more subject they are to error. The projections for the next year or two are probably within a few percent

12"Projections of School and College Enrollment in the United States to 1985", *Current Population Reports: Population Estimates,* Series P-25, No. 338, May 31, 1966.

of the actual enrollments while the later projections may have larger errors.

It is more difficult to project for a state population than for the nation because, in addition to changes in proportions of persons going to and staying in college, the state figures are subject to variation because of in and outmigration of students. The task of projecting for different categories of institutions is even more difficult because of competition for students, policy decisions of individual institutions, locations of new institutions, etc.

Two major series of projections are presented in this report. Series A and Series B, are each based upon different assumptions on the increase in proportion of the second graders who graduate from high school. Depending upon the base period used to determine the trend line, different numbers of graduates can be determined, two of which are presented here. One (Series A) assumes that the increase in proportion who graduate will be from a beginning base of 62.5 percent while the second (Series B) assumes a base of 67.2 percent. In recent years, the rate of graduation has been close to the latter figure. In the future the rate of increase may speed up or slow down. This rate is dependent upon two major factors: (1) the rate of attrition, and (2) rates of in and outmigration.

Working with these two basic series, it is possible to make an almost unlimited number of projections with variations in each. However, to indicate to the reader some of the range of possibilities, three series of projections made at various times by myself and the Commission on Higher Education will be presented in the text and Appendix III. The variation between these series can be illustrated in the 1973-74 projection. These range from a low of 166,000 to 197,000 (See Figure 48). In each of the projections the basic assumption is that larger proportions of high school graduates will go to college. In the last two decades, this has averaged about 2 percent per year. About 60 percent of the graduates now enroll in college. This rate of increase cannot continue indefinitely. When the proportion going to college will level off is unknown, but it will probably be in the near future. The majority of higher academic ability students are now entering colleges. Thus, the future increases in college enrollments are dependent upon the growth of college vocational education which will meet the needs of the non-academically oriented. If the college vocational programs do not develop rapidly, most of the projections which follow are high.

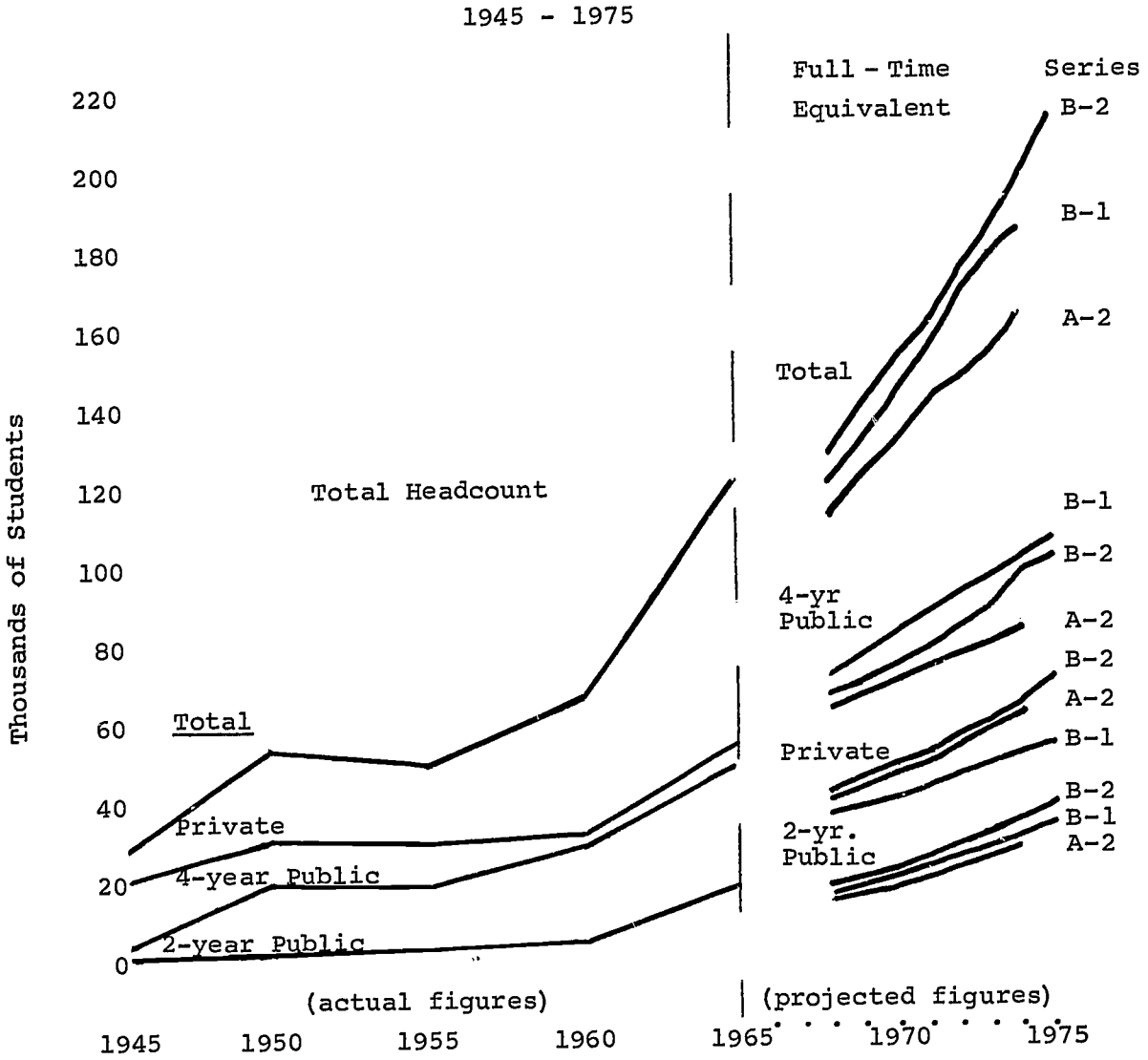
The remainder of our discussion in the text will be based upon Series B-1, a series which includes the high rate of increase in high

Figure 48

ENROLLMENT IN MISSOURI

COLLEGES AND UNIVERSITIES

1945 - 1975



school graduates, a low rate of increase in the private colleges, and a medium rate of increase in the public colleges.

Again, let me add a note of caution. Major changes in the economic situation, in the size of the Armed Forces, or the vocational programs offered by colleges could bring about rapid changes in the levels of enrollment.

The general trend in college enrollments in Missouri is upward (See Table 11). This increase has resulted from (1) large numbers of youth born in Missouri, (2) more of the youth going to primary and secondary school, (3) a higher proportion of the youth graduating from high school (4) a higher proportion of high school graduates entering college, (5) a higher proportion of persons entering college continuing to a first level degree (A./B. or B./S.), and (6) a higher proportion of persons with

TABLE 11

FULL TIME EQUIVALENT FALL SEMESTER ENROLLMENT IN MISSOURI INSTITUTIONS OF HIGHER EDUCATION

Actual

Year	Total
1961-2	69,162
1962-3	75,646
1962-4	81,715
1964-5	94,555
1965-6	106,754
1966-7	115,245
Projected (Series B-1)	
1967-8	122,036
1968-9	129,130
1969-70	136,877
1970-1	147,800
1971-2	156,321
1972-3	165,248
1973-4	176,436
1974-5	185,022
1975-6	194,700

first level degrees continuing training in professional or graduate schools. This compounding action will result in an increase in numbers of students from 115,000 full-time equivalent enrollment (F.T.E.) in the fall of 1966 to 194,000 in the fall of 1975. Within this total enrollment the largest percentage increase is at the graduate and professional level where an increase of almost 100 percent is projected while the number of freshmen will only increase by about one third (See Table 12, Parts A-I).

When the enrollments are examined by type of institution, it is found that the two-year public institutions (junior college) have the largest percentage increase in enrollment. It is estimated that they will increase from about 15,000 students to almost 39,000 during this period. The four-year public institutions also have a substantial increase, from 63,000 to 107,000. The amount of increase is, of course, considerably more than the absolute increase in the two-year schools, that is, an increase of 43,000 in the four year public and 24,000 in the two-year public schools. The private schools are forecast to have the smallest increase, from 37,000 to 49,000.

TABLE 12-A

FULL TIME EQUIVALENT ENROLLMENT

ACTUAL TOTALS

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1966 - 67

(58,187 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	23,731	11,591	11,099	46,421
(first time)				35,463
Sophomores	12,667	3,482	7,913	24,062
Juniors and Seniors	14,881	-	9,702	24,583
Graduates and Professionals	12,008	-	8,171	20,179
Total	64,375	15,073	36,885	116,333

TABLE 12-B

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES B-1

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1967 - 68

(59,556 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	22,036	11,314	11,063	44,413
(first time)				39,307
Sophomores	15,071	5,528	8,011	28,610
Juniors and Seniors	16,188	-	9,537	25,725
Graduates and Professional	12,986	-	6,465	19,451
Special and Unclassified	658	-	3,179	3,837
Total	66,939	16,842	38,255	122,036

TABLE 12-C

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES B-1

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1968 - 69

(60,316 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	22,316	12,666	11,459	46,441
(first time)				41,015
Sophomores	15,425	5,657	8,298	30,056
Juniors and Seniors	17,557	-	9,879	27,436
Graduates and Professionals	14,525	-	6,696	21,221
Special and Unclassified	683	-	3,293	3,976
Total	70,506	18,999	39,625	129,130

TABLE 12-D

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES B-1

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1969 - 70

(63,391 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	23,454	14,581	11,855	49,890
(first time)				44,373
Sophomores	15,622	6,333	8,585	29,864
Juniors and Seniors	19,355	-	10,220	29,575
Graduates and Professional	16,491	-	6,928	23,419
Special and Unclassified	722	-	3,407	4,129
Total	75,644	20,238	40,995	136,877

TABLE 12-E

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES B-1

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1970 - 71

(65,669 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	24,298	16,418	12,251	52,967
(first time)				47,282
Sophomores	16,418	7,290	8,871	32,579
Juniors and Seniors	21,446	-	10,562	32,008
Graduates and Professionals	18,797	-	7,160	25,957
Special and Unclassified	768	-	3,521	4,289
Total	81,727	23,708	42,365	147,800

TABLE 12-F

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES B-1

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1971 - 72

(76,561 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	24,998	18,241	12,648	55,887
(first time)				49,995
Sophomores	17,009	8,209	9,159	34,377
Juniors and Seniors	23,510	-	10,903	34,413
Graduates and Professionals	19,809	-	7,391	27,200
Special and Unclassified	810	-	3,634	4,444
Total	86,136	26,450	43,735	156,321

TABLE 12-G

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES B-1

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1972 - 73

(69,815 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	25,828	20,243	13,044	59,115
(first time)				53,059
Sophomores	17,499	9,121	9,446	36,066
Juniors and Seniors	25,720	-	11,245	36,965
Graduates and Professional	20,879	-	7,622	28,501
Special and Unclassified	853	-	3,748	4,601
Total	90,779	29,364	45,105	165,248

TABLE 12-H

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES B-1

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1973 - 74

(73,562 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	27,218	22,804	13,440	63,462
(first time)				57,378
Sophomores	18,080	10,122	9,733	37,935
Juniors and Seniors	28,507	-	11,586	40,093
Graduates and Professional	22,318	-	7,854	30,172
Special and Unclassfied	912	-	3,862	4,774
Total	87,035	32,926	46,475	176,436

TABLE 12-I

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES B-1

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1974 - 75

(73,658 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	27,253	24,307	13,829	65,389
(first time)				58,926
Sophomores	19,053	11,402	10,014	40,469
Juniors and Seniors	30,870	-	11,921	42,791
Graduates and Professionals	23,338	-	8,107	31,445
Special and Unclassified	954	-	3,974	4,928
Total	101,468	35,709	47,845	185,022

TABLE 12-J

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES B-1

MISSOURI INSTITUTIONS OF HIGHE: EDUCATION

1975 - 76

(76,532 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen (first time)	28,316	26,787	14,232	69,335
Sophomores	19,077	12,154	10,306	41,537
Juniors and Seniors	31,595	-	12,269	43,864
Graduates and Profecssional	26,581	-	8,317	34,898
Special and Unclassified	976	-	4,090	5,066
Total	106,545	38,940	49,214	194,700

CHAPTER VI

MISSOURI POPULATION AND THE LOCATION OF COLLEGES

The distance to the nearest college, especially to a public college, is an important influence on the ratio of college attendance. Because of this, formal and informal attempts have been and are being made to locate colleges within commuting distance of students. In the location of colleges, distance is just one of many factors which must be considered. Other factors include number of college age youth, number of high school graduates, rates of college attendance, patterns of attendance, and tax base.

In this section, an attempt is made to examine the proportion of the population which is within commuting distance (within a 25 mile radius of a public college), in a fringe area (25—50 mile radius), and beyond any commuting distance. These distances were figured on a straight line basis even though it is realized that the actual patterns of commuting follow major routes of transportation, and that the time required to travel 25 miles in a metropolitan area is often much longer than the time to travel the same distance in a rural area.

If the counties are divided into categories on the basis of the area in which the majority of the area falls, it is found that the majority of the counties are within 50 miles of a public college of some type. Four major exceptions are noted to this pattern: the Southern Ozarks, the "bootheel", an area in West Central Missouri, and along the Mississippi River. These are all areas of declining population, of comparatively low density, and low rates of college enrollments (See Figure 49).

In 1960, 75 percent of the state's population was within a 25 mile radius of a public college; the same distance will contain 81 percent by 1990. In 1960, 20 percent of the population was located in the fringe area; this will decline to 17 percent in 1990. The 50 miles and beyond range included only 5 percent of the state's population in 1960, which will equal 2 percent in 1990 (See Table 13).

These comments should not be taken as an effort to prevent any area from establishing a college, but as an effort to re-emphasize a point made earlier. The state's population is becoming much more concentrated and more urban than in the past. It is probably fair to say that in the future, as the metropolitan areas go, so goes the state.

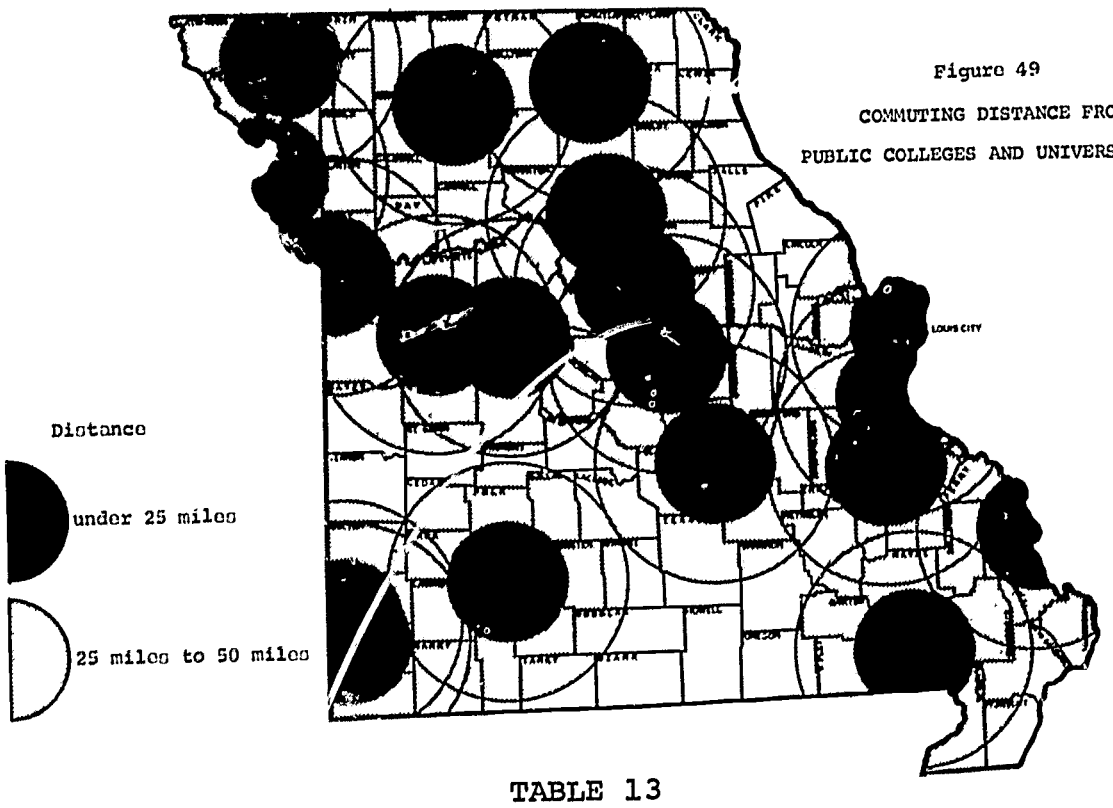


Figure 49

COMMUTING DISTANCE FROM

PUBLIC COLLEGES AND UNIVERSITIES

TABLE 13

PROPORTION OF POPULATION BY DISTANCE

TO NEAREST PUBLIC COLLEGE OR UNIVERSITY

Distance Radius	1960 (N)	1960 (%)	1967 (N)	1967 (%)
Within 25 Miles	3,236,200	75%	3,535,000	77%
25 to 50 Miles	888,400	20%	881,800	19%
Over 50 Miles	194,700	5%	172,100	4%
	1975		**1990**	
	(N)	(%)	(N)	(%)
Within 25 Miles	4,224,900	79%	5,093,400	81%
25 to 50 Miles	962,100	18%	1,076,400	17%
Over 50 Miles	157,600	3%	137,600	2%

APPENDIX A

ASSUMPTIONS CONCERNING THE PROJECTIONS OF FUTURE ENROLLMENTS

High School Graduates

Low Level–Series A

It was assumed for this level that the percentage of second graders graduating would increase at the same rate but would start from a low base percentage (62.5). Which of these is correct will depend upon the amount of resources invested in primary and secondary education, the efficiency of new programs in the local school systems, and the rate of change in favorable attitudes toward education.

High Level–Series B

It was assumed that the percentage of second graders who go on to graduate in Missouri will continue to increase at about 1.0 percent per year from a base of 67.2 percent; a change in the percentage could result from either of two factors: (1) a decline in drop-out rates, and/or (2) a decline in out-migration of children from the state.

College Enrollment Projection Assumptions for Series B-1

Private Colleges and Universities

The projected enrollments in the private colleges and universities for 1975 were derived from the Pfnister and Quehl report: "Report on the Status of Private Higher Education in the State of Missouri" (available from the Missouri Commission on Higher Education). The enrollments for the intervening years were interpolated on a straight line basis. In the report, the number of graduate and professional students are given as is the total enrollment. It was assumed that the distribution of undergraduates would remain similar to that distribution in the 1966-67 school year. Using these procedures the distributions of freshmen, sophomores, juniors, and seniors remain the same while the proportion of graduate and professionals declines slightly.

Public Colleges and Universities

A. Four-Year Institutions:

(1) It was assumed that the freshman class would receive a stable 37 percent of the high school graduates. This means that the number of freshmen in such institutions will gradually increase in number. This percentage is slightly lower than the percentage attending four-year institutions in 1966-67. The validity of this assumption and most of those following will depend more upon the

policies followed by various institutions and less upon the behavior of individual youth.

(2) It was assumed that attrition rate between the freshman and sophomore years will remain at about 30 percent. Thus, net dropout of students after the first year will be slightly less than one-third.

(3) It was assumed that the junior and senior classes will increase from 29 percent of the undergraduate total in 1967-68 to 40 percent by 1974-75 and then will remain stable thereafter. Such an increase assumes there will be declining proportion of the student body in the first two years and more students will be going to junior colleges and transferring to the four-year institutions.

(4) It was assumed that the special and unclassified students will remain a stable 11 percent of the total undergraduate, special and unclassified students.

(5) The assumption for graduate and professional enrollment was that it would increase from 18.2 percent of the total enrollment in 1967-68 to 23 percent in 1970-71, and that it would remain constant thereafter. If this occurs it will require an increase of transfer students after the first level degree and a proportion increase of first level graduates from the four-year institutions entering graduate school.

B. Two-Year Institutions

(1) It was assumed that the number of freshmen entering colleges or universities in the fall of 1967 would equal 68 percent of the 1967 high school graduates and that this percent would increase 2 percent per year. The private colleges are assumed to get 10 percent of the graduates, the public four-year colleges 37 percent, and the public two-year colleges the remainder.

The question must be raised as to where the proportion of students entering college will level off. Will it be at 70 percent, 80 percent or where? Probably the rate of increase will start decreasing in the near future. When this will occur, depends largely upon the development of junior colleges and the vocational or terminal programs within each.

(2) The net attrition rate between the two years was assumed to be 50 percent.

A Note of Caution:

If one safe statement can be made concerning any projections, it is that they will be in error. The projections given in this report made a large number of assumptions, some of which are discussed above. Another assumption is that there will be no major wars, recessions, depressions, major reductions in public support for higher education, or other major variations. They are also dependent upon policy decisions by the federal, state, and local governments, the higher education institutions and others. For example, if the colleges' vocational education programs increase rapidly, the projections may be low; if they increase slowly, the projections may be high. *The projections should not be regarded as absolute numbers but as trend lines of ABOUT where we will be in terms of enrollment at a given time.*

College Enrollment Projection Assumptions for Series A-2

(1) It is assumed that through 1974-75 the net gain in out-of-state students will continue at the historical annual rate of 2,500 in the private institutions and 500 in the public colleges and universities.

(2) Public graduate and professional enrollment will increase to 20 percent of the total by 1967-68 (18.4 percent in 1964) and will continue to increase by 1 percent per year until 1974-75. Such enrollments at the two private universities are projected by those institutions.

(3) The freshman class size in the public four-year institutions will be stabilized at 35 percent in 1966-67 (32.1 percent in 1964-65) of the number of Missouri high school graduates that year, including some out-of-state students. The private institutions will get a constant 10 percent of Missouri high school graduates as freshmen. The percentage going on to college will increase 2 percent per year, and the public junior colleges (now at about 15 percent) will absorb the increases.

(4) The net attrition rate in the private college and university sector and in the four-year public institutions between the freshman and sophomore years will be 30 percent (the approximate current rate in the public institution group). The rate of attrition between these two years in the public junior colleges will be 50 percent (somewhat better than is currently the case). The junior and senior enrollment in the private sector will be a constant 40 percent of the undergraduate total. Upper class en-

rollment in the public institutions (now 33 percent of the undergraduate total) will build to 40 percent by 1969-70.

College Enrollment Projection Assumptions for Series B-2

(1) The public institution out-of-state enrollment will (or should) approximately equal the number of Missouri students going out-of-state to like supported colleges and universities. Missouri private institutions will continue to increase their out-of-state enrollment by 2,500 undergraduate students per year.

(2) Public graduate and professional enrollment will increase to 20 percent of the total by 1967-68 (18.4 percent in 1964) and will continue to increase by 1 percent per year until 1973-74. Such enrollments at the two private universities are projected by those institutions.

(3) The freshman class size in the public four-year institutions will be stabilized at 35 percent in 1966-67 of the number of Missouri high school graduates that year, including some out-of-state students. The private institutions will get a constant 10 percent of Missouri high school graduates as freshmen. The percentage going on to college will increase 2 percent per year, and the public junior colleges will absorb the increases.

(4) The net attrition rate in the private colleges and university sector and the four-year public institutions between the freshman and sophomore years will be 30 percent (the approximate current rate in the public institution group). The rate of attrition between these 2 years in the public junior colleges will be 50 percent (slightly better than is currently the case). The junior and senior enrollment in the private sector will be a constant 40 percent of the undergraduate total. Upper class enrollment in the public institutions (now 33 percent of the undergraduate total) will build to 40 percent by 1969-70.

(5) The enrollments are stated on a full-time equivalency basis. The special and unclassified students enrolled at the University of Missouri are not accounted for.

APPENDIX B

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES A-2

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1967 - 68

(54,104 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	18,936	10,280	5,410	34,626
Sophomores	13,362	4,636	3,818	21,816
Juniors and Seniors	17,391	-	6,155	23,546
Out-of-State	-	-	20,416	20,416
Graduates and Professional	12,422	-	5,749	18,171
Total	62,111	14,916	41,548	118,575

1968 - 69

(54,500 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	19,075	11,445	5,450	35,970
Sophomores	13,255	5,140	3,787	22,182
Juniors and Seniors	19,815	-	6,158	25,973
Out-of-State	-	-	22,916	22,916
Graduates and Professional	13,861	-	6,043	19,904
Total	66,006	16,585	44,354	126,945

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES A-2

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1969-70

(56,981 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	19,943	13,106	5,698	38,747
Sophomores	13,353	5,722	3,815	22,890
Juniors and Seniors	21,553	-	6,342	27,895
Out-of-State	-	-	25,416	25,416
Graduates and Professional	15,470	-	6,337	21,807
Total	70,319	18,828	47,608	136,755

1970 - 71

(58,828 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	20,590	14,707	5,883	41,180
Sophomores	13,960	6,553	3,989	24,502
Juniors and Seniors	23,033	-	6,581	29,614
Out-of-State	-	-	27,916	27,916
Graduates and Professional	17,200	-	6,508	23,708
Total	74,783	21,260	50,877	146,920

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES A-2

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1971 - 72

(60,233 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	21,082	16,263	6,023	43,368
Sophomores	14,413	7,353	4,118	25,884
Juniors and Seniors	23,662	-	6,760	30,422
Out-of-State	-	-	30,416	30,416
Graduates and Professional	18,680	-	6,678	25,358
Total	77,837	23,616	53,995	155,448

1972 - 73

(61,949 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	21,682	17,965	6,195	45,842
Sophomores	14,757	8,131	4,216	27,104
Juniors and Seniors	24,292	-	6,940	31,232
Out-of-State	-	-	32,916	32,916
Graduates and Professional	20,243	-	6,848	27,091
Total	80,974	26,096	57,115	164,185

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES A-2

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1973 - 74

(64,996 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	22,749	20,149	6,500	49,398
Sophomores	15,177	8,982	4,337	28,496
Juniors and Seniors	25,284	-	7,224	32,508
Out-of-State	-	-	35,416	35,416
Graduates and Professional	22,208	-	7,018	29,226
Total	85,418	29,131	60,495	175,044

APPENDIX C

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES B-2

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1967 - 68

(59,556 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	20,845	11,316	5,956	38,117
Sophomores	14,626	5,074	4,179	23,879
Juniors and Seniors	20,403	-	6,155	26,558
Out-of-State	1,676	-	17,916	19,592
Graduates and Professionals	13,960	-	5,749	19,709
Total	72,010	16,390	42,455	130,855

1968 - 69

(60,316 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	21,111	12,666	6,032	39,809
Sophomores	14,591	5,658	4,169	24,418
Juniors and Seniors	22,720	-	6,158	28,878
Out-of-State	2,176	-	20,416	22,592
Graduates and Professional	15,519	-	6,043	21,562
Total	76,617	18,324	45,318	140,259

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES B-2

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1969 - 70

(63,391 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	22,187	14,580	6,339	43,106
Sophomores	14,778	6,333	4,222	25,333
Juniors and Seniors	24,640	-	6,342	30,982
Out-of-State	2,676	-	22,916	25,592
Graduates and Professionals	17,380	-	6,337	23,717
Total	82,161	20,913	48,656	151,730

1970 - 71

(65,669 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	22,984	16,417	6,567	45,968
Sophomores	15,531	7,290	4,437	27,258
Juniors and Seniors	25,680	-	6,581	32,261
Out-of-State	3,176	-	25,416	28,592
Graduates and Professionals	19,182	-	6,508	25,690
Total	87,053	23,707	52,009	162,769

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES B-2

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1971 - 72

(67,561 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	23,646	18,241	6,756	48,643
Sophomores	16,089	8,208	4,597	28,894
Juniors and Seniors	26,480	-	6,760	33,240
Out-of-State	3,676	-	27,916	31,592
Graduate and Professional	20,904	-	6,678	27,582
Total	91,295	26,449	55,207	172,951

1972 - 73

(69,805 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	24,432	20,243	6,981	51,656
Sophomores	16,552	9,121	4,729	30,402
Juniors and Seniors	27,320	-	6,940	34,260
Out-of-State	4,176	-	30,416	34,592
Graduates and Professional	22,775	-	6,848	29,623
Total	95,755	29,364	58,414	183,533

FULL TIME EQUIVALENT ENROLLMENT

PROJECTED TOTALS FOR SERIES B-2

MISSOURI INSTITUTIONS OF HIGHER EDUCATION

1973 - 74

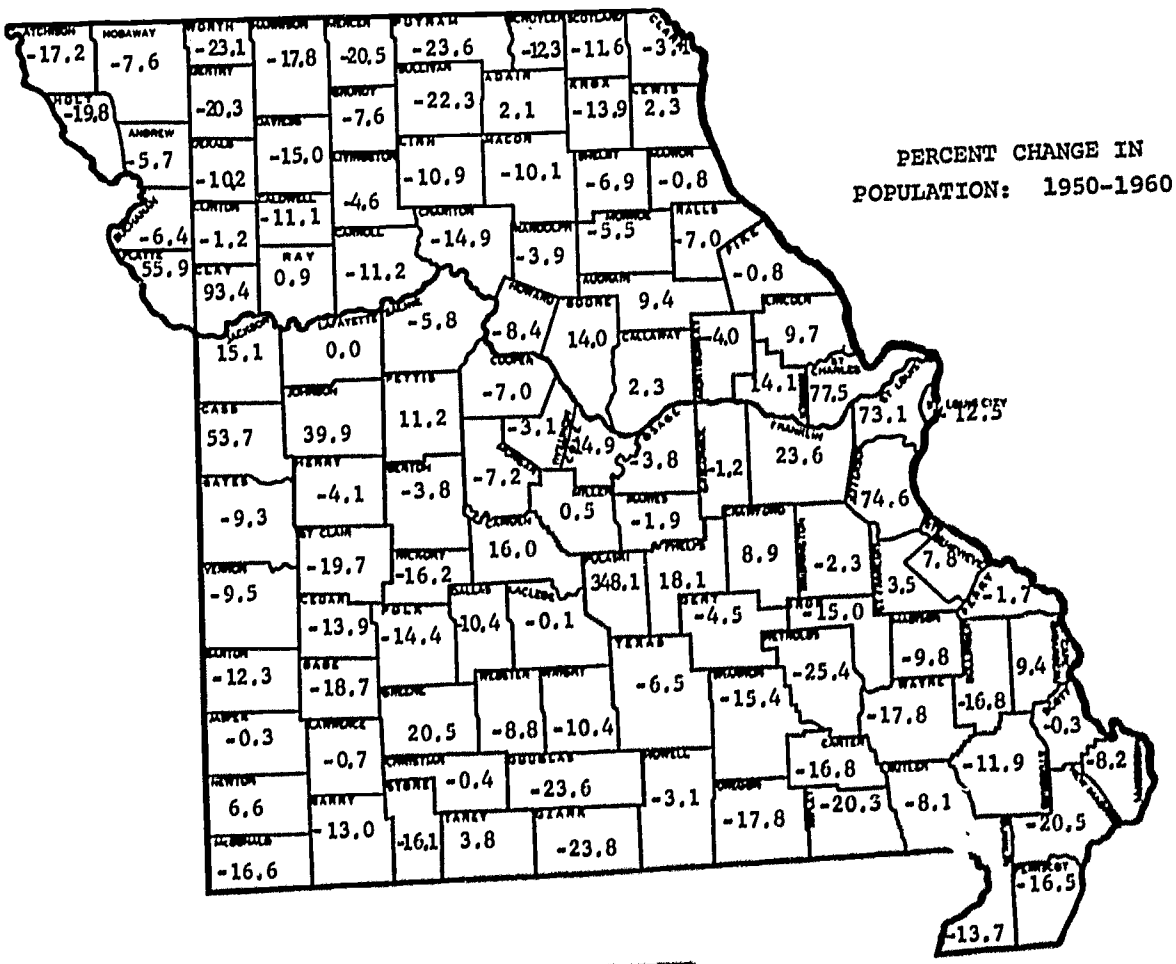
(73,562 High School Graduates)

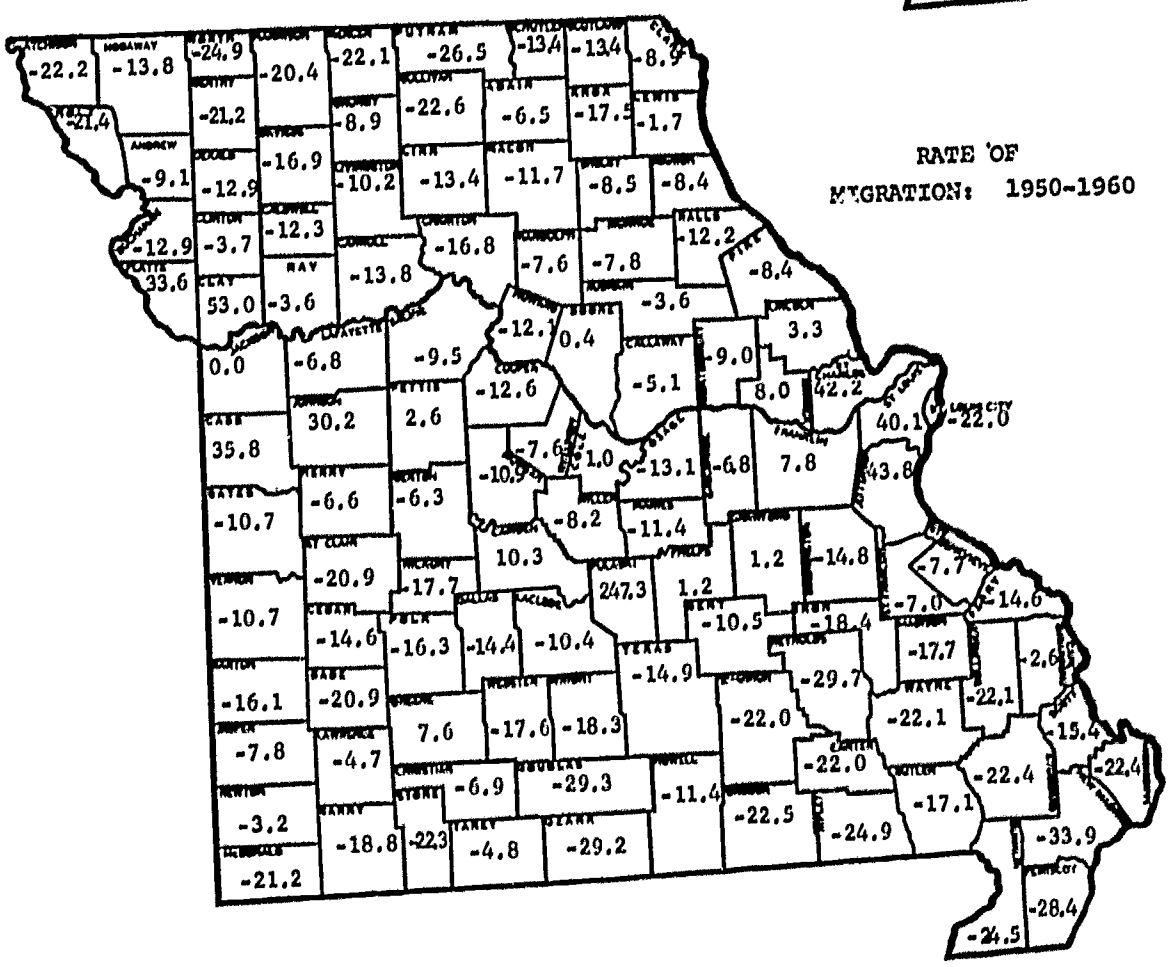
Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	25;747	22,804	7,356	55,907
Sophomores	17,102	10,122	4,887	32,111
Juniors and Seniors	28,560	-	7,224	35,784
Out-of-State	4,676	-	32,916	37,592
Graduates and Professional	25,090	-	7,018	32,108
Total	101,675	32,926	61,901	196,502

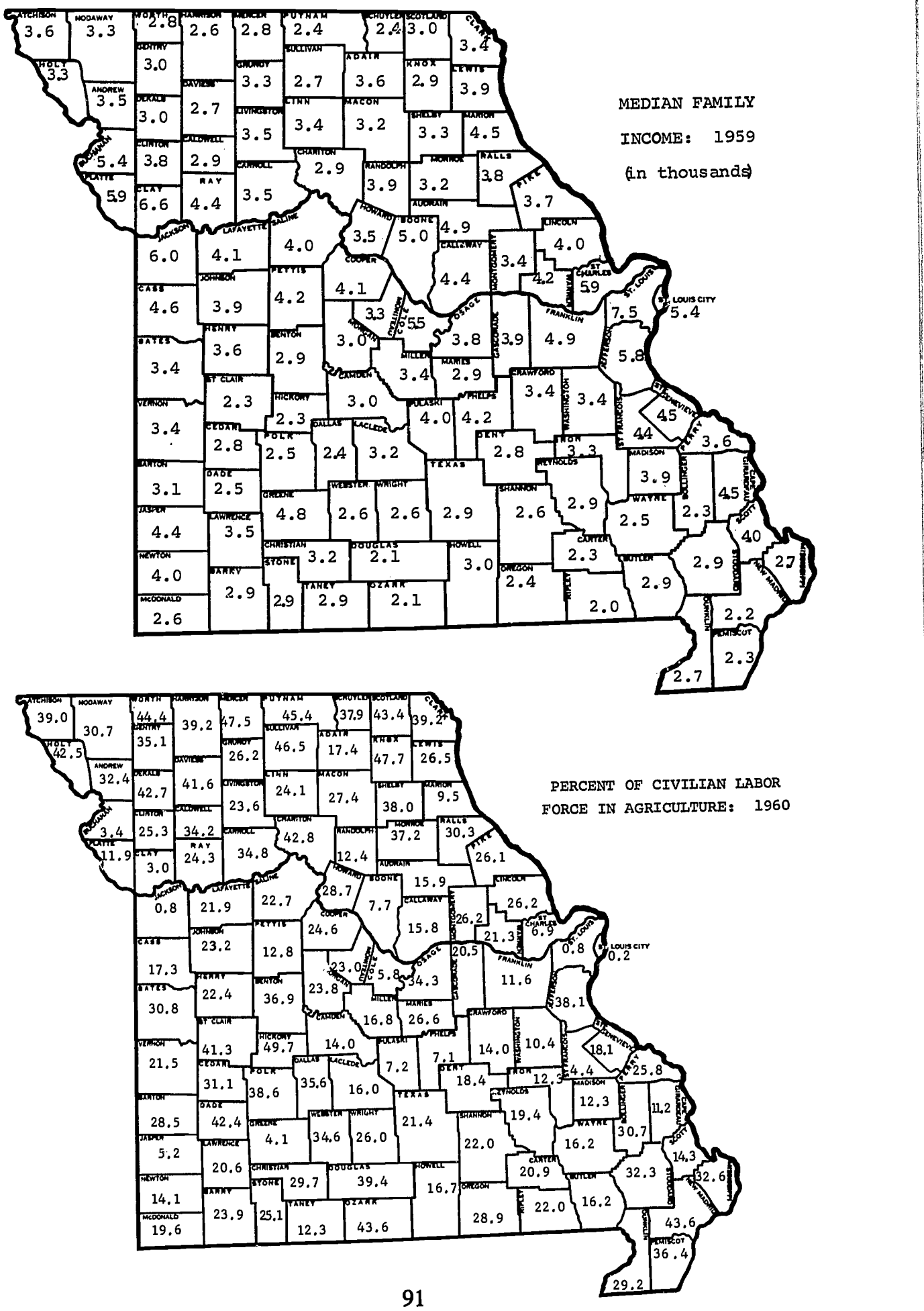
1974 - 75

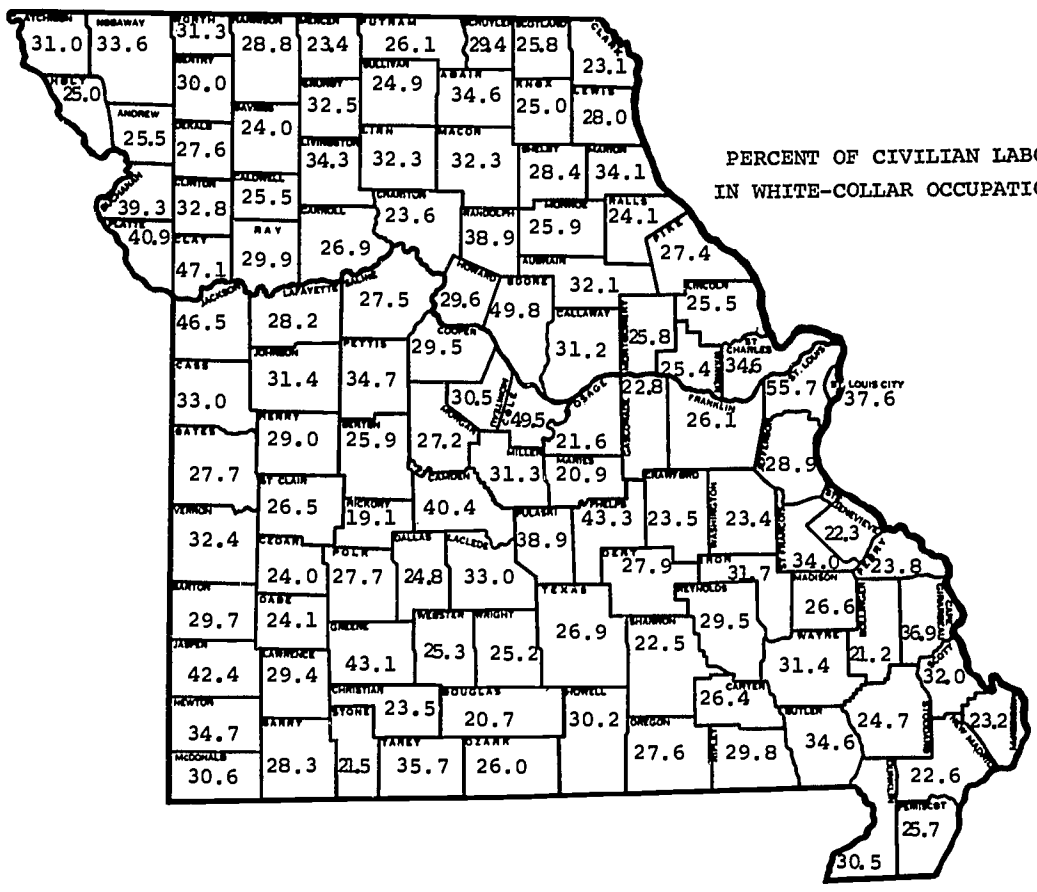
(73,658 High School Graduates)

Level	4-Yr. Public	2-Yr. Public	Private	Total
Freshmen	25,780	24,307	7,366	57,453
Sophomores	18,023	11,402	5,149	34,574
Juniors and Seniors	29,200	-	7,324	36,524
Out-of-State	5,176	-	35,416	40,592
Graduates and Professional	27,000	-	7,188	34,188
Total	105,679	35,709	64,943	206,331


PERCENT CHANGE IN
POPULATION: 1950-1960


RATE OF
MIGRATION: 1950-1960


MEDIAN FAMILY
INCOME: 1959
(in thousands)
ATCHISON 3.6
NODAWAY 3.3
WORTH 2.8
HARRISON 2.6
MERCER 2.8
PUTNAM 2.4
SCHUYLER 2.4
SCOTLAND 3.0
CLARK 3.4
HOLT 3.3
GENTRY 3.0
SULLIVAN
ADAIR 3.6
KNOX 2.9
LEWIS 3.9
ANDREW 3.5
DAVIESS 2.7
GRUNDY 3.3
DEKALB 3.0
LINN 3.4
MACON 3.2
SHELBY 3.3
MARION 4.5
LIVINGSTON 3.5
BUCHANAN 5.4
CLINTON 3.8
CALDWELL 2.9
CHARITON 2.9
RANDOLPH 3.9
MONROE 3.2
RALLS 3.8
PIKE 3.7
PLATTE 5.9
CLAY 6.6
RAY 4.4
CARROLL 3.5
AUDRAIN
HOWARD 3.5
BOONE 5.0
CALLAWAY 4.4
MONTGOMERY 3.4
LINCOLN 4.0
JACKSON 6.0
LAFAYETTE 4.1
SALINE 4.0
COOPER 4.1
ST CHARLES 5.9
ST LOUIS 4.2
ST LOUIS CITY 5.4
CASS 4.6
JOHNSON 3.9
PETTIS 4.2
CRAWFORD 3.3
OSAGE 3.8
GASCONADE 3.9
FRANKLIN 4.9
JEFFERSON 7.5
HENRY 3.6
BENTON 2.9
MORGAN 3.0
MILLER 3.4
MARIES 2.9
BATES 3.4
ST CLAIR 2.3
HICKORY 2.3
CAMDEN 3.0
PHELPS 4.2
WASHINGTON 3.4
ST FRANCOIS 4.5
STE GENEVIEVE 4.5
VERNON 3.4
CEDAR 2.8
POLK 2.5
DALLAS 2.4
LACLEDE 3.2
PULASKI 4.0
IRON 3.3
PERRY 3.6
BARTON 3.1
DADE 2.5
TEXAS
DENT 2.8
REYNOLDS
MADISON 3.9
JASPER 4.4
LAWRENCE 3.5
GREENE 4.8
WEBSTER 2.6
WRIGHT 2.6
SHANNON 2.6
WAYNE 2.5
BOLLINGER 2.3
NEWTON 4.0
CHRISTIAN 3.2
DOUGLAS 2.1
STONE 2.9
TANEY 2.9
OZARK 2.1
HOWELL 3.0
CARTER 2.3
BUTLER 2.9
RIPLEY 2.0
OREGON 2.4
MCDONALD 2.6
BARRY 2.9
CAPE GIRARDEAU 4.0
SCOTT 4.5
MISSISSIPPI 2.9
NEW MADRID 2.7
DUNKLIN 2.2
PEMISCOT 2.3
PERCENT OF CIVILIAN LABOR
FORCE IN AGRICULTURE: 1960
ATCHISON 39.0
NODAWAY 30.7
WORTH 44.4
HARRISON 39.2
MERCER 47.5
PUTNAM 45.4
SCHUYLER 37.9
SCOTLAND 43.4
CLARK 39.2
HOLT 42.5
GENTRY 35.1
SULLIVAN
GRUNDY 26.2
ADAIR 17.4
KNOX 47.7
LEWIS 26.5
ANDREW 32.4
DAVIESS 41.6
DEKALB 42.7
LINN 24.1
MACON 27.4
SHELBY 38.0
MARION 9.5
LIVINGSTON 23.6
BUCHANAN 3.4
CLINTON 25.3
CALDWELL 34.2
CHARITON 42.8
RANDOLPH 12.4
MONROE 37.2
RALLS 30.3
PIKE 26.1
PLATTE 11.9
CLAY 3.0
RAY 24.3
CARROLL 34.8
AUDRAIN
HOWARD 28.7
BOONE 7.7
CALLAWAY 15.8
MONTGOMERY 26.2
LINCOLN 26.2
JACKSON 0.8
LAFAYETTE 21.9
SALINE 22.7
COOPER 24.6
ST CHARLES 6.9
ST LOUIS 21.3
ST LOUIS CITY 0.2
CASS 17.3
JOHNSON 23.2
PETTIS 12.8
CRAWFORD 23.0
OSAGE 5.8
GASCONADE 20.5
FRANKLIN 11.6
JEFFERSON 38.1
HENRY 22.4
BENTON 36.9
MORGAN 23.8
MILLER 16.8
MARIES 26.6
BATES 30.8
ST CLAIR 41.3
HICKORY 49.7
CAMDEN 14.0
PHELPS 7.1
WASHINGTON 14.0
ST FRANCOIS 10.4
STE GENEVIEVE 18.1
PERRY 25.8
VERNON 21.5
CEDAR 31.1
POLK 38.6
DALLAS 35.6
LACLEDE 16.0
PULASKI 7.2
IRON 12.3
BARTON 28.5
DADE 42.4
GREENE 4.1
WEBSTER 34.6
WRIGHT 26.0
TEXAS 21.4
DENT 18.4
REYNOLDS 19.4
SHANNON 22.0
MADISON 12.3
WAYNE 16.2
BOLLINGER 30.7
JASPER 5.2
LAWRENCE 20.6
CHRISTIAN 29.7
DOUGLAS 39.4
HOWELL 16.7
CARTER 20.9
BUTLER 16.2
RIPLEY 22.0
OREGON 28.9
NEWTON 14.1
BARRY 23.9
STONE 25.1
TANEY 12.3
OZARK 43.6
MCDONALD 19.6
CAPE GIRARDEAU 32.3
SCOTT 14.3
MISSISSIPPI 32.6
NEW MADRID 43.6
DUNKLIN 36.4
PEMISCOT 29.2


PERCENT OF CIVILIAN LABOR FORCE
IN WHITE-COLLAR OCCUPATIONS: 1960
ATCHISON 31.0
HOLT 31.3
NODAWAY 33.6
ANDREW 25.5
BUCHANAN 39.3
PLATTE 40.9
CLAY 47.1
CLINTON 32.8
CALDWELL 25.5
DAVIESS 27.6
GRUNDY 32.5
HARRISON 28.8
MERCER 23.4
PUTNAM 26.1
SULLIVAN 24.9
LINN 32.3
LIVINGSTON 34.3
CARROLL 26.9
CHARITON 23.6
RANDOLPH 38.9
MACON 32.3
ADAIR 34.6
SCHUYLER 29.4
SCOTLAND 25.8
KNOX 25.0
SHELBY 28.4
MONROE 25.9
RALLS 24.1
PIKE 27.4
CLARK 23.1
LEWIS 28.0
MARION 34.1
RAY 29.9
CALDWELL 25.5
CARROLL 26.9
HOWARD 29.6
CHARITON 23.6
RANDOLPH 38.9
AUDRAIN 32.1
LINCOLN 25.5
LAFAYETTE 46.5
SALINE 27.5
COOPER 29.5
BOONE 49.8
CALLAWAY 31.2
MONTGOMERY 25.8
WARREN 25.4
ST CHARLES 34.5
JOHNSON 31.4
PETTIS 34.7
CASS 33.0
HENRY 29.0
BENTON 25.9
MORGAN 30.5
MILLER 27.2
CAMDEN 49.5
OSAGE 22.8
FRANKLIN 26.1
ST LOUIS 55.7
ST LOUIS CITY 37.6
GATES 27.7
ST CLAIR 26.5
HICKORY 19.1
DALLAS 24.8
LACLEDE 33.0
CAMDEN 31.3
MARIES 20.9
CRAWFORD 23.5
WASHINGTON 23.4
JEFFERSON 28.9
VERNON 32.4
CEDAR 24.0
POLK 27.7
DADE 24.1
LAWRENCE 29.4
BARRY 28.3
STONE 21.5
TANEY 35.7
CHRISTIAN 23.5
GREENE 43.1
DOUGLAS 20.7
OZARK 26.0
WEBSTER 25.3
WRIGHT 25.2
TEXAS 26.9
HOWELL 30.2
OREGON 27.6
SHANNON 22.5
CARTER 26.4
RIPLEY 29.8
DUNKLIN 38.9
PEMISCOT 43.3
DENT 27.9
IRON 31.7
REYNOLDS 29.5
WAYNE 31.4
BUTLER 34.6
STODDARD 34.0
STE GENEVIEVE 22.3
FARMINGTON 23.8
MADISON 26.6
PERRY 21.2
CAPE GIRARDEAU 36.9
SCOTT 32.0
MISSISSIPPI 24.7
NEW MADRID 30.5
BOLLINGER 23.2
CAPE GIRARDEAU 22.6
WAYNE 25.7