DEPARTMENT OF THE INTERIOR,
CENSUS OFFICE.

COMPENDIUM

OF

THE ELEVENTH CENSUS: 1890.

PART I.—POPULATION.

ROBERT P. PORTER.
SUPERINTENDENT.

WASHINGTON, D. C.:
GOVERNMENT PRINTING OFFICE.
1892.

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DEPARTMENT OF THE INTERIOR,
CENSUS OFFICE,
WASHINGTON, D. C., December 8, 1892.

SIR:

I have the honor to transmit herewith the statistical tables, with accompanying descriptive and explanatory matter, including maps, notes, and other data, which have been prepared under the acts of March 1, 1889, and March 3, 1891, as a Compendium of the Eleventh Census of the United States.

Very respectfully, your obedient servant,

ROBERT P. PORTER,
Superintendent of Census.

Hon. JOHN W. NOBLE,
Secretary of the Interior.

INTRODUCTION.

The ideal Compendium of the Census would be a volume compiled after all the reports were written and in type, in fact, an epitome of every investigation. Covering all branches of inquiry, it would be a complete résumé of the population, wealth, and social condition of the people, classified with the greatest possible care, and prepared with due deliberation by hands well skilled in marshaling facts and figures. To make the Compendium of the Eleventh Census all this has been attempted, so far as compatible with the demand for prompt publication, but in some particulars it falls short of this high standard. In future censuses it may become possible to prepare the Compendium as above suggested, making this publication the last instead of one of the first. Indeed, the need of its early publication was partly obviated in the present census, as its place was taken by the series of systematic bulletins which presented the results as fast as they were obtained, and embraced a large portion of the several investigations. Every month that can be saved in the publication of census statistics adds appreciably to their value, and hence the salient features of the Eleventh Census have been made public many months and in several cases years earlier than heretofore.

The Compendium of the Eleventh Census will reflect the growth of the country in an enlarged scope of information, and give a very complete classification of material. There are many imperfections which can not well be avoided so long as the demand for general statistics makes it necessary to publish the summary before the details are fully and thoroughly worked up. The custom of getting out the Compendium early sacrifices precise classification and completeness. Part I of the Compendium of the Eleventh Census is herewith presented, and the copy of Part II is nearly all in hand.

While the rapid increase of population adds greatly to the work of taking the census, improved communication, division of labor, and more enlightened methods made it possible not only to secure greater accuracy than before, but to obtain results more speedily. For example, in 1850 the enumeration was begun June 1, but the first returns were not received until August 29 of that year, and the final returns (from California) were not received until February 17, 1852, exactly 1 year 8 months and 17 days after the commencement of the enumeration, while in 1890, on the 21st of August, exactly 2 months and 19 days after the date of commencement of enumeration, the official returns by counties and precincts of the state of Washington were telegraphed by this office to the governor for the use of the state legislature, then convening for the purpose of apportioning representation in that body. By October 20 the population of the Pacific coast states (California, Oregon, and Washington) had been announced.

No official statement of the dates when returns were received appears in the population volume of the Eighth Census, 1860. The enumeration for 1870 was nearly completed January 9, 1871, but not fully until August 23 of that year, because the last schedules were not received from the enumerators until that time, more than a year

after the commencement of the enumeration. The Tenth Census was practically completed March 4, 1881, the final count following soon afterward. The last returns of the Eleventh Census received at this office were from the first supervisor's district of Florida, November 10, 1890.

The first announcement of population was that for the District of Columbia, and was made June 28, 1890. It was followed July 18 by the announcement of the population of the city of New York, constituting the whole of the first supervisor's district of the state of New York. On August 6 the population of the first district of Pennsylvania, comprising the city of Philadelphia, was given to the public. During the month of August the first count of the states of Delaware, Idaho, Rhode Island, and Washington was announced; during September, that of Colorado, Connecticut, Maine, Massachusetts, Montana, Nevada, Vermont, and the territories of Arizona and Utah; during October, that of Alabama, Arkansas, California, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, West Virginia, Wisconsin, Wyoming, and the territories of New Mexico and Oklahoma.

The count was pushed with such energy that the Census Office had the official returns of the population ready on the convening of Congress in 1890, causing no delay in the apportionment of national representatives. The passage of the apportionment bill, for the first time in the history of the country, in the next session of Congress following the census, makes it worth while briefly to review the apportionment legislation. The following table shows what may be termed the constitutional population of the United States, the present number of representatives, and the number of representatives provided for by the act which passed the House of Representatives December 17, 1890, and the Senate January 29, 1891, and which was signed by the President February 7, 1891:

STATES.	Constitutional population.	Present number of members.	Proposed number of members.	STATES.	Constitutional population.	Present number of members.	Proposed number of members.
Total	61,908,906	332	356	Missouri	2,679,184	14	15
				Montana	132,159	1	1
Alabama	1,513,017	8	9	Nebraska	1,058,910	3	6
Arkansas	1,128,179	5	6	Nevada	45,761	1	1
California	1,208,130	6	7	New Hampshire	376,530	2	2
Colorado	412,198	1	2	New Jersey	1,444,933	7	8
Connecticut	746,258	4	4	New York	5,997,853	34	34
Delaware	168,493	1	1	North Carolina	1,617,947	9	9
Florida	391,422	2	2	North Dakota	182,719	1	1
Georgia	1,837,353	10	11	Ohio	3,672,316	21	21
Idaho	84,385	1	1	Oregon	313,767	1	2
Illinois	3,826,351	20	22	Pennsylvania	5,258,014	28	30
Indiana	2,192,404	13	13	Rhode Island	345,506	2	2
Iowa	1,911,896	11	11	South Carolina	1,151,149	7	7
Kansas	1,427,096	7	8	South Dakota	328,808	2	2
Kentucky	1,858,635	11	11	Tennessee	1,767,518	10	10
Louisiana	1,118,587	6	6	Texas	2,235,523	11	13
Maine	661,086	4	4	Vermont	332,422	2	2
Maryland	1,042,390	6	6	Virginia	1,655,980	10	10
Massachusetts	2,238,943	12	13	Washington	349,390	1	2
Michigan	2,093,889	11	12	West Virginia	762,794	4	4
Minnesota	1,301,826	5	7	Wisconsin	1,686,880	9	10
Mississippi	1,289,600	7	7	Wyoming	60,705	1	1

The apportionment of representatives in Congress, according to the enumeration of the First, Second, Third, Fourth, Fifth, and Sixth Censuses, was made by Congress. At these apportionments Congress set the ratio of population for each member allowed, and also at each apportionment fixed the total number of members of the House.

The law for the taking of the Seventh Census was intended to be permanent (act of May 23, 1850, 9 Stats., 428). It presented a rule of apportionment, fixed the number of members of the House at 233, and directed the Secretary of the Interior thereafter to make the apportionment to each state.

The apportionment under the Eighth Census was made under this law, but Congress on March 4, 1862, fixed the total number of members at 241, and the Secretary of the Interior apportioned the new quotas to the states.

The ninth and tenth apportionments were made by Congress; hence it may be assumed that the power conferred on the Secretary of the Interior by the act of May 23, 1850, was repealed by implication. Heretofore all apportionments have been made at the long sessions of Congress, being the second session after each census year, but early enough for the election of representatives to the next ensuing Congress.

The apportionment under the Eleventh Census was relatively about two years earlier than any before made.

APPORTIONMENTS.

The Constitution, article I, section 2, made the first apportionment, fixing the number of representatives for each state on the ratio of one representative for every 30,000 persons, in all 65 representatives.

FIRST CENSUS.

The act of April 14, 1792 (1 Stats., 253), on the ratio of one member for 33,000 persons, fixed the number of representatives for each state (in all 105) to take effect after March 3, 1793.

SECOND CENSUS.

The act of January 14, 1802 (2 Stats., 128), on the ratio of one member for 33,000 persons, fixed the number of representatives for each state (in all 141) to take effect after March 3, 1803.

THIRD CENSUS.

The act of December 21, 1811 (2 Stats., 669), on the ratio of one member for 35,000 persons, fixed the number of representatives for each state (181 in all) to take effect after March 3, 1813.

FOURTH CENSUS.

The act of March 7, 1822 (3 Stats., 651), on the ratio of one member for 40,000 persons, fixed the number of representatives for each state (in all 213) to take effect after March 3, 1823.

FIFTH CENSUS.

The act of May 22, 1832 (4 Stats., 516), on the ratio of one representative for 47,700 persons, fixed the number of representatives for each state (240 in all) to take effect after March 3, 1833.

SIXTH CENSUS.

The act of June 25, 1842 (5 Stats., 491), on the ratio of one representative for 70,680 persons, fixed the number of representatives for each state (223 in all) to take effect after March 3, 1843, and the act allowed an additional representative to each such state as had a population of a fraction greater than a moiety of said ratio. This act also required that the representatives be elected in districts composed of contiguous territory.

SEVENTH CENSUS.

The Secretary of the Interior, under the provisions of the act of May 23, 1850, made the apportionment of representatives for each state, the act having limited the number of representatives to 233 after March 3, 1853, the date said apportionment took effect. That act, sections 25 and 26, prescribed the mode of ascertaining the ratio of population.

EIGHTH CENSUS.

Under the provisions of the act of May 23, 1850, the Secretary of the Interior made the apportionment. The act of March 4, 1862 (12 Stats., 353), fixed the number of representatives at 241 after March 3, 1863, the date said apportionment took effect.

NINTH CENSUS.

The act of February 2, 1872 (17 Stats., 28), fixed the membership of the House after *March 3, 1873, at 283 members*, and apportioned them among the states.

TENTH CENSUS.

The act of February 25, 1882 (22 Stats., 5), fixed the membership of the House after March 3, 1883, at 325 members, and apportioned them among the states. This act provided for members from new states, and for elections at large for states cut down in number of representatives, or at large for members a state may have gained by the apportionment.

ELEVENTH CENSUS.

The act of February 7, 1891, fixed the apportionment upon a basis of 356 members, who were apportioned by Congress.

The following tables bring together the facts regarding all the apportionments in a very complete and concise form:

NUMBER OF REPRESENTATIVES AS APPORTIONED ON THE ENUMERATION OF THE SEVERAL CENSUSES, COMPOSING THE MEMBERSHIP OF THE NATIONAL HOUSE OF REPRESENTATIVES AT THE CLOSE OF THE SESSION OF CONGRESS PRIOR TO THE OPERATION OF EACH APPORTIONMENT.

APPORTIONMENT UPON THE ENUMERATION OF THE SEVERAL CENSUSES.			MEMBERSHIP AT CLOSE OF SESSION BEFORE NEW ACT TAKES EFFECT.			Assigned after apportionment.
Census.	Act of—	Number.	Congress.	Date ending—	Number.	
Prior to 1790	Constitution	65	.....	.....	65	.....
First Census	April 14, 1792	105	Second	March 2, 1793	106	1
Second Census	January 14, 1802	141	Seventh	March 3, 1803	142	1
Third Census	December 21, 1811	181	Twelfth	March 3, 1813	193	12
Fourth Census	March 7, 1822	213	Seventeenth	March 3, 1823	213	.....
Fifth Census	May 22, 1832	240	Twenty-second	March 3, 1833	242	2
Sixth Census	June 25, 1842	223	Twenty-seventh	March 3, 1843	232	9
Seventh Census	May 23, 1850	233	Thirty-second	March 3, 1853	237	4
Eighth Census	May 23, 1850	241	Thirty-seventh	March 3, 1863	243	2
Ninth Census	February 2, 1872	283	Forty-second	March 3, 1873	293	10
Tenth Census	February 25, 1882	325	Forty-seventh	March 3, 1883	332	7
Eleventh Census	February 7, 1891	356	Fifty-second	March 3, 1893	.....	.....

The table on the following pages gives in detail the number of representatives assigned to each of the states from the formation of the government to the present time.

NUMBER OF REPRESENTATIVES ASSIGNED TO EACH OF THE STATES IN THE HOUSE OF THAT WERE ASSIGNED PRIOR

	STATES.	Previous to 1790 First apportionment. Constitution, art. 1, sec. 2.		1790 First Census apportionment by act April 14, 1792. 1 Stats., 253.		1800 Second Census apportionment by act Jan. 14, 1802. 2 Stats., 128.		1810 Third Census apportionment by act Dec. 21, 1811. 2 Stats., 669.		1820 Fourth Census apportionment by act Mar. 7, 1822. 3 Stats., 651.	
		Apportionment.	Assigned after apportionment.	Apportionment.	Assigned after apportionment.	Apportionment.	Assigned after apportionment.	Apportionment.	Assigned after apportionment.	Apportionment.	Assigned after apportionment.
1	The United States	65	.....	105	1	141	1	181	12	213	.....
2	Alabama	.....	.....	.....	.....	.....	.....	.....	1	3	.....
3	Arkansas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	California	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	Colorado	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6	Connecticut	5	.....	7	.....	7	.....	7	.....	6	.....
7	Delaware	1	.....	1	.....	1	.....	2	.....	1	.....
8	Florida	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9	Georgia	3	.....	2	.....	4	.....	6	.....	7	.....
10	Idaho	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	Illinois	.....	.....	.....	.....	.....	.....	.....	1	1	.....
12	Indiana	.....	.....	.....	.....	.....	.....	.....	1	3	.....
13	Iowa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14	Kansas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15	Kentucky	.....	.....	2	.....	6	.....	10	.....	12	.....
16	Louisiana	.....	.....	.....	.....	.....	.....	.....	1	3	.....
17	Maine	.....	.....	.....	.....	.....	.....	.....	7	7	.....
18	Maryland	6	.....	8	.....	9	.....	9	.....	9	.....
19	Massachusetts	8	.....	14	.....	17	.....	20	.....	13	.....
20	Michigan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21	Minnesota	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22	Mississippi	.....	.....	.....	.....	.....	.....	.....	1	1	.....
23	Missouri	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
24	Montana	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25	Nebraska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
26	Nevada	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
27	New Hampshire	3	.....	4	.....	5	.....	6	.....	6	.....
28	New Jersey	4	.....	5	.....	6	.....	6	.....	6	.....
29	New York	6	.....	10	.....	17	.....	27	.....	34	.....
30	North Carolina	5	.....	10	.....	12	.....	18	.....	13	.....
31	North Dakota	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
32	Ohio	.....	.....	.....	.....	.....	1	6	.....	14	.....
33	Oregon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
34	Pennsylvania	8	.....	13	.....	18	.....	23	.....	26	.....
35	Rhode Island	1	.....	2	.....	2	.....	2	.....	2	.....
36	South Carolina	5	.....	6	.....	8	.....	9	.....	9	.....
37	South Dakota	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
38	Tennessee	.....	.....	.....	1	3	.....	6	.....	9	.....
39	Texas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
40	Vermont	.....	.....	2	.....	4	.....	6	.....	5	.....
41	Virginia	10	.....	19	.....	22	.....	23	.....	22	.....
42	Washington	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
43	West Virginia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
44	Wisconsin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
45	Wyoming	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Date after which apportionment takes effect			March 3, 1793.		March 3, 1803.		March 3, 1813.		March 3, 1823.	

REPRESENTATIVES OF CONGRESS UNDER THE SEVERAL ENUMERATIONS, ALSO THOSE TO THE FIRST CENSUS.

1830 Fifth Census apportionment by act May 22, 1832. 4 Stats., 516.		1840 Sixth Census apportionment by act June 25, 1842. 5 Stats., 491.		1850 Seventh Census apportionment by act May 23, 1850. 9 Stats., 428–432.		1860 Eighth Census apportionment by act May 23, 1850. 9 Stats., 428–432.		1870 Ninth Census apportionment by act Feb. 2, 1872. 17 Stats., 28.		1880 Tenth Census apportionment by act Feb. 25, 1882. 22 Stats., 5.		1890 Eleventh Census apportionment by act Feb. 7, 1891. 26 Stats., 735.		
Apportionment.	Assigned after apportionment.	Apportionment.	Assigned after apportionment	Apportionment.	Assigned after apportionment.	Apportionment.	Assigned after apportionment.	Apportionment.	Assigned after apportionment.	Apportionment.	Assigned after apportionment.	Apportionment.	Assigned after apportionment.	
240	2	223	9	233	4	241	2	283	10	325	7	356	.....	1
5	.....	7	.....	7	.....	6	.....	7	1	8	.....	9	.....	2
.....	1	1	.....	2	.....	3	.....	4	.....	5	.....	6	.....	3
.....	.....	.....	2	2	.....	3	.....	4	.....	6	.....	7	.....	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	.....	5
6	.....	4	.....	4	.....	4	.....	4	.....	4	.....	4	.....	6
1	.....	1	.....	1	.....	1	.....	1	.....	1	.....	1	.....	7
.....	.....	.....	1	1	.....	1	.....	1	1	2	.....	2	.....	8
9	.....	8	.....	8	.....	7	.....	9	.....	10	.....	11	.....	9
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	10
3	.....	7	.....	9	.....	14	.....	19	.....	20	.....	22	.....	11
7	.....	10	.....	11	.....	11	.....	12	1	13	.....	13	.....	12
.....	.....	.....	2	2	.....	6	.....	9	.....	11	.....	11	.....	13
.....	.....	.....	.....	.....	.....	1	.....	3	.....	7	.....	8	.....	14
13	.....	10	.....	10	.....	9	.....	10	.....	11	.....	11	.....	15
3	.....	4	.....	4	.....	5	.....	5	1	6	.....	6	.....	16
8	.....	7	.....	6	.....	5	.....	5	.....	4	.....	4	.....	17
8	.....	6	.....	6	.....	5	.....	6	.....	6	.....	6	.....	18
12	.....	10	.....	10	1	10	.....	11	.....	12	.....	13	.....	19
.....	1	3	.....	4	.....	6	.....	9	.....	11	.....	12	.....	20
.....	.....	.....	.....	.....	2	2	.....	3	.....	5	.....	7	.....	21
2	.....	4	.....	5	.....	5	.....	6	.....	7	.....	7	.....	22
2	.....	5	.....	7	.....	9	.....	13	.....	14	.....	15	.....	23
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	24
.....	.....	.....	.....	.....	.....	.....	1	1	.....	3	.....	6	.....	25
.....	.....	.....	.....	.....	.....	.....	1	1	.....	1	.....	1	.....	26
5	.....	4	.....	3	.....	3	.....	2	1	2	.....	2	.....	27
6	.....	5	.....	5	.....	5	.....	7	.....	7	.....	8	.....	28
40	.....	34	.....	33	.....	31	.....	32	1	34	.....	34	.....	29
13	.....	9	.....	8	.....	7	.....	8	.....	9	.....	9	.....	30
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	31
19	.....	21	.....	21	.....	19	.....	20	.....	21	.....	21	.....	32
.....	.....	.....	.....	.....	1	1	.....	1	.....	1	.....	2	.....	33
28	.....	24	.....	25	.....	24	.....	26	1	28	.....	30	.....	34
2	.....	2	.....	2	.....	2	.....	2	.....	2	.....	2	.....	35
9	.....	7	.....	6	.....	4	.....	5	.....	7	.....	7	.....	36
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2	.....	37
13	.....	11	.....	10	.....	8	.....	9	1	10	.....	10	.....	38
.....	.....	.....	2	2	.....	4	.....	6	.....	11	.....	13	.....	39
5	.....	4	.....	3	.....	3	.....	2	1	2	.....	2	.....	40
21	.....	15	.....	13	.....	11	.....	9	.....	10	.....	10	.....	41
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	.....	42
.....	.....	.....	.....	.....	.....	.....	.....	3	.....	4	.....	4	.....	43
.....	.....	.....	2	3	.....	6	.....	8	.....	9	.....	10	.....	44
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	45
March 3, 1833.		March 3, 1843.		March 3, 1853.		March 3, 1863.		March 3, 1873.		March 3, 1883.		March 3, 1893.		

The endeavor has been to make the Eleventh a purely statistical census, dealing only with information called for by law, and although the new investigations added by Congress will make it nearly as bulky as the Tenth Census, the work has been held rigidly within the scope determined upon at the outset. The Census Office has only dealt with developed industries. Thus, in the matter of mineral resources, the work of the office was directed to finding the product from existing mines, leaving to the geological surveys the development of the extent of existing coal fields, of iron deposits, etc. Similarly in the matter of timber resources, the work was confined to the lumber product and its use in manufactures. The study of the methods in use in the various branches of art and industry was also not considered a part properly of the census inquiries in this plan, and was not touched upon. Similarly the study of soils and incidentally the surface geology of the country, although of the utmost value of themselves, and especially in their application to agriculture, were not considered as properly falling within the scope of the census.

With these general ideas in view, the following plan for the Eleventh Census was mapped out and has been adhered to throughout:

I. POPULATION.—Characteristics, conditions, distribution, and parentage. Occupations.

II. VITAL AND SOCIAL STATISTICS.—Mortality and vital statistics. Social statistics. Statistics of special classes. Pauperism and crime.

III. EDUCATION AND CHURCH STATISTICS.—Education and illiteracy. Religious bodies.

IV. PUBLIC INDEBTEDNESS, VALUATION, TAXATION, AND EXPENDITURES.—National, state, and local indebtedness; assessed and estimated true valuation; state and local taxation; receipts and expenditures of national, state, county, and principal municipalities.

V. FARMS, HOMES, AND MORTGAGES.—Recorded private indebtedness. Ownership of farms and homes and indebtedness thereon.

VI. AGRICULTURE.—Irrigation. Tobacco. Farms, cereals, grass lands, and forage crops. The fibers, forestry, and sugar. Live stock on farms and dairy products. Wool and miscellaneous products. Horticulture, including truck farming, floriculture, seed farming, nurseries, and tropic and semitropic fruits. Viticulture. Live stock on ranges. Live stock not on farms.

VII. MANUFACTURES.—General statistics of manufactures. Statistics of specified industries. Manufactures in cities. Lumber and saw mill and timber products. Slaughtering and meat packing. Chemical manufactures and salt. Clay and pottery products. Coke and glass. Cotton manufactures. Dyeing and finishing of textiles. Electrical industries. Manufactured gas. Iron and steel. Printing, publishing, and the periodical press. Wool manufactures, including woolen goods, worsteds, felt goods, carpets other than rag, wool hats, hosiery, and knit goods. Shipbuilding. Silk and silk goods. Agricultural implements. Paper mills. Boots and shoes. Leather, tanned and curried. Brickyards. Flour and grist mills. Cheese, butter, and condensed milk factories. Carriages and wagons. Leather, patent and enameled.

VIII. MINES AND MINING.—Mineral industries in the United States: Iron ore. Gold and silver. Copper, lead, and zinc. Quicksilver. Manganese, petroleum, and natural gas. Aluminum. Coal. Stone. Precious stones. Mica. Mineral waters. Minor minerals.

IX. FISH AND FISHERIES.—Statistics of fisheries by geographical divisions. Statistics of fisheries by name. Scientific and popular names of fishes, with their geographical distribution. Illustrations of the principal food fishes of the United States. Condensed description of fish by species. Statistical summary for each species for the United States.

X. TRANSPORTATION.—Railroads. Statistics for the year ended June 30, 1890. Statistics for 10 years ended in 1889. Lake, ocean, and river transportation. Canals. Transportation on the Pacific coast. Express business. Street railways.

XI. INSURANCE.—Fire, ocean marine, inland navigation and transportation, and tornado insurance business. Life insurance, showing the business of level premium, assessment, and co-operative companies. Miscellaneous insurance, including the business of accident, burglary and theft guarantee, hail, live stock, plate glass, and real estate title guarantee, steam boiler, surety, and windstorm insurance companies. Fraternal and other beneficiary associations.

XII. INDIANS.—Report and statistics of the condition of Indians living within the jurisdiction of the United States in 1890, including taxed and not taxed.

XIII. ALASKA.—Population and resources of Alaska.

XIV. VETERANS OF THE CIVIL WAR.—(Seven volumes of 1,000 pages each; publication not yet authorized.)

XV. STATISTICAL ATLAS.—(Publication not yet authorized.)

While the Eleventh Census has been a purely statistical one, and in this respect has been condensed, in certain other directions its scope was enlarged by several acts of Congress. (*a*) Prominent among the additional matters touched upon were the investigations relating to the ownership of homes and farms and the amount of mortgages secured by real estate, authorized by special act of Congress, appropriations being made therefor. Certain questions were added to the population schedules which never before appeared in a national census, such as the number of children born and number of these living at date of enumeration, questions relating to aliens and naturalization and ability to speak the English language. The form of the schedule was changed, and for the first time a family schedule was used as a prior schedule to a considerable extent, especially in large cities, this use being carried as far as seemed to be safe and economical. To what extent the prior schedule aided enumerators in their work is not definitely ascertained, but the impression is that in places where it was used intelligently and methodically it facilitated the work and increased the degree of accuracy. Of course a family schedule meant about 20,000,000 separate schedules, but with ample accommodations and mechanical tabulation they were easily handled. The information concerning each individual was transferred by punching to a separate card, and then the punched card took the place of the schedule.

In the Eleventh Census the card system was adopted for the tallying of results and the electrical machines were used for counting the cards. This secured results with great rapidity and accuracy, besides giving opportunity to make a more thorough analysis of the figures.

By the use of the electric tabulating machines it has become possible in the present census, for the first time in the history of statistical work, to aggregate from the schedules all the information which appears in any way desirable. Heretofore the amount of such information which could be evolved from the schedules had been limited, especially in the degree of complexity of the tables. It had been possible to obtain related statistics in tabular form only to a limited extent, but with the machines the most complicated tables can be produced at no more expense than the simpler ones. To illustrate this, attention need only be called to the first handling of the cards by the tabulating machines after they had been punched, by which were obtained for each enumeration district a primary classification of the population according to native white of native parentage, native white of foreign parentage, foreign white, native colored, and foreign colored. In 1880 no distinction was made for native white as to those of native or foreign parentage. Each of the primary classifications just noted for 1890 was in turn subdivided according to sex and by the following age periods: less than 1 year; 1 to 4 years; 5 to 9 years; 10 to 17 years; 18 to 20 years; 21 to 44 years; 45 years and upward. For all adult males of foreign birth a classification was also made as regards the number who have been naturalized, have taken out naturalization papers, or are aliens, together with a separate classification as to the number of aliens who can not speak the English language. In the same way for the native and foreign colored a separate classification was made as regards the number of blacks, mulattoes, quadroons, octoroons, Chinese, Japanese, and civilized Indians. For all householders, also, a separate classification was made as regards the number who hire or own their homes or farms, and if owned, the number of homes or farms that are free or mortgaged. The results of this first or preliminary count are shown by states, counties, cities, and wards of cities, and comprehend not only the simple statements as to the number of males and females, the number of native born and foreign born, the number of whites, negroes of pure or mixed blood, Chinese, Japanese, and civilized Indians, but the various combinations of facts relating to sex, color, and

a See acts, pages cxxx to cxl, inclusive.

general nativity for each of the principal divisions of the population as regards age, including children less than 1 year of age and children under 5 years of age, of special importance for purposes of vital statistics; the number of children between 5 and 20 years of age, or the ages covering most school attendants; the number of males between the ages of 18 and 44 years, or the militia ages; the number of males 21 years of age and upward, representing the potential voting ages, and the number of persons 45 years of age and upward.

Besides this, very interesting results are shown concerning areas, dwellings, and families, comprehending the total number of dwellings and families, the average number of persons to a dwelling, the average number of persons to a family, the number of persons to a dwelling in detail, as 1, 2, 3, or 4 persons, to the highest number reported; the number of persons to a family in the same manner, and for the larger cities a special classification of the number of families to a dwelling. The only tally made in 1880 as regards dwellings and families was by simply counting the number of families and the number of dwellings in the given district, and dividing the total population of that district by the number of dwellings and the number of families, in order to obtain the average number of persons to a dwelling and to a family.

The subsequent counts of the punched cards will number 4 or possibly 5. They furnish all the various particulars concerning each individual as regards place of birth in detail by states and foreign countries, ages by single years, occupations, months unemployed in remunerative occupations, foreign parentage, illiteracy, and conjugal condition, besides several new and important features of the present census as regards population. The inquiries concerning foreign born male adults as to the length of residence in this country, and whether they are naturalized or not, will furnish data in regard to the problem of unrestricted immigration. For all persons 10 years of age and over, either of foreign birth or foreign extraction, an inquiry was made as to whether they were able to speak the English language. The results of these inquiries, particularly as regards the alien element of our population, will determine the number who have not yet learned to speak the English language. Concerning all married women, also, a new inquiry has been introduced into the census, calling for the number of children born to them and the number of these children now living. This will aid in solving the question as to the relative fecundity of women of various nationalities. The present census law also calls for a subdivision of the colored population into blacks, mulattoes, quadroons, and octoroons. The result of this special requirement can furnish, however, only an approximation as to the real facts.

The separate enumeration of the names and service of survivors of the war of the rebellion has entailed a great deal of labor in the collection, correction, and classification of the results, comprehending records of from 1,200,000 to 1,500,000 veterans, and which, if published, will occupy 7 large quarto volumes of 1,000 pages each. At the last session of Congress no provision was made, however, for the printing of this huge directory of surviving veterans of the late war, and until such provision is made for the continuation of this work no further steps will be taken toward the completion of the results. Incidental thereto, by means of a special inquiry made on the population schedule, it will be possible to show for all surviving veterans their ages at the time of taking the census, where they were born, where they now reside, in what employments they are found, and what their present mental and physical condition may be; for the widows of such as have died a similar presentation can also be made.

In the subsequent counts of the cards the primary classification of the population into native white of native and foreign parents, foreign white, and native and foreign colored, has been observed in all cases. With the exception of the distinction already referred to for native white as regards native and foreign parentage, the results concerning single years of age and place of birth do not differ essentially from those arrived at in the census of 1880.

The results alluded to, as shown for 1890, were obtained in 1880 by the following tallies: a rough count showing the population by white and colored, by native and foreign, and by male and female. It is understood there were also tallied separately Chinese, Japanese, and civilized Indians, where such occurred. Age was tabulated by single years, according to the 6 following heads: native white male, native white female, foreign white male, foreign white female, colored male, and colored female. From this tally the various tabulations of age, race, and sex were obtained. The birthplace of persons residing in the United States was tabulated according to the forty-seven states and territories for the native born, with the distinction of white and colored, and according to some sixty foreign countries for the foreign born.

For foreign parentage there will be shown for 1890, as regards each of the primary subdivisions, a classification of birthplace of father in combination with the birthplace of mother for the following countries: United States, Ireland, Germany, England, Scotland, Wales, English and French Canada, Sweden, Norway, Denmark, Bohemia, France, Hungary, Italy, Russia, with a grouping of all other countries, and unknown. In 1880 foreign parentage was tabulated for a little more than one-half of the entire population, or 26,354,124 out of a total population of 50,155,783, according to whether the person was native or foreign born, and whether the father was born in one of the following 7 groups of birthplaces: United States, Ireland, Germany, Great Britain, Scandinavia, British America, and other countries, and according to the same 7 groups of birthplaces for the mother.

In 1890 the occupations as returned by the enumerators have been classified under nearly three hundred heads, following in the main the classification used in the Tenth Census, but with certain modifications and amplifications to meet the requirements of the present census. The results regarding occupations will be shown according to the primary subdivisions of population, as already noted, by sex, for the 18 places of birth referred to under foreign parentage, and for the following age periods: under 15; 15 to 19; 20 to 24; 25 to 34; 35 to 44; 45 to 54; 55 to 59; 60 to 64; 65 and upward. In 1880 occupations were tabulated under 265 heads, by sex, by 3 age periods, namely, 10 to 15; 16 to 59; 60 and upward, and according to 7 birthplaces, grouped as follows: United States, Ireland, Germany, Great Britain, Scandinavia, British America, and "Other Countries".

Regarding illiteracy, a tabulation will be made for all persons 10 years of age and over who can neither read nor write, or who are returned as being unable to write, subdivided according to the primary divisions of population, by sex, and for ages by quinquennial periods from 10 to 25 years, by decennial periods from 25 to 45 years, and for those 45 years and upward. In addition, such distinctions will be made as regards place of birth and occupations as may be necessary to determine the nationalities from which the larger part of this element of our population is derived, as well as the employments in which they are more commonly found. In 1880 the illiterates were tabulated according to native white, foreign white, and colored, and subdivided by sex according to the following 3 age periods: 10 to 14; 15 to 20; 21 and over.

One of the most striking illustrations of the improved methods of tabulation is the fact that in 1880 conjugal condition, even in its simplest form, could not be tabulated, though full data regarding the same were enumerated. In 1890, however, the conjugal condition of the people will be tabulated not only as regards native white of native and foreign parentage and foreign white, but for the colored a further separation will be made as regards the blacks and those of mixed blood, and for Chinese, Japanese, and civilized Indians, distinguished as to sex and age periods.

Speaking of errors, and they will creep in regardless of every precaution, recalls the fact that the punched card system provides a far better check against error than the old system of tallying. Every day a careful examination of the cards punched

by each clerk was made, and the percentage of errors found that would pass through the machine rarely exceeded 1 per cent. This system of examination comprised the taking of 25 to 50 cards at random and comparing them with the schedule. In the work of punching, three classes of errors are likely to occur: first, the card may be improperly punched, that is, some part of the information necessary to a complete transcript may be omitted; in all cases these cards are invariably rejected by the tabulating machines, and are not counted until the proper corrections are made; second, the record punched upon the card may be an inconsistent one, as, for instance, a young person less than 10 years of age may be recorded on the card as engaged at some remunerative occupation, as farmer, carpenter, etc., which, of course, can not be the fact and is an error in punching; such inconsistent transcripts must appear on the result slips when this class of information is tabulated, and are eliminated, as a matter of course; third, the card may be so punched that the error may be said to be a consistent one, that is, the information as punched may not be the exact fact, and still is not inconsistent with the other facts punched from the schedule as regards sex, place of birth, occupation, etc.; for instance, a person's age may be punched 29 years instead of 25 years, yet the facts as regards occupation, place of birth, etc., may be thoroughly consistent with such record. The latter is the only class of error which can not be detected by the work of subsequent tabulation. It is believed that the percentage of this class of error is entirely immaterial, particularly as it is as easy to punch a correct transcript as an incorrect one; on the first run of the cards through the machines the two classes of error which were detected only averaged a little more than 1 per cent of the total number of cards counted. In this connection it must be understood that of this percentage of error more than three-fourths are made up of omissions to punch 1 or more holes out of an average of from 14 to 17 holes to each card and less than one-fourth consists of incorrectly punched holes, this estimate being based upon a very careful examination of over 200,000 cards to determine the classes of error most commonly made. Another point should also be stated: in each punched card from 14 to 17 holes were necessary to represent all the information returned on the population schedule concerning each person enumerated; so that if, instead of basing the percentage of error, whether of omission or commission, upon the actual number of cards rejected, as has been done, it should be determined by the relation which the number of holes omitted or improperly punched bears to the whole number of holes punched in all the cards, the percentage of error discovered and corrected becomes hardly worthy of serious consideration, that is, less than one-fifteenth of 1 per cent. It is not likely that the errors that have gone undetected are consequential. The only way to insure absolute accuracy would be to compare every card, the cost of which would be so great that it would be folly to undertake it. With ordinary care and with additional checks the transcription of data has been certainly as accurate as in previous censuses.

Next in importance to the count of the people are the vital statistics and the statistics of the special classes; for after the number of our population, with its characteristics, distribution, and parentage, are found, the question of its health and physical condition naturally comes up for consideration. The report for the Tenth Census was far in advance of anything ever attempted in this direction before, and the great importance of complete and accurate records of vital statistics, including marriages, births, and deaths, is becoming more and more recognized in this country. Such records are the absolutely necessary foundation for well directed attempts to improve the health and lengthen the life of the people; to increase the productive efficiency of the workers; to form a sound basis for the enormous money interests involved in the business of life insurance, and for other purposes vital to the health and well-being of the population.

The great majority of states have still no satisfactory system for registration of vital statistics, although most of them are slowly being improved in this respect.

The accurate collection of statistics of mortality by means of the regular census enumerators was perhaps the most difficult undertaking imposed on the Census Office. The efforts to secure a statement of facts concerning the deaths occurring in any locality during the year preceding the date on which the inquiry was made necessarily fell short of securing a complete return. This fact was well understood, and every effort was made to supply deficiencies that could be successfully carried out. The most reliable data are obtained from those localities in which local laws require registration of each death at the time it occurs, and wherever the records were sufficient for the use of this office, copies have been made from them. This has been done to a much greater extent than in any previous census.

The most important new features of work in this direction are as follows:

(1) A special study of the birth and death rates and of the principal causes of death in 24 of our largest cities, to show where the highest and lowest death rates prevail, and what the relations of these are to topography, drainage, character of habitations, overcrowding, poverty, and other environments.

(2) A special study of the influence of race upon fecundity and mortality, including studies of the birth and death rates of negroes and whites, and of the principal European races which have contributed to the population of this country.

(3) A special study of the relations of occupation to death rates and to particular causes of death, as shown by a detailed study of figures derived from the records of our largest manufacturing cities for a period of 5 years, in addition to the data of the whole country for the census year which were obtained by the enumerators.

The records obtained from states and cities maintaining a compulsory system of registration of deaths are much fuller than those obtained in previous censuses, and cover an aggregate population of over 17,000,000. These records, in connection with those for the census year, furnish a continuous record of deaths for these localities for a period of 6 years, which affords more reliable information than anything which has heretofore been published with regard to the vital statistics of this country.

The insane, feeble minded, deaf, and blind were classified in the Eleventh Census under the head of "Special classes". A comparison with the returns of 1880 indicates that the enumeration of these classes has been upon the whole satisfactory, and the treatment of the returns will be substantially the same as 10 years ago.

A report on the social statistics of cities was inaugurated in 1880. It was decided to make a statistical report on this important subject, and the results have been highly satisfactory.

Nearly all the information for the treatment of social statistics of cities was collected through the several city officials, mostly without expense other than clerical work. Letters explaining the scope of the work were sent to all places having a population of 10,000 and upward, and the several chief executives were asked to co-operate with this office to enable their cities to have full representation in the final report. Schedules were then prepared, covering all points to be treated, and so divided that each one could be referred to the officer having jurisdiction of the subject to which it pertained. There were 12 schedules covering the following points: altitude, cemeteries, drainage, fire, government, licenses, parks, police, public buildings, streets, street lighting, and waterworks.

As to securing information relating to pauperism and crime for tabulation, there was no essential difference between the Tenth and Eleventh Censuses. Schedules were sent to the larger institutions to be filled by the officers in charge, and for the smaller institutions reliance was placed upon the regular enumerators. The inquiries contained in these schedules were for the most part identical with those 10 years ago, though

some new questions were added, and it is believed that the forms of the schedules were materially improved. A new feature in the Eleventh Census, however, was the appointment of institution enumerators selected by the authorities in charge of the institutions, and the payment of such enumerators, a method which was found to work admirably in practice. The same plan was adopted with all benevolent institutions. In this way were secured 3,000 or 4,000 of the very best equipped persons as enumerators for a class of work that would be difficult for ordinary enumerators to perform. The statistics of crime and pauperism for 1890 compared with those for 1880 show no alarming growth of these evils during the past decade. The number of prisoners returned in 1880 was 58,609; in 1890 it was 82,329; an apparent increase of 40 per cent against an increase of a little less than 25 per cent in the population at large. But an examination of the figures shows that this relative increase has been in the population of minor prisons, not of penitentiaries, and it does not indicate any greater prevalence of serious crime; indeed, it may be due merely to greater care and severity in dealing with disorder and petty misdemeanors. The number of paupers in almshouses returned in 1880 was 66,203; in 1890 it was 73,045, an increase of only about 10 per cent, or less than half what might have been anticipated. The number of juvenile delinquents in custody in 1880 was 11,468; in 1890 it was 14,846, an increase of between 29 and 30 per cent, or very nearly the same as that of the total population.

In Census Bulletin No. 90, relating to the almshouse population, a table is published by way of an appendix, which shows the number of outdoor paupers found and returned by the census enumerators. These figures have been much misunderstood by persons who have failed to comprehend that no statistics of outdoor relief can be procured through the agency of the enumerators, for the obvious reason that they can not ask at every house whether any of the members of the household are paupers. Their local knowledge enables them to report a few of this class. Both in the censuses of 1880 and 1890 such information as has been obtained in this way has been given to the public chiefly for the purpose of demonstrating the futility of any effort in this direction. It should be known and understood that probably not one outdoor pauper in 10 ever has been or ever will be discovered and reported by the census enumerators.

Education was a subject of national census inquiry for the first time in 1840, 50 years ago, when in no entire state but the commonwealth of Massachusetts were public schools and free schools synonymous. The change in the system for the support of schools which almost immediately after that census set up the union free school as a standard in a town of New York spread across the new states of the west except Indiana for the time by an adverse judicial decision, and since the civil war almost the whole union has come into line for local taxation to secure the support of public schools. The public provision for superior and secondary as well as elementary education has widened. The records show a more rapid growth of school enrollment than of population, indicating how vital an interest this is to the people. The general conditions for each decade of pupils enrolled in schools, exclusive of reformatory, charitable, and Indian schools and schools for special classes, appear to be as follows:

ITEMS.	1840	1850	1860	1870	1880	1890
Population	17,069,453	23,191,876	31,443,321	38,558,371	50,155,783	62,622,250
All schools	2,025,656	3,042,694	5,477,037	7,210,420	.....	a14,373,670
Primary and common 1840, public 1850 to 1890.	1,845,264	3,354,173	4,955,894	6,228,060	9,951,608	12,705,386

a Including private, 804,204; parochial, 799,602; additional public, 64,478.

The conditions point out two distinct lines of census inquiry on education. Along one of these lines the population schedules embodied questions as to age, sex, parent nativity, occupation in which attendance at school as teacher or pupil is included, and illiteracy, from which can be derived tables showing the amount of time used in teaching or by children as pupils, as well as an analysis of the occupations and nativities of illiterates. It is to be remembered that school age pertains to state laws, and that there is no national school age. The state laws vary so greatly on this point that it is better for a national census to give the facts for each year from 4 years, the minimum in any state, to 21 years, the maximum in any state. Individual states can then derive from the national census reports such facts as are useful under their own laws. The items above named have never been sought except to a very limited extent by any authority other than a national or state census, and for the country as a whole by a census only. Few states have yet taken a separate census. Except through the decennial national census no statistics of national illiteracy have hitherto been available.

The other line of inquiry ought to be readily handled, and educators and school officers should see to it that it becomes easy for even a private individual to gather the facts for his own satisfaction in any year. This line of inquiry is the reports of the institutions as distinguished from the statements by the heads of families. It is now a laborious inquiry, not altogether satisfactory, because of the exceeding diversity of records, and it is no light work to gather even the public school enrollment.

Taking warning from the fate of educational statistics in the Tenth Census, which largely failed of publication, it was determined to confine the inquiries in the Eleventh Census to a small number of essential questions most readily answered, the results of which would be capable of being promptly prepared for publication. The schedule sent out for the public common schools, therefore, asked only for the number, sex, and color of the teachers and pupils, and a separate statement for those in high schools. Simple as this schedule was, it was necessary to send thousands of inquiries to local officials in some of the states because the ordinary report took no account of sex or color. Even number is not a simple matter in practice, whatever it may seem in theory. In some cases the promotions, re-enrollment, and transfers within the year all went to swell the annual enrollment, while in other cases all such duplications were carefully excluded. Sex was omitted from the usual reports of 20 states at the time of taking the census; the chief officials in 7 of these states were able, however, to adjust their reports for the census year so as to report sex. Passing by the important question whether more boys or more girls are occupied in wage labor, and so disturb the balance of the sexes in elementary schools, it is well known to those who have paid special attention to the subject that in the country at large girls greatly predominate over boys in high schools, so that it becomes a question of consequence whether the high schools are equably educating the young people or whether they tend to become young ladies' seminaries, yet the attendance by sex is not, in certain states, a matter of state record. In the nation, color becomes an important item as a superficial indication of race, though in large portions of the country one race is almost absolutely prevalent to the exclusion of others.

Where race was not a matter of record it was not presumed that a teacher would find it difficult to make a suitable estimate of the few colored pupils enrolled in the census year from his knowledge of changes by the time inquiries reached him. The press has rendered invaluable aid to the census, and so to the community, by criticism upon the inadequate showing in census bulletins of the reports furnished by the local authorities on color in the schools. The criticism of the newspapers led some officials even to send corrections for their original reports, but for those portions of the country where the colored race is in small numbers, and taught in the schools of the whites,

the returns inadequately represent the distinctive facts. The fullness and accuracy of reports of institutions depend on school officials. If the records are defective, no inquiry after the year is ended can be readily answered, and so for all institutional reports the first essential is completeness of the leading items of record. If the local records are properly made and preserved, their compilation into state and national tables will be a very simple and easy matter, not very burdensome upon any agency that may do the work.

In the absence of anything like a uniformity of record of attendance, it was deemed wholly impracticable to secure the exceedingly important item of effective attendance, which could be expressed by the aggregate number of days' attendance of all pupils. It is an evidence of the energy with which the work has been pushed that the facts as to public schools were available to the public, county by county, at so early a date. The final results show 14,373,670 pupils in all schools, including 804,204 in private schools and 799,602 in the subdivision "Parochial schools".

The enrollment in the public common schools of the United States in the Eleventh Census year is shown in the following statement:

TEACHERS AND PUPILS.	Total.	White.	Colored.
Teachers	362,008	337,896	24,112
Pupils	12,705,386	11,358,525	1,346,861

The Census Office has occasion to recognize a very general and cordial co-operation by public and private school officers and managers of parochial schools.

For the first time the United States census has secured complete church statistics. By limiting the number of questions and by the most persistent and voluminous correspondence, the number of church communicants is shown by counties in something like 150 religious denominations, including the various branches. These statistics have been gathered expressly for the Eleventh Census. The plan adopted was to secure the statistics desired through the clerks of the various ecclesiastical subdivisions. In churches having a presbyterian form of government the stated clerks of presbyteries were requested to gather the statistics from the churches within their jurisdiction by the use of printed circulars, enter the results in schedules, and forward them to the Census Office. In some churches having an episcopal form of government this work was placed in the hands of the secretary or bishop of the diocese; in churches having annual conferences the presiding elders of districts, who visit all their churches once every quarter, were commissioned to obtain the desired information; in denominations having no ecclesiastical conferences or associations each pastor was addressed directly. This plan worked admirably. It would have been impossible to communicate with all pastors direct, because in many churches they change their location very frequently, and new congregations are being constantly organized, so that reports obtained in this way would be necessarily incomplete. Each stated clerk of a presbytery, secretary of a diocese or association, or presiding elder of a district knows intimately all the congregations within his jurisdiction, and this fact insures complete and intelligent reports. The number of secretaries, stated clerks, presiding elders, and individual pastors who have assisted in obtaining statistics is very large. Many of the denominations for which full returns have been obtained never gave to the public before any statistics whatever.

The work of the wealth, debt, and taxation division of the census has been modeled after the work of 1880, which the present Superintendent of Census had the honor to compile. The first volume of this work, relating to public debt, is now completed and in the hands of the printer. Except in the matter of receipts and expenditures, the scope

of the work for 1890 is not much greater in extent than it was for 1880, but the work is far more exhaustive in detail. In 1880 the debt of only 27 foreign nations was compiled, and these from unofficial sources; for 1890 full official details are published of 83 countries, and their per capita. The debt of the United States is also given much more in detail for 1890 than it was for 1880, and with it is shown the paper and coin circulation, which was not shown in 1880. In 1880 the debt of the states of the United States as published showed few, if any, details, and no account was taken of the funds held by the states, either in amount or character. For 1890 complete details of every outstanding loan and of all funds on hand are shown for each year from 1880 to 1890. The municipal and school district debt was not published in detail in 1880 except for New England. For 1890 every place that has a debt is reported and compared with like statistics, as far as shown, for 1880. In 1880 the rates of interest upon the state and local bonded debt were published. For 1890, in addition to rates of interest, there is shown the amount of the interest charge by states upon the state and local bonded debt and compared with like information for 1880.

In 1880 the receipts and expenditures of only 310 municipalities, being those having a population of 7,500 or upward, were given. For 1890 not only will the expenditures of these cities be shown but the receipts and expenditures of the states for 10 years, in detail, of all the counties where information can be obtained, of all municipalities having a population of 4,000 or upward, 905 in number, and of all the school districts in the United States by counties, showing in detail the source of all receipts and the objects of all expenditures.

In 1880 no details of valuation of cities having a population of less than 7,500 were shown except in New England, Michigan, New York, Pennsylvania, and New Jersey, and in the three latter states and Ohio the details of taxation were not shown. For 1890 the valuation and taxation of every place in the country having a population of 1,000 or upward will be published, and probably in the New England states, New York, Pennsylvania, New Jersey, and some other states, every place with a debt-creating and taxing power.

The estimate of true valuation is necessarily based on data more or less incomplete and imperfect. Prior to 1880 no attempt was made to go outside of the assessors' returns. As a means of introducing an initial correction into the statistics of valuation of real estate in 1880, the present Superintendent of Census, then in charge of the statistics of wealth, debt, and taxation, addressed circulars to an immense number of bankers, real estate agents, business men, and public officials connected more or less directly with the valuation of property for purposes of taxation. Answers to these circulars were received from every county in the United States, and in many cases they contained data showing the assessed value of certain pieces of property, with the actual selling price of the same property. An attempt was also made in that year, for the first time, to obtain the amount of capital invested in trade and banking outside of the assessors' returns. It is fair to assume that the estimates of the actual wealth of the country were based upon a greater variety of data in 1880 than ever before, and hence more reliance may be placed upon the results of that investigation than upon those of previous censuses. In preparing the estimates of wealth of the United States for the present census the same care has been exercised, and as far as practicable the same plan has been pursued.

To collect statistics of the ownership of farms and homes and the indebtedness thereon throughout the United States was a novel not to say a bold step in statistical inquiry. Old statisticians shook their heads and said the obstacles in the way of such an investigation were too great to overcome. All over the country could be heard murmurings of discontent and declarations that the people of the United States would

never submit to such an inquisitorial inquiry relating to their private affairs. Reckless newspapers made this investigation, forced upon the Census Office by almost a unanimous vote in both houses of Congress in spite of repeated protests, an excuse for attacks upon the whole census, and called upon the people to resist the enumerators, if necessary, with force. Meantime the Superintendent of Census was sorely perplexed. This novel inquiry had been ordered on the very eve of sending out the population schedules. Those schedules were complete, and the public printer was ready to start the printing of 25,000,000, the probable number required. No time could be lost. To put questions in the population schedules asking every individual in the United States the amount of the mortgage on his farm or home, the motive for contracting the debt, and the value of his property, would have swamped the constitutional enumeration of the people. The amount of irritation which would have been aroused had this course been adopted can not be estimated. The enumeration of the people would have been endangered and to no purpose, because in the very nature of things the enumerators would have failed in half the cases to obtain the desired information about mortgages. The accepted theory of the census is that the enumerators see personally about one in every seven of the inhabitants. Already the population schedule of the census was bowed down with the burden of a double yoke. There were twice as many questions as should have been propounded before those relating to mortgages were added. These questions, however, were made as easy as possible by throwing out all reference to the amount of the indebtedness, interest, value of property, etc., and confining them to a simple inquiry as to whether the farm or home was owned or rented, and if owned, whether free from debt or incumbered by a mortgage. In cases of ownership with incumbrance and of incomplete reports, the enumerator was instructed to give the name and address of the owner or head of family, and by subsequent investigation the remaining information required by law was obtained. This solution proved a practical one, and it has formed the basis of one of the most valuable investigations ever undertaken by any government. While the addition of these and other questions, such as those relating to the veterans of the late war and other inquiries, increased the cost and added to the difficulties of the constitutional enumeration, and while the individual voice of the present Superintendent of Census will always be raised against thus overloading the population schedule with special inquiries, it is safe to assume that, owing to the high character of the supervisors and the faithfulness and intelligence of the vast body of enumerators, the enumeration of the people did not suffer to any serious extent. At the same time future legislation should simplify the population schedule and relegate all questions relating to special inquiries to other schedules.

From a statistical standpoint the work of collecting information in regard to mortgage indebtedness of individuals and private corporations has been prosecuted with a success far beyond the anticipations of statisticians who have studied the question for years. The employment of a small army of 2,500 special agents and clerks to make an abstract of every mortgage placed on record throughout the United States for the last 10 years has attracted attention to the dangers of these incumbrances, to the enormous burdens in the way of interest, to the alarming extent to which usury is practiced, and to the defectiveness of these records in all parts of the country. The agents of the Census Office have traveled on horseback and on foot through the most sparsely settled districts of our vast domain in search of mortgages, and have done their work so industriously and so thoroughly that there are now on file in Washington, as a result of their labor, the abstracts of about 9,000,000 mortgages, and of this number nearly 4,000,000, representing 800 counties, have been tabulated. Some months before the inquiry was begun Congress, and through Congress the public, was put in possession of the scope of the plan adopted. That plan, with hardly any change, has been successfully carried out.

The two important features brought out in this inquiry are the amount of mortgages placed on record each year for 10 years and the amount of the existing debt. It would, of course, be absurd to accept the amount of the uncanceled mortgages as the amount of debt in force. Such an exhibit would manifestly be a gross exaggeration unworthy of confidence. The extent of this defect in the records has been ascertained by the Census Office in 102 counties, representing all parts of the country, and in 61 of these counties the face of the uncanceled records exaggerates the true amount of the debt by 71 per cent on the average. It was therefore decided to make a transcript of the record in every case for 10 years and ascertain therefrom the average life of a mortgage.

Preliminary experiments by special agents of the Census Office pointed to the use of the average life of mortgages, with an allowance for partial payments, as promising results much nearer the truth, near enough, at any rate, to be fairly conclusive as to the amount of existing indebtedness. This plan is approximately correct, and under perfectly uniform conditions would produce accurate results. An objection that can be raised against it is that mortgages are not uniform in amount and number recorded each year. These variations, however, when large amounts of debt are considered, are not as great as may be supposed, and under careful observation and corrective treatment lose much of their influence for error. If the average life of all mortgages under such circumstances is 4 years, and the total amount of the mortgages recorded within the last 4 years is taken as equivalent to the amount of indebtedness existing at the present time, it is evident that many paid mortgages created within the 4 years are included within the amount, and that many unpaid mortgages created more than 4 years ago are not included. In such cases it is true, if the average life of mortgages is correctly represented, that the mortgages of the life period of 4 years now paid are exactly equal to the mortgages made previous to the life period and now unpaid, so that the total recorded debt of the life period stands for the amount of debt in force.

The agents were therefore instructed to transcribe for every real estate mortgage acknowledged and received within the 10 years ended December 31, 1889 (except mortgages made by public and quasi-public corporations), the following facts: the state and county in which the mortgaged real estate is situated; the year in which the acknowledgment was made; corporations, both as mortgageors and mortgagees, classified as savings banks, banks (including loan and trust companies, but not including savings banks), building and loan associations, insurance companies, mortgage corporations, and all others; the original amount of the debt; the actual rate of interest, or, if not ascertainable from records, the customary rate at the time; the number of incumbered acres and city or village lots; and also, for the canceled mortgages of 1880–1883, the full dates of acknowledgment and cancellation. For the purpose of checking this inquiry special investigations were conducted in the 102 counties already indicated, representing every phase of American life and industry. In these counties the same facts were taken from the records as in other counties, and also for all uncanceled mortgages as far back in time as any appreciable number of them were found in force the names and addresses of the parties. Schedules were sent these persons, and in each one of these counties an exact statement of existing debt has been compiled. The enormous cost would preclude this method for the whole country, but work in what is termed "inquiry" counties has been of great service in correcting the work elsewhere. The "inquiry" counties also reveal the purposes for which the debt was incurred. By far the largest proportion of real estate mortgage debt has been incurred to secure the purchase of land, and the cost of improvements stands second in importance. The security of purchase money is generally 50 to 75 per cent of the real estate mortgage debt of the people of a county, and improvements generally represent from 10 to 20 per cent of the debt.

The following table summarizes the results of this inquiry as far as possible to date:

ITEMS.	Alabama.	Iowa.	Kansas.	Tennessee.	Illinois.	Missouri.	Nebraska.
Number of mortgages recorded during 1880–1889.	93,828	520,448	654,243	93,282	612,249	488,085	337,872
Amount of mortgages recorded during 1880–1889.	$91,099,623	$439,936,354	$498,653,903	$100,212,257	$870,699,940	$537,027,754	$274,368,358
Number of mortgages in force January 1, 1890.	35,331	252,539	298,880	39,470	297,247	192,028	155,377
Amount of mortgages in force January 1, 1890.	$39,027,983	$199,774,171	$243,146,826	$40,421,396	$384,299,150	$214,609,772	$132,902,322
Number of acres covered by incumbrance January 1, 1890.	5,997,613	16,307,145	26,577,522	3,018,045	10,660,987	10,159,021	14,085,290
Number of lots covered by incumbrance January 1, 1890.	14,189	163,674	265,341	32,896	286,148	155,441	94,772
Number of acres incumbered during 1880–1889.	16,175,153	33,864,721	58,510,089	7,269,279	21,578,919	26,193,263	30,935,681
Number of lots incumbered during 1880–1889.	34,649	303,556	544,934	65,566	602,152	395,490	208,969
Percentage of debt in force of debt recorded 1880–1889.	42.84	45.41	48.76	40.34	44.14	39.96	48.44
Percentage of assessed acres incumbered January 1, 1890.	21.63	46.95	61.56	11.65	30.78	25.41	58.13
Equated life of mortgages (in years)	2.73	4.92	3.38	2.81	4.02	3.06	3.24
Range of interest rates (per cent)	1–40	1–20	1–60	1–12	1–18	1–80	1–64
Amount per capita of mortgages in force January 1, 1890.	$26	$104	$170	$23	$100	$80	$126

The exhaustive investigation made in connection with the Tenth Census as to the production of meat, cotton, tobacco, and the cereals, and likewise into forestry, has rendered it unnecessary that the present inquiry should be extended beyond the developments and other changes of the past 10 years. The most striking features of the agricultural report consist of subjects that have never before had any prominent place in census investigation. Among these are horticulture, viticulture, irrigation, the production of sugar, and the peculiar conditions of farm occupancy which prevail in the southern states. All of these carry with them their own justification, horticulture being a subject of more or less importance in almost every state in the union; viticulture, an interest that is rapidly coming into the front rank, especially in the states of California and New York; the production of sugar, an industry that is now attracting a more than ordinary amount of attention; the cultivation of the soil by the freedmen of the south, a matter involving social and economic questions of far reaching importance; and irrigation, the agency to which some of the most prosperous agricultural regions of the United States owe their present productiveness, and probably the only method by which a large portion of the arid belt can ever be successfully brought under cultivation. The most important investigation that is entirely new is that of irrigation in the arid and subhumid states and territories. The intricate question of farm occupancy in the south, the outgrowth of the former condition of slavery, has been carefully investigated, and an endeavor made to trace the almost invisible line which divides the farm laborer from the tenant farmer. While various minor products of the soil have been taken account of for the first time in each of the great divisions into which agriculture naturally falls, it is in horticulture that the work of the division is mainly broadened. The success of this work may best be judged by the statistics of viticulture, floriculture, nurseries, and seed and truck farms, which appear in the report. Without undertaking such an elaborate report on meat production as was published 10 years ago, there has been a special enumeration of range cattle and the usual returns of live stock on farms.

In no branch of the census work was the plan laid with greater care than in the division relating to manufactures. More than a year before the enumeration consultations were held with manufacturers, officers of trade associations, economists, statists, and men of affairs. As a result, it was decided to obtain individual reports

from every establishment of productive industry. New questions were added only after mature consideration. The subdivisions of the inquiry respecting capital employed were calculated to develop the full amount of such capital, both owned and borrowed.

Under the head of labor and wages a classified wage table was used which comprehended all classes, showing separately males above 16 years, females above 15 years, and children; it required the average number employed during the year and the total amount paid in wages, but called for a statement of these facts by classes, that is, for a distinct statement respecting the officers of corporations and members of firms; clerks and salesmen; operatives, engineers, and other skilled workmen; watchmen, laborers, teamsters, and other unskilled workmen, and all pieceworkers not included in the foregoing. To this was added a series of inquiries which would develop the weekly rates of wages paid and the average number employed at each rate; the average term of employment in weeks during the year, and the average daily term of employment in hours.

The preliminary results show a large increase in number employed and value of product and capital invested, in such relation as to leave little doubt regarding the thoroughness of the work. The withdrawal of the schedules relating to manufactures from the regular enumerator was the emancipation of American industrial statistics. Three times as many cities and towns were taken out of the hands of the enumerators as in 1880, and the result has been most satisfactory. By the provisions of the census law the Superintendent of Census has authority, whenever he may deem it expedient, to withdraw the manufacturing schedules from the enumerators and charge the collection of the requisite data upon experts and special agents, to be appointed without regard to locality. Under the authority thus conferred the collection of the statistics of manufactures in 1,040 cities and towns, without regard to population, was withdrawn from the general enumeration and the duty assigned to special agents appointed immediately after the completion of the count of the people. In all localities where the statistics were not withdrawn, as above noted, the returns have been collected by enumerators.

In the case of the following industries special reports were directed to be made by expert special agents charged with this duty, as noted in each case: chemical industry; clay and pottery products; coke and glass; cotton goods; distilled spirits used in the arts, manufactures, and medicine; electrical apparatus and appliances, their manufactures and uses; manufactured gas; iron and steel; mixed textiles; printing, publishing, and the periodical press; salt; shipbuilding; silk and silk goods; wool and worsted.

Special schedules were prepared for each of the following industries, covering the general and technical details relating to each, which manufacturers engaged therein regarded as best adapted to elicit accurate information as to existing conditions:

No. 1. Agricultural implements.
No. 2. Paper mills.
No. 3. Boots and shoes.
No. 4. Leather, tanned and curried, including morocco leather.
No. 5. Lumber mills and saw mills.
No. 6. Brickyards.
No. 7. Flour and grist mills.
No. 8. Cheese, butter, and condensed milk factories.
No. 9. Slaughtering and meat packing.
No. 10. Chemical manufactures.
No. 11. Clay and pottery products.
No. 12. Coke.
No. 13 Cotton manufactures.
No. 14. Dyeing and finishing of textiles.
No. 15. Electrical industry.
No. 16. Glass.
No. 17. Manufactured gas.
No. 18. Iron and steel.
No. 19. Printing, publishing, and the periodical press.
No. 20. Shipbuilding.
No. 21. Silk and silk goods.
No. 22. Wool manufactures.
No. 23. Hosiery and knit goods.
No. 24. Carriages and wagons.
No. 25. Salt works.
No. 26. Leather, patent and enameled.
No. 27. Petroleum, refining.

A supplemental schedule was also prepared for distilled spirits used in the arts, manufactures, and medicine.

In the case of all industries for which special schedules had not been provided, as above set forth, a general schedule of questions had been prepared, with a view to collecting data which would clearly show the general characteristics of each branch of manufactures to be reported on the general schedule.

A quarto volume of about 1,000 pages, with illustrations and maps, relating to the mineral resources in the United States, has been issued from the Government Printing Office, consisting of reports with the following titles:

Manganese, petroleum, and natural gas.
Gold and silver.
Coal.
Stone.
Quicksilver.
Antimony, asphaltum, ozocerite, gypsum, infusorial earth, corundum, millstones, whetstones, asbestos, graphite, soapstone, barytes, ocher, fluorspar, lithographic stone, sulphur, and pyrites.
Iron ores.
Copper and lead and zinc.
Precious stones.
Phosphate rock.
Aluminum.
Mineral waters.
Mica.
Marl.
Tin, nickel and cobalt, chromic iron ore, platinum, and iridium.

The increase during the decennium of the number of persons employed, the quantity of product, and the value of product, indicate that the work has been thoroughly done. The favorable reception of the bulletins on mineral resources by the scientific journals of this country and Europe has been alike gratifying to the experts in direct charge of the work and to the Census Office.

The inquiries contained in the schedules relating to fish and fisheries are much more numerous and far reaching than have been used in any previous census. The work is well advanced, and the final volume, as planned, will contain the following statistics:

Fisheries of the Great Lakes.
Marine mammalia.
Fisheries of the Pacific states.
Cod and ground.
Menhaden.
Sea herring.
Mackerel.
Lobster.
Oyster.
Boat fisheries of the Atlantic ocean and Gulf of Mexico.
Shad and alewife.
Sponge.
Alligator.
The inland fisheries.
Carp.

In addition to the 16 subdivisions of the fish and fisheries report above enumerated, there is in preparation a manual of the food fish in the United States. This manual will contain illustrations of the principal food fish, and will include under each species of fish and marine mammal described the following points of information:

(*a*) The geographical distribution.
(*b*) The scientific and popular names.
(*c*) The measurement and weight.
(*d*) The means of capture.
(*e*) The uses, etc.
(*f*) The statistical summary.

The statistical features of the final report will be very complete, and possess great economic value.

Many valuable returns from the division of transportation have been put in type, which has for its field of labor the railroads, the carrying trade of lake, ocean, river, and canal, and the express business and street railways. With the exception of the railroad statistics, all the work done by this division has either been taken up for the first time by the present census or has been so developed and enlarged as to be practically new.

The railroad statistics embrace a full presentation for the 10 years ended 1889, and a still more detailed presentation for the fiscal year ended June 30, 1890; the facts and figures which have been prepared dealing with the mileage, operations,

and administrative and financial conditions of all the railroads of the country for more than a decade.

The report on street railways is a new feature, and will stand as a precedent for future labors.

The work of securing the vast amount of information relative to transportation by water has been a most difficult one, because of its largely experimental character. Those difficulties, however, have been overcome, and the statistics which have been prepared concerning the equipment, tonnage, value, ownership, freight traffic, expenses and profits, employés, and wages are such as enable the Census Office to furnish a complete record of all that is worth knowing concerning the industry of transportation by water as conducted by American craft.

The report on express companies is entirely new.

The statistics of the fire, marine, and inland insurance companies for 10 years are all completed. Of the old line life insurance companies, the statistics have been gathered and the data prepared for the census year. The statistics of the assessment and co-operative insurance companies (fire and life), the fraternal and independent beneficiary organizations, miscellaneous insurance companies, and the fire department and water supply of the United States have also been gathered.

The census of the Indians embraced two propositions, as called for in the act authorizing the present census; the first was their enumeration; the second, a report on their condition. A bulletin, No. 25, was issued as early as January 29, 1891, giving the approximate census. For the enumeration of 53 reservations the United States Indian agents were appointed enumerators. A corps of special agents was also appointed, who visited each reservation, and saw that the census was properly taken or had been so taken, and made a report on the condition of the Indians of each reservation.

The Five Civilized Tribes were enumerated by Indian and white enumerators under the charge of a special agent for each of the tribes, who also reported on their condition. A very large white and colored population was found in the five tribes, equal to that of several of the smaller states of the union. The Six Nations of New York were enumerated and reported by a special agent. The Cherokees of North Carolina and the Moqui Pueblos of Arizona and Pueblos of New Mexico were also enumerated by special agents. A series of illustrations was made with brush and pencil, and also by the aid of the camera, which will give an exhaustive idea of the actual condition of the Indians in 1890. 7 artists of standing were appointed special agents, who contributed much toward making this census a success. The Indians taxed, or those living off reservations or out of tribal relations, were enumerated by the regular enumerators. The enumeration of the Indians included some 30 states and territories, and besides employing some hundreds of the regular enumerators, there were 94 Indian agent enumerators and special agents in the service, not including those in the Indian territory and with the Navajos. The work was a serious problem, but has been satisfactorily completed to the point of publication.

The list of names of all tribal Indians except 3 has for the first time been obtained by the Census Office, and in many cases both the Indian and the white names are given. The scope of the work was large, embracing age, wealth, resources, and all items of an economical and historical nature.

The work of taking the census of Alaska has been prosecuted successfully. The report on Alaska is in the hands of the printer. Besides a complete enumeration of the Alaskan population, the report will give an exhaustive review of Alaskan commerce and resources, and contain a number of excellent monographs, by intelligent residents of Alaska, descriptive of their sections of the territory. The statistics of fisheries and of mining have also been collected. Under the plan adopted it has been possible to make

the statistics of the native population of Alaska as complete as those of our general population in regard to conjugal condition, language, and illiteracy. The report will be amply illustrated with plates and maps.

It has seemed advisable to put in this permanent shape a review of the main features of the organization and administration of the Census Office. As has been said, the Eleventh Census has been more statistical and has dealt less with latent resources and the technology of industries than the Tenth. The Eleventh Census includes in its scope several new features, such as the investigation into private and corporate indebtedness and the special inquiry relating to the soldiers of the late war and the widows of veterans. Several questions added to the population schedule will throw light upon important investigations. A report has been made upon the condition of the Indians, and valuable reports on the statistics of education, churches, and the fisheries are ready for the printer. To this extent the Eleventh Census has undoubtedly taken a decided step ahead of other censuses. The population work has been strengthened. There is no reason to doubt that the enumeration of the people was fully equal to the enumeration of the Tenth Census, and that enumeration could not be excelled under the present system. The tabulation has been improved and the classification greatly extended. Facts were collected in 1870 and 1880 which were never tabulated, but their counterpart to date will find their way into the final reports. As five-sixths of all the experts and chiefs had experience in the Tenth Census, the office has benefited by their experience. In the special work healthy statistical advancement has been made all along the line. The impossible has not been attempted; the number of questions has been reduced whenever practicable, confining them strictly to the salient points. Without trying to be too original, the plans were gladly taken up where the Tenth Census laid them down. In this way the vital statistics were strengthened by the 5-year registration work; it was possible to secure correct schedules of the special classes by institution enumerators; the electrical tabulation was brought to bear on the statistics of population, pauperism, crime, benevolence, agriculture, and mortality; all but the essential questions in the educational schedules were discarded; the work relating to religious bodies was reduced to a point where the preachers and ecclesiastical officers could readily answer the questions and this office could promptly tabulate the replies; the wealth, debt, and taxation work was strengthened at every point; several new and important inquiries were added to the agricultural, and horticultural statistics, including subjects omitted by all previous censuses; the number of places in which the manufacturing statistics were withdrawn from the enumerators were trebled and the collection was placed in the hands of competent special agents, and every expert was brought under the control of a central head at Washington, so there could be no overlapping; the same method was applied to the statistics of the mineral resources; the inquiry relating to fish and fisheries was made more statistical; several new and important features were added to the statistics of transportation; the 10 years' work and the fraternal and independent beneficiary assemblies were included in the insurance branch; a complete report of the condition of all the Indians was made, and the reputation of the Tenth Census on the report on the population and wealth of Alaska has been kept up. With all these inquiries the word failure can not be applied to a single investigation.

Although feeling justly proud of some of these achievements, the Superintendent of Census acknowledges that much more remains to be done and that many imperfections exist, and in this the honest judgment of his colaborers concurs. These imperfections are not the result of dishonest work, of incompetent work, of slovenly work; they are the result of the system under which the census is taken. Time enough is not allowed to start the machinery of this tremendous inquiry, embracing so many subjects and such

infinite detail. The work which, if properly done, would be sufficient for a life study of 40 or 50 bright specialists, is dumped upon the shoulders of a man taken from some other occupation, who was directed by act of Congress to raise an army of 60,000 recruits, most of them necessarily raw, and perform the task. If he takes time to do it, the public becomes impatient. If he puts it through rapidly, croakers rise up all over the land and declare the work can not be correct. The remedy for all this is a permanent Census Bureau, and already the intelligent public sentiment of all political parties is crystallizing in this direction. People are beginning to realize that the faults and errors of this census are not the shortcomings of any one man, but those of a system.

In concluding this review of the work of the Eleventh Census and introduction to the Compendium it is only just that mention should be made of those who have aided in the compilation of this volume. The expert special agents in charge of the several divisions will receive due credit in their respective volumes. Mr. Henry Gannett, Geographer of the Tenth and Eleventh Censuses, has shared much of the most responsible work with the present Superintendent of Census, as he did with General Francis A. Walker in 1880. Mr. William C. Hunt, expert special agent in charge of the population division, upon whom has devolved the entire tabulation of the population tables, deserves great credit for the skill and accuracy displayed in the preparation of the tables of this volume, while mention should be made of his principal executive officer, Mr. Howard Sutherland, who has been indefatigable in the performance of his duty. Valuable assistance in revision of copy has also been rendered by Mr. A. E. Shuman and Mr. James H. Blodgett. The typographical arrangement of this volume devolved upon the late Orlando C. Ketcham, whose death is a great loss to the Census Office. The thanks of the Superintendent are also due to the present chief of the printing division, Mr. Charles F. Warren, and Mr. Spencer N. Benerman and his corps of proof readers for painstaking and critical work in correcting the proofs. No public officer was ever aided by more faithful, competent, and conscientious assistants than the Superintendent of the Eleventh Census.

ROBERT P. PORTER,
Superintendent of Census.

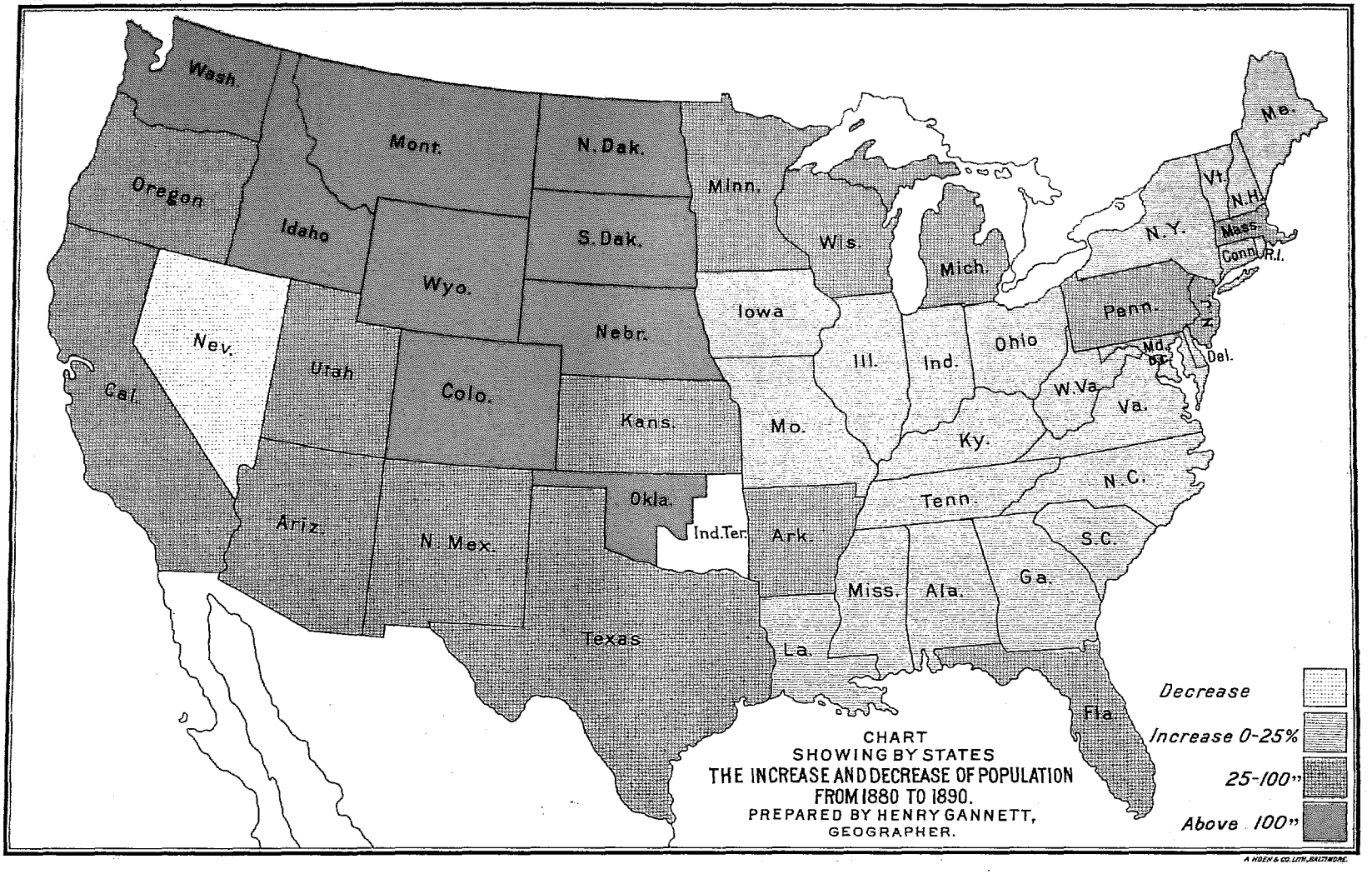


CHART
SHOWING BY STATES
THE INCREASE AND DECREASE OF POPULATION
FROM 1880 TO 1890.
PREPARED BY HENRY GANNETT,
GEOGRAPHER.

A. HOEN & CO. LITH., BALTIMORE.

PROGRESS OF THE NATION.

AGGREGATE POPULATION.

The following table shows the aggregate population of the United States at each census from 1790 to 1890, together with the rate of increase during each decade:

CENSUS YEARS.	Population.	Per cent of increase.
1790	3,929,214	.....
1800	5,308,483	35.10
1810	7,239,881	36.38
1820	9,633,822	33.07
1830	12,866,020	33.55
1840	17,069,453	32.67
1850	23,191,876	35.87
1860	31,443,321	35.58
1870	38,558,371	22.63
1880	50,155,783	30.08
1890	62,622,250	24.86

The population of the United States on June 1, 1890, as shown by the final count, exclusive of Indians and other persons in Indian territory, on Indian reservations, and in Alaska, was 62,622,250; including these persons the population was 62,979,766. In 1880 the population with the same exclusions was 50,155,783. The absolute increase of the population in the 10 years intervening was 12,466,467, and the percentage of increase was 24.86. In 1870 the population was stated as 38,558,371. According to these figures the absolute increase in the decade between 1870 and 1880 was 11,597,412, and the percentage of increase was 30.08.

Upon their face these figures show that the population increased 869,055 more between 1880 and 1890 than between 1870 and 1880, while the rate of increase has apparently diminished from 30.08 to 24.86 per cent. If these figures were derived from correct data, they would be disappointing. Such a reduction in the rate of increase, in the face of the heavy immigration during the past 10 years, would argue a diminution in the fecundity of the population, or a corresponding increase in its death rate. These figures are, however, easily explained when the character of the data used is understood. It is well known, the fact having been demonstrated by extensive and thorough investigation, that the census of 1870 was grossly deficient in the southern states, so much so as not only to give an exaggerated rate of increase of the population between 1870 and 1880 in these states, but to affect materially the rate of increase in the country at large.

These omissions were not the fault of the Census Office nor within its control. The census of 1870 was taken under a law which the Superintendent, General Francis A. Walker, characterized as "clumsy, antiquated, and barbarous". The Census Office had no power over its enumerators save a barren protest, and even this right was questioned in some quarters. In referring to these omissions the Superintendent of the Tenth Census (1880) said in his report in relation to the taking

of the census in South Carolina: "It follows, as a conclusion of the highest authority, either that the census of 1870 was grossly defective in regard to the whole of the state or some considerable parts thereof, or else that the census of 1880 was fraudulent". Those, therefore, who believe in the accuracy and honesty of the Tenth Census—and that was thoroughly established—must accept the other alternative offered by General Walker, namely, that the Ninth Census was "grossly defective". What was true of South Carolina was also true, in greater or less degree, of all the southern states.

There are, of course, no means of ascertaining accurately the extent of these omissions, but an approximation to it may be obtained by the following method:

It is fair to assume that the rates of increase of population of the southern states between 1860 and 1870 and between 1870 and 1880 were related to one another in a proportion similar to the corresponding rates in the northern states during the same periods. In the term "southern states" is here included the two Virginias, the two Carolinas, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Arkansas, Tennessee, and Kentucky. The census of 1870 is known or is suspected to be deficient in all these states. In the other states and territories there is no suspicion of incompleteness. The population of the southern states in 1860, 1870, and 1880 was as follows:

1860	10,259,016
1870	11,250,411
1880	15,257,393

The population of the other states and territories in 1860, 1870, and 1880 was as follows:

1860	21,184,305
1870	27,307,960
1880	34,898,390

The rate of increase in these other states and territories was 28.91 per cent between 1860 and 1870 and 27.80 per cent between 1870 and 1880. These two rates are so nearly equal that in extending them to the southern states they may be regarded as identical; in other words, it may be assumed that the rate of increase in the southern states between 1860 and 1870 and between 1870 and 1880 was the same.

Classified as white, and colored of African descent, the population of the southern states was as follows:

CENSUS YEARS.	White.	Colored.
1860	6,366,703	3,890,037
1870	7,067,213	4,179,222
1880	9,592,568	5,057,035

The increase of the white population between 1860 and 1880 was 50.67 per cent, or at a uniform rate for each 10 years of 22.75 per cent. The increase of the colored population between 1860 and 1880 was 45.44 per cent, or at the rate of 20.60 per cent for each 10 years. Applying these rates of increase respectively to the white and colored population in 1860, the white population in 1870 was approximately 7,815,128 and the colored 4,691,385. These results are in excess of the figures as returned by the census of 1870, in the case of the white 747,915, and in the case of the colored 512,163, a total of 1,260,078, which may be assumed as approximately the extent of the omissions by the faulty census of 1870. The total population in 1870 was, therefore, approximately 39,818,449 instead of 38,558,371.

Assuming these figures to represent approximately the true population in 1870, the rates of increase would stand as follows:

	PER CENT.
1860–1870	26.64
1870–1880	25.96
1880–1890	24.86

Omitting from consideration those states in which the census of 1870 is known or is presumed to have been faulty, the rate of increase between 1870 and 1880 in the remaining states has been very nearly maintained in the decade between 1880 and 1890. The census of 1870 is known or is presumed to have been deficient in nearly all the states of the South Atlantic and South Central divisions, while in the North Atlantic, North Central, and Western divisions no evidence of incompleteness has been detected. The population of these three last named divisions in 1870, 1880, and 1890, the absolute increase for the two decades, and the rate of increase, are set forth in the following table:

CENSUS YEARS.	Population.	Increase in population.	Percentage of increase.
1870	26,270,351		
1880	33,630,215	7,368,864	28.05
1890	42,791,437	9,152,222	27.21

It will be seen that the absolute increase between 1880 and 1890 exceeded that between 1870 and 1880 by 1,783,358, and that the proportional increase was only 0.84 of 1 per cent less.

The table on the following page shows the percentage of increase of total population for each decade since 1790, derived from Table 1b, pages 4 and 5, post.

PERCENTAGE OF INCREASE OF TOTAL POPULATION: 1790-1890.

STATES AND TERRITORIES.	1880 to 1890	1870 to 1880	1860 to 1870	1850 to 1860	1840 to 1850	1830 to 1840	1820 to 1830	1810 to 1820	1800 to 1810	1790 to 1800
The United States	24.86	30.08	22.63	35.58	35.87	32.67	33.55	33.07	36.38	35.10
North Atlantic division	19.95	17.96	16.09	22.81	27.60	21.99	27.22	24.95	32.29	33.92
Maine	1.87	3.51	a0.22	7.74	16.22	25.62	33.92	30.42	50.74	57.16
New Hampshire	8.51	9.01	a2.38	2.55	11.74	5.66	10.37	13.78	16.64	29.58
Vermont	0.04	0.52	4.90	0.31	7.59	4.02	18.94	8.29	41.06	80.82
Massachusetts	25.57	22.35	18.38	23.79	34.81	20.85	16.68	10.83	11.63	11.63
Rhode Island	24.94	27.23	24.47	18.35	35.57	11.97	17.09	7.91	11.30	0.43
Connecticut	19.84	15.86	16.80	24.10	19.62	4.13	8.19	5.04	4.36	5.49
New York	18.60	15.97	12.94	25.29	27.52	26.60	39.83	43.07	62.81	73.19
New Jersey	27.74	24.83	34.83	37.27	31.14	16.36	15.64	12.98	16.30	14.67
Pennsylvania	22.77	21.61	21.19	25.71	34.09	27.87	28.71	29.31	34.49	38.67
South Atlantic division	16.59	29.79	9.11	14.65	19.20	7.67	19.11	14.43	16.99	23.47
Delaware	14.93	17.27	11.41	22.60	17.22	1.74	5.50	0.10	13.07	8.76
Maryland	11.49	19.73	13.66	17.84	24.04	5.14	9.74	7.04	11.42	6.82
District of Columbia	29.71	34.87	75.41	45.26	18.24	9.74	20.57	37.53	70.46	.....
Virginia	9.48	23.46	b23.25	12.29	14.67	2.34	13.73	9.29	10.72	17.74
West Virginia	23.34	39.92	.....	.....	.....	.....	.....	.....	.....	.....
North Carolina	15.59	30.65	7.93	14.22	15.35	2.09	15.52	15.00	16.19	21.42
South Carolina	15.63	41.10	0.27	5.27	12.47	2.27	15.60	21.11	20.12	38.75
Georgia	19.14	30.24	12.00	16.67	31.07	33.78	51.57	35.08	55.17	97.08
Florida	45.24	43.54	33.70	60.59	60.52	56.86	.....	.....	.....	.....
North Central division	28.78	33.76	42.70	68.35	61.23	108.11	87.49	192.99	474.77	.....
Ohio	14.83	19.99	13.92	18.14	30.33	62.01	61.35	151.90	408.67	.....
Indiana	10.82	17.71	24.45	36.63	44.11	99.94	133.07	500.24	334.67	.....
Illinois	24.32	21.18	48.36	101.06	78.81	202.44	185.42	349.13	.....	.....
Michigan	27.92	38.25	58.06	88.38	87.34	570.90	260.97	84.00	.....	.....
Wisconsin	28.23	24.73	35.93	154.06	886.88	.....	.....	.....	.....	.....
Minnesota	66.74	77.57	155.61	2,730.72	.....	.....	.....	.....	.....	.....
Iowa	17.68	36.06	76.91	251.13	345.85	.....	.....	.....	.....	.....
Missouri	23.56	25.97	45.62	73.30	77.75	173.19	111.03	219.29	.....	.....
North Dakota, South Dakota	c278.41	d853.23	d193.18	.....	.....	.....	.....	.....	.....	.....
Nebraska	134.06	267.83	326.45	.....	.....	.....	.....	.....	.....	.....
Kansas	43.27	173.35	239.91	.....	.....	.....	.....	.....	.....	.....
South Central division	23.02	38.62	11.54	34.05	42.24	46.72	51.91	72.89	134.09	206.08
Kentucky	12.73	24.81	14.31	17.64	25.98	13.36	21.94	38.77	83.98	199.90
Tennessee	14.00	22.55	13.40	10.68	20.92	21.60	61.29	61.53	147.84	105.88
Alabama	19.84	26.63	3.40	24.96	30.62	90.36	142.01	.....	.....	.....
Mississippi	13.96	36.68	4.63	30.47	61.46	174.96	81.08	86.97	355.95	.....
Louisiana	19.01	29.31	2.67	36.74	46.92	63.35	41.08	99.75	.....	.....
Texas	40.44	94.45	35.48	184.21	.....	.....	.....	.....	.....	.....
Oklahoma	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Arkansas	40.58	65.65	11.26	107.46	115.12	221.09	113.17	.....	.....	.....
Western division	71.27	78.46	60.02	246.15	.....	.....	.....	.....	.....	.....
Montana	237.49	90.14	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming	192.01	128.00	.....	.....	.....	.....	.....	.....	.....	.....
Colorado	112.12	387.47	16.30	.....	.....	.....	.....	.....	.....	.....
New Mexico	28.46	30.14	a1.76	51.94	.....	.....	.....	.....	.....	.....
Arizona	47.43	318.72	.....	.....	.....	.....	.....	.....	.....	.....
Utah	44.42	65.88	115.49	253.89	.....	.....	.....	.....	.....	.....
Nevada	a26.51	46.54	519.67	.....	.....	.....	.....	.....	.....	.....
Idaho	158.77	117.41	.....	.....	.....	.....	.....	.....	.....	.....
Washington	365.13	213.57	106.62	.....	.....	.....	.....	.....	.....	.....
Oregon	79.53	92.22	73.30	294.65	.....	.....	.....	.....	.....	.....
California	30.72	54.34	47.44	310.37	.....	.....	.....	.....	.....	.....

a Decrease.
b Decrease; due to loss of territory, West Virginia having been set off from Virginia December 31, 1862.
c North and South Dakota combined. Apportioning the population of Dakota territory in 1880, North Dakota increased 295.05 per cent. and South Dakota increased 234.60 per cent.
d Dakota territory.

The 13 original states, which comprise practically the North Atlantic and South Atlantic divisions, were at the time of the First Census, in 1790, to a great extent settled communities, and their rate of increase in the early decades, though in certain cases considerable, was in no case excessive. In certain cases, indeed, it was very small, as in Rhode Island, Connecticut, Delaware, and Maryland.

These two groups of states, from the time of the earliest records, have been the sources of supply for a great westward migration. Their children have peopled the great interior valley and the mountains of the west. They have swarmed from the Atlantic coast to the prairies, plains, mountains, and deserts by millions during the last century. The extent of this movement can not be estimated, but some idea of it may be obtained from the fact that in 1880, out of 22,000,000 persons born in the Atlantic states, over 3,000,000 were found living in other states, entirely to the westward.

In the North Atlantic division this draft has been in great part made good, especially during the past 40 years, by foreign immigration, which has thus replaced to a great extent the original stock. Such is not the case, however, with the South Atlantic states, which, owing in part to climatic conditions and in part to the presence of the colored race, have received insignificant foreign immigration.

In the North Central, South Central, and Western divisions the rate of increase was at first very large and gradually diminished as the population increased in number and approximated settled conditions.

The general law governing the increase of population is, that when not disturbed by extraneous causes, such as wars, pestilences, immigration, emigration, etc., increase of population goes on at a continually diminishing rate. The operation of this law in this country has been disturbed in recent years by the civil war, which, besides the destruction of a vast number of lives, decreased the birth rate materially during its progress. It was followed by an increased birth rate, as is invariably the case under similar circumstances. The normal rate of increase has been, and is, greatly disturbed also by immigration, and it is difficult to estimate the effect of this upon our rate of increase.

Throughout the whole table, in nearly every state, there is distinctly traceable the result of the late civil war upon the rate of increase between 1860 and 1870. It is, however, much more marked in the southern than in the northern states, showing how much more severely these states were strained by the conflict.

The preceding table, showing the percentages of increase of population by states and territories from 1790 to 1890, is supplemented in the case of a few states and territories by the following table, in which are given, in addition to the results of the United States censuses of 1880 and 1890, the results of state censuses taken in 1885, with the exception of Michigan, the census of that state having been taken in 1884:

STATES AND TERRITORIES.	POPULATION.			INCREASE.		PERCENTAGE OF INCREASE.	
	1890	1885	1880	1885 to 1890	1880 to 1885	1885 to 1890	1880 to 1885
Colorado	412,198	243,010	194,327	168,288	49,583	69.00	25.52
Dakota (a)	511,527	415,610	135,177	95,917	280,433	23.08	207.46
Florida	391,422	342,551	269,493	48,871	73,058	14.27	27.11
Iowa	1,911,896	1,753,980	1,624,615	157,916	129,365	9.00	7.96
Kansas	1,427,096	1,268,530	996,096	158,566	272,434	12.50	27.35
Massachusetts	2,238,943	1,942,141	1,783,085	296,802	159,056	15.28	8.92
Michigan	2,093,889	1,853,058	1,636,937	240,231	216,721	12.96	13.24
Minnesota	1,301,826	1,117,798	780,773	184,028	337,025	16.46	43.17
Nebraska	1,058,910	740,645	452,402	318,265	288,243	42.97	63.71
New Jersey	1,444,933	1,278,033	1,131,116	166,900	146,917	13.06	12.99
New Mexico	153,593	134,141	119,565	19,452	14,576	14.50	12.19
Oregon	313,767	194,150	174,768	119,617	19,382	61.61	11.09
Rhode Island	345,506	304,284	276,531	41,222	27,753	13.55	10.04
Washington	349,390	129,438	75,116	219,952	54,322	169.93	72.32
Wisconsin	1,686,880	1,563,413	1,315,497	123,467	247,916	7.90	18.85

a North and South Dakota combined for 1890; Dakota territory in 1880 and 1885

In comparing the results of these state censuses with those of the United States censuses, it must be understood that the state censuses were taken under different authority, by different machinery, and by different methods from those employed in the United States censuses.

In the state of Kansas the course of the population can be traced even more closely than in the other states represented in the preceding table. Since 1885 this state has taken a census each year, the results of which are shown in the accompanying table, together with the United States censuses of 1880 and 1890:

1880.	United States census	996,096
1885.	State census	1,268,530
1886.	State census	1,406,738
1887.	State census	1,514,578
1888.	State census	1,518,552
1889.	State census	1,464,914
1890.	United States census	1,427,096

In the principal tables the states and territories are grouped as North Atlantic, South Atlantic, North Central, South Central, and Western. This grouping is a natural one, and by the aid of it certain characteristic features in the development of the states are brought out. The North Atlantic section is primarily a manufacturing section. As a necessary result of the predominance of manufacturing, there is a great development of urban population. Indeed, more than half of the inhabitants are grouped in cities.

The predominant industry of the North Central states is agriculture, although in many of these states manufactures are now acquiring prominence. The industries of the South Atlantic and South Central sections are still almost entirely agricultural, while in the Western states and territories the leading industries are agriculture, mining, and grazing.

In the course of the settlement and development of a country the industries commonly follow one another in a certain order. After the hunter, trapper, and prospector, who are commonly the pioneers, the herdsman follows, and for a time the raising of cattle is the leading industry. As settlement becomes less sparse, this is followed by agriculture, which in its turn, as the population becomes more dense, is succeeded by manufactures, and, as a consequence, the aggregation of the people in cities. All stages of this progress are seen in this country.

In Maine, New Hampshire, and Vermont the rate of increase between 1870 and 1880 was not quite maintained, probably due to a large migration of the farming population to the far west, while manufactures had not assumed great prominence. In Vermont there has been only a trifling increase of population.

In the other states of this subdivision, with the exception of Rhode Island, viz., Massachusetts, Connecticut, New York, New Jersey, and Pennsylvania, manufactures have assumed so great prominence that they have not only sufficed to maintain the former rate of increase but even to increase it. The rate in Massachusetts has increased from 22.35 to 25.57 per cent, in Connecticut from 15.86 to 19.84, in New York from 15.97 to 18.00, in New Jersey from 24.83 to 27.74, and in Pennsylvania from 21.61 to 22.77. It will be seen, furthermore, that this augmentation of the rate of increase is greater in the more easterly states than in the three western ones above mentioned, owing to the relatively greater development of manufacturing industries.

Turning to the table on the preceding page, showing the results of the state censuses, it appears that during the first half of the last decade the rate of increase in Massachusetts was below the average of the decade, while in the last half it was much greater, a fact which indicates either that the rate of increase declined materially in the first half of the decade, or that the state enumeration was much less complete than that of the United States enumeration in 1890. The case is somewhat similar in Rhode

Island, although not in so marked a degree, the rates of increase between 1880 and 1885 and between 1885 and 1890 being, respectively, 10.04 and 13.55 per cent. In New Jersey the rate of increase seems to have been maintained quite uniformly throughout the decade.

In the North Central group of states various conditions prevail. In Ohio, Indiana, Iowa, and Missouri, and in Illinois, if the city of Chicago be dropped from consideration, the rate of increase has declined decidedly. In Ohio it has fallen from 19.99 to 14.83 per cent; in Indiana from 17.71 to 10.82; in Iowa from 36.06 to 17.68; in Missouri from 25.97 to 23.56 per cent, in spite of the rapid growth of St. Louis and Kansas city, and in Illinois, dropping Chicago from consideration, from 14.89 to 5.90 per cent. In these states the agricultural industry, which is still the prominent one, has begun to decline, owing to the sharp competition of western farms. The farming population has migrated westward, and the growth of manufactures is not yet sufficiently rapid to repair these losses. The southern portions of Michigan, Wisconsin, and Minnesota are under similar conditions, but the northern parts of these states, lying upon the frontier of settlement, have filled up with sufficient rapidity to repair either wholly or in part the losses of the southern parts. Michigan increased at the rate of 38.25 per cent between 1870 and 1880, while between 1880 and 1890 the rate was but 27.92 per cent. The increase between 1880 and 1890 was cut into unequal parts by the state census taken in 1884. In the first 4 years of the decade the increase was 13.24 per cent, while in the last 6 years it was 12.96 per cent. As the rate of increase in this state is declining, the state census taken in 1884 corroborates the United States census of 1890. In Wisconsin the last decade shows an increase of 28.23 per cent, as against an increase of 24.73 per cent in the decade between 1870 and 1880. The state census of Wisconsin, taken in 1885, cuts the decade into two equal parts, and shows an increase during the first half of 18.85 per cent and during the second half of but 7.90 per cent.

Minnesota increased 77.57 per cent between 1870 and 1880 and 66.74 per cent between 1880 and 1890, the numerical increase being over half a million in the past decade. The state census, taken in 1885, shows that the bulk of this increase occurred between 1880 and 1885. The numerical increase during the first 5 years was 337,025, and the rate of increase 43.17 per cent, while during the last half of the decade the numerical increase was 184,028, and the rate of increase 16.46 per cent.

During the past 10 years the population of Dakota, considering the two states of North Dakota and South Dakota together, has increased from 135,177 to 511,527, or 278.41 per cent; Nebraska from 452,402 to 1,058,910, or 134.06 per cent, and Kansas from 996,096 to 1,427,096, or 43.27 per cent. This increase has not, however, continued uniformly throughout the decade. In 1885 Dakota contained 415,610 inhabitants, or more than four-fifths of its present population. Nebraska contained 740,645 inhabitants in the same year, thus dividing the numerical increase quite equally between the two halves of the decade, but leaving the greater percentage of increase in the first half. In the same year Kansas by its state census had 1,268,530 inhabitants, showing that nearly two-thirds of the numerical gain was acquired during the first half of the decade. The industries of these states are almost purely agricultural, and are largely dependent on the supply of moisture, either in the form of rain or by irrigation. Through these states passes what is known as the subhumid belt, a strip of country several degrees in width, in which during rainy years there is an abundance of moisture for the needs of crops, while in the years when the rainfall is below the average the supply is deficient. In this region little provision has been made for artificial irrigation, the settlers having thus far been content to depend upon rainfall. Into this region settlers flocked in large numbers in the early years of the decade, drawn thither by the fertility of the land and by the fact that for a few years the rainfall had been sufficient for the needs of agriculture. During the past two or three years, however, the conditions of rainfall have materially changed. It has fallen decidedly below the normal, and the settlers

have thereby been forced to emigrate. Thousands of families have abandoned this region and gone to Oklahoma and the Rocky Mountain region. This migration is well shown in the progress of Kansas, as indicated by its annual censuses. These censuses show a rapid increase in population from 1880 up to 1887; 1888 shows but a slight increase over 1887, while 1889 shows a reduction in the population, leading up to the further reduction shown by the United States census in 1890.

Throughout the South Atlantic and South Central states the rate of increase has diminished, and in most of these states it has diminished materially. A certain reduction in the percentage of increase, especially in the eastern part of this region, was to have been expected, due not only to the operation of general laws but also to the fact that there has been considerable migration from the states east of the Mississippi river to the westward, and but little immigration. Taken together, however, these two causes by no means account for the reduction in the rate of increase in these states. The real cause is to be found, as was stated early in this discussion, in the imperfections of the census of 1870. These imperfections resulted in giving a comparatively low rate of increase between 1860 and 1870, and an exaggerated increase between 1870 and 1880. The following table, showing the rates of increase during the last three decades in these states, illustrates the imperfections of the census of 1870 in a somewhat startling manner:

STATES.	PER CENT OF INCREASE.		
	1860 to 1870	1870 to 1880	1880 to 1890
Virginia	a4.44	23.46	9.48
North Carolina	7.93	30.65	15.59
South Carolina	0.27	41.10	15.63
Georgia	12.00	30.24	19.14
Alabama	3.40	26.63	19.84
Mississippi	4.63	36.68	13.96
Louisiana	2.67	29.31	19.01
Kentucky	14.31	24.81	12.73
Tennessee	13.40	22.55	14.60

a Of Virginia and West Virginia together.

It is but reasonable to suppose that in these states, which were ravaged by war from 1861 to 1865, the rate of increase in the decade which includes the war period should be less than a normal one. Of all these states Virginia, whose soil was the principal theater of the war, must have suffered most severely, and during the period in question it increased at the rate of but 4.44 per cent. Next to Virginia, Kentucky and Tennessee suffered the most severely, and yet they increased, respectively, 14.31 and 13.40 per cent. On the other hand, North Carolina, which suffered less severely, gained but 7.93 per cent, and South Carolina, which suffered less in comparison with Virginia, apparently remained at a standstill as regards population. Georgia gained 12.00 per cent, while Alabama gained but 3.40 per cent; Louisiana 2.67 per cent, and Mississippi 4.63 per cent, although they were comparatively remote from active operations, and suffered relatively little from the ravages of war. On the other hand, those states which suffered the most severely from the war have made during the decade between 1870 and 1880 the smallest proportion of gain of the southern states, whereas the reverse should have been the case. Thus Virginia gained 23.46 per cent, Kentucky 24.81, and Tennessee 22.55, while the states that were farther removed from active operations were North Carolina, which gained 30.65; South Carolina, 41.10; Georgia, 30.24; Alabama, 26.63; Mississippi, 36.68, and Louisiana, 29.31 per cent. These startling discrepancies can be due only to the imperfections of the census of 1870, which were, as

has been demonstrated, greatest in South Carolina, Mississippi, Louisiana, Alabama, Georgia, and North Carolina, although they were not by any means wanting in Virginia, Kentucky, and Tennessee.

The industries of these two sections are almost purely agricultural. During the past 10 years manufactures have obtained a slight footing and mining has made considerable growth in the mountain regions, but these causes have thus far produced but a comparatively trifling movement of population. The urban population, although great in proportion to that which existed formerly, is very small in proportion to the rural population of the region.

During the first half of the last decade Florida had a rapid growth. The population between 1880 and 1885 increased 73,058, or at the rate of 27.11 per cent. This rapid growth, however, received a serious check in 1887 and 1888 by an epidemic of yellow fever and by severe frosts. The growth since 1885 has, therefore, been comparatively slow.

Arkansas has continued to grow at a rapid rate, having increased 40.58 per cent in the last 10 years. Texas also has increased with great rapidity, the numerical increase of its population being 643,774, or 40.44 per cent.

In the western section the conditions of growth have been varied. In the earlier years of the decade the discovery of valuable silver and copper mines in the mountains of Montana in the neighborhood of Butte drew to that state a large immigration, which is engaged not only in mining but in developing the agricultural resources. Wyoming has continued to grow with accelerated rapidity.

The census of Colorado in 1880 was taken on the top wave of a mining excitement, which had filled its mountains with miners, prospectors, and speculators, increasing its population enormously, especially in the mountainous country. The census of the state taken in 1885 was, on a superficial view, very surprising. It showed that most of the mining counties had lost population during the 5 years preceding. This loss was, however, more than made up by the growth of its cities and its agricultural counties. The census of 1890 shows still further reduction of population in the mining regions of the state, and on the other hand an extraordinary development of its urban population and its farming element. New Mexico, Arizona, and Utah show rates of increase which are small when the sparsely settled condition of these territories is considered, while Nevada shows an absolute diminution of population of 16,505, or 26.51 per cent, leaving it the smallest of all the states. This condition of things is a natural result of the failure of the Comstock and other mines, work upon which has practically ceased. Idaho has increased its population 158.77 per cent. Its prosperity is mainly due to its mines, although people are now turning to agriculture in considerable numbers.

The growth of Washington has been phenomenal, the population in 1890 being nearly five times that of 1880. As is shown by the state census taken in 1885, this growth has been almost entirely during the last 5 years of the decade. The inducements which have attracted settlers are in the main its fertile soil and ample rainfall, which enable farming to be carried on without irrigation over almost the entire state. The growth of Oregon, though less rapid, has been at a rate of 79.53 per cent during the past decade. The numerical increase has been 138,999, of which over four-fifths has been acquired during the past 5 years. The additions to its population are mainly in the valleys of the Columbia and Willamette rivers.

California, which increased 54.34 per cent during the decade between 1870 and 1880, has maintained during the past decade a rate of increase of 39.72 per cent. This increase, though widespread throughout the state, has been most marked in its great cities and in the southern part.

The following table shows the relative rank in population of the states and territories in 1890 and in 1880:

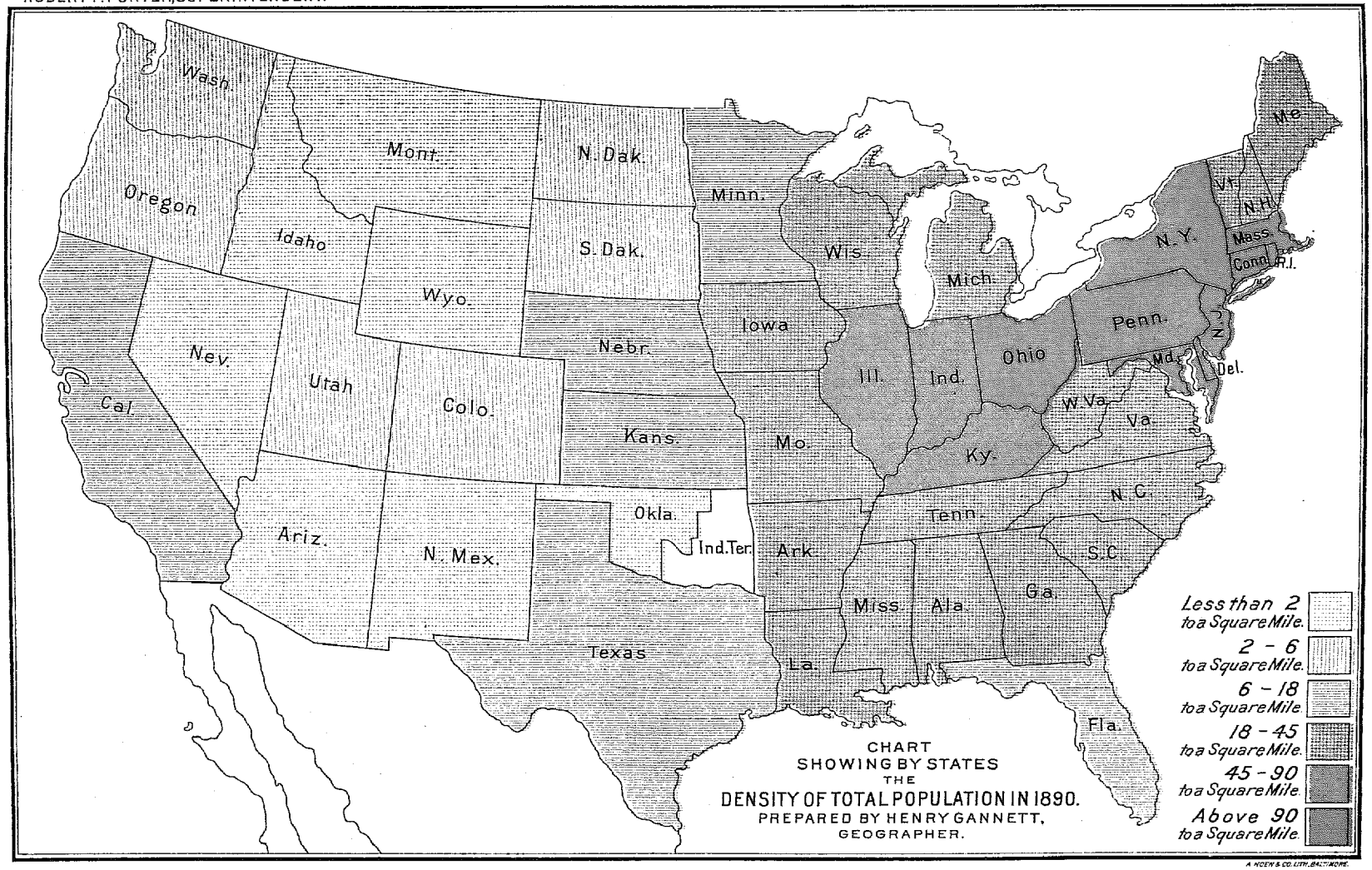
1890	1880	1890	1880
1 New York.	1 New York.	26 Nebraska.	26 Minnesota.
2 Pennsylvania.	2 Pennsylvania.	27 Maryland.	27 Maine.
3 Illinois.	3 Ohio.	28 West Virginia.	28 Connecticut.
4 Ohio.	4 Illinois.	29 Connecticut.	29 West Virginia.
5 Missouri.	5 Missouri.	30 Maine.	30 Nebraska.
6 Massachusetts.	6 Indiana.	31 Colorado.	31 New Hampshire.
7 Texas.	7 Massachusetts.	32 Florida.	32 Vermont.
8 Indiana.	8 Kentucky.	33 New Hampshire.	33 Rhode Island.
9 Michigan.	9 Michigan.	34 Washington.	34 Florida.
10 Iowa.	10 Iowa.	35 Rhode Island.	35 Colorado.
11 Kentucky.	11 Texas.	36 Vermont.	36 District of Columbia.
12 Georgia.	12 Tennessee.	37 South Dakota.	37 Oregon.
13 Tennessee.	13 Georgia.	38 Oregon.	38 Delaware.
14 Wisconsin.	14 Virginia.	39 District of Columbia.	39 Utah.
15 Virginia.	15 North Carolina.	40 Utah.	40 Dakota.
16 North Carolina.	16 Wisconsin.	41 North Dakota.	41 New Mexico.
17 Alabama.	17 Alabama.	42 Delaware.	42 Washington.
18 New Jersey.	18 Mississippi.	43 New Mexico.	43 Nevada.
19 Kansas.	19 New Jersey.	44 Montana.	44 Arizona.
20 Minnesota.	20 Kansas.	45 Idaho.	45 Montana.
21 Mississippi.	21 South Carolina.	46 Oklahoma.	46 Idaho.
22 California.	22 Louisiana.	47 Wyoming.	47 Wyoming.
23 South Carolina.	23 Maryland.	48 Arizona.	
24 Arkansas.	24 California.	49 Nevada.	
25 Louisiana.	25 Arkansas.		

It will be seen that, as in 1880, New York still heads the list, and is followed by Pennsylvania. Ohio and Illinois have exchanged places. Of the other changes in the list the most marked are those of Texas, which rises from No. 11 to No. 7; Kentucky, which drops from 8 to 11; Minnesota, which rises from 26 to 20; Nebraska, which rises from 30 to 26; Maryland, which drops from 23 to 27; Colorado, which rises from 35 to 31; Vermont, which drops from 32 to 36; Washington, which rises from 42 to 34; Delaware, which drops from 38 to 42; Nevada, which drops from 43 to 49, and Arizona, which drops from 44 to 48. The average change in rank is 2.2 places.

DENSITY OF POPULATION.

The following table shows for each census the gross area (land and water surface) which the country had at the date of the census, exclusive of Alaska, together with the average number of inhabitants to the square mile:

CENSUS YEARS.	Area.	Density.
1790	827,844	4.75
1800	827,844	6.41
1810	1,999,775	3.62
1820	1,999,775	4.82
1830	2,059,043	6.25
1840	2,059,043	8.29
1850	2,980,959	7.78
1860	3,025,600	10.39
1870	3,025,600	12.74
1880	3,025,600	16.58
1890	3,025,600	20.70



A. HOEN & CO. LITH. BALTIMORE.

At the time of the first two censuses the United States comprised only the territory between the Atlantic ocean and the Mississippi river. In 1803 the enormous area of the Louisiana purchase was added, which, as it was entirely unsettled at that time, reduced the number of inhabitants to the square mile to a little more than one-half what it was previously. In 1821 the purchase of the Floridas from Spain increased our territory by nearly 60,000 square miles. Between 1840 and 1850 the acquisition of territory from Mexico under the treaty of Guadalupe Hidalgo, and in 1853 by the Gadsden purchase, made a vast increase of territory, which again reduced the average number of inhabitants to the square mile. The last acquisition of territory, that of Alaska, containing nearly 600,000 square miles, was made in 1867.

It will be seen that notwithstanding these great acquisitions of territory (excluding Alaska), which have increased our domain from 827,844 to 3,025,600 square miles, the density of population has increased from 4.75 to 20.70 inhabitants to the square mile within the century.

The distribution of population is of sufficient importance to give it some degree of detail.

The classification given below has been followed, as being in accord with similar discussions in the reports of earlier censuses. All urban bodies of 8,000 inhabitants or more have been deducted.

(0) Less than 2 inhabitants to a square mile. (Regarded as unsettled.)
(1) 2 to 6 inhabitants to a square mile.
(2) 6 to 18 inhabitants to a square mile.
(3) 18 to 45 inhabitants to a square mile.
(4) 45 to 90 inhabitants to a square mile.
(5) 90 inhabitants or more to a square mile.

These limits define in a general way the extent and prevalence of various classes of industries. The first group, 2 to 6 to a square mile, indicates a population mainly occupied with the grazing industry or a widely scattered farming population. The second group, 6 to 18, indicates a farming population, with systematic cultivation of the soil, but this either in an early stage of settlement or upon more or less rugged soil. The third group, 18 to 45 to a square mile, almost universally indicates a highly successful agriculture, while in some localities the beginnings of manufactures have raised into this group a difficult farming region. Speaking generally, agriculture in this country is not carried on yet with such care and refinement as to afford employment and support to a population in excess of 45 to a square mile; consequently, the last two groups, 45 to 90 and 90 or more to a square mile, appear only as commerce and manufactures arise and personal and professional services are in demand. In reports of former censuses that portion of our domain which contains less than 2 inhabitants to a square mile has been regarded as unsettled territory, and throughout this discussion the same distinction will be observed.

The following table presents the areas in square miles of the different classes of settlement and the total settled area at the date of each census:

CENSUS YEARS.	Total area of settlement: 2 or more to the square mile.	1	2	3	4	5
		2 to 6 to the square mile.	6 to 18 to the square mile.	18 to 45 to the square mile.	45 to 90 to the square mile.	90 or more to the square mile.
1790	239,935	83,436	83,346	59,282	13,051	820
1800	305,708	81,010	123,267	82,504	17,734	1,193
1810	407,945	116,629	154,419	108,155	27,499	1,243
1820	508,717	140,827	177,153	150,390	39,004	1,343
1830	632,717	151,460	225,894	186,503	65,446	3,414
1840	807,292	183,607	291,819	241,587	84,451	5,828
1850	979,249	233,697	294,698	338,796	100,794	11,264
1860	1,194,754	260,866	353,341	431,601	134,722	14,224
1870	1,272,239	245,897	363,475	470,529	174,036	18,302
1880	1,569,570	384,820	373,890	554,300	231,410	25,150
1890	1,947,285	592,037	393,943	701,845	235,148	24,312

It will be noted that the settled area has constantly and rapidly increased, but by no means at a uniform rate or at rates proportional to the increase of population. The following table shows the rates of increase of the settled area and of the population placed in juxtaposition:

CENSUS YEARS.	Area.	Population.	PER CENT OF INCREASE.	
			Area.	Population.
1790	239,935	3,929,214	.....	.....
1800	305,708	5,308,483	27.41	35.10
1810	407,945	7,239,881	33.44	36.38
1820	508,717	9,633,822	24.70	33.07
1830	632,717	12,866,020	24.38	33.55
1840	807,292	17,069,453	27.59	32.67
1850	979,249	23,191,876	21.30	35.87
1860	1,194,754	31,443,321	22.01	35.58
1870	1,272,239	38,558,371	6.49	22.63
1880	1,569,570	50,155,783	23.37	30.08
1890	1,947,285	62,622,250	24.06	24.86

In 1890 the population was nearly 16 times as great as in 1790, while during the century the settled area was increased only about eightfold. In general, the increase of population has gone on at a much more rapid rate than that of settled area.

Notwithstanding the constant passage of territory from lower groups into higher by reason of increase in the number of inhabitants, the lower groups have been so rapidly increased by settlement of new territory that they have increased in every case, except that in 1870 a slight diminution is noted in group 1. In 1890 a trifling reduction is seen in the highest group. This is doubtless an indirect result of the rapid development of cities in the territory falling into this group, as each city, upon reaching a population of 8,000, is subtracted from the population of its county, thereby materially reducing the apparent density of the population of the county. To a certain extent the case is similar in the next group, that of 45 to 90 inhabitants to a square mile, which during the past decade increased in area but 3,738 square miles.

During this period the inroads upon the unsettled region have been unprecedented in amount, not less than 377,715 square miles having been redeemed, exceeding by 80,384 square miles the area settled between 1870 and 1880.

The following table shows the proportion of the area of each group of population to the total area of settlement at each census:

CENSUS YEARS.	1	2	3	4	5
1790	348	348	247	54	3
1800	265	403	270	58	4
1810	286	379	265	67	3
1820	277	348	296	76	3
1830	239	357	295	103	6
1840	228	361	299	105	7
1850	239	301	346	103	11
1860	218	296	361	113	12
1870	193	286	370	137	14
1880	245	238	353	148	16
1890	304	202	361	121	12

The most striking fact connected with the extension of settlement during the past decade is the numerous additions which have been made to the settled area within the Cordilleran region. Settlements have spread westward up the slope of the plains until they have joined the bodies formerly isolated in Colorado, forming a continuous body of settlement from the east to the Rocky mountains. Practically the whole of Kansas has become a settled region, and the unsettled area of Nebraska has been reduced in dimensions to a third of what it was 10 years ago. What was a sparsely settled region in Texas in 1880 is now the most populous part of the state, while settlements have spread westward to the escarpment of the Staked Plains. The unsettled regions of North and South Dakota have been reduced to half their former dimensions. Settlements in Montana have spread until they now occupy one-third of the state. In New Mexico, Idaho, and Wyoming considerable extensions of area are to be noted. In Colorado, in spite of the decline of the mining fever and the depopulation of its mining regions, settlement has spread, and two-thirds of the state is now under the dominion of man. Oregon and Washington show equally rapid progress, and California, although its mining regions have suffered, has made great inroads upon its unsettled regions, especially in the south. Of all the western states and territories Nevada alone is at a standstill in this respect, its settled area remaining practically the same as in 1880. When it is remembered that the state has lost one-third of its population during the past 10 years, the fact that it has held its own in settled area is surprising until it is understood that the state has undergone a material change in occupations during the decade, and that the inhabitants, instead of being closely grouped and engaged in mining pursuits, have become scattered along its streams and have engaged in agriculture.

Settlement is spreading with some rapidity in Maine, its unsettled area having dwindled from 12,000 down to about 4,000 square miles. The unsettled portion of the Adirondack region in New York has also diminished, there being now but 1,000 square miles remaining. The frontier has been pushed still farther southward in Florida, and the unsettled area has been reduced from 20,800 to 13,000 square miles.

The lumbering and mining interests of Michigan have practically obliterated its wilderness and have reduced that of Wisconsin to less than one-half of its former area. In Minnesota the area of its wild northern forests has been reduced from 34,000 to 23,000 square miles.

The following table presents in detailed form, by states and territories, the extent of settled area and the area in each of the density groups:

AREAS IN SQUARE MILES OF THE DIFFERENT CLASSES OF SETTLEMENT IN 1890, BY STATES AND TERRITORIES.

STATES AND TERRITORIES.	Total area of settlement.	2 to 6 to the square mile.	6 to 18 to the square mile.	18 to 45 to the square mile.	45 to 90 to the square mile.	90 or more to the square mile.
The United States	1,947,285	592,037	393,943	701,845	235,148	24,312
North Atlantic division	156,682	11,759	10,099	45,733	69,267	19,824
Maine	25,729	9,624	6,596	6,703	2,806	.....
New Hampshire	8,828	708	886	5,245	1,989	.....
Vermont	9,135	.....	730	7,487	918	.....
Massachusetts	8,040	.....	.....	959	4,149	2,932
Rhode Island	1,085	.....	.....	.....	320	765
Connecticut	4,845	.....	.....	.....	4,072	773
New York	46,580	1,427	1,887	13,172	28,266	1,828
New Jersey	7,455	.....	.....	1,550	3,055	2,850
Pennsylvania	44,985	.....	.....	10,617	23,692	10,676
South Atlantic division	255,455	19,854	55,585	143,962	35,152	902
Delaware	1,960	.....	.....	810	1,150	.....
Maryland	9,860	.....	.....	2,900	6,123	837
District of Columbia	65	.....	.....	.....	.....	65
Virginia	40,125	.....	3,109	29,895	7,121	.....
West Virginia	24,645	.....	9,190	11,766	3,689	.....
North Carolina	48,580	.....	6,313	38,060	4,207	.....
South Carolina	30,170	.....	369	23,560	6,241	.....
Georgia	58,980	1,166	16,153	35,040	6,621	.....
Florida	41,070	18,688	20,451	1,931	.....	.....
North Central division	636,570	119,529	144,736	270,084	99,589	2,632
Ohio	40,760	.....	.....	1,616	37,744	1,400
Indiana	35,910	.....	.....	12,484	23,426	.....
Illinois	56,000	.....	.....	41,890	14,110	.....
Michigan	57,430	12,349	13,651	16,844	13,806	780
Wisconsin	51,148	8,410	14,360	20,672	7,302	404
Minnesota	59	9,871	25,766	20,022	.....	.....
Iowa	75	.....	4,246	50,167	1,062	.....
Missouri	35	.....	14,892	52,765	1,030	48
North Dakota	20,978	17,835	9,138	.....	.....	.....
South Dakota	43,848	19,343	23,150	1,355	.....	.....
Nebraska	63,061	26,801	17,040	19,220	.....	.....
Kansas	80,971	24,920	22,493	32,449	1,109	.....
South Central division	431,795	67,363	107,251	225,137	31,140	904
Kentucky	40,000	.....	1,643	25,149	12,491	717
Tennessee	41,750	.....	4,114	24,985	12,651	.....
Alabama	51,540	.....	9,472	37,717	4,351	.....
Mississippi	46,340	.....	10,007	35,502	831	.....
Louisiana	45,420	7,608	18,490	18,319	816	187
Texas	150,810	59,755	40,313	50,742	.....	.....
Oklahoma	2,890	.....	.....	2,890	.....	.....
Arkansas	53,045	.....	23,212	29,833	.....	.....
Western division	466,783	373,532	76,272	16,929	.....	50
Montana	46,706	45,941	855	.....	.....	.....
Wyoming	22,852	22,852	.....	.....	.....	.....
Colorado	68,492	57,810	9,439	1,243	.....	.....
New Mexico	45,589	35,625	9,964	.....	.....	.....
Arizona	24,045	24,045	.....	.....	.....	.....
Utah	27,580	20,421	5,701	1,458	.....	.....
Nevada	11,948	10,022	1,208	718	.....	.....
Idaho	39,143	37,233	1,910	.....	.....	.....
Washington	36,945	22,202	13,461	1,282	.....	.....
Oregon	46,189	39,124	5,018	2,047	.....	.....
California	96,604	57,657	28,716	10,181	.....	50

Up to and including 1880 the country had a frontier of settlement, but at present the unsettled area has been so broken into by isolated bodies of settlement that there can hardly be said to be a frontier line. In the discussion of its extent and its westward movement it can not, therefore, any longer have a place in the census reports.

The following table shows the number of inhabitants per square mile (land surface) of each state and territory at each census. The area of Alaska and Indian territory is not considered in computing density.

DENSITY OF TOTAL POPULATION: 1790–1890.

STATES AND TERRITORIES.	1890	1880	1870	1860	1850	1840	1830	1820	1810	1800	1790
The United States	21.31	17.29	13.30	10.84	7.93	8.43	6.35	4.76	3.69	6.61	4.89
North Atlantic division	107.37	89.52	75.89	65.37	53.23	41.72	34.20	26.88	21.51	16.26	12.14
Maine	22.11	21.71	20.07	21.02	19.51	16.79	13.36	9.98	7.65	5.08	3.23
New Hampshire	41.81	38.53	35.35	36.21	35.31	31.00	29.91	27.10	23.82	20.42	15.76
Vermont	36.39	36.38	36.19	34.49	34.39	31.96	30.72	25.83	23.85	16.91	9.35
Massachusetts	278.48	221.78	181.20	153.12	123.70	91.75	75.92	65.07	58.71	52.59	47.11
Rhode Island	318.44	254.87	200.33	160.94	135.99	100.30	89.58	76.51	70.90	63.71	63.43
Connecticut	154.03	128.52	110.93	94.97	76.53	63.98	61.44	56.79	54.06	51.81	49.11
New York	125.95	106.74	92.04	81.49	65.04	51.01	40.29	28.31	20.14	12.37	7.14
New Jersey	193.82	151.73	121.54	90.15	65.67	50.07	43.03	37.21	32.94	28.32	24.70
Pennsylvania	116.88	95.21	78.29	64.60	51.99	38.32	29.97	23.29	18.01	13.39	9.61
South Atlantic division	32.98	28.28	21.79	19.97	17.42	14.61	13.57	11.39	12.48	10.66	8.64
Delaware	85.97	74.80	63.78	57.25	46.70	39.84	39.16	37.12	37.08	32.79	30.15
Maryland	105.72	94.82	79.20	69.68	59.13	47.67	45.34	41.31	38.59	34.64	32.23
District of Columbia	3,839.87	2,960.40	2,195.00	1,251.33	861.45	485.69	442.60	367.10	266.92	156.59	.....
Virginia	41.27	37.70	30.53	24.65	21.95	19.14	18.70	16.44	15.05	13.59	11.54
West Virginia	30.95	25.09	17.94	.....	.....	.....	.....	.....	.....	.....	.....
North Carolina	33.30	28.81	22.05	20.43	17.89	15.51	15.19	13.15	11.43	9.84	8.11
South Carolina	38.16	33.00	23.39	23.32	22.16	19.70	19.26	16.66	13.76	11.45	8.26
Georgia	31.15	26.15	20.08	17.93	15.36	11.72	8.76	5.78	4.28	2.76	1.46
Florida	7.22	4.97	3.46	2.59	1.61	1.00	0.64	.....	.....	.....	.....
North Central division	29.68	23.04	17.23	12.07	7.17	4.45	2.14	1.14	0.39	0.20	.....
Ohio	90.10	78.46	65.39	57.40	48.59	37.28	23.01	14.26	5.66	1.11	.....
Indiana	61.05	55.99	46.80	37.61	27.52	19.10	9.55	4.10	0.68	0.03	.....
Illinois	68.33	54.93	45.36	30.57	15.20	8.50	2.81	0.99	0.09	.....	.....
Michigan	36.46	28.50	20.02	13.04	6.92	3.70	0.23	0.06	0.10	.....	.....
Wisconsin	30.98	24.16	19.37	14.25	5.61	0.51	.....	.....	.....	.....	.....
Minnesota	16.44	9.86	5.55	2.17	0.04	.....	.....	.....	.....	.....	.....
Iowa	34.46	29.20	21.52	12.17	3.46	0.21	.....	.....	.....	.....	.....
Missouri	28.98	31.55	25.04	17.20	9.92	5.58	2.13	1.01	0.32	.....	.....
North Dakota	2.60	a0.92	a0.10	a0.06	.....	.....	.....	.....	.....	.....	.....
South Dakota	4.28				.....	.....	.....	.....	.....	.....	.....
Nebraska	13.78	5.94	1.01	0.08	.....	.....	.....	.....	.....	.....	.....
Kansas	17.47	12.19	4.46	0.85	.....	.....	.....	.....	.....	.....	.....
South Central division	18.94	16.51	11.91	10.68	7.05	8.69	5.93	3.90	2.30	1.94	0.63
Kentucky	46.47	41.22	33.03	28.89	24.56	19.50	17.20	14.10	10.16	5.52	1.84
Tennessee	42.34	36.94	30.14	26.58	24.02	19.86	16.33	10.13	6.27	2.53	0.85
Alabama	29.36	24.59	19.34	18.71	14.97	11.46	6.01	2.48	.....	.....	.....
Mississippi	27.83	24.42	17.87	17.03	13.09	8.11	2.95	1.63	0.43	0.24	.....
Louisiana	24.63	20.69	16.00	15.59	11.40	7.76	4.75	3.37	1.69	.....	.....
Texas	8.52	6.07	3.12	2.30	0.81	.....	.....	.....	.....	.....	.....
Oklahoma	1.59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Arkansas	21.27	15.13	9.13	8.21	3.96	1.84	0.57	0.27	.....	.....	.....
Western division	2.58	1.50	0.84	0.53	0.16	.....	.....	.....	.....	.....	.....
Montana	0.91	0.27	0.14	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming	0.62	0.21	0.09	.....	.....	.....	.....	.....	.....	.....	.....
Colorado	3.98	1.87	0.38	0.33	.....	.....	.....	.....	.....	.....	.....
New Mexico	1.25	0.98	0.75	0.36	0.29	.....	.....	.....	.....	.....	.....
Arizona	0.53	0.36	0.09	.....	.....	.....	.....	.....	.....	.....	.....
Utah	2.53	1.75	1.06	0.18	0.05	.....	.....	.....	.....	.....	.....
Nevada	0.42	0.57	0.39	0.06	.....	.....	.....	.....	.....	.....	.....
Idaho	1.00	0.39	0.18	.....	.....	.....	.....	.....	.....	.....	.....
Washington	5.22	1.12	0.36	0.06	.....	.....	.....	.....	.....	.....	.....
Oregon	3.32	1.85	0.96	0.55	0.05	.....	.....	.....	.....	.....	.....
California	7.75	5.54	3.59	2.44	0.59	.....	.....	.....	.....	.....	.....

a Dakota territory.

The above table shows that with the exception of the District of Columbia, which is in effect a municipality, the most densely settled state is Rhode Island, and next to that Massachusetts. In these states the density of population is as great as in many of the most densely settled European states. Indeed, the entire North Atlantic division of states, which is pre-eminently the manufacturing section of the country, contains

an average of over 100 inhabitants to the square mile. The South Atlantic and South Central divisions, which are pre-eminently farming regions, are much less densely peopled. The scattered character of the population of the western states and territories is illustrated by the low density of population.

CENTER OF POPULATION.

By the Eleventh Census the center of population in 1890 was in the following position:

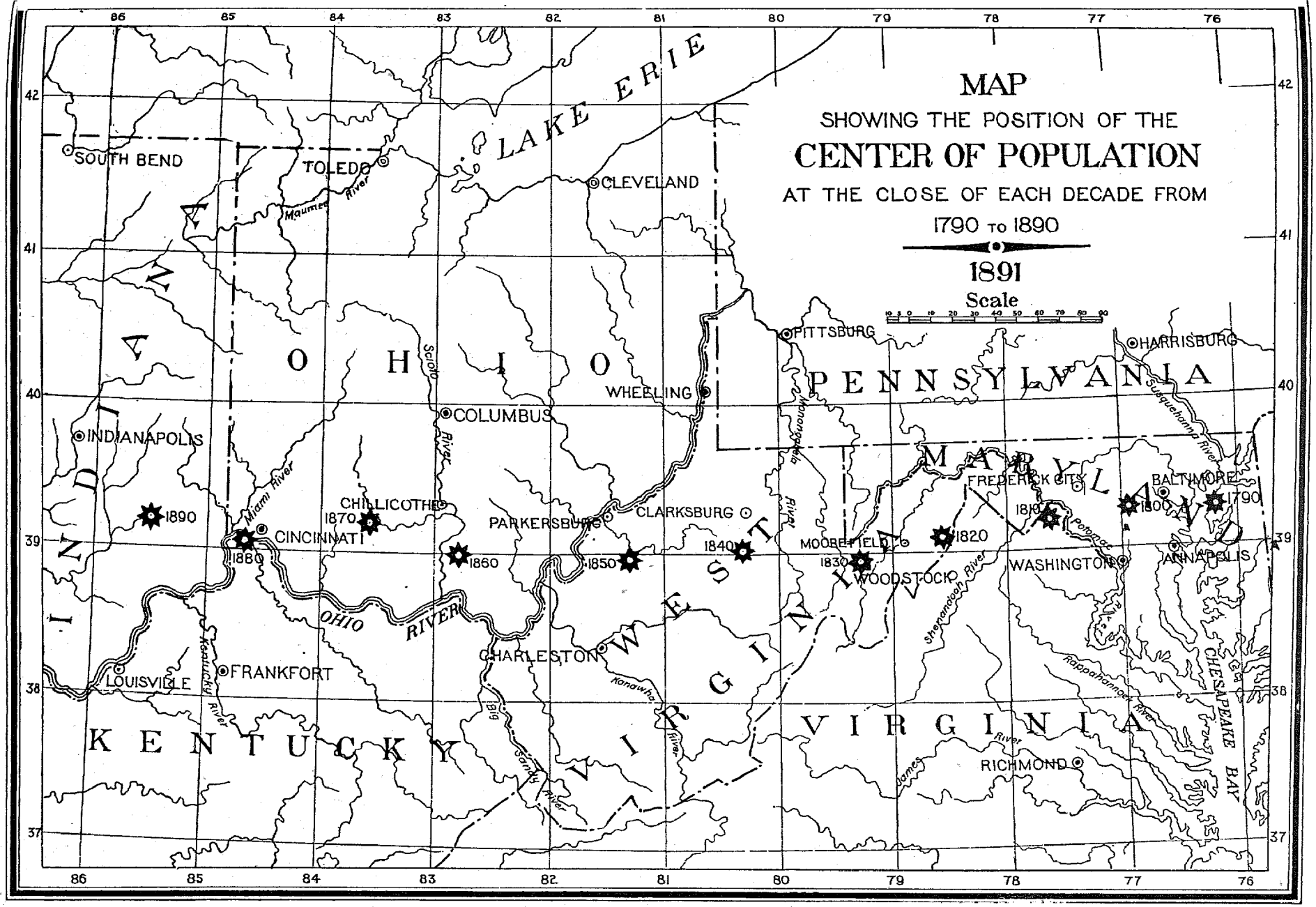
Latitude	39°	11′	56″
Longitude	85	32	53

In 10 years the center of population has moved westward 53′ 13″, or about 48 miles, and northward 7′ 48″, or about 9 miles. It rests now in southern Indiana, at a point a little west of south of Greensburg, the county seat of Decatur county, and 20 miles east of Columbus, Indiana.

The closeness with which the center of population, through such rapid westward movement as has been recorded, has clung to the parallel of 39° of latitude can not fail to be noticed. The most northern point reached was at the start in 1790; the most southern point was in 1830, the preceding decade having witnessed a rapid development of population in the southwest, Alabama, Arkansas, Mississippi, and Louisiana having been admitted as states and Florida annexed and organized as a territory. The extreme variation in latitude has been less than 19 minutes, while the hundred years of record have accomplished a movement of longitude of nearly 9.5 degrees. Assuming the westward movement to have been uniformly along the parallel of 39° of latitude, the westward movement of the several decades has been as follows: 1790–1800, 41 miles; 1800–1810, 36 miles; 1810–1820, 50 miles; 1820–1830, 39 miles; 1830–1840, 55 miles; 1840–1850, 55 miles; 1850–1860, 81 miles; 1860–1870, 42 miles; 1870–1880, 58 miles, and 1880–1890, 48 miles, a total westward movement of 505 miles. The sudden acceleration of movement between 1850 and 1860 was due to the transfer of a considerable body of population from the Atlantic to the Pacific coast, 12 individuals in San Francisco exerting as much pressure at the then pivotal point, viz., the crossing of the 83d meridian and the 39th parallel, as 40 individuals at Boston.

The center of population is the center of gravity of the population of the country, each individual being assumed to have the same weight. The method of determination used, in order that the result might be comparable with that obtained in 1880, was in brief as follows:

The population of the country was first distributed by "square degrees", as the area included between consecutive parallels and meridians has been designated. A point was then assumed tentatively as the center, and corrections in latitude and longitude to this tentative position were computed. In this case the center was assumed to be at the intersection of the parallel of 39° with the meridian of 86° west of Greenwich. The population of each square degree was assumed to be located at the center of that square degree, except in cases where it was manifest that this assumption would be untrue, as, for instance, where a part of the square degree was occupied by the sea or other large body of water, or where it contained a city of considerable magnitude which was situated "off center". In these cases the position of the center of the population of the square degree was estimated as nearly as possible. The distance of each such center of population of a square degree, whether assumed to be at the center of the square degree or at a distance from the center from the assumed parallel and from the assumed meridian, was then computed. The population of each square degree was then multiplied by its distance from the assumed parallel of latitude, and the sums


MAP
SHOWING THE POSITION OF THE
CENTER OF POPULATION
AT THE CLOSE OF EACH DECADE FROM
1790 TO 1890
1891
Scale
LAKE ERIE
SOUTH BEND
TOLEDO
CLEVELAND
PITTSBURG
HARRISBURG
INDIANA
OHIO
PENNSYLVANIA
WHEELING
COLUMBUS
INDIANAPOLIS
MARYLAND
FREDERICK CITY
BALTIMORE
1790
1800
1810
1820
1830
1840
1850
1860
1870
1880
1890
CHILLICOTHE
PARKERSBURG
CLARKSBURG
CINCINNATI
MOOREFIELD
WOODSTOCK
WASHINGTON
ANNAPOLIS
OHIO RIVER
CHARLESTON
WEST VIRGINIA
LOUISVILLE
FRANKFORT
KENTUCKY
VIRGINIA
RICHMOND
CHESAPEAKE BAY
Maumee River
Scioto River
Monongahela River
Susquehanna River
Potomac River
Shenandoah River
Rappahannock River
James River
Kanawha River
Big Sandy River
Kentucky River
Miami River
86
85
84
83
82
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of the products, or moments, north and south of that parallel were made up. Their difference, divided by the total population of the country, gave a correction to the latitude. In a similar manner the east and west moments were made up, and from them a correction in longitude was obtained.

In 1790 the center of population was at 39° 16.5′ north latitude and 76° 11.2′ west longitude, which a comparison of the best maps available would seem to place about 23 miles east of Baltimore. During the decade from 1790 to 1800 it appears to have moved almost due west to a point about 18 miles west of the same city, being in latitude 39° 16.1′ and longitude 76° 56.5′.

From 1800 to 1810 it moved westward and slightly southward to a point about 40 miles northwest by west from Washington, being in latitude 39° 11.5′ and longitude 77° 37.2′. The southward movement during this decade appears to have been due to the annexation of the territory of Louisiana, which contained quite extensive settlements.

From 1810 to 1820 it moved westward and again slightly southward to a point about 16 miles north of Woodstock, Virginia, being in latitude 39° 5.7′ and longitude 78° 33′. This second southward movement appears to have been due to the extension of settlements in Mississippi, Alabama, and eastern Georgia.

From 1820 to 1830 it moved still westward and southward to a point about 19 miles southwest of Moorefield, in the present state of West Virginia, being in latitude 38° 57.9′ and longitude 79° 16.9′. This is the most decided southward movement that it has made during any decade. It appears to have been due in part to the addition of Florida to our territory and in part to the great extension of settlements in Louisiana, Mississippi, and Arkansas, or generally, it may be said, in the southwest.

From 1830 to 1840 it moved still farther westward, but slightly changed its direction northward, reaching a point 16 miles south of Clarksburg, West Virginia, being in latitude 39° 2′ and longitude 80° 18′. During this decade settlement had made decided advances in the prairie states and in the southern portions of Michigan and Wisconsin, the balance of increased settlement evidently being in favor of the northwest.

From 1840 to 1850 it moved westward and slightly southward again, reaching a point about 23 miles southeast of Parkersburg, West Virginia, in latitude 38° 59′ and longitude 81° 19′, the change of direction southward being largely due to the annexation of Texas.

From 1850 to 1860 it moved westward and slightly northward, reaching a point 20 miles south of Chillicothe, Ohio, this being in latitude 39° 0.4′, longitude 82° 48.8′.

From 1860 to 1870 it moved westward and sharply northward, reaching a point about 48 miles east by north of Cincinnati, Ohio, in latitude 39° 12′, longitude 83° 35.7′. This northward movement was due in part to waste and destruction in the south consequent upon the civil war, and in part probably to the fact that the census of 1870 was defective in its enumeration of the southern people, especially of the newly enfranchised colored population.

In 1880 the center of population had returned southward to nearly the same latitude which it had in 1860, being in latitude 39° 4.1′, longitude 84° 39.7′. This southward movement was due only in part to an imperfect enumeration at the south in 1870. During the decade between 1870 and 1880 the southern states made a large positive increase, both from natural growth and from immigration southward.

During the past decade the center of population has moved northward into practically the same latitude which it occupied in 1870. It has moved westward 53′ 13″, or 48 miles, being less by 10 miles than its movement during the preceding decade, 6 miles greater than the movement between 1860 and 1870, and slightly less than the average westward movement since the First Census, its present position being in latitude 39° 11′ 56″ and longitude 85° 32′ 53″. The most salient point of its progress during the past decade is the northing which has been made, which is doubtless due to the

great development in the cities of the northwest and in the state of Washington, and also in no small degree to the increase of population in New England.

The center of the area of the United States, excluding Alaska, is in northern Kansas in approximate latitude 39° 55′ and approximate longitude 98° 50′. The center of population is therefore about three-fourths of a degree south and more than 13 degrees east of the center of area.

The following table shows the movement of the center of population since 1790:

POSITION OF THE CENTER OF POPULATION: 1790–1890.

CENSUS YEARS.	North latitude.	West longitude.	Approximate location by important towns.	Westward movement in miles during preceding decade.
1790	39° 16.5′	76° 11.2′	23 miles east of Baltimore, Maryland	
1800	39 16.1	76 56.5	18 miles west of Baltimore, Maryland	41
1810	39 11.5	77 37.2	40 miles northwest by west of Washington, District of Columbia	36
1820	39 5.7	78 33.0	16 miles north of Woodstock, Virginia	50
1830	38 57.9	79 16.9	19 miles west-southwest of Moorefield, West Virginia	39
1840	39 2.6	80 18.6	16 miles south of Clarksburg, West Virginia	55
1850	38 59.0	81 19.0	23 miles southeast of Parkersburg, West Virginia	55
1860	39 0.4	82 48.8	20 miles south of Chillicothe, Ohio	81
1870	39 12.0	83 35.7	48 miles east by north of Cincinnati, Ohio	42
1880	39 4.1	84 39.7	8 miles west by south of Cincinnati, Ohio	58
1890	39 11.9	85 32.9	20 miles east of Columbus, Indiana	48

GEOGRAPHICAL DISTRIBUTION OF POPULATION.

DISTRIBUTION OF POPULATION BY DRAINAGE BASINS.

In the table appended is given, first, the approximate area of each drainage basin in square miles, and, secondly, the population of each such drainage basin in 1890, 1880, and 1870, together with the number of inhabitants to the square mile.

The drainage areas are classified primarily by the two oceans and the Great Basin; second, by sections of the coast; third, by the principal rivers, the rivers of each section of the coast being arranged under that section, and the branches of a river placed under the main river.

The primary divisions are set at the margin of the page. Under each primary division its secondary divisions are placed, being indented 1 space. Under each of these secondary divisions the tertiary divisions are placed, and so on, the subdivisions of a drainage basin being in every case indented within that of the stream comprising them.

The New England coast comprises the area and population of the basins of the several rivers given beneath it, and, in addition to these, the area and population of the minor streams and of the immediate coast from the eastern border of Maine to the Hudson river.

The Middle Atlantic coast comprises, besides the basin of the rivers under it, in like manner the basins of the minor streams and of the coast itself as far as the mouth of the Potomac, including that stream.

The South Atlantic coast, in like manner, comprises the country from the Potomac southward to Florida.

The Gulf of Mexico, commencing with the peninsula of Florida, embraces the coast and the whole Mississippi valley to the mouth of the Rio Grande, including the latter stream.

The population of the various subdivisions was obtained by using the county as a unit, and subdividing the counties into tenths in cases where they lie partly in one basin and partly in another. Of course, in making these divisions of counties, population and not area was considered.

The areas of the different river basins were measured approximately from maps, and were finally adjusted to suit a total area of the United States (which had been determined with care) of 3,025,600 square miles, exclusive of Alaska.

The table shows that 96.16 per cent of the inhabitants live in the country which is drained to the Atlantic ocean; that 52.69 per cent of the population live in the region drained by the Gulf of Mexico, and that 43.77 per cent of the entire population of the country are congregated in the drainage area of the Mississippi river; that only 0.41 of 1 per cent live in the Great Basin, and 3.43 per cent on the Pacific coast. It shows, further, that the proportion living within the region drained to the Atlantic is steadily diminishing, while of this region the part drained to the Gulf of Mexico is becoming relatively more populous, as is the case in a still more marked degree in the Great Basin and the region drained to the Pacific.

DISTRIBUTION OF POPULATION ACCORDING TO DRAINAGE BASINS: 1890, 1880, AND 1870.

DRAINAGE BASINS.	Approximate area in square miles.	Population 1890.	Population per square mile.	Population 1880.	Population per square mile.	Population 1870.	Population per square mile.
Atlantic ocean	2,178,210	60,220,763	27.65	48,707,352	22.36	37,706,410	17.31
New England coast	61,830	4,486,813	72.57	3,811,102	61.64	3,286,416	53.15
St. John river	7,890	53,381	6.77	46,615	5.91	37,544	4.76
Penobscot river	8,934	113,179	12.67	111,050	12.43	112,326	12.57
Kennebec river	10,102	236,553	23.42	231,345	22.90	224,365	22.21
Merrimac river	4,864	616,594	126.77	500,978	103.00	436,238	89.69
Connecticut river	11,269	782,216	69.41	692,803	61.48	618,171	54.86
Housatonic river	1,933	251,701	130.21	208,920	108.08	182,738	94.54
Middle Atlantic coast	83,020	11,482,411	138.31	9,646,057	116.19	8,038,651	96.83
Hudson river	13,366	1,094,126	81.86	1,009,082	75.50	959,376	71.78
Delaware river	12,012	2,561,113	213.21	2,175,800	181.14	1,834,009	152.68
Susquehanna river	27,655	1,965,184	71.06	1,673,847	60.53	1,445,902	52.28
Potomac river	14,479	870,135	60.10	791,007	54.63	657,644	45.42
South Atlantic coast	132,040	4,248,466	32.18	3,705,807	28.07	2,799,126	21.20
James river	9,684	495,910	51.21	448,891	46.35	365,913	37.79
Cape Fear river	8,310	239,399	28.81	212,904	25.62	164,994	19.85
Neuse river	5,299	216,933	40.94	197,552	37.28	149,761	28.26
Pedee river	17,098	600,277	35.11	505,252	29.55	367,785	21.51
Roanoke river	9,237	404,281	43.77	364,160	39.42	276,289	29.91
Santee river	14,696	607,098	41.31	507,205	34.51	373,389	25.41
Savannah river	11,402	446,569	39.17	384,739	33.74	280,783	24.63
Altamaha river	14,109	473,967	33.59	401,789	28.48	301,091	21.34
Great Lakes	175,340	7,009,839	39.98	5,377,019	30.67	4,226,597	24.11
St. Lawrence river	13,636	474,158	34.77	469,554	34.43	458,834	33.65
Lake Ontario	12,387	1,006,668	81.27	926,128	74.77	853,486	68.90
Lake Erie	17,207	2,179,269	126.65	1,720,712	100.00	1,372,848	79.78
Lake Huron	18,839	439,393	23.32	313,255	16.63	176,914	9.39
Lake Michigan	45,876	2,507,562	54.66	1,826,534	39.81	1,327,417	28.93
Lake Superior	17,830	155,271	8.71	50,843	2.85	33,737	1.89
Red river	39,577	247,518	6.25	69,993	1.77	3,361	0.08
Gulf of Mexico	1,725,980	32,993,234	19.12	26,167,367	15.16	19,355,620	11.21
Peninsula of Fl	48,900	435,603	8.91	300,342	6.14	214,163	4.38
Apalachicola river	18,918	699,713	36.99	608,057	32.14	486,296	25.71
Mobile river	43,436	1,425,649	32.82	1,207,680	27.80	938,242	21.60
Tombigbee river	18,896	611,338	32.35	499,882	26.45	383,763	20.31
Alabama river	23,820	784,099	32.92	679,170	28.51	526,821	22.12
Pascagoula river	8,960	129,084	14.37	98,800	11.00	68,476	7.63
Pearl river	8,670	175,698	20.27	148,635	17.14	114,588	13.22
Sabine river	20,440	172,656	8.45	134,869	6.60	85,413	4.18
Trinity river	17,960	449,718	25.04	315,220	17.55	128,244	7.14
Brazos river	59,646	512,621	8.59	363,892	6.10	165,986	2.78
Colorado river	41,220	183,524	4.45	125,869	3.05	55,004	1.33
Nueces river	18,944	41,633	2.20	27,635	1.46	11,204	0.59
San Antonio river	16,352	169,847	10.39	122,413	7.49	72,137	4.41
Rio Grande river	128,792	156,150	1.21	115,517	0.90	79,370	0.62
Mississippi river	1,240,039	27,411,522	22.11	21,776,479	17.56	16,333,045	13.17
Yazoo river	12,794	415,406	32.47	366,502	28.65	259,563	20.29
Illinois river	29,013	1,867,935	64.38	1,474,337	50.82	1,206,706	41.59
Rock river	9,792	532,117	54.34	506,835	51.76	497,302	50.79
Wisconsin river	12,280	259,778	21.15	208,189	16.95	167,361	13.63
Chippewa river	8,892	141,529	15.92	84,240	9.47	43,022	4.84
St. Croix river	7,576	92,854	12.26	59,832	7.90	30,664	4.05
Minnesota river	16,000	327,852	20.49	231,065	14.44	119,847	7.49
Cedar river	12,492	393,021	31.46	372,556	29.82	290,884	23.29
Des Moines river	14,652	423,128	28.88	328,746	22.44	224,993	15.36

DISTRIBUTION OF POPULATION ACCORDING TO DRAINAGE BASINS, ETC.—Continued.

DRAINAGE BASINS.	Approximate area in square miles.	Population 1890.	Population per square mile.	Population 1880.	Population per square mile.	Population 1870.	Population per square mile.
Atlantic ocean—Continued.							
Gulf of Mexico—Continued.							
Mississippi river—Cont'd.							
Ohio river	201,720	10,986,877	54.47	9,588,303	47.53	7,839,424	38.86
Tennessee river	43,897	1,384,733	31.55	1,177,144	26.82	927,054	21.12
Cumberland river	18,573	720,012	38.77	643,819	34.66	529,088	28.49
Kentucky river	7,425	291,022	39.19	253,839	34.19	203,230	27.37
Green river	9,065	358,804	39.58	332,056	36.63	262,874	29.00
Licking river	3,658	221,478	60.55	200,297	54.76	161,132	44.05
Kanawha river	16,690	334,795	20.06	263,047	15.81	182,131	10.91
Monongahela river	7,625	495,636	65.00	375,939	49.30	292,326	38.34
Allegheny river	11,437	970,869	84.89	809,926	70.82	645,752	56.46
Miami river	5,400	469,596	86.96	413,592	76.59	351,370	65.07
Scioto river	6,480	444,124	68.54	400,856	61.86	337,914	52.15
Muskingum river	7,740	541,378	69.95	505,196	65.27	445,934	57.61
Wabash river	33,725	1,915,790	56.81	1,727,214	51.21	1,455,300	43.15
Big Sandy river	4,050	190,283	46.98	154,012	38.03	109,886	27.13
Missouri river	527,155	4,560,561	8.65	2,841,451	5.39	1,604,465	3.04
Big Sioux river	7,880	119,337	15.14	51,241	6.50	5,200	0.67
Yellowstone river	69,683	21,574	0.31	3,184	0.05	241	0.00
Platte river	90,011	647,104	7.19	267,230	2.97	68,471	0.76
Kansas river	59,256	985,524	16.63	623,621	10.52	176,308	2.98
Osage river	15,444	508,201	32.91	385,848	24.98	273,444	17.71
Arkansas river	185,671	1,771,312	9.54	1,141,607	6.15	533,331	2.88
Cimarron river	17,360	55,690	3.21	4,203	0.24	1,693	0.10
Canadian river	42,710	54,766	1.28	24,859	0.58	18,887	0.44
White river	27,925	338,305	12.11	244,455	8.75	147,979	5.30
Red river of Louisiana	89,970	955,757	10.62	705,806	7.84	445,366	4.95
Washita river	19,138	360,566	18.84	281,582	14.71	187,385	9.79
St. Francis river	7,884	162,897	20.66	118,108	14.99	78,428	9.95
Great Basin	228,150	256,130	1.12	210,998	0.92	125,384	0.55
Great Salt lake	32,400	156,150	4.82	104,621	3.23	65,627	2.03
Humboldt river	32,148	38,119	1.19	49,864	1.55	29,592	0.92
Pacific ocean	619,240	2,145,357	3.46	1,237,433	2.00	726,577	1.17
Colorado river	225,049	208,643	0.93	109,188	0.49	39,495	0.18
Green river	47,222	27,494	0.58	10,709	0.23	4,366	0.10
Grand river	26,472	47,349	1.79	14,795	0.56	165	0.01
Little Colorado river	29,268	3,821	0.13	3,644	0.12	428	0.01
Gila river	68,623	45,917	0.67	28,348	0.41	6,954	0.10
Sacramento river	58,824	378,462	6.43	324,398	5.51	240,246	4.08
San Joaquin river	29,952	134,206	4.48	88,902	2.97	67,459	2.25
Klamath river	14,660	18,199	1.24	14,627	1.00	10,000	0.68
Columbia river	216,537	393,415	1.82	222,737	1.03	104,882	0.48
Willamette river	11,700	129,782	11.09	78,326	6.69	50,271	4.30
Snake river	103,885	142,091	1.37	55,256	0.53	21,530	0.21
Clark fork	63,291	46,067	0.73	12,274	0.19	7,215	0.11

A condensation of the preceding table, showing the percentage of the total population of the principal drainage basins of the country as it existed in the three decades mentioned, is herewith presented:

PERCENTAGE OF TOTAL POPULATION.

DIVISIONS.	1890	1880	1870
Atlantic ocean	96.16	97.11	97.79
New England coast	7.16	7.60	8.52
Middle Atlantic coast	18.34	19.23	20.85
South Atlantic coast	6.78	7.39	7.26
Great Lakes	11.19	10.72	10.96
Gulf of Mexico	52.69	52.17	50.20
Great Basin	0.41	0.42	0.33
Pacific ocean	3.43	2.47	1.88

Of the percentages given in the preceding table for the drainage basin of the Gulf of Mexico, the tertiary division of the Mississippi river embraces 43.77 for 1890, 43.42 for 1880, and 42.36 for 1870.

DISTRIBUTION OF POPULATION IN ACCORDANCE WITH TOPOGRAPHIC FEATURES.

Considering the surface of the United States broadly, it is seen to contain two great elevated areas. The eastern, known as the Appalachian Mountain system, is separated from the Atlantic by a broad plain sloping gently eastward. The western, known as the Cordilleran Mountain system, is many times as broad as the eastern system, more than twice as high, and the mountain ranges which crown it are vastly greater in number and more complex. It extends westward to the Pacific coast.

Between these two systems lies a broad valley, most of which is drained by the Mississippi river to the Gulf of Mexico. The northeastern part is drained by the St. Lawrence river and the system of the Great Lakes to the gulf of St. Lawrence, while along the Gulf coast are considerable areas drained by other streams.

The country thus broadly outlined contains every variety of surface found upon the globe. The various effects due to differences in slope, elevation, and climate are all represented.

An attempt has been made in the table shown on page lxi to subdivide the country into areas differing in the character of their surface, their products, and their climate, and to classify the population in accordance therewith. These subdivisions are briefly characterized as follows:

COAST SWAMPS.—These swamps are found along the South Atlantic and Gulf coasts, extending inland to varying distances, in some places as much as 100 miles. They have the greatest breadth in North Carolina and Louisiana, but border the coast nearly all the way from southeast Virginia to the mouth of the Rio Grande, Texas. Upon the Atlantic coast the surface of these swamps, while exceedingly level, has ample slope for drainage, and accordingly as the land becomes valuable their borders are being drained and converted into farms. In the Carolinas a considerable area of them is utilized for rice plantations. In the main they are well timbered, principally with cypress and juniper, among which is a luxuriant growth of cane. The population of this region is mainly of the colored race, the climate being very unhealthy for the white race.

ATLANTIC PLAIN.—The Atlantic plain comprises the strip of land lying between the Coast swamps and the fall line throughout the Atlantic states south of New York and the Gulf states as far as the Mississippi river. It is characterized by a level surface, a low elevation, scarcely reaching 200 feet above the sea, is underlaid by recent sedimentary rocks, and except where they have been removed by the hand of man is covered with pine forests.

PIEDMONT REGION.—This region comprises a strip of country extending from Maine to Alabama, lying between the fall line on the east and the Blue Ridge on the west. It is underlaid by metamorphic rocks and forested with a mixed growth of broad and narrow leaf trees. The lower portion is comparatively level, being broken only by the beds of streams, but in the neighborhood of the Blue Ridge and throughout New England it is hilly..

NEW ENGLAND HILLS.—This name has been applied to the hill country in the upper part of New England, including all of the upper part of Maine, the White mountains of New Hampshire, the Green mountains of Vermont, and the Adirondacks of New York, all of which is a broken, mountainous country, ranging in elevation from 1,000 to 6,000 feet, and covered with forests.

APPALACHIAN MOUNTAIN REGION.—This region includes the Blue Ridge and the Appalachian valley lying immediately north and west of it, and extends from New Jersey to Alabama and Georgia. The Blue Ridge, consisting of a single range throughout Pennsylvania, Maryland, and Virginia, expands in North Carolina into a very complex mass of mountains, and there reaches its maximum elevation, namely, 6,700 feet.

The Appalachian valley is drained in New Jersey and Pennsylvania by the Delaware and Susquehanna rivers, in Virginia by the Potomac, the James, and Kanawha rivers, and in Tennessee mainly by the Tennessee river. It is traversed by numerous ranges, some of them assuming the dignity of separate mountain ranges, and all of them running closely parallel to one another and to the general direction of the valley.

CUMBERLAND-ALLEGHENY PLATEAU.—Rising from the northwest border of the Appalachian valley is an escarpment extending more or less continuously from northeastern Pennsylvania down through Maryland, Virginia, and Tennessee into Alabama. From the summit of this escarpment a plateau stretches with a general northwestern slope. This plateau is everywhere deeply scored by streams with a general northwesterly direction. These streams have cut the plateau into a mass of very irregular ridges and gorges, making it one of the most intricate mountain regions on the globe. The entire region is densely covered with forests, the hand of man having removed but a very small part of them.

INTERIOR TIMBERED REGION.—This region comprises southern Ohio and Indiana, the western half of Kentucky and Tennessee, and the northeastern part of Mississippi, together with small areas in adjoining states. It possesses no characteristic features except that in the settled regions it is covered with forests.

LAKE REGION.—A narrow strip of country bordering on the Great Lakes has been segregated under this name. It includes small parts of New York, Pennsylvania, and Ohio, and most of Michigan, Wisconsin, and northern Minnesota. Owing to the proximity of large bodies of water this region has many of the characteristics of a coast climate. The atmosphere being moist, the winters are abnormally warm and the summers abnormally cool. This region contains great pine forests, which are still serving as a main source of supply of that timber.

OZARK MOUNTAIN REGION.—This region is located in northwest Arkansas, southwest Missouri, and the eastern part of Indian territory. In Arkansas it is made up of a succession of narrow ranges 2,000 to 3,000 feet high, having a generally east and west trend, separated by somewhat broad valleys. Further to the northeast, in Missouri, the hills become merely a confused mass, without order or system.

ALLUVIAL REGION OF THE MISSISSIPPI.—This region extends in a rapidly widening strip from Cairo, at the mouth of the Ohio, to the coast swamps in Louisiana, into which it merges without any sharp line of demarcation. It includes parts of the states of Missouri, Arkansas, Mississippi, and Louisiana, besides a trifling area in Kentucky and Tennessee. Much the larger portion of it is marshy, and is below the level of the water in the rivers. The dry land lies mainly along the immediate banks of the streams, having been formed by deposition from overflows. With the exception of the cultivated land, this region is entirely covered with forests. The soil is of the highest degree of fertility, but the climate is hostile to the white race, and by far the larger proportion of its inhabitants is of the colored race.

PRAIRIE REGION.—This region comprises a small portion of western Indiana, most of Illinois and Iowa, southern Wisconsin and Minnesota, northern Missouri, and eastern North Dakota, South Dakota, Kansas, and Nebraska, and extends in a broad belt down through the Indian territory and Texas.

On the east it merges by insensible degrees into the forest-clad regions, and on the west by equally insensible degrees into the Great Plains. It is a region of transition from the one to the other. Its climate is such that without protection forests can not thrive. Before the advent of man various unfavorable conditions, among which forest fires were the most prominent, prevented the growth of forests in this region.

Its surface is level or slightly undulating, and was, in its natural state, covered with luxuriant grasses, but timber growth was scarce, and was confined almost entirely to the bluffs and the borders of streams. With the protection afforded by man the growth of forests has increased in this region, until now it presents a landscape diversified by a tree growth, whose extent is constantly increasing. It is the granary of the country.

GREAT PLAINS.—Merging with the prairie region by insensible degrees are the Great Plains, extending from approximate longitude 99° to the foot of the Rocky mountains, and from the Canadian border to the Rio Grande. It is a region devoid of timber, except in the narrowest strips along certain streams, but sparsely covered with bunch grass, changing in the more arid regions to sage, artemisia, cactus, and yucca. Its surface is a monotonous, billowy expanse, broken only here and there by lines of cliffs and buttes.

Throughout this region the rainfall is insufficient for the needs of agriculture, and irrigation is necessary for the cultivation of the soil. The supply of water in the flowing streams is sufficient to irrigate only a small part of the land, and the extent to which settlement is possible will in the future become, therefore, a question of the abundance of water and not of land.

CORDILLERAN REGION.—The Cordilleran region is naturally subdivided into districts which differ from one another in certain features and have other features in common. Except in the extreme northwest, in Washington, western Oregon, and northwest California, the climate is arid and the rainfall is insufficient for agriculture. This aridity of climate and deficiency of rainfall increase southward and reach a maximum in southern Nevada, California, and Arizona. The prevalence of forests accompanies the rainfall. Upon the northwest coast and inland as far as the Cascade range in Oregon and Washington the country is densely covered with forests of great trees. This forest belt extends inland through northern Washington and Idaho into

the mountainous region of Montana, and thence southeastward, accompanying the mountain ranges into the Yellowstone Park. Elsewhere no forests are found except upon the mountains, and in the more arid regions of the south even the mountains are bare to their summits. The valleys produce only the vegetation characteristic of an arid region. Where the rainfall is abundant bunch grass is found, but as the rainfall diminishes and the dryness of the atmosphere increases, the vegetation of the valleys changes to artemisia, cactus, yucca, and other desert plants.

ROCKY MOUNTAIN REGION.—This region, including the easternmost portion of the Cordilleran system, comprising western Montana, eastern Idaho, western Wyoming, central Colorado, and New Mexico, with a little of Texas, is composed of a series of ranges separated by valleys of greater or less breadth, trending parallel to one another a little west of north and east of south. It is naturally subdivided into two parts. The northern part extends from Canada southeastward into central Wyoming; thence for a distance of 100 miles or thereabouts the mountain ranges disappear, leaving in their place only broad plateaus. The ranges reappear in southern Wyoming and extend thence southward. In the northern part the mountains range from 9,000 to 13,000 or more feet in altitude, rising from a base of 4,000 or 5,000 feet. In the southern part the base is much higher, rising in Colorado to 6,000 or 8,000 feet, with high mountain valleys reaching 10,000 feet above the sea, while many of the ranges exceed 14,000 feet in altitude. Both the general level of the country and the mountain ranges diminish in altitude southward.

PLATEAU REGION.—This region comprises most of the drainage basin of the Colorado river above the mouth of the Virgin, in southern Nevada. It is a region of great plateaus, whose surfaces are level or slightly inclined, and which terminate with great lines of cliffs, in some cases thousands of feet in height. From the mountains which border this range on the east, north, and west these plateaus descend by a succession of gigantic steps from an elevation of 12,000 feet down to 1,000 or 2,000 feet above the sea. Every stream is in a canyon, and as the rainfall is light and spasmodic a great majority of these canyons are dry during the greater part of the year. In many regions these canyons are so abundant as to have reduced the plateau to a mere skeleton, or the process of erosion may have gone still further, so that nothing is left of the upper plateau but fragments in the form of mesas and buttes.

The higher plateaus in the neighborhood of the mountains are green and forested from the abundant rainfall. The lower plateaus, on the other hand, have only the sparsest vegetation or are absolutely sterile.

BASIN REGION.—In the interior of the Cordilleran region is an area comprising practically all of Nevada, western Utah, part of eastern California, and southern Oregon, which has no drainage to the sea. It is a closed basin. The only discharge of its waters is by sinking into the thirsty soil or by evaporation into the thirsty atmosphere. This is the most desert part of the country, with the exception of the course of the lower Colorado and Gila rivers. The rainfall is scanty, even upon the mountains; so scanty, indeed, that there are but two or three running streams of any magnitude within it. Its surface is diversified by many ranges of mountains having a general parallel trend, rising from flat valleys filled with alluvium. These ranges divide the basin into numerous minor basins, in each of which water collects and sinks. In the eastern part the largest basin is that known as the Great Salt lake, into which several small streams flow from the Wasatch mountains. In the western part the principal basin is that of the Humboldt river. The elevation of the floor of the basin ranges from 6,000 feet near its middle line, downward, reaching in Death valley, in eastern California, an elevation of 200 feet below the level of the sea.

COLUMBIAN MESAS.—The drainage basin of the Snake river, in Idaho, Oregon, and Washington, together with a part of the basin of the Columbia, in the latter state, has been in great part covered by eruptions of basalt, which, bursting out of the soil at various points, has spread over the country, forming a table land.

SIERRA NEVADA.—Separating the Great Basin from the California valley, in eastern California, is a broad, heavy, forest-covered range of mountains with long slopes to the west and an abrupt ascent to the east.

PACIFIC VALLEY.—West of the Cascade range and the Sierra Nevada and stretching from Puget sound to southern California is a valley drained in Oregon by the Willamette and in California by the Sacramento and San Joaquin rivers. In its southern part, south of the latitude of the bay of San Francisco, the climate is such that irrigation is necessary, while north of it the rainfall is sufficient, and in Oregon and Washington is more than sufficient for the farmers' needs. Where the rainfall is insufficient this valley is treeless, but farther north, and especially in Oregon and Washington, it is covered with dense forests.

CASCADE RANGE.—Stretching northward in line with the Sierra Nevada, but distinguished sharply from it by the character of its formation, is the Cascade range. It is a series of extinct volcanoes, rising from a high plateau of volcanic rock. This range is densely forested.

COAST RANGES.—Separating this valley from the Pacific is a succession of ranges trending parallel with the coast, and known as the Coast ranges. In southern California the valleys among these ranges are of the highest degree of fertility, and produce grapes and tropical fruits in profusion. Farther north the country is but little settled or even explored.

The table on the following page shows in each of the divisions characterized above the number of inhabitants in thousands at each of the last 3 censuses, namely, 1890, 1880, and 1870. It shows also the numerical increase of the population expressed in even thousands, the number of inhabitants in each subdivision, under the assumption that the total population of the country was 100,000, and, finally, the density of the total population or the number of inhabitants to the square mile in each subdivision.

Grouping these subdivisions, it will be seen that in the swamp regions of the country, including in that term the coast marshes and the alluvial region of the Mississippi river, there were 2,694,000 inhabitants, or 4.30 per cent of the population. This, as was previously stated, consists mainly of the colored race. In the desert and semidesert regions of the country there were found 1,469,000, or 2.35 per cent of the population. In the mountain region of the west there were found 1,535,000 people, or about 2.45 per cent, while in the eastern mountain region 10,888,000 people were living in 1890, or about one-sixth of the entire population.

DISTRIBUTION OF POPULATION IN ACCORDANCE WITH TOPOGRAPHIC FEATURES.

REGIONS.	POPULATION IN THOUSANDS.			INCREASE OF POPULATION IN THOUSANDS.				NUMBER IN 100,000 INHABITANTS.			DENSITY OF POPULATION.		
				1880 to 1890		1870 to 1880							
	1890	1880	1870	Absolute.	Per cent.	Absolute.	Per cent.	1890	1880	1870	1890	1880	1870
Coast swamps	1,809	1,569	1,284	240	15.30	285	22.20	2,889	3,128	3,330	21.5	18.7	15.3
Atlantic plain	8,784	7,113	5,546	1,671	23.49	1,567	28.25	14,027	14,182	14,384	74.4	60.2	47.0
Piedmont region	7,858	6,660	5,468	1,198	17.99	1,192	21.80	12,548	13,279	14,181	69.5	55.8	45.8
New England hills	2,290	2,171	1,995	119	5.48	176	8.82	3,657	4,329	5,174	40.7	38.6	35.4
Appalachian Mountain region.	2,849	2,386	1,959	463	19.40	427	21.80	4,550	4,757	5,081	49.8	41.7	34.3
Cumberland-Allegheny plateau.	5,749	4,787	3,940	962	20.10	847	21.50	9,180	9,544	10,218	59.3	49.4	40.7
Interior timbered region.	11,292	9,891	7,976	1,401	14.16	1,915	24.01	18,032	19,720	20,686	44.3	38.8	31.3
Lake region	3,578	2,507	1,722	1,071	42.72	785	45.59	5,714	4,998	4,466	25.1	17.6	12.1
Ozark Mountain region.	1,041	734	473	307	41.83	261	55.18	1,662	1,463	1,227	22.8	16.0	10.3
Alluvial region of the Mississippi.	885	683	460	202	29.58	223	48.48	1,413	1,362	1,193	23.6	18.2	12.2
Prairie region	13,048	9,777	6,715	3,271	33.46	3,062	45.60	20,836	19,493	17,415	28.3	21.2	14.6
Great Plains	737	222	73	515	231.98	149	204.11	1,177	443	189	1.4	0.4	0.1
North Rocky mountains.	153	50	29	103	206.00	21	72.41	244	100	75	1.1	0.4	0.2
South Rocky mountains.	247	192	78	55	28.65	114	146.15	394	383	202	2.1	1.7	0.7
Plateau region	110	81	29	29	35.80	52	179.31	176	162	75	0.7	0.5	0.2
Basin region	403	252	149	151	59.92	103	69.13	644	502	386	1.4	0.9	0.5
Columbian mesas	219	91	27	128	140.66	64	237.04	350	181	70	1.9	0.8	0.2
Sierra Nevada	146	136	111	10	7.35	25	22.52	233	271	288	4.9	4.6	3.8
Pacific valley	435	248	166	187	75.40	82	49.40	695	494	431	9.1	5.2	3.5
Cascade range	179	54	30	125	231.48	24	80.00	286	108	78	5.5	1.7	0.9
Coast ranges	810	552	328	258	46.74	224	68.29	1,293	1,101	851	14.3	9.8	5.8

DISTRIBUTION OF POPULATION WITH REFERENCE TO MEAN ANNUAL TEMPERATURE.

The great increase in the amount of data concerning the distribution of temperature in the country during the past 10 years, produced by the extension of State Weather Services, rendered it advisable to collect material and prepare a new map showing the distribution of the isothermals, and to make therefrom a recomputation of the distribution of population in 1870 and 1880. The necessary data have been freely contributed by the Chief Signal Officer of the Army, General A. W. Greely, and by the several directors of the State Weather Services, to whom this office is under great obligations. The information collected from these various sources has been placed upon a map of the United States, and isothermals drawn in accordance with their indications, combined with a knowledge of the relief of the country and the influence of the relief upon temperature. The counties falling between the different isothermal lines have been drawn from the maps in tabular form and the population classified in accordance therewith.

The table on the following page is presented as embracing the results of this investigation. In this table the first column shows the degrees of temperature; the second, third, and fourth columns, a distribution of population in accordance with the isothermal lines, subject to the supposition that the entire population of the country was at each date 100,000 persons, or, in other words, these columns show the percentage of the population which was, at the date designated, living between the various isothermal lines, the computation being carried out to the thousandth of 1 per cent. The fifth and sixth columns show the change in the number from census to census under the same assumption that the entire population was 100,000. The seventh, eighth, and ninth columns show the number of inhabitants, the total population being assumed at

100,000, living under temperature conditions below each of the several groups. The tenth, eleventh, and twelfth columns show the density of population, that is, the number of inhabitants per square mile in each of the several groups, while the last two columns show the increase in density.

DEGREES OF TEMPERATURE.	NUMBER IN 100,000 INHABITANTS.			CHANGE IN NUMBER IN 100,000.		NUMBER IN 100,000 ABOVE EACH GROUP.			DENSITY OF POPULATION.			INCREASE IN DENSITY OF POPULATION.	
	1890	1880	1870	1880 to 1890	1870 to 1880	1890	1880	1870	1890	1880	1870	1880 to 1890	1870 to 1880
Below 40	1,653	1,155	919	+498	+236	1,653	1,155	919	4.69	2.63	1.61	2.06	1.02
40 to 45	8,180	7,413	7,119	+767	+294	9,833	8,568	8,038	12.51	9.10	6.72	3.41	2.38
45 to 50	27,423	27,324	28,986	+99	−1,662	37,256	35,892	37,024	28.61	22.86	18.65	5.75	4.21
50 to 55	31,583	32,396	33,182	−813	−786	68,839	68,288	70,206	31.02	25.54	20.11	5.48	5.43
55 to 60	13,775	14,230	13,723	−455	+507	82,614	82,518	83,929	22.78	18.88	14.00	3.90	4.88
60 to 65	9,865	9,982	9,152	−117	+830	92,479	92,500	93,081	17.89	14.53	10.24	3.36	4.29
65 to 70	6,279	6,262	5,062	+17	+600	98,758	98,762	98,743	14.16	11.33	7.88	2.83	3.45
70 to 75	1,210	1,216	1,242	−6	−26	99,968	99,978	99,985	7.49	6.01	4.72	1.48	1.29
Above 75	32	22	15	+10	+7	100,000	100,000	100,000	3.59	2.00	1.03	1.59	0.97

A glance at the table will show that in 1870, 1880, and 1890 more than half the population was living under a temperature between 45 and 55 degrees, and that between 45 and 60 degrees were found from 70 to 75 per cent of the inhabitants. Only a trifle over 1 per cent were living where the temperature was greater than 70 degrees, while in the region whose mean annual temperature was above 75 degrees the number of inhabitants was trifling. The number of inhabitants to the square mile not only expresses the density of population but also gives a comparative measure of the absolute number and the increase in absolute number. The greatest density has been, since 1870, where the temperature ranges from 50 to 55 degrees. From this as a maximum it diminishes rapidly both with an increase and decrease in temperature. The most rapid proportional increase in population has taken place at the two extremes, where it has trebled during the 20 years intervening between 1870 and 1890, while in the same time it has increased but about 50 per cent in the most densely settled group.

The average annual temperature of the territory of the United States, excluding Alaska from consideration, is 53 degrees. The average annual temperature under which the people of the country live, taking into account the density of settlement, is practically the same.

DISTRIBUTION OF POPULATION IN ACCORDANCE WITH MEAN ANNUAL RAINFALL.

Through the courtesy of the Chief Signal Officer of the Army, General A. W. Greely, and of the directors of the Weather Services of the various states, the latest and most reliable data regarding the rainfall of the country have been placed at the disposal of this office. In addition to this, a compilation has been made of all other accessible material, including the Smithsonian collections and the records of the state engineer of California. From these various sources data from nearly 2,000 stations have been obtained, platted upon a map of the United States, and the curves of mean annual rainfall, at intervals of 10 inches, sketched in accordance with their indications, supplemented by our knowledge of the relief of the country and its known influence upon rainfall.

From the map thus prepared the counties falling between the different curves of mean annual rainfall were drawn off in lists. In cases where the county was cut in

parts by a curve, due weight was given in the partition of the county to any inequality in distribution of population. The population was then distributed by counties in accordance with the lists. The result is shown in the table appended:

INCHES OF RAINFALL.	NUMBER IN 100,000 INHABITANTS.			CHANGE IN NUMBER IN 100,000 INHABITANTS.		NUMBER IN 100,000 ABOVE EACH GRADE.			POPULATION PER SQUARE MILE.			INCREASE IN POPULATION PER SQUARE MILE.	
	1890	1880	1870	1880 to 1890	1870 to 1880	1890	1880	1870	1890	1880	1870	1880 to 1890	1870 to 1880
Below 10.....	300	278	192	+22	+86	300	278	192	0.8	0.6	0.3	0.2	0.3
10 to 20.....	2,612	1,385	949	+1,227	+436	2,912	1,663	1,141	1.8	0.8	0.4	1.0	0.4
20 to 30.....	6,038	4,343	1,909	+1,695	+2,434	8,950	6,006	3,050	8.1	4.7	1.6	3.4	3.1
30 to 40.....	34,098	34,970	36,644	—872	—1,674	43,048	40,976	39,694	43.1	35.5	28.6	7.6	6.9
40 to 50.....	39,459	40,984	42,719	—1,525	—1,735	82,507	81,960	82,413	59.0	49.2	39.4	9.8	9.8
50 to 60.....	16,164	16,734	16,212	—570	+522	98,671	98,694	98,625	25.1	20.9	15.5	4.2	5.4
60 to 70.....	1,274	1,271	1,358	+3	—87	99,945	99,965	99,983	18.1	14.5	11.9	3.6	2.6
Above 70.....	55	35	17	+20	+18	100,000	100,000	100,000	4.1	2.1	0.8	2.0	1.3

In this table the first column shows the grades, expressed in inches of rainfall; the second, third, and fourth columns, the number of inhabitants found in each grade in 1890, 1880, and 1870, assuming that the total population at each of the above periods was 100,000, or, in other words, the percentage of the population in each of these grades at the periods under consideration, carrying the figures out to the thousandth of 1 per cent; the fifth and sixth columns show the increase or decrease in number; the seventh, eighth, and ninth columns show the number of inhabitants in each 100,000 above each grade, and therefore are cumulative columns; the tenth, eleventh, and twelfth columns show the density of population in each grade in 1890, 1880, and 1870, and the last two columns show the increase in population per square mile.

It will be noticed that the main body of the population of the country inhabits the region in which the annual rainfall is between 30 and 50 inches, nearly three-fourths of the inhabitants being found there. On either side, as the rainfall increases or diminishes, the population diminishes rapidly. It will be seen further that the arid region of the west, where the rainfall is less than 20 inches, a region which comprises two-fifths of the entire area of the country, contains at present less than 3 per cent of the population.

The greatest density of population is in the area enjoying from 40 to 50 inches of annual rainfall, the average of this region being 59 inhabitants to the square mile. Next to that is the area having from 30 to 40 inches, where the density is 43.1. The density of population has increased rapidly in these regions. It is apparent, however, that the most rapid increase, as expressed by density of population, is where the rainfall ranges from 20 to 30 inches; that is, in the eastern portion of the Great Plains ranging from Texas to Dakota, where the density has increased in 20 years from 1.6 to 8.1.

The average annual rainfall upon the surface of the United States, as deduced from the map previously mentioned, is 29.6 inches. The average annual rainfall with relation to the population, deduced by giving weight to each area of country in proportion to the number of its inhabitants, was, in 1870, 42.5 inches; in 1880 it had diminished to 42 inches, and in 1890 to 41.4 inches, the diminution being caused mainly by the settlement of the Great Plains and the arid regions of the west.

DISTRIBUTION OF POPULATION IN ACCORDANCE WITH MEAN RELATIVE HUMIDITY OF THE ATMOSPHERE.

The atmosphere along the Atlantic, Gulf, and Lake coasts and the entire Pacific coast is heavily charged with moisture. It is especially so upon the coast of Oregon and Washington, where the atmosphere is more highly charged with moisture than elsewhere within our territory. The high mountain regions of the Appalachian and to a considerable extent those of the Rocky mountain ranges also have a moist atmosphere. The moisture is less in the Piedmont region east of the Appalachians and in the upper Mississippi valley. Passing across the prairies and the Great Plains, the amount of moisture in the atmosphere diminishes still more, while the minimum is reached in the Great Basin, in Utah, Nevada, southern Arizona, and southeastern California. In a general way, the amount of moisture in the atmosphere increases and decreases with the rainfall, but this is not always the case. The upper lake region, with an atmosphere as moist as that of Washington city, has a much smaller rainfall. The coast of southern California, with a deficient rainfall, has as moist an atmosphere as the Atlantic coast.

In the following table showing this distribution the population is given to the nearest thousands, as the results aimed at are merely general relations. The first column defines the groups, expressed in percentages of saturation; the second, third, and fourth columns, the absolute number of inhabitants in thousands in the various groups at the Eleventh, Tenth, and Ninth censuses; the fifth and sixth columns, the percentages of increase; the seventh, eighth, and ninth columns, the percentages of the total population in each group; the tenth, eleventh, and twelfth columns, the number of inhabitants to the square mile in each group.

GROUPS.	POPULATION IN THOUSANDS.			PER CENT OF INCREASE.		PER CENT OF TOTAL POPULATION.			POPULATION PER SQUARE MILE.		
	1890	1880	1870	1880 to 1890	1870 to 1880	1890	1880	1870	1890	1880	1870
Below 50	309	219	137	41.10	59.85	0.49	0.44	0.36	1.14	0.80	0.50
50 to 55	433	202	91	114.36	121.98	0.69	0.40	0.24	1.44	0.67	0.30
55 to 60	291	134	61	117.16	119.67	0.46	0.27	0.16	1.35	0.61	0.28
60 to 65	868	439	136	97.72	222.79	1.39	0.87	0.35	2.89	1.46	0.45
65 to 70	22,969	19,279	14,388	19.14	33.99	36.68	38.44	37.32	31.46	26.41	20.26
70 to 75	34,067	27,280	21,885	24.88	24.65	54.40	54.39	56.76	40.07	32.10	25.74
75 to 80	3,341	2,403	1,730	39.03	38.90	5.34	4.79	4.49	14.21	10.22	7.36
Above 80	344	200	130	72.00	53.85	0.55	0.40	0.34	5.55	3.22	2.09

A glance at this table shows that nearly all the population breathe an atmosphere containing 65 to 75 per cent of its full capacity of moisture; that is, the atmosphere is from two-thirds to three-fourths saturated. In 1890, 57,036,000 out of 62,622,250 were found in this region; in 1880, 46,559,000 out of 50,155,783, and in 1870, 36,273,000 out of 38,558,371. The number of inhabitants living in a drier atmosphere was at each census comparatively trifling, numbering in 1870 less than 500,000, and in 1890 less than 2,000,000. In the moister atmosphere were found larger numbers scattered along the Gulf coast and the shores of Washington and Oregon.

The most rapid increase is found near the top and bottom of the scale, and particularly in the more arid region, where the population has nearly doubled during each of the last two periods.

DISTRIBUTION OF POPULATION IN ACCORDANCE WITH LATITUDE AND LONGITUDE.

Three tables are given on the following pages, the first showing the population of the country in 1890 by thousands, distributed by square degrees, that is, by areas included between consecutive parallels and consecutive meridians. It is in effect a population map of the country, showing not only the total population of each square degree, but an approximation to the relative density of population in each square degree. The magnitude of the numbers betrays the whereabouts of the great centers of population, as New York, Chicago, etc., while, on the other hand, the sparseness of population upon the Cordilleran plateau is shown in an equally forcible manner.

The second and third tables are abstracts from the first table, with deductions from them.

The second table shows the distribution of the population in accordance with latitude, giving first the absolute population in thousands between each two consecutive parallels across the country in 1890, 1880, and 1870; the percentage of increase in population between each two parallels; the number of inhabitants in each group, under the assumption that the total population was 100,000 at each of these three censuses; the number in 100,000 north of each parallel of latitude; the number of inhabitants per square mile, and the increase or decrease in the density of population.

The third table presents similar facts regarding the distribution of population in accordance with longitude, arranged in a similar manner.

POPULATION IN 1890 IN EACH SQUARE

DEGREES OF LONGITUDE.	DEGREES OF LATITUDE.											
	48–49	47–48	46–47	45–46	44–45	43–44	42–43	41–42	40–41	39–40	38–39	37–38
Total	144	388	547	1,004	2,134	3,235	6,655	7,506	9,832	7,284	4,606	3,528
67–68		5	5	27	22							
68–69		5	24	47	69							
69–70		5	13	25	126	33		3				
70–71			3	20	91	153	460	124				
71–72				5	52	162	1,233	515				
72–73					123	120	345	455	31			
73–74					111	150	373	465	2,573			
74–75					75	72	273	311	1,080	196	1	
75–76					75	216	200	354	554	1,414	141	38
76–77					21	155	309	252	543	727	118	114
77–78						223	207	153	198	249	366	242
78–79						130	426	142	244	138	129	137
79–80						12	101	209	539	141	63	156
80–81							8	288	602	172	73	109
81–82								448	291	219	140	78
82–83					3	65	60	122	231	252	207	83
83–84			1	11	34	161	395	305	237	256	170	91
84–85			12	30	24	101	197	217	268	671	303	181
85–86			8	13	62	169	210	217	252	222	374	140
86–87			9	7	20	63	60	105	232	286	158	143
87–88		1	37	49	73	156	384	950	134	209	235	186
88–89		16	37	27	141	201	311	218	150	165	150	152
89–90			16	28	80	113	182	135	189	184	184	155
90–91			22	18	72	98	159	217	156	162	615	77
91–92	5	6	14	42	101	115	121	134	187	138	92	57
92–93	10	22	19	56	124	105	107	142	122	134	112	74
93–94		1	10	212	275	79	92	173	116	151	121	140
94–95		1	19	71	82	55	84	114	124	348	159	167
95–96	4	17	42	50	45	53	90	133	118	168	139	123
96–97	13	32	32	29	35	61	88	241	167	83	61	79
97–98	31	31	25	19	30	48	41	80	105	90	95	107
98–99	18	12	12	25	22	26	21	41	94	67	54	52
99–100	6	4	6	14	11	5	11	32	52	40	24	17
100–101	5	3	5	3	6		6	10	30	20	12	11
101–102	2	1	3				3	5	20	19	9	6
102–103			2		2	1	14	6	8	42	2	3
103–104	1		1	1	18	11	13	8	7	41	4	10
104–105			1	1	1	2	4	8	10	58	42	19
105–106			1	1	1	2	5	9	16	29	17	11
106–107			1	1	2	1	2	4	5	25	9	10
107–108			1		1	1	1	2	1	9	12	7
108–109	1	1	2		1		1	2	1	4	6	5
109–110	1	1	3	2			1	2	2	1	1	
110–111		3	4	5	1	2	2	2	7	2	3	1
111–112		7	7	6	3	4	8	47	55	21	7	2
112–113		12	17	22	3	4	7	2	27	4	4	2
113–114	2	4	8	7	1	3	2	5	2	3	3	5
114–115	1	1	2	2	1	3	3	1	1			
115–116	1	4	2	1	2	3	1	1	1	1		
116–117	2	3	13	1	5	8	1	1	2	2		
117–118	2	44	25	9	5	1	1	1	1	1		1
118–119	2	10	14	15	6	1	1	1	1	1	1	5
119–120		3	2	6	4	2	1	3	3	17	4	10
120–121	3	6	4	10	2	1	1	4	4	30	30	17
121–122	23	53	15	25	5	1	1	5	7	36	82	146
122–123	9	56	27	96	34	8	11	8	13	22	62	359
123–124	1	14	20	25	20	11	9	11	12	14	12	
124–125	1	4	1		2	5	2	3	7			

DEGREE TO THE NEAREST THOUSAND.

DEGREES OF LATITUDE—continued.													DEGREES OF LONGITUDE.
36-37	35-36	34-35	33-34	32-33	31-32	30-31	29-30	28-29	27-28	26-27	25-26	24-25	
2,660	2,490	2,239	2,503	2,282	1,362	1,343	602	109	61	22	7	19	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	67-68
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	68-69
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	69-70
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	70-71
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	71-72
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	72-73
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	73-74
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	74-75
8	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	75-76
178	57	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	76-77
136	135	62	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	77-78
170	149	70	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	78-79
174	115	136	90	65	.....	.....	.....	.....	.....	.....	.....	.....	79-80
143	184	144	142	64	.....	.....	.....	4	2	1	.....	.....	80-81
122	153	170	140	102	74	43	38	25	9	2	.....	19	81-82
164	133	190	154	71	40	39	47	19	12	.....	.....	.....	82-83
170	103	136	175	146	48	84	4	.....	.....	.....	.....	.....	83-84
90	122	122	271	153	102	71	2	.....	.....	.....	.....	.....	84-85
117	132	145	166	146	123	28	1	.....	.....	.....	.....	.....	85-86
265	187	137	152	158	65	10	.....	.....	.....	.....	.....	.....	86-87
141	111	102	96	164	65	32	.....	.....	.....	.....	.....	.....	87-88
153	131	104	156	113	48	61	.....	.....	.....	.....	.....	.....	88-89
115	237	129	118	101	53	273	17	.....	.....	.....	.....	.....	89-90
79	76	116	120	144	121	83	71	.....	.....	.....	.....	.....	90-91
72	83	95	68	85	95	148	57	.....	.....	.....	.....	.....	91-92
56	75	103	65	79	57	67	12	.....	.....	.....	.....	.....	92-93
95	88	58	84	105	49	26	3	.....	.....	.....	.....	.....	93-94
77	70	20	74	96	53	29	24	.....	.....	.....	.....	.....	94-95
.....	.....	.....	112	87	76	64	69	3	.....	.....	.....	.....	95-96
5	.....	.....	132	154	100	119	74	10	.....	.....	.....	.....	96-97
11	32	.....	75	114	88	107	82	23	11	7	7	.....	97-98
5	.....	2	25	46	51	36	80	11	13	11	.....	.....	98-99
.....	1	10	10	18	17	13	12	10	14	1	.....	.....	99-100
2	2	3	2	8	6	2	6	4	.....	.....	.....	.....	100-101
1	2	1	1	2	3	1	1	.....	.....	.....	.....	.....	101-102
1	1	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	102-103
6	7	6	1	1	1	1	1	.....	.....	.....	.....	.....	103-104
6	7	6	1	1	6	3	1	.....	.....	.....	.....	.....	104-105
13	16	5	2	3	5	2	.....	.....	.....	.....	.....	.....	105-106
7	10	5	3	3	2	.....	.....	.....	.....	.....	.....	.....	106-107
6	7	3	3	5	2	.....	.....	.....	.....	.....	.....	.....	107-108
1	5	3	4	4	2	.....	.....	.....	.....	.....	.....	.....	108-109
1	1	1	3	4	3	.....	.....	.....	.....	.....	.....	.....	109-110
.....	.....	.....	4	3	2	.....	.....	.....	.....	.....	.....	.....	110-111
1	2	2	3	4	3	.....	.....	.....	.....	.....	.....	.....	111-112
1	2	2	4	5	1	.....	.....	.....	.....	.....	.....	.....	112-113
.....	.....	1	2	3	.....	.....	.....	.....	.....	.....	.....	.....	113-114
1	1	3	1	4	.....	.....	.....	.....	.....	.....	.....	.....	114-115
.....	3	5	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	115-116
1	5	5	3	3	.....	.....	.....	.....	.....	.....	.....	.....	116-117
1	4	23	17	18	.....	.....	.....	.....	.....	.....	.....	.....	117-118
14	6	76	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	118-119
16	8	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	119-120
15	17	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	120-121
20	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	121-122
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	122-123
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	123-124
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	124-125

DISTRIBUTION OF POPULATION IN ACCORDANCE WITH LATITUDE.

DEGREES OF LATITUDE.	POPULATION IN THOUSANDS.			PER CENT OF INCREASE.		NUMBER IN 100,000.			NUMBER IN 100,000 NORTH OF EACH PARALLEL.			DENSITY.			INCREASE IN DENSITY.	
	1890	1880	1870	1880 to 1890	1870 to 1880	1890	1880	1870	1890	1880	1870	1890	1880	1870	1880 to 1890	1870 to 1880
48-49 ..	144	17	6	747.06	183.33	230	34	15	230	34	15	1.5	0.2	0.1	1.3	0.1
47-48 ..	388	79	30	391.14	163.33	620	157	78	850	191	93	3.5	0.7	0.3	2.8	0.4
46-47 ..	547	215	84	154.42	155.95	874	429	218	1,724	620	311	4.1	1.6	0.6	2.5	1.0
45-46 ..	1,064	483	249	120.29	93.98	1,699	963	646	3,423	1,583	957	7.7	3.5	1.8	4.2	1.7
44-45 ..	2,134	1,768	1,354	20.70	30.58	3,408	3,525	3,512	6,831	5,108	4,469	13.2	10.9	8.4	2.3	2.5
43-44 ..	3,235	2,678	2,197	20.80	21.89	5,166	5,339	5,698	11,997	10,447	10,167	19.8	16.4	13.5	3.4	2.9
42-43 ..	6,655	5,358	4,485	24.21	19.46	10,627	10,683	11,632	22,624	21,130	21,799	38.6	31.1	26.0	7.5	5.1
41-42 ..	7,506	5,938	4,716	26.41	25.91	11,986	11,839	12,231	34,610	32,969	34,030	40.8	32.3	25.6	8.5	6.7
40-41 ..	9,832	7,863	6,177	25.04	27.29	15,701	15,677	16,020	50,311	48,646	50,050	53.5	42.8	33.6	10.7	9.2
39-40 ..	7,284	6,265	4,994	16.26	25.45	11,632	12,491	12,952	61,943	61,137	63,002	40.2	34.5	27.5	5.7	7.0
38-39 ..	4,606	3,996	3,129	15.27	27.71	7,355	7,967	8,115	69,298	69,104	71,117	25.8	22.4	17.5	3.4	4.9
37-38 ..	3,528	2,831	2,017	24.62	40.36	5,634	5,644	5,231	74,932	74,748	76,348	20.1	16.1	11.5	4.0	4.6
36-37 ..	2,660	2,170	1,644	22.58	32.00	4,248	4,326	4,264	79,180	79,074	80,612	15.2	12.4	9.4	2.8	3.0
35-36 ..	2,490	2,078	1,594	19.83	30.36	3,976	4,143	4,134	83,156	83,217	84,746	14.2	11.3	9.1	2.9	2.2
34-35 ..	2,239	1,805	1,282	24.04	40.80	3,575	3,599	3,325	86,731	86,816	88,071	13.3	10.7	7.6	2.6	3.1
33-34 ..	2,503	1,940	1,291	29.02	50.27	3,997	3,868	3,348	90,728	90,684	91,419	16.2	12.5	8.3	3.7	4.2
32-33 ..	2,282	1,939	1,383	17.69	40.26	3,644	3,866	3,587	94,372	94,550	95,006	16.4	13.9	9.9	2.5	4.0
31-32 ..	1,362	1,060	747	28.49	41.90	2,175	2,113	1,937	96,547	96,663	96,943	12.2	9.5	6.7	2.7	2.8
30-31 ..	1,343	865	595	55.26	45.38	2,145	1,725	1,543	98,692	98,388	98,486	14.5	9.4	6.4	5.1	3.0
29-30 ..	602	673	505	a10.55	33.27	961	1,342	1,310	99,653	99,730	99,796	10.7	12.0	9.0	a1.3	3.0
28-29 ..	109	61	39	78.69	56.41	174	122	101	99,827	99,852	99,897	4.1	2.3	1.5	1.8	0.8
27-28 ..	61	36	18	69.44	100.00	97	72	47	99,924	99,924	99,944	3.1	1.8	0.9	1.3	0.9
26-27 ..	22	21	12	4.76	75.00	35	42	31	99,959	99,966	99,975	1.4	1.3	0.8	0.1	0.5
25-26 ..	7	9	6	a22.22	50.00	11	18	15	99,970	99,984	99,990	1.4	1.7	1.2	a0.3	0.5
24-25 ..	19	8	4	137.50	100.00	30	16	10	100,000	100,000	100,000	438.4	184.6	92.3	253.8	92.3

a Decrease.

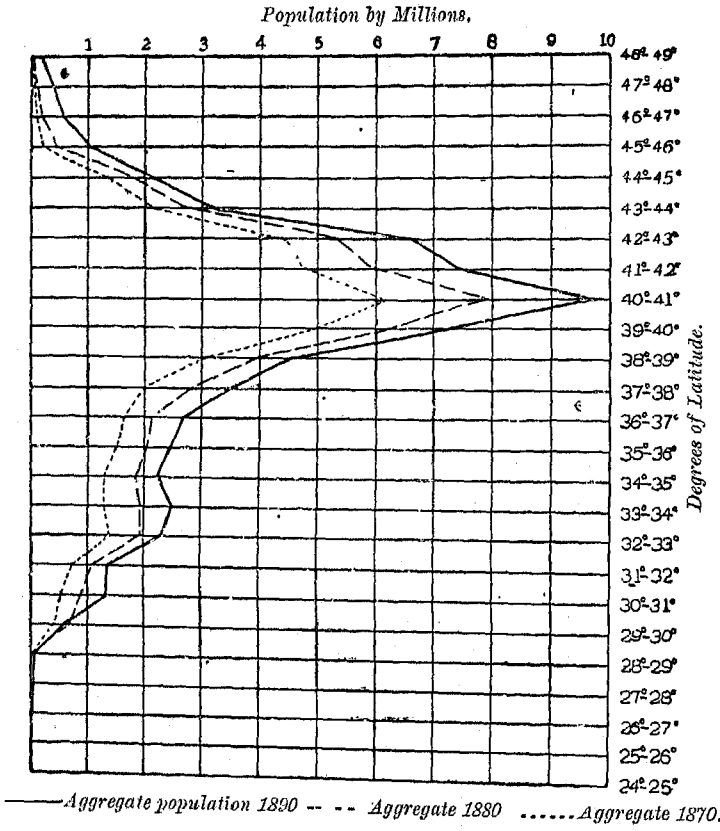
DISTRIBUTION OF POPULATION IN ACCORDANCE WITH LONGITUDE.

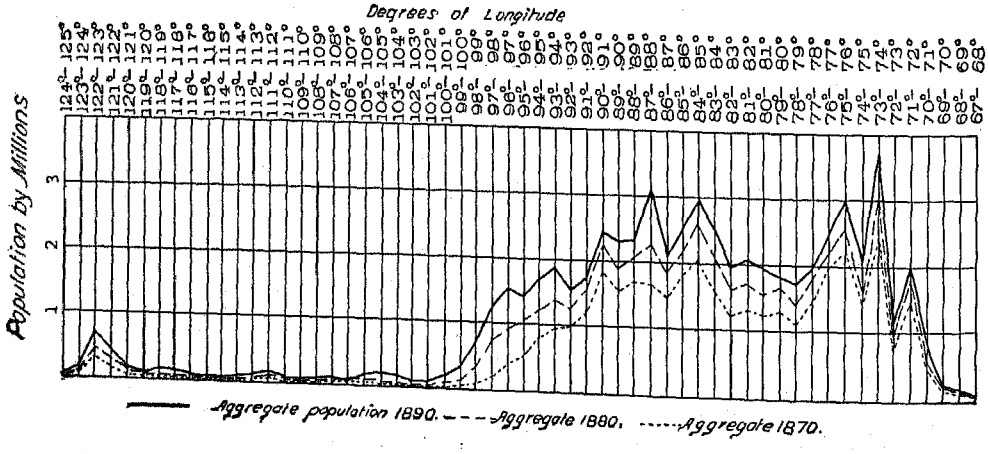
DEGREES OF LONGITUDE.	POPULATION IN THOUSANDS.			PER CENT OF INCREASE.		NUMBER IN 100,000.			NUMBER IN 100,000 EAST OF EACH MERIDIAN.			DENSITY.			INCREASE IN DENSITY.	
	1890	1880	1870	1880 to 1890	1870 to 1880	1890	1880	1870	1890	1880	1870	1890	1880	1870	1880 to 1890	1870 to 1880
67–68 ..	59	53	49	11.32	8.16	94	106	127	94	106	127	14.5	13.1	12.1	1.4	1.0
68–69 ..	145	130	125	11.54	4.00	232	259	324	326	365	451	14.5	13.0	12.5	1.5	0.5
69–70 ..	205	202	201	1.49	0.50	327	403	521	653	768	972	18.6	18.2	18.2	0.4	0.0
70–71 ..	851	606	547	40.43	10.79	1,359	1,208	1,419	2,012	1,976	2,391	80.0	56.9	51.4	23.1	5.5
71–72 ..	1,967	1,763	1,434	11.57	22.94	3,141	3,515	3,719	5,153	5,491	6,110	152.5	136.8	111.2	15.7	25.6
72–73 ..	1,074	921	824	16.61	11.77	1,715	1,836	2,137	6,868	7,327	8,247	76.8	65.8	59.0	11.0	6.8
73–74 ..	3,672	3,037	2,404	20.91	26.33	5,864	6,055	6,235	12,732	13,382	14,482	249.5	206.3	163.3	43.2	43.0
74–75 ..	2,008	1,604	1,454	25.19	10.32	3,207	3,198	3,771	15,939	16,580	18,253	103.2	82.4	74.7	20.8	7.7
75–76 ..	3,005	2,591	2,196	15.98	17.99	4,799	5,166	5,695	20,738	21,746	23,948	114.2	98.3	83.5	15.9	14.8
76–77 ..	2,490	2,220	1,902	12.16	16.72	3,976	4,426	4,933	24,714	26,172	28,881	91.5	81.6	69.9	9.9	11.7
77–78 ..	1,972	1,761	1,488	11.98	18.35	3,149	3,511	3,859	27,863	29,683	32,740	59.6	53.2	45.0	6.4	8.2
78–79 ..	1,745	1,376	1,103	26.82	24.75	2,787	2,743	2,861	30,650	32,426	35,601	48.7	38.4	30.8	10.3	7.6
79–80 ..	1,801	1,670	1,308	7.84	27.68	2,876	3,330	3,392	33,526	35,756	38,993	50.6	47.0	36.8	3.6	10.2
80–81 ..	1,936	1,559	1,213	24.18	28.52	3,092	3,108	3,146	36,618	38,864	42,139	40.1	32.3	25.1	7.8	7.2
81–82 ..	2,073	1,683	1,277	23.17	31.79	3,310	3,356	3,312	39,928	42,220	45,451	35.2	28.6	21.7	6.6	6.9
82–83 ..	1,892	1,572	1,239	20.36	26.88	3,021	3,134	3,213	42,949	45,354	48,664	32.9	27.3	21.5	5.6	5.8
83–84..	2,527	2,049	1,583	23.33	29.44	4,035	4,085	4,105	46,984	49,439	52,769	44.1	35.7	27.6	8.4	8.1
84–85 ..	2,997	2,578	2,054	16.25	25.51	4,786	5,140	5,327	51,770	54,579	58,096	49.3	42.4	33.8	6.9	8.6
85–86 ..	2,525	2,181	1,762	15.77	23.78	4,032	4,348	4,570	55,802	58,927	62,666	42.1	36.3	29.4	5.8	6.9
86–87 ..	2,126	1,831	1,484	16.11	23.38	3,395	3,651	3,849	59,197	62,578	66,515	41.9	36.1	29.2	5.8	6.9
87–88 ..	3,125	2,258	1,664	38.40	35.70	4,990	4,502	4,316	64,187	67,080	70,831	58.4	42.2	31.1	16.2	11.1
88–89 ..	2,334	2,052	1,712	13.74	19.86	3,727	4,091	4,440	67,914	71,171	75,271	36.8	32.3	26.9	4.5	5.4
89–90 ..	2,309	1,855	1,597	24.47	16.16	3,687	3,698	4,142	71,601	74,869	79,413	35.2	28.2	24.3	7.0	3.9
90–91 ..	2,406	2,236	1,852	7.60	20.78	3,842	4,458	4,803	75,443	79,327	84,216	36.0	33.4	27.7	2.6	5.7
91–92 ..	1,715	1,480	1,195	15.88	23.85	2,739	2,951	3,099	78,182	82,278	87,315	24.9	21.5	17.4	3.4	4.1
92–93 ..	1,541	1,264	967	21.91	30.71	2,461	2,520	2,508	80,643	84,798	89,823	22.0	18.0	13.8	4.0	4.2
93–94 ..	1,878	1,401	946	34.05	48.10	2,999	2,793	2,453	83,642	87,591	92,276	26.8	20.0	13.5	6.8	6.5
94–95 ..	1,667	1,261	807	32.20	56.26	2,662	2,514	2,093	86,304	90,105	94,369	23.2	17.6	11.2	5.6	6.4
95–96 ..	1,399	995	516	40.60	92.83	2,234	1,984	1,338	88,538	92,089	95,707	18.7	13.3	6.9	5.4	6.4
96–97 ..	1,515	900	375	68.33	140.00	2,419	1,794	973	90,957	93,883	96,680	19.8	11.8	4.9	8.0	6.9
97–98 ..	1,259	722	207	74.38	248.79	2,010	1,440	537	92,967	95,323	97,217	15.0	8.5	2.5	6.5	6.0
98–99 ..	724	367	59	97.28	522.03	1,156	732	153	94,123	96,055	97,370	8.4	4.3	0.7	4.1	3.6
99–100 .	328	127	13	158.27	876.92	524	253	34	94,647	96,308	97,404	4.0	1.6	0.2	2.4	1.4
100–101	146	48	5	204.17	860.00	233	96	13	94,880	96,404	97,417	1.9	0.6	0.1	1.3	0.5
101–102	80	5	1	1,500.00	400.00	128	10	3	95,008	96,414	97,420	1.1	0.1	0.0	1.0	0.1
102–103	84	11	2	663.64	450.00	134	22	5	95,142	96,436	97,425	1.2	0.2	0.0	1.0	0.2
103–104	139	33	8	321.21	312.50	222	66	21	95,364	96,502	97,446	1.9	0.4	0.2	1.5	0.2
104–105	177	86	31	105.81	177.42	283	172	80	95,647	96,674	97,526	2.5	1.2	0.4	1.3	0.8
105–106	138	97	44	42.27	120.45	220	193	114	95,867	96,867	97,640	2.1	1.5	0.7	0.6	0.8
106–107	90	95	39	a5.26	143.59	144	189	101	96,011	97,056	97,741	1.4	1.5	0.6	a0.1	0.9
107–108	61	26	13	134.62	100.00	97	52	34	96,108	97,108	97,775	1.0	0.4	0.2	0.6	0.2
108–109	43	16	8	168.75	100.00	69	32	21	96,177	97,140	97,796	0.7	0.2	0.1	0.5	0.1
109–110	27	13	2	107.69	550.00	43	26	5	96,220	97,166	97,801	0.4	0.2	0.0	0.2	0.2
110–111	41	24	6	70.83	300.00	65	48	16	96,285	97,214	97,817	0.7	0.4	0.1	0.3	0.3
111–112	182	119	70	52.94	70.00	291	237	182	96,576	97,451	97,999	2.8	1.9	1.1	0.9	0.8
112–113	119	56	27	112.50	107.41	190	112	70	96,766	97,563	98,069	2.0	0.9	0.5	1.1	0.4
113–114	51	21	12	142.86	75.00	81	42	31	96,847	97,605	98,100	0.8	0.3	0.2	0.5	0.1
114–115	25	11	10	127.27	10.00	40	22	26	96,887	97,627	98,126	0.4	0.2	0.2	0.2	0.0
115–116	28	13	12	115.38	8.33	45	26	31	96,932	97,653	98,157	0.5	0.2	0.2	0.3	0.0
116–117	55	24	10	129.17	140.00	88	48	26	97,020	97,701	98,183	1.0	0.4	0.2	0.6	0.2
117–118	154	59	24	161.02	145.83	246	118	62	97,266	97,819	98,245	2.7	1.0	0.4	1.7	0.6
118–119	164	58	22	182.76	163.64	262	116	57	97,528	97,935	98,302	3.1	1.1	0.4	2.0	0.7
119–120	93	71	41	30.99	73.17	148	142	106	97,676	98,077	98,408	1.8	1.4	0.8	0.4	0.6
120–121	152	119	88	27.73	35.23	243	237	228	97,919	98,314	98,636	3.0	2.4	1.7	0.6	0.7
121–122	424	258	178	64.34	44.94	677	514	462	98,596	98,828	99,098	9.3	5.6	3.9	3.7	1.7
122–123	705	475	285	48.42	66.67	1,126	947	739	99,722	99,775	99,837	18.6	12.6	7.5	6.0	5.1
123–124	149	96	56	55.21	71.43	238	191	145	99,960	99,966	99,982	4.6	3.0	1.7	1.6	1.3
124–125	25	17	7	47.06	142.86	40	34	18	100,000	100,000	100,000	3.5	2.3	1.0	1.2	1.3

a Decrease.

Naturally the greater density of population in a square degree is governed by the location of the larger cities. Thus the 2 square degrees between latitudes 40° and 41° and longitudes 73° and 75°, comprising New York, Brooklyn, Jersey city, and other large cities, contain 3,653,000 inhabitants. The square degree between latitudes 42° and 43° and longitudes 71° and 72°, comprising Boston and its suburbs, has 1,233,000 inhabitants; that between latitudes 39° and 40° and longitudes 75° and 76°, in which is most of Philadelphia, has 1,414,000, while that between latitudes 41° and 42° and longitudes 87° and 88°, in which is situated most of Chicago, contains 950,000 people.

The following diagrams show graphically the distribution of population in accordance with latitude and longitude at each of the 3 censuses under consideration:





URBAN POPULATION.

In the published records of former censuses urban population has been defined as that element living in cities, or other closely aggregated bodies of population, containing 8,000 inhabitants or more. This definition of the urban element, although a somewhat arbitrary one, is used in the present discussion of the results of the Eleventh Census in order that they may be compared directly with those of earlier censuses. The limit of 8,000 inhabitants is, however, a high one, inasmuch as most of the distinctive features of urban life are found in smaller bodies of population. Recognizing this fact, the discussion of the urban class was in 1880 extended in part to include all such bodies of population down to a limit of 4,000, a precedent which will be followed in the more extended publications of the Eleventh Census.

Throughout the United States, with the exception of the New England states, there is no difficulty or uncertainty in carrying out either of the above definitions of urban population. Excepting in these states, municipal charters are generally granted only to dense bodies of population, and all such bodies are incorporated and their limits sharply defined by the acts of incorporation. In the New England states, on the contrary, the general practice is to subdivide the counties into towns, which are, so far as area and distribution of population are concerned, equivalent to the townships of the states of the Upper Mississippi valley. When certain conditions of population are fulfilled these towns are chartered bodily as cities. Thus these cities may contain considerable numbers of rural population, and, conversely, certain towns may contain dense bodies of population of magnitude sufficient to be classed as urban. It is therefore possible in these states to make only an approximate separation of the urban and rural elements. According to this definition the urban population of the country was 18,284,385 in 1890, the total population being 62,622,250. The urban population in 1890 constituted 29.20 per cent of the total population. Corresponding figures for the several censuses are given in the following table :

CENSUS YEARS.	Population of the United States.	Population of cities.	Inhabitants of cities in each 100 of the total population.
1790	3,929,214	131,472	3.35
1800	5,308,483	210,873	3.97
1810	7,239,881	356,920	4.93
1820	9,633,822	475,135	4.93
1830	12,866,020	864,509	6.72
1840	17,069,453	1,453,994	8.52
1850	23,191,876	2,897,586	12.49
1860	31,443,321	5,072,256	16.13
1870	38,558,371	8,071,875	20.93
1880	50,155,783	11,318,547	22.57
1890	62,622,250	18,284,385	29.20

It will be seen that the proportion of urban population has increased gradually during the past century from 3.35 up to 29.20 per cent, or from one-thirtieth up to nearly one-third of the total population. The increase has been quite regular from the beginning up to 1880, while from 1880 to 1890 it has made a leap from 22.57 up to 29.20 per cent, thus illustrating in a forcible manner the accelerated tendency of our population toward urban life. The number of cities having a population of more than 8,000 increased from 6 in 1790 to 286 in 1880, whence it has leaped to 448 in 1890.

This urban element is distributed very unequally over the country, as is shown below by geographical divisions:

GEOGRAPHICAL DIVISIONS.	Urban population.	Per cent of entire urban population.
Total	18,284,385	100.00
North Atlantic	9,015,383	49.31
South Atlantic	1,419,964	7.76
North Central	5,793,896	31.69
South Central	1,147,089	6.27
Western	908,053	4.97

The North Atlantic division contains nearly one-half the urban population of the country, while the North Atlantic and North Central divisions together contain nearly five-sixths of it.

In the North Atlantic division 51.81 per cent, or more than one-half the entire population, is contained in cities of 8,000 inhabitants or more. During the past 10 years the urban element in this division has increased 44.15 per cent, while the total population has increased but 19.95 per cent. This relative increase is well distributed among the several states of this division, with the single exception of Vermont, whose urban element has increased but little. In Maine, Vermont, Massachusetts, and New York the numerical increase in the urban element is greater than the increase of the total population, so that in these states the rural population has actually diminished in number. This rapid increase in the urban element of the North Atlantic division is due to the equally rapid extension of manufactures and commerce, requiring the aggregation of the inhabitants into compact bodies.

In the North Central division 25.91 per cent, or a trifle more than one-fourth of the inhabitants, is classed as urban. In the past 10 years the number of the urban element has nearly doubled, while the total population has increased but 28.78 per cent. The number of cities has increased from 95 in 1880 to 152 in 1890. The increase in number of urban population, viz., 2,769,217, is comprised mainly in a few large cities; thus the total increase in the 11 largest cities, comprising a trifle more than one-half of the urban population of this section, is 1,446,089, or more than half the entire gain in urban population in this division.

In the South Atlantic and South Central divisions the proportion of urban population is comparatively small, being in the first named but 16.03 per cent of the entire population, or less than one-sixth, and the second but 10.45 per cent, the proportion of urban to the total population in all the southern states being less than 13 per cent. The industries of these states are mainly agricultural, and while manufactures and mining are making some progress they are still in their infancy. The progress in these branches of industry may be measured roughly by the growth of the urban element. In 1880 this element numbered 1,616,095, and constituted less than 10 per cent of the population. In 1890 it numbered 2,567,053, having increased 58.84 per cent, while the total population had increased but 20.07 per cent.

In certain of these states the proportion of urban population is still trifling; thus, in Mississippi it constitutes but 2.64, in North Carolina but 3.87, and in Arkansas but 4.89 per cent of the total population.

Mining, commerce, and manufactures in the western states and territories are in a much more advanced stage, as is shown by the greater proportion of the urban element. Considered as a whole, the urban element in the Western division in 1890 constituted 29.99 per cent of the whole population, while in 1880 it constituted 23.97 per cent. It has therefore gained somewhat more rapidly than the total population.

In 1880 there was but one city, New York, which had a population in excess of a million. In 1890 there were three, New York, Chicago, and Philadelphia.

In 1870 there were but 14 cities each containing more than 100,000 inhabitants. In 1880 this number had increased to 20, and in 1890 to 28.

The relative rank of the cities having a population of 100,000 or more at the date of each of these censuses is set forth in the following table:

RANK.	1890	1880	1870
1	New York, N. Y.	New York, N. Y.	New York, N. Y.
2	Chicago, Ill.	Philadelphia, Pa.	Philadelphia, Pa.
3	Philadelphia, Pa.	Brooklyn, N. Y.	Brooklyn, N. Y.
4	Brooklyn, N. Y.	Chicago, Ill.	St. Louis, Mo.
5	St. Louis, Mo.	Boston, Mass.	Chicago, Ill.
6	Boston, Mass.	St. Louis, Mo.	Baltimore, Md.
7	Baltimore, Md.	Baltimore, Md.	Boston, Mass.
8	San Francisco, Cal.	Cincinnati, Ohio.	Cincinnati, Ohio.
9	Cincinnati, Ohio.	San Francisco, Cal.	New Orleans, La.
10	Cleveland, Ohio.	New Orleans, La.	San Francisco, Cal.
11	Buffalo, N. Y.	Cleveland, Ohio.	Buffalo, N. Y.
12	New Orleans, La.	Pittsburg, Pa.	Washington, D. C.
13	Pittsburg, Pa.	Buffalo, N. Y.	Newark, N. J.
14	Washington, D. C.	Washington, D. C	Louisville, Ky.
15	Detroit, Mich.	Newark, N. J.	
16	Milwaukee, Wis.	Louisville, Ky.	
17	Newark, N. J.	Jersey city, N. J.	
18	Minneapolis, Minn.	Detroit, Mich.	
19	Jersey city, N. J.	Milwaukee, Wis.	
20	Louisville, Ky.	Providence, R. I.	
21	Omaha, Neb.		
22	Rochester, N. Y.		
23	St. Paul, Minn.		
24	Kansas city, Mo.		
25	Providence, R. I.		
26	Denver, Colo.		
27	Indianapolis, Ind.		
28	Allegheny, Pa.		

The following table shows the 50 principal cities of the United States in the order of their rank, giving the population in 1890 and 1880, and the increase from 1880 to 1890:

50 PRINCIPAL CITIES IN 1890 IN THE ORDER OF THEIR RANK.

CITIES.	POPULATION.		INCREASE.		CITIES.	POPULATION.		INCREASE.	
	1890	1880	Number.	Per cent.		1890	1880	Number.	Per cent.
New York, N. Y	1,515,301	1,206,299	309,002	25.62	Denver, Colo	106,713	35,629	71,084	199.51
Chicago, Ill	1,099,850	503,185	596,665	118.58	Indianapolis, Ind	105,436	75,056	30,380	40.48
Philadelphia, Pa	1,046,964	847,170	199,794	23.58	Allegheny, Pa	105,287	78,682	26,605	33.81
Brooklyn, N. Y	806,343	566,663	239,680	42.30	Albany, N. Y	94,923	90,758	4,165	4.59
St. Louis, Mo	451,770	350,518	101,252	28.89	Columbus, Ohio	88,150	51,647	36,503	70.68
Boston, Mass	448,477	362,839	85,638	23.60	Syracuse, N. Y	88,143	51,792	36,351	70.19
Baltimore, Md	434,439	332,313	102,126	30.73	Worcester, Mass	84,655	58,291	26,364	45.23
San Francisco, Cal	298,997	233,959	65,038	27.80	Toledo, Ohio	81,434	50,137	31,297	62.42
Cincinnati, Ohio	296,908	255,139	41,769	16.37	Richmond, Va	81,388	63,600	17,788	27.97
Cleveland, Ohio	261,353	160,146	101,207	63.20	New Haven, Conn	81,298	62,882	18,416	29.29
Buffalo, N. Y	255,664	155,134	100,530	64.80	Paterson, N. J	78,347	51,031	27,316	53.53
New Orleans, La	242,039	216,090	25,949	12.01	Lowell, Mass	77,696	59,475	18,221	30.64
Pittsburg, Pa	238,617	156,389	82,228	52.58	Nashville, Tenn	76,168	43,350	32,818	75.70
Washington, D. C	230,392	177,624	52,768	29.71	Scranton, Pa	75,215	45,850	29,365	64.05
Detroit, Mich	205,876	116,340	89,536	76.96	Fall River, Mass	74,398	48,961	25,437	51.95
Milwaukee, Wis	204,468	115,587	88,881	76.90	Cambridge, Mass	70,028	52,669	17,359	32.96
Newark, N. J	181,830	136,508	45,322	33.20	Atlanta, Ga	65,533	37,409	28,124	75.18
Minneapolis, Minn	164,738	46,887	117,851	251.35	Memphis, Tenn	64,495	33,592	30,903	92.00
Jersey city, N. J	163,003	120,722	42,281	35.02	Wilmington, Del	61,431	42,478	18,953	44.62
Louisville, Ky	161,129	123,758	37,371	30.20	Dayton, Ohio	61,220	38,678	22,542	58.28
Omaha, Neb	140,452	30,518	109,934	360.23	Troy, N. Y	60,956	56,747	4,209	7.42
Rochester, N. Y	133,896	89,366	44,530	49.83	Grand Rapids, Mich	60,278	32,016	28,262	88.27
St. Paul, Minn	133,156	41,473	91,683	221.07	Reading, Pa	58,661	43,278	15,383	35.54
Kansas city, Mo	a132,716	55,785	76,931	137.91	Camden, N. J	58,313	41,659	16,654	39.98
Providence, R. I	132,146	104,857	27,289	26.02	Trenton, N. J	57,458	29,910	27,548	92.10

a Includes a population of 13,048, which by recent decision of Missouri state supreme court is now outside the limits of Kansas city.

The following table shows the number of cities classified according to population at the date of each census:

NUMBER OF CITIES CLASSIFIED ACCORDING TO POPULATION: 1790–1890.

CENSUS YEARS.	Total.	8,000 to 12,000	12,000 to 20,000	20,000 to 40,000	40,000 to 75,000	75,000 to 125,000	125,000 to 250,000	250,000 to 500,000	500,000 to 1,000,000	1,000,000 and over.
1790	6	1	3	1	1	.....	.....	.....	.....	.....
1800	6	1	.....	3	2	.....	.....	.....	.....	.....
1810	11	4	2	3	.....	2	.....	.....	.....	.....
1820	13	3	4	2	2	2	.....	.....	.....	.....
1830	26	12	7	3	1	1	2	.....	.....	.....
1840	44	17	11	10	1	3	1	1	.....	.....
1850	85	36	20	14	7	3	3	1	1	.....
1860	141	62	34	23	12	2	5	1	2	.....
1870	226	92	63	39	14	8	3	5	2	.....
1880	286	110	76	55	21	9	7	4	3	1
1890	448	176	107	91	35	14	14	7	1	3

The table on the following page shows by states and groups of states the total population in 1880 and 1890, the urban population in the same years, the number of cities, and the proportion which the urban population bears to the total population.