

Population Distribution and Population Movements in the United States

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• AS IS TRUE of most relationships between different human activities, the relationship between the distribution of population, on the one hand, and the location of transportation facilities, on the other, is of a reciprocal nature. The availability of highways and the cost of travel along them in various kinds of vehicles influence the settlement pattern, including the types of residential structures that are built. Conversely, the existing or expected population distribution and the distances from homes to jobs, schools, shops, and recreational facilities affect the planning of highways. In one sense, highways are attracted by population concentrations because they must link large concentrations together. This might be called the macro-ecological sense (as distinguished from the micro-ecological sense) in which highways skirt population concentrations because of the costs of residential land. These various interactions between population distribution and the location and nature of highways, railroads, subways, etc., complicate the making of forecasts.

The population is not only growing fairly rapidly (adding about 3 million persons a year) but also, in several important respects, becoming more concentrated. In very general geographic terms, the Atlantic, Pacific, and Gulf Coasts and the shores of the Great Lakes are growing at the expense of the Nation's interior. In the 1950's, almost one-half (49 percent) of all the counties in the United States actually lost population. All of these counties lost because of net out-migration. In addition, 29 percent of American counties had net out-migration that was offset by natural increase (excess of births over deaths), so that they had only slight or moderate population growth. Obviously, then some counties had high rates of net in-migration. The counties with very high rates of net in-migration (Fig. 1) are mostly outlying counties within metropolitan areas, a few relatively "young" metropolitan areas, and counties in Florida and California. A comparison with the rates of net migration by counties for the 1940's would show a great deal of similarity.

Closely associated with the tendency of people to concentrate in certain geographic areas is the tendency of people to concentrate in cities. As part of its description of the distribution of people by the size of place in which they live, the Bureau of the Census classifies territory as "urban" or as "rural."

This classification is arbitrary in that it uses a cutting score of 2,500, but a moderately higher or lower cutting score would show regional differentials very similar to those given in Table 1. Moreover, the cutting score could be raised or lowered somewhat without invalidating the statement that population in urban territory is growing faster than that in rural territory.

The definition of urban territory now in use is as follows:

In general, the urban population comprises all persons living in urbanized areas and in places of 2,500 inhabitants or more outside urbanized areas. More specifically, according to the definition adopted for use in the 1960 Census, the urban population comprises all persons living in (a) places of 2,500 inhabitants or more incorporated as cities, boroughs, villages, and towns (except towns in New England, New York, and Wisconsin); (b) the densely settled urban fringe, whether incorporated or unincorporated, of urbanized areas; (c) towns in New England and townships in New Jersey and Pennsylvania which contain no incorporated municipalities as subdivisions and have either 25,000

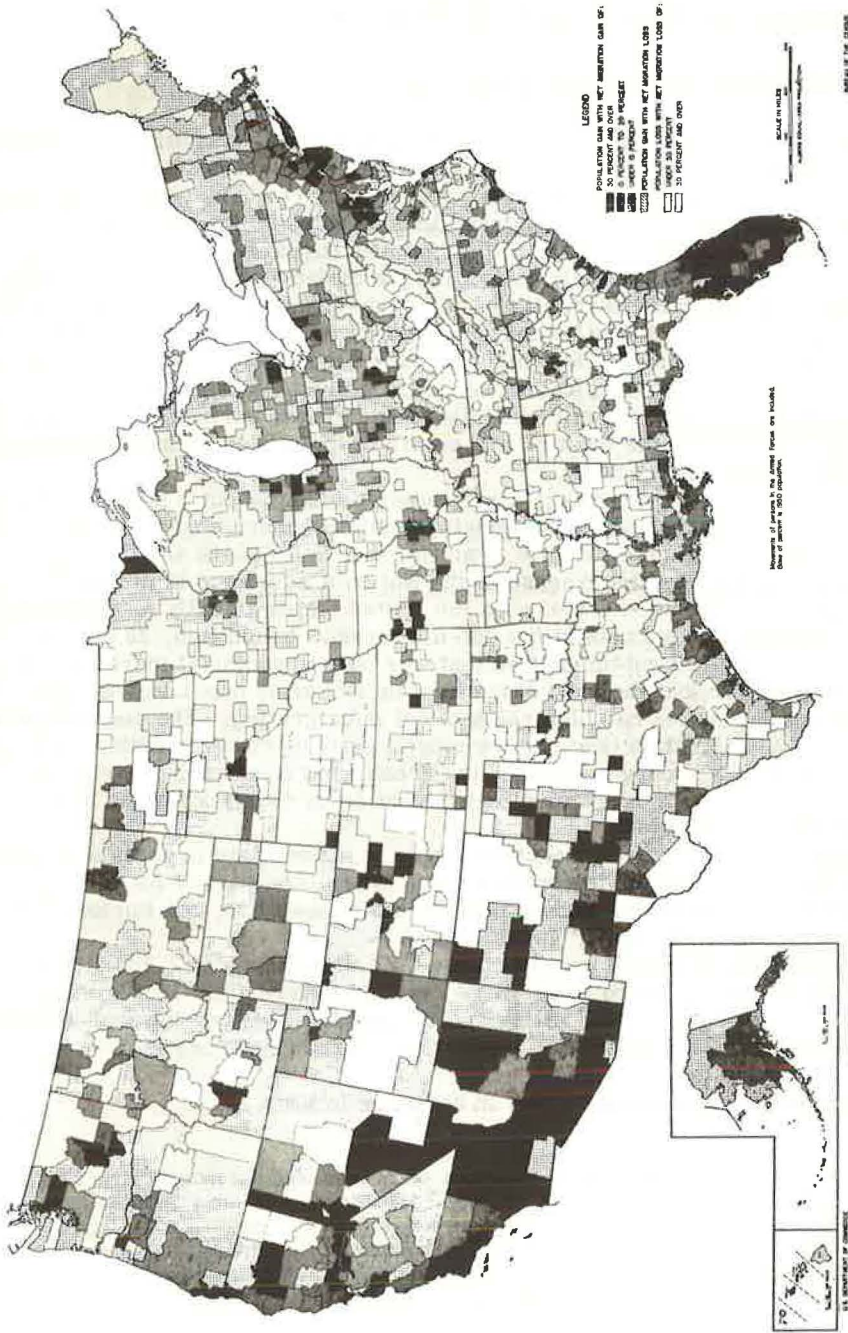


Figure 1. Net migration by counties: 1950 to 1960.

inhabitants or more or a population of 2,500 to 25,000 and a density of 1,500 persons or more per square mile; (d) counties in States other than the New England States, New Jersey, and Pennsylvania that have no incorporated municipalities within their boundaries and have a density of 1,500 persons or more per square mile; and (e) unincorporated places of 2,500 inhabitants or more.

Table 1 gives the urban and rural population in the 13 economic regions used by Bogue and Beale (1). Figure 2 shows these economic regions. Between 1950 and 1960, the urban population grew faster than the rural population in all but one of these economic regions. Indeed, in 5 regions and in the United States as a whole, the rural population decreased. Furthermore, in all but two of the regions, the urban population is in the majority and the two exceptions are now very close to being 50 percent urban.

This urbanization process has been taking place since the very first intercensal decade (Table 2). Study of the historic trend is complicated somewhat by the fact that a more realistic definition was introduced in the 1950 Census to include as urban not only the incorporated places of 2,500 or more but also the densely settled "urban fringes" around cities of 50,000 or more. On the old definition, the urban population comprised only 5 percent of the population in 1790, first exceeded 50 percent in 1920, and comprised 63 percent in 1960. The new definition gives 70 percent urban for 1960.

A town of 2,500 is, of course, a small place by modern standards. It is perhaps more striking to point out that cities of 50,000 or more and their urban fringes (which together are called "urbanized areas") account for over one-half the population (53 percent in 1960). Table 3 gives the distribution of the population by size of place. Lest the picture of the American as a dweller in big cities be overemphasized, about one-quarter still live in what the table calls "other rural territory"; i. e., villages and hamlets of less than 1,000 inhabitants plus the open country. Of these 48 million, however, only 13 million lived on farms.

Population change in a subdivision of the United States always has two broad components: (a) natural increase and (b) net migration. It may have a third—changes in boundaries. At the present time, practically all areas have an excess of births over deaths. Migration includes immigration and emigration from, and to abroad; but internal migration is numerically a much more important factor in population increase or decrease. Boundary changes result from such actions as annexations, retrocessions, and consolidations. Furthermore, when viewing population change for an aggregate, like urban territory or cities of 50,000 to 100,000, one must bear in mind that places enter or drop from the class when their population passes the critical size.

TABLE 1
POPULATION IN 1960 AND PERCENT CHANGE, 1950-60, BY URBAN-RURAL RESIDENCE^a

Region	Name of Region	Population, 1960			Percent Change, 1950-60			Percent Urban	Percent Rural
		Total	Urban	Rural	Total	Urban	Rural		
I	Atlantic Metropolitan Belt	36,500,804	31,603,170	4,897,634	17.5	18.6	10.8	86.6	13.4
II	Eastern Great Lakes-Northeastern Upland	10,116,810	6,087,691	4,029,119	9.7	8.4	11.8	60.2	39.8
III	Lower Great Lakes	25,212,494	20,358,868	4,853,626	18.6	22.1	5.8	80.7	19.3
IV	Upper Great Lakes	5,750,213	3,351,722	2,398,491	14.5	27.9	-0.1	58.3	41.7
V	North Center (Corn Belt)	17,169,930	9,942,641	7,227,289	12.6	23.7	0.2	57.9	42.1
VI	Central Plains	6,013,853	3,608,311	2,405,542	16.4	41.6	-8.1	60.0	40.0
VII	Central and Eastern Upland	14,882,135	7,421,755	7,460,380	5.1	20.2	-6.6	49.9	50.1
VIII	Southeast Coastal Plain	16,391,896	7,788,643	8,603,253	9.6	32.3	-5.1	47.5	52.5
IX	Atlantic Flatwoods and Gulf Coast	11,812,018	8,971,391	2,840,627	48.1	63.2	14.7	76.0	24.0
X	South Center and Southwest Plains	8,993,054	5,434,377	3,558,677	8.3	40.8	-19.9	60.4	39.6
XI	Rocky Mountain and Intermountain	4,568,878	2,727,282	1,841,596	26.7	54.2	0.3	59.7	40.3
XII	Pacific Northwest	4,918,314	3,169,316	1,748,998	21.7	34.2	4.3	64.4	35.6
XIII	Pacific Southwest	16,992,776	14,805,449	2,187,327	50.1	61.6	1.4	87.1	12.9
	U. S. total	179,323,175	125,270,616	54,052,559	18.5	29.3	-0.8	69.9	30.1

^a Adapted from (1) by permission of authors.

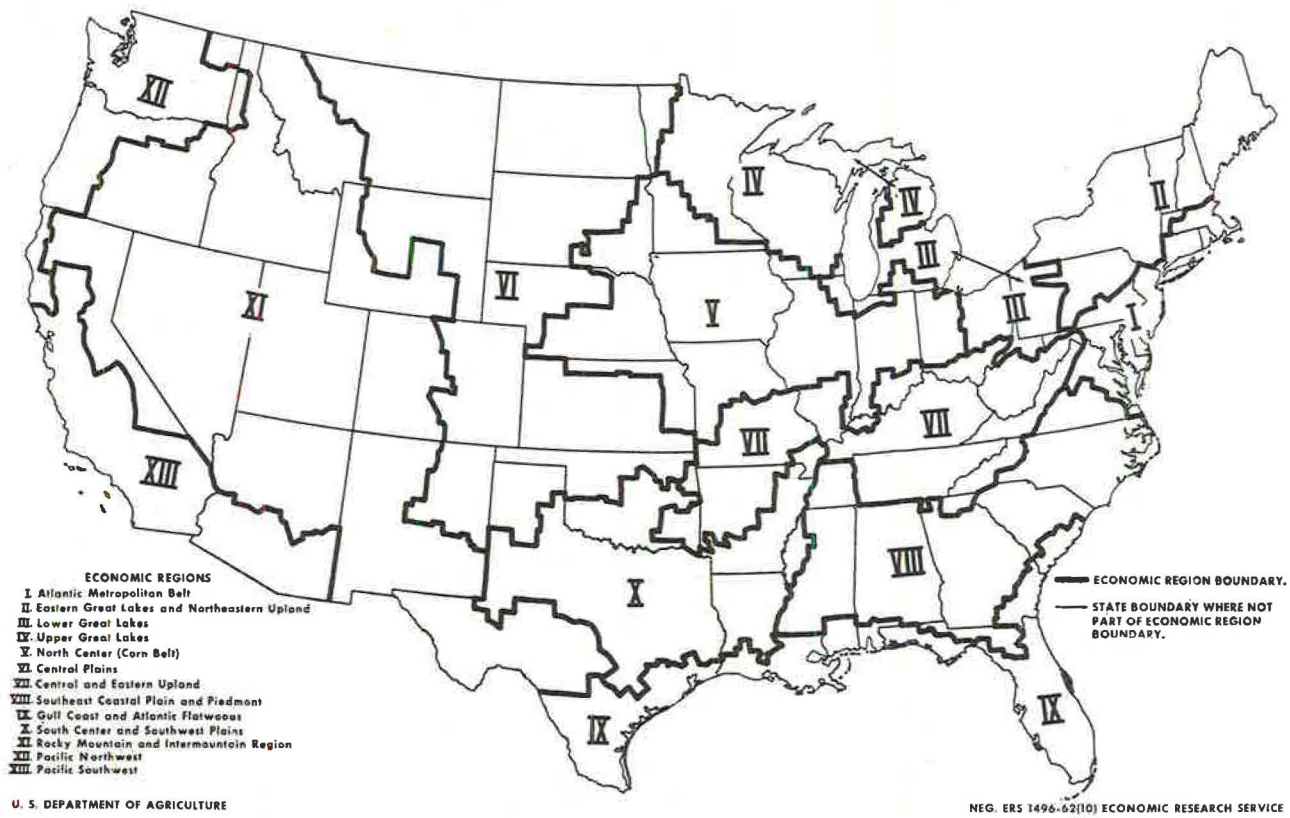


Figure 2. Economic regions of the United States.

TABLE 2
URBAN AND RURAL POPULATION OF THE UNITED STATES: 1790 TO 1960^a

Area	Urban Definition	Census Date	Total				Urban				Rural				Percent of Total	
			Population	Increase over Preceding Census		Population	Increase over Preceding Census		Population	Increase over Preceding Census ^b		Urban	Rural			
				Number	Percent		Number	Percent		Number	Percent					
United States	Current	1960	179,323,175	27,997,377	18.5	125,268,750	28,421,933	29.3	54,054,425	-424,556	-0.8	69.9	30.1			
		1950	151,325,798	-	-	96,846,817	-	-	54,478,981	-	-	64.0	36.0			
	Previous	1960	179,323,175	27,997,377	18.5	113,056,353	22,928,159	25.4	66,266,822	5,069,218	8.3	63.0	37.0			
		1950	151,325,798	19,161,229	14.5	90,128,194	15,422,856	20.6	61,197,604	3,738,373	6.5	59.6	40.4			
		1940	132,164,569	8,961,945	7.3	74,705,338	5,544,739	8.0	57,459,231	3,417,206	6.3	56.5	43.5			
Conterminous United States	Current	1930	123,202,624	17,181,087	16.2	69,160,599	14,907,317	27.5	54,042,025	2,273,770	4.4	56.1	43.9			
		1960	178,464,236	27,766,875	18.4	124,699,022	28,231,336	29.3	53,765,214	-464,461	-0.9	69.9	30.1			
	Previous	1950	150,697,361	-	-	96,467,686	-	-	54,229,675	-	-	64.0	36.0			
		1960	178,464,236	27,766,875	18.4	112,531,941	22,782,878	25.4	65,932,295	4,983,997	8.2	63.1	36.9			
		1950	150,697,361	19,028,086	14.5	89,749,063 ^c	15,325,361	20.6	60,948,298 ^c	3,702,725	6.5	59.6	40.4			
		1940	131,669,275	8,894,229	7.2	74,423,702	5,468,879	7.9	57,245,573	3,425,350	6.4	56.5	43.5			
		1930	122,775,046	17,064,426	16.1	68,954,823	14,796,850	27.3	53,820,223	2,267,576	4.4	56.2	43.8			
		1920	105,710,620	13,738,354	14.9	54,157,973	12,159,041	29.0	51,552,647	1,579,313	3.2	51.2	48.8			
		1910	91,972,266	15,977,691	21.0	41,998,932	11,839,011	39.3	49,973,334	4,138,680	9.0	45.7	54.3			
		1900	75,994,575	13,046,861	20.7	30,159,921	8,053,656	36.4	45,834,654	4,993,205	12.2	39.7	60.3			
		1890	62,947,714	12,791,931	25.5	22,106,265	7,976,530	56.5	40,841,449	4,815,401	13.4	35.1	64.9			
		1880	50,155,783	11,597,412	30.1	14,129,735	4,227,374	42.7	36,026,048	7,370,038	25.7	28.2	71.8			
		1870	38,558,371	7,115,050	22.6	9,902,361	3,685,843	59.3	28,656,010	3,429,207	13.6	25.7	74.3			
		1860	31,443,321	8,251,445	35.6	6,216,518	2,672,802	75.4	25,226,803	5,578,643	28.4	19.8	80.2			
		1850	23,191,876	6,122,423	35.9	3,543,716	1,698,661	92.1	19,648,160	4,423,762	29.1	15.3	84.7			
		1840	17,069,453	4,203,433	32.7	1,845,055	717,808	63.7	15,224,398	3,485,625	29.7	10.8	89.2			
		1830	12,866,020	3,227,567	33.5	1,127,247	433,992	62.6	11,738,773	2,793,575	31.2	8.8	91.2			
		1820	9,638,453	2,398,572	33.1	693,255	167,796	31.9	8,945,198	2,230,776	33.2	7.2	92.8			
		1810	7,239,881	1,931,398	36.4	525,459	203,088	63.0	6,714,422	1,728,310	34.7	7.3	92.7			
		1800	5,308,483	1,379,269	35.1	322,371	120,716	59.9	4,986,112	1,258,553	33.8	6.1	93.9			
1790	3,929,214	-	-	201,655	-	-	3,727,559	-	-	5.1	94.9					

^aSource: U. S. Bureau of the Census, "1960 Census of Population." Series PC(1)-1A, Table 3.

^bMinus sign denotes decrease.

^cRevised since publication of 1950 reports.

TABLE 3
POPULATION IN GROUPS OF PLACES CLASSIFIED ACCORDING TO SIZE: 1960 AND 1950^a

Type of Area	1960				1950				Percent Change in Population 1950 to 1960
	No. of Places	Population	Percent of Total Population	Percent of Total Area	No. of Places	Population	Percent of Total Population	Percent of Total Area	
Central Cities:									
1,000,000 or more	5	17,484,059	9.8	14.0	5	17,404,450	11.5	18.0	0.5
500,000 to 1,000,000	16	11,110,991	6.2	8.9	13	9,186,945	6.1	9.5	20.9
250,000 to 500,000	30	10,765,881	6.0	8.6	22	7,990,793	5.3	8.3	34.7
100,000 to 250,000	66	9,872,604	5.5	7.9	55	8,244,219	5.4	8.5	19.8
50,000 to 100,000	111	7,858,514	4.4	6.3	68	5,172,381	3.4	5.3	51.9
Under 50,000	26	883,083	0.5	0.7	9	378,452	0.3	0.4	133.3
Total	254	57,975,132	32.3	46.3	172	48,377,240	32.0	50.0	19.8
Urban fringes:									
2,500 or more:									
100,000 or more	15	1,779,822	1.0	1.4	11	1,485,210	1.0	1.5	19.8
50,000 to 100,000	90	5,977,388	3.3	4.8	37	2,562,230	1.7	2.6	133.3
25,000 to 50,000	212	7,253,877	4.0	5.8	71	2,494,662	1.6	2.6	190.8
10,000 to 25,000	518	8,209,099	4.6	6.6	231	3,629,308	2.4	3.7	126.2
5,000 to 10,000	399	2,862,099	1.6	2.3	268	1,892,680	1.3	2.0	51.2
2,500 to 5,000	346	1,250,219	0.7	1.0	241	885,800	0.6	0.9	41.1
Subtotal	1,580	27,332,504	15.2	21.8	859	12,949,890	8.6	13.4	111.1
Under 2,500:									
2,000 to 2,500	112	249,559	0.1	0.2	80	180,587	0.1	0.2	38.2
1,500 to 2,000	86	149,220	0.1	0.1	106	183,844	0.1	0.2	-18.8
1,000 to 1,500	122	152,177	0.1	0.1	93	115,660	0.1	0.1	31.6
Under 1,000	276	138,790	0.1	0.1	178	97,901	0.1	0.1	41.8
Subtotal	596	689,746	0.4	0.6	457	577,992	0.4	0.6	19.3
Other	---	9,851,105	5.5	7.9	---	7,344,026	4.9	7.6	34.1
Total	---	37,873,355	21.1	30.2	---	20,871,908	13.8	21.6	81.5
Within urbanized areas	---	95,848,487	53.5	76.5	---	69,249,148	45.8	71.5	38.4
Outside urbanized areas:									
25,000 or more	200	6,935,191	3.9	5.5	195	7,406,051	4.9	7.6	-6.4
10,000 to 25,000	610	9,237,648	5.2	7.4	548	8,248,451	5.5	8.5	12.0
5,000 to 10,000	995	6,917,615	3.9	5.5	916	6,299,956	4.2	6.5	9.8
2,500 to 5,000	1,806	6,329,809	3.5	5.1	1,617	5,643,211	3.7	5.8	12.2
Subtotal	3,611	29,420,263	16.4	23.5	3,276	27,597,669	18.2	28.5	6.6
Urban total	---	125,268,750	69.9	100.0	---	96,846,817	64.0	100.0	29.3
Rural:									
2,000 to 2,500	784	1,748,316	1.0	3.2	762	1,693,965	1.1	3.1	3.2
1,500 to 2,000	1,248	2,157,904	1.2	4.0	1,282	2,203,750	1.5	4.0	-2.1
1,000 to 1,500	2,119	2,590,568	1.4	4.8	2,142	2,617,759	1.7	4.8	-1.0
Subtotal	4,151	6,496,788	3.6	12.0	4,186	6,515,474	4.3	12.0	-0.3
Other	---	47,557,637	26.5	88.0	---	47,963,507	31.7	88.0	-0.8
Total	---	54,054,425	30.1	100.0	---	54,478,981	36.0	100.0	-0.8
United States, Total	---	179,323,175	100.0	---	---	151,325,798	100.0	---	18.5
Urbanized Areas:									
1,000,000 or more	16	51,785,410	28.9	54.0	12	37,817,068	25.0	54.6	36.9
500,000 to 1,000,000	22	15,365,801	8.6	16.0	13	8,751,241	5.8	12.6	75.6
250,000 to 500,000	30	10,624,125	5.9	11.1	24	8,676,270	5.7	12.5	22.5
100,000 to 250,000	85	13,480,252	7.5	14.1	70	10,888,119	7.2	15.7	23.8
Under 100,000	60	4,592,890	2.6	4.8	38	3,116,450	2.1	4.5	47.4
Total	213	95,848,487	53.5	100.0	157	69,249,148	45.8	100.0	38.4

^aSource: U. S. Bureau of the Census, "1960 Census of Population." Series PC(1)-1A, Table 5.

^bThere were 5,445 places of 2,500 or more.

^cThere were 4,307 places of 2,500 or more.

TABLE 4
POPULATION AND DENSITY IN GROUPS OF PLACES CLASSIFIED
ACCORDING TO SIZE: 1960^a

Area	Population	Land Area (sq mi)	Population (per sq mi of land area)
United States:			
Places of 1,000,000 or more	17,484,059	1,261	13,865
500,000 to 1,000,000	11,110,991	1,888	5,885
250,000 to 500,000	10,765,881	2,401	4,484
100,000 to 250,000	11,652,426	2,728	4,271
50,000 to 100,000	13,835,902	3,539	3,910
25,000 to 50,000	14,950,612	5,319	2,811
10,000 to 25,000	17,568,286	6,939	2,532
5,000 to 10,000	9,779,714	5,005	1,954
2,500 to 5,000	7,580,028	5,242	1,446
Other urban territory	10,540,851	5,917	1,781
Rural territory	54,054,425	3,508,736	15
Total	179,323,175	3,548,974	51
Within urbanized areas:			
Places of 1,000,000 or more	17,484,059	1,261	13,865
500,000 to 1,000,000	11,110,991	1,888	5,885
250,000 to 500,000	10,765,881	2,401	4,484
100,000 to 250,000	11,652,426	2,728	4,271
50,000 to 100,000	13,835,902	3,539	3,910
25,000 to 50,000	8,015,421	2,594	3,090
10,000 to 25,000	8,330,638	2,873	2,900
5,000 to 10,000	2,862,099	1,488	1,923
2,500 to 5,000	1,250,219	856	1,461
Other urban territory	10,540,851	5,917	1,781
Total	95,848,487	25,544	3,752
Outside urbanized areas:			
Places of 25,000 to 50,000	6,935,191	2,725	2,545
10,000 to 25,000	9,237,648	4,066	2,272
5,000 to 10,000	6,917,615	3,517	1,967
2,500 to 5,000	6,329,809	4,386	1,443
Rural territory	54,054,425	3,508,736	15
Total	83,474,688	3,523,430	24

^aSource: U.S. Bureau of the Census, "1960 Census of Population," Series PC(1)-1A, Table E.

TABLE 5
POPULATION INSIDE AND OUTSIDE CENTRAL CITY OR CITIES OF STANDARD METROPOLITAN
STATISTICAL AREAS WITH POPULATION OF AREAS ANNEXED TO CENTRAL CITIES, BY REGIONS:
1960 AND 1950^a

Region	Component Part of SMSA	Population		Change, 1950 to 1960						1960 Population on Basis of 1950 Limits of Central Cities
		1960	1950	Total		Based on 1950 Limits of Central Cities		From Annexations		
				Number	Per- cent	Number	Per- cent	Number	Per- cent	
United States	Central city	58,004,334	52,371,379	5,632,955	10.8	767,209	1.5	4,851,483	9.3	53,138,588
	Outside central city	54,880,844	36,945,524	17,935,320	48.5	22,801,066	61.7	-4,851,483	-13.1	59,746,590
	Total	112,885,178	89,316,903	23,568,275	26.4	23,568,275	26.4	--	--	112,885,178
Northeast	Central city	17,321,731	17,881,490	-559,759	-3.1	-594,078	-3.3	20,115	0.1	17,287,412
	Outside central city	18,024,774	13,385,679	4,639,095	34.7	4,673,414	35.0	-20,115	-0.2	18,059,093
	Total	35,346,505	31,267,169	4,079,336	13.0	4,079,336	13.0	--	--	35,346,505
North Central	Central city	16,510,746	15,836,656	674,090	4.3	-257,583	-1.6	931,673	5.9	15,579,073
	Outside central city	14,449,215	9,238,018	5,211,197	56.4	6,142,870	66.5	-931,673	-10.1	15,380,888
	Total	30,959,961	25,074,674	5,885,287	23.5	5,885,287	23.5	--	--	30,959,961
South	Central city	15,061,777	11,720,843	3,340,934	28.5	615,801	5.3	2,725,133	23.3	12,336,644
	Outside central city	11,385,618	7,696,908	3,688,710	47.9	6,413,843	83.3	-2,725,133	-35.4	14,110,751
	Total	26,447,395	19,417,751	7,029,644	36.2	7,029,644	36.2	--	--	26,447,395
West	Central city	9,110,080	6,932,390	2,177,690	31.4	1,003,069	14.5	1,174,562	16.9	7,935,459
	Outside central city	11,021,237	6,624,919	4,396,318	66.4	5,579,939	84.1	-1,174,562	-17.7	12,195,858
	Total	20,131,317	13,557,309	6,574,008	48.5	6,574,008	48.5	--	--	20,131,317

^aSource: Adapted from U.S. Bureau of the Census, "1960 Census of Population" Vol. 1, Part A, Number of Inhabitants, Table P.

Table 3 shows that, as the resultant of all these factors, every size-class of urbanized area grew more rapidly than the total population, as did most size-classes of central cities and of places in the urban fringe. In contrast, all urban size-classes outside urbanized areas and all rural size-classes grew less rapidly than the national average or even had a decrease of population.

Analytically, however, it is useful to know how much of the growth in, say, a given place or class of places occurred within constant boundaries. Elsewhere it is estimated that 59 percent of the 1950-1960 increase in the urban population is attributable to reclassification of territory (2). Probably less than one-half of that is specifically attributable to annexations to incorporated places.

Population growth leads to greater population density unless the area is expanded to include more thinly settled territory. Within the fixed area of the 48 States, population density increased during the 1950's from 50.7 to 60.1 per square mile; but the addition of Alaska and Hawaii drove the density of the United States as defined in 1960 down slightly from the 1950 figure to 50.5. Obviously, this average density represents a very wide range among various areas even within the conterminous United States. Table 4 shows, for example, that urbanized areas had an average population of 3,752 per square mile, whereas that of rural territory was only 15. Within urbanized areas, the urban fringe areas, which are essentially suburban, had a density of 2,575 as contrasted with 5,349 for the central cities. Union City (40,138 persons per square mile) and two other cities in northeastern New Jersey have a higher density than New York City as a whole, but the Borough of Manhattan exceeds them with its density of 77,195. At the other extreme, some middle-sized cities (25,000 inhabitants or more) have relatively low densities. Examples are Hilo, Hawaii, with only 89; Oak Ridge, Tenn., with 316; and Concord, N. H., with 452.

At the risk of confusing the reader with still another type of area, it is necessary to discuss briefly the important concept of the metropolitan area. As defined by the Bureau of the Budget, a Standard Metropolitan Statistical Area (SMSA) includes a central city (or cities), the county containing it, and any contiguous counties that qualify in terms of criteria of metropolitan character and economic and social integration (3). The chief indicator used in determining the extent of integration is the rate of commuting by workers. Like urbanized areas, SMSA's have been defined for cities of 50,000 or more. An SMSA is almost always a larger area than its corresponding urbanized area, and the part beyond the urban fringe is of lower density. In fact, this density is only about 60, or not much above the national average of 51. Nevertheless, it is in this outer ring that the most rapidly growing areas of the next decade are likely to be found.

In 1960, 63 percent of all Americans lived in the 212 SMSA's. Central cities contained 32 percent and the metropolitan rings (including urban fringes) contained the remaining 31 percent. Although the central cities retain this slight majority of all metropolitan residents, the rates of growth in the 1950's show that their outlying areas are fast catching up (Table 5). The intercensal rates of growth are compared in Table 6. In fact, about five-sixths of the total national growth occurred within metropolitan areas and about two-thirds occurred within their outlying rings.

Moreover, 86 percent of the growth of the central cities was attributable to their annexations from their metropolitan rings. Had it not been for these numerous and extensive annexations during the decade, the rate of increase of central-city population would have been only 1.5 percent, whereas that of their rings would have been 62 percent. Nine of the 10 largest cities in 1950 and 19 of the 41 cities of 250,000 inhabitants or more in 1950 lost population as the

TABLE 6
INTERCENSAL RATES OF GROWTH

Total	Rate of Growth ^a (%)
U. S.	18.5
SMSA	26.4
Central cities	10.8
Rings	48.5

^aOf 1950 population.

result of net out-migration. Essentially, these net losses were to the city's own suburbs. Only 8 of 212 entire metropolitan areas lost population during the 1950's. These were areas of chronic economic depression like the Johnstown, Scranton, Wheeling, and Wilkes-Barre—Hazleton SMSA's. The decline of coal mining was frequently a factor.

An interesting analysis of population change could be made in terms of small areas like city blocks, census tracts, and the minor civil divisions (townships, etc.) of counties. This would bring out the effects of new subdivisions and shopping centers; urban renewal and redevelopment; freeway construction; the creation of artificial lakes by damming rivers; the opening or expansion of factories, research laboratories, office buildings, and military posts and the contraction or closing down of such installations; and other ways in which man is altering the surface of this continent. This picture is too detailed to be painted on the small canvas of this paper, but many intensive local studies are being made and published.

The important role of net migration in redistributing population has been mentioned. Much of population movement is compensating, however, so that gross migration considerably exceeds the sum of net shifts; for example, when from the 1950 Census statistics the sum of the net migration in the preceding year for all States and net immigration is about 300,000. The total number of interstate migrants in this same 1949-50 period was 3.9 million, however. There is some evidence that the ratio of net migration to gross migration is declining; i. e., that a larger share of the gross migration is compensating (4).

About one in five Americans changes his address in any given year. This rate represents about 36 million persons nowadays, of whom 11 million move to a different county and 6 million to a different State. An estimated 8 or 9 million families have moved in each recent year. Many, if not most, of these movers use automobiles and moving vans to transport themselves and their furniture, respectively, to their new homes.

But obviously most passenger car trips are not made for the purpose of effecting a change of usual residence. Various origin and destination studies give a partial picture of the purposes of automobile trips and the relative numbers of passengers who are going to work, to school, to shop, and so on. There are no comprehensive national statistics with a classification by routes, areas, time of day, day of the week, or season of the year. A new set of statistics that is comprehensive in at least its national coverage is becoming available from the 1960 Census, however. (Furthermore, the 1963 Census of Transportation will include a National Travel Survey, which will collect data quarterly from a panel of households concerning (a) trips over-night or to a place at least 100 miles away, and (b) home-to-work travel.)

The 1960 Census had questions on place of work in the preceding week and on the chief means of transportation employed. These questions and the resulting tabulations represent a modest beginning in some respects. The geographic detail on place of work is not so great as one would like, and all means of transportation used in the given week are not known. Nonetheless, a large volume of statistics (some in unpublished form) is becoming available. These show considerable detail on place of residence and on the characteristics (age, sex, occupation, industry, etc.) of the commuters.

Some summary figures are given in Tables 7 and 8. In the country as a whole, of those workers reporting, about one in seven worked away from their county of residence. There are, of course, tremendous geographic variations in this kind of commuter rate; but, surprisingly, the rate for workers living in metropolitan areas is only a little higher than that for those in nonmetropolitan areas. The moderate over-all metropolitan rate results from the fact that relatively few of the many workers in central cities of SMSA's work outside their home county. Between one-fifth and one-fourth of workers living in urban-fringe areas, however, commute to a different county. In Fairfax County, Va. (a Washington "bedroom" county), 64 percent of those reporting worked outside the county and 38 percent worked in Washington. In the outlying "rings" of SMSA's of 100,000 or more, 34 percent of the workers reporting worked in the central city, whereas, of those living in the central cities, only 10 percent commuted to the outlying rings (Table 9).

If any proof is needed of the overwhelming importance of the private automobile as

TABLE 7
PLACE OF WORK OF WORKERS^a DURING THE CENSUS WEEK, BY COLOR, FOR THE UNITED STATES,
URBAN AND RURAL: 1960^b

Worker	Place of Work	Number				Percent Distribution			
		United States	Urban	Rural		United States	Urban	Rural	
				Nonfarm	Farm			Nonfarm	Farm
White	In county of res.	47,312,465	34,263,368	9,435,743	3,613,354	81.4	81.5	79.3	87.1
	Outside county of res.	8,423,028	5,990,983	2,039,283	392,762	14.5	14.2	17.1	9.5
	Not reported	2,363,993	1,789,647	429,638	144,708	4.1	4.3	3.6	3.5
	Subtotal	58,099,486	42,043,998	11,904,664	4,150,824	100.0	100.0	100.0	100.0
Nonwhite	In county of res.	5,499,552	4,279,407	867,172	352,973	83.9	83.6	83.4	89.5
	Outside county of res.	562,560	412,850	124,804	24,906	8.6	8.1	12.0	6.3
	Not reported	494,207	429,493	48,312	16,402	7.5	8.4	4.6	4.2
	Subtotal	6,556,319	5,121,750	1,040,288	394,281	100.0	100.0	100.0	100.0
Total	In county of res.	52,812,017	38,542,775	10,302,915	3,966,327	81.7	81.7	79.6	87.3
	Outside county of res.	8,985,588	6,403,833	2,164,087	417,668	13.9	13.6	16.7	9.2
	Not reported	2,858,200	2,219,140	477,950	161,110	4.4	4.7	3.7	3.5
	Subtotal	64,655,805	47,165,748	12,944,952	4,545,105	100.0	100.0	100.0	100.0

^aIncluding members of Armed Forces.

^bSource: U. S. Bureau of the Census, "1960 Census of Population." Series PC(1)-1C, Table 93.

TABLE 8
MEANS OF TRANSPORTATION TO WORK OF WORKERS^a DURING THE CENSUS WEEK, FOR THE
UNITED STATES, URBAN AND RURAL: 1960^b

Means of Transportation to Work	Number				Percent Distribution			
	United States	Urban	Rural		United States	Urban	Rural	
			Nonfarm	Farm			Nonfarm	Farm
Private automobile or car pool	41,368,062	30,295,829	9,390,246	1,681,987	64.0	64.2	72.5	37.0
Railroad, subway, or elevated	2,484,281	2,436,865	44,657	2,759	3.8	5.2	0.3	0.1
Bus or streetcar	5,322,651	5,142,633	158,948	21,070	8.2	10.9	1.2	0.5
Walked to work	6,416,343	4,717,841	1,435,783	262,719	9.9	10.0	11.1	5.8
Other means	1,619,842	1,029,471	471,227	119,144	2.5	2.2	3.6	2.6
Worked at home	4,662,750	1,357,400	991,701	2,313,649	7.2	2.9	7.7	50.9
Not reported	2,781,876	2,185,709	452,390	143,777	4.3	4.6	3.5	3.2
Total worker	64,655,805	47,165,748	12,944,952	4,545,105	100.0	100.0	100.0	100.0

^aIncluding members of Armed Forces.

^bSource: U. S. Bureau of the Census, "1960 Census of Population," Series PC(1)-1C, Table 94.

a means of getting people to work, Table 8 should provide it. Nationally, two-thirds of all workers used a car as their chief means of traveling between home and work. Less than one-tenth used a bus or streetcar and another 4 percent used other forms of public transportation (railroad, subway, or elevated train). For workers living in the central cities of SMSA's, of course, public transportation is relatively more important. Even there, however, only 27 percent reported this means, or about one-half the proportion reporting private automobile or carpool. Only in New York City do more than one-half of the workers use public transportation.

If commuter streams between certain areas and types of areas, are considered additional contrasts are found. Within SMSA's of 100,000 or more, 82 percent of those commuting to the central city used a private automobile or carpool, whereas this means was reported by a bare majority (54 percent) of those both living and working in the central city. Of those living and working in New York City, 18 percent traveled by automobile, 53 percent by subway, and 15 percent by bus; whereas of those commuting from the New York metropolitan ring (that part in New York State only), 43 percent used an automobile, 54 percent, railroad or subway, and only 2 percent traveled by bus.

A few students in the United States and Western Europe have speculated that the rise

TABLE 9
PLACE OF WORK AND MEANS OF TRANSPORTATION OF WORKERS DURING THE CENSUS
WEEK, BY RESIDENCE IN THE CENTRAL CITY OR IN THE RING, FOR STANDARD
METROPOLITAN STATISTICAL AREAS OF 100,000 OR MORE: 1960^a

Residence and Means of Transportation	Total Workers 14 Years or Over	Place of Work			
		Central City	SMSA Ring	Outside SMSA of Residence	Not Reported
Living in central city of SMSA	22,134,421	18,301,306	2,027,946	537,127	1,268,042
Total reporting means of transportation	20,823,578	18,142,360	2,006,086	524,756	150,376
Percent distribution:					
Private automobile or carpool	57.9	54.4	84.9	74.5	59.5
Railroad, subway, or elevated	9.3	10.1	1.7	9.5	9.6
Bus or streetcar	18.4	19.6	10.5	7.3	18.2
Walked only	9.9	11.0	1.5	2.9	7.3
Other means	1.7	1.6	1.4	5.7	5.4
Worked at home	2.8	3.3	--	--	--
Not reporting	1,310,843	158,946	21,860	12,371	1,117,666
Living in SMSA ring	19,642,613	6,491,160	11,324,847	1,073,708	752,898
Total reporting means of transportation	18,784,183	6,329,531	11,225,396	1,058,280	170,976
Percent distribution:					
Private automobile or carpool	77.1	82.3	74.0	79.0	78.0
Railroad, subway, or elevated	2.7	6.1	0.3	6.9	4.8
Bus or streetcar	6.1	8.9	4.3	7.8	6.3
Walked only	7.6	1.3	11.7	1.7	5.4
Other means	2.3	1.3	2.5	4.5	5.5
Worked at home	4.3	--	7.2	--	--
Not reporting	858,430	161,629	99,451	15,428	581,922

^aSource: Adapted from U.S. Bureau of the Census, "1960 Census of Population." Series PC(1)-1D, Table 216 (forthcoming report).

of worker-commuting has tended to reduce the amount of migration into the growing labor markets and have tried to measure the relationship between these two types of movement (5,6). The relationship is probably more complex than this statement suggests, however. Not only might workers living on the periphery of a labor market decide to commute daily rather than to move into town but also workers who live in the central city may decide to move their homes to this same peripheral area because of the feasibility of commuting. Moreover, shopping centers and other service facilities are diffusing to the periphery, and some employers are locating there to tap the local labor supply and to use other advantages of a site outside the city proper.

The fact that the Census statistics will show the streams of workers commuting to and from the larger areas permits the estimation of the total number of workers employed in the area, or in other words, the daytime working population. Such estimates have already been published on a limited basis (7).

What of the future? Will these trends intensify, will they level off in plateaus, or will some strong countertrends develop? Officially, the Bureau of the Census makes projections on the basis of specified assumptions. It does not make predictions or forecasts.

The last published projections to 1975 of the total population show 226 or 235 million, depending on the assumption about future births. Either may be too high or too low; but, barring some major catastrophe, a population of 200 million is not very far off. There are 188 million today including the Armed Forces abroad.

Others have speculated about future trends in the metropolitan population and in the urban population. Writing in 1957, Cuzzort and Siegel independently concluded that there would be further concentration of the population in metropolitan areas and Siegel added, in urban areas and in suburbs, as well (8,9). Cuzzort projected the proportion of the population in SMSA's of 100,000 or more from 56 percent in 1950 to 60 or 66 percent in 1975. The percentage observed in 1960 was already 63. The higher percentage, namely 66, looks somewhat more likely, therefore. Applied to the total population projections already cited, this yields a population of roughly 150 million in the principal metropolitan areas only a dozen years ahead. In a recent paper, Beale

has speculated about the future growth of the rural population (10). By subtraction, the projected urban population would constitute about 74 percent of the total in 1970 and 78 percent in 1980, as compared with 70 percent in 1960.

There is little doubt that these kinds of population concentrations are going to persist for several decades, partly because of the continuing decline in the number of families dependent on agriculture or mining. What is perhaps more problematical is whether the flight to the suburbs will be slowed down or even reversed, and people will be more attracted by the conveniences and amenities of the city proper. Already, some observers profess to see signs of a slackening of the centrifugal movement (11). These straws in the wind seem to have had very little impact on the statistics, however. One may have to wait until the next census to see whether big cities have recovered their losses of the 1950's or whether the decentralization pattern that was most pronounced in large metropolitan areas of the Northeast will spread to other regions and to smaller SMSA's.

Schnore expects commuting in 1975 to be characterized by a greater amount of lateral movement around the city, further decentralization of population, even longer work-trips, and more use of the private automobile (12). Writing in the same symposium, Hitchcock of the Bureau of Public Roads projected motor-vehicle registrations and highway travel to 1975 (13). In comparison with the 1960 figures that have since become available, these projections imply considerably higher rates of increase for vehicle registrations and highway travel over the 15-year period than those projected for population. These relative growth rates are, of course, in line with past trends. Moreover, most projections assume the continuation of past trends. One of the great values of projections, however, is to give leaders an opportunity to see the indicated results, to compare these results with a preferred set of attainable living conditions, and to make necessary plans or suggestions for changing the trends. There may be differences about national goals, but there is agreement on the need for better data for plotting the course and for understanding the complex cause-and-effect relationships that were mentioned at the beginning of this paper.

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