

## VII. SEX AND AGE OF THE WHITE POPULATION.

DECREASE IN PROPORTION OF MALES—IN PROPORTION OF EACH SEX UNDER 16 YEARS—INFLUENCE OF IMMIGRATION—OF MODERN SANITARY SCIENCE.

At the First Census a complete classification of sex and a partial classification of age were obtained for the entire white population. The three questions under which these items were secured were as follows:

1. Free white males of 16 years and upward, including heads of families.
2. Free white males under 16 years.
3. Free white females, including heads of families.

*Sex.*—Discussion of the proportions of the sexes in the United States has been presented from time to time in reports of the Federal census. Such change as has occurred in the proportion of the sexes is best illustrated by computing the number of males in each 1,000 of population in 1790 and 1900 and midway, in 1850.

TABLE 25.—Proportion of males in the white population, by states and territories: 1790, 1850, and 1900.

| STATE OR TERRITORY.                    | NUMBER OF MALES PER 1,000 OF WHITE POPULATION. |      |      |
|--|--|------|------|
|  | 1790   | 1850 | 1900 |
| Continental United States.....         | 509  | 513  | 513  |
| Area enumerated in 1790.....           | 509  | 504  | 502  |
| New England.....                       | 498  | 498  | 494  |
| Maine.....                             | 511  | 510  | 505  |
| New Hampshire.....                     | 503  | 491  | 499  |
| Vermont.....                           | 526  | 509  | 509  |
| Massachusetts.....                     | 490  | 491  | 487  |
| Rhode Island.....                      | 492  | 489  | 489  |
| Connecticut.....                       | 495  | 495  | 500  |
| Middle states.....                     | 514  | 506  | 502  |
| New York.....                          | 516  | 507  | 497  |
| New Jersey.....                        | 510  | 501  | 500  |
| Pennsylvania.....                      | 514  | 506  | 508  |
| Delaware.....                          | 517  | 502  | 510  |
| Southern states.....                   | 515  | 506  | 506  |
| Maryland and District of Columbia..... | 514  | 504  | 495  |
| Virginia and West Virginia.....        | 514  | 504  | 510  |
| North Carolina.....                    | 511  | 494  | 500  |
| South Carolina.....                    | 523  | 502  | 504  |
| Georgia.....                           | 513  | 510  | 504  |
| Kentucky.....                          | 527  | 516  | 509  |
| Tennessee.....                         | 519  | 505  | 508  |
| Added area.....                        |  | 529  | 521  |

The proportion of males in the white population shows a more marked decrease from 1790 to 1900 in the Middle and Southern states than in New England. In 1790 the only states reporting an excess of females were Massachusetts, Rhode Island, and Connecticut.

In 1900 such excess was reported not only by Massachusetts and Rhode Island, but also by New Hampshire, New York, and Maryland. Had the proportions been the same in 1790 as in the original area in 1900, there would have been 23,194 fewer white males than were reported at the First Census. If, on the other hand, the proportion of males in the area enumerated in 1790 had been the same in 1900 as in 1790, the number of males reported would have been greater by 216,826.

*Age.*—The age classification secured at the First Census separated white males into age groups above and under the age of 16 years, without a similar separation for females. In any attempt to analyze the age figures thus presented, it becomes necessary to estimate the same classification with respect to females. The defect noted in the enumeration of 1790 was corrected at the census of 1800. Hence, within a decade of 1790 the exact proportion of females in the age groups specified were definitely known. This fact suggests the practicability of utilizing the well-known and fairly constant statistical ratio between the numbers of males and females, and the probably similar ratios for the principal age groups.

Before utilizing such proportions, it was of course necessary to demonstrate that the results would be substantially accurate. If from the Second to the Third Census no marked variation is found in the proportion formed of all white females by white females under 16 years of age, either in the total or in the returns for the same states, the proportion from 1790 to 1800 is likely to have been fairly constant; furthermore, if the proportion formed of all white males by white males under 16 in 1790, as compared with the similar proportion shown in 1800, varied little, it would then be established beyond reasonable doubt that the proportion of white females in the same age groups, though unascertained, must have differed but little in 1790 from the proportions actually shown in 1800. Hence, the application of the proportion shown for white females under 16 years of age in the various states in 1800, to obtain the number of females in the same age group in 1790, would be fully justified. What are the results of an analysis concerning the constancy of such ratios?

The proportion which the white females under 16 years of age in the year 1800 formed of all white females amounted to about one-half. It varied less than one-twentieth of 1 per cent from 1800 to 1810. The percentages for the United States and for the New England states, Middle states, and Southern states at both censuses were:

|                      | 1800 | 1810 |
|----------------------|------|------|
| United States.....   | 49.7 | 49.7 |
| New England.....     | 46.3 | 46.4 |
| Middle states.....   | 50.2 | 50.3 |
| Southern states..... | 51.6 | 51.4 |

For the most part the range among individual states is very narrow. In 8 out of 17 states the difference in proportion is less than 1 per cent, and in no instance does it exceed 3 per cent.

The proportion in 1800 for males under 16 years of age is substantially the same as for females, being:

|                      | 1800 | 1810 |
|----------------------|------|------|
| United States.....   | 50.4 | 50.3 |
| New England.....     | 48.9 | 47.9 |
| Middle states.....   | 50.0 | 50.2 |
| Southern states..... | 51.8 | 51.8 |

The important question, however, is obviously the confirmation which may or may not be afforded by the similarity of the proportion shown for white males under 16 years of age at the Second Census as compared with the First. The proportions of males in this age group at the First and Second censuses were as follows:

|                      | 1790 | 1800 |
|----------------------|------|------|
| United States.....   | 49.6 | 50.4 |
| New England.....     | 48.4 | 48.9 |
| Middle states.....   | 48.7 | 50.0 |
| Southern states..... | 51.1 | 51.8 |

In short, the uniformity in the proportion of white females under 16 years of age among all white females in 1810 as compared with 1800, the similarity in the proportion of white males under 16 and white females under 16 in 1800 as compared with 1810, and the similarity of the proportion of all white males formed by those under 16 years of age in 1800 as compared with 1790, appear to justify the use of the proportion of females under 16 years of age returned in 1800 by the several states, to compute the number of females in the same age group in 1790. Accordingly, in Table 106, on page 208, will be found the probable number of females under and over the age of 16, determined in accordance with the proportions shown by the various states in 1800.

| SEX AND AGE.           | WHITE POPULATION IN 1790. |           |
|------------------------|---------------------------|-----------|
|                        | Number.                   | Per cent. |
| Total.....             | 3,172,444                 | .....     |
| 16 years and over..... | 1,619,184                 | 51.0      |
| Under 16 years.....    | 1,553,260                 | 49.0      |
| Males.....             | 1,615,761                 | .....     |
| 16 years and over..... | 815,098                   | 50.4      |
| Under 16 years.....    | 800,663                   | 49.6      |
| Females.....           | 1,556,683                 | .....     |
| 16 years and over..... | 804,086                   | 51.7      |
| Under 16 years.....    | 752,597                   | 48.3      |

The proportions of white persons of both sexes who were under 16 years of age in 1790 are compared with the corresponding proportions in 1900 in the following summary:

*Per cent white persons under 16 years of age form of total white population, and per cent white males and females of the same age group form of all white males and females, respectively: 1790 and 1900.*

| STATE OR TERRITORY.                    | BOTH SEXES. |      | MALES. |      | FEMALES. |      |
|--|-------------|------|--------|------|----------|------|
|  | 1790        | 1900 | 1790   | 1900 | 1790     | 1900 |
| Continental United States.....         | 49.0        | 35.6 | 49.6   | 35.2 | 48.3     | 36.1 |
| Area enumerated in 1790.....           | 49.0        | 34.1 | 49.6   | 34.3 | 48.3     | 33.9 |
| New England.....                       | 47.0        | 29.1 | 48.4   | 29.6 | 45.6     | 28.7 |
| Maine.....                             | 50.7        | 29.0 | 50.4   | 29.0 | 51.1     | 29.0 |
| New Hampshire.....                     | 48.0        | 27.5 | 49.1   | 27.5 | 48.0     | 27.5 |
| Vermont.....                           | 51.3        | 29.4 | 49.9   | 29.2 | 52.8     | 29.6 |
| Massachusetts.....                     | 45.5        | 29.0 | 47.8   | 29.6 | 43.4     | 28.3 |
| Rhode Island.....                      | 46.4        | 30.5 | 49.5   | 31.7 | 43.3     | 29.3 |
| Connecticut.....                       | 45.4        | 29.7 | 47.2   | 29.8 | 43.7     | 29.7 |
| Middle states.....                     | 49.4        | 32.6 | 48.7   | 32.6 | 50.2     | 32.5 |
| New York.....                          | 49.3        | 30.9 | 48.3   | 31.2 | 50.5     | 30.6 |
| New Jersey.....                        | 48.7        | 32.7 | 47.8   | 32.7 | 49.6     | 32.6 |
| Pennsylvania.....                      | 49.8        | 34.5 | 49.2   | 34.2 | 50.4     | 34.8 |
| Delaware.....                          | 49.4        | 32.7 | 50.8   | 32.6 | 48.0     | 32.9 |
| Southern states.....                   | 50.2        | 40.0 | 51.1   | 40.2 | 49.2     | 39.7 |
| Maryland and District of Columbia..... | 45.0        | 33.3 | 47.0   | 33.0 | 41.9     | 32.8 |
| Virginia and West Virginia.....        | 49.7        | 40.0 | 51.1   | 40.0 | 48.1     | 40.1 |
| North Carolina.....                    | 51.9        | 42.8 | 52.5   | 43.6 | 51.1     | 42.0 |
| South Carolina.....                    | 52.2        | 41.8 | 51.5   | 42.5 | 53.0     | 41.1 |
| Georgia.....                           | 53.1        | 41.6 | 51.7   | 41.8 | 54.5     | 41.4 |
| Kentucky.....                          | 54.5        | 40.4 | 53.0   | 40.3 | 56.3     | 40.4 |
| Tennessee.....                         | 55.0        | 41.1 | 52.9   | 41.4 | 57.2     | 40.8 |
| Added area.....                        |             | 36.0 |        | 35.8 |          | 38.0 |

The summary indicates that the proportion of each sex under 16 years of age was materially less for the United States in 1900 than in 1790, and slightly less in the area enumerated in 1790 than for the entire nation. The most decided changes in this respect appear in the New England states. In some of these the proportion in 1900 was little more than one-half of that shown in 1790. The change is least marked in the Southern states, where the white population has maintained a much larger proportion of increase than in other portions of the country, and has been but little affected by immigration during the century. In 1790 7 out of the 17 states and territories enumerated showed

a proportion of more than one-half under 16 years of age; the lowest proportion shown by any state or territory at that census was that of Maryland, in which 45 per cent of the inhabitants were under 16 years of age. In 1900, however, no state reported a proportion as high as the lowest reported for 1790.

The question at once presents itself, whether a large part of the decided reduction shown in this summary is not attributable to the arrival in the last decade of the nineteenth century of great numbers of immigrants, a very large proportion of whom were over 16 years of age. Such an influx would seemingly tend to augment the proportion of the population in the higher age group at the expense of that in the lower. To measure the influence of this element, two computations were made to determine the proportion which in 1900 (1) the native white of native parentage under 16 years of age and (2) the native white of foreign parentage and the foreign white in the same age period, formed of the total produced by adding to their number the number of persons available for their support. The first computation gave the proportion which the native white of native parentage under 16 years of age formed of the total obtained by adding to their number the total native white of native parentage above 16, and the married, widowed, and divorced native white of foreign parentage in this same age period; the second gave the proportion which the total of the foreign white under 16 years of age and the native white of foreign parentage in the same age period formed of the aggregate produced upon adding to their number the foreign white above 16 years and the single native white of foreign parentage in the same age period. For the United States as a whole, the proportions obtained by these two computations were 35.5 and 35.9 per cent, respectively, as compared with 35.6 in the preceding summary. It thus appears that the

influence of the large influx of adult immigrants upon the proportions shown in the summary has been practically offset by a higher birth rate among these immigrants, and that the proportion shown for 1900 in the preceding summary has not been materially affected by immigration.

While the increase or decrease in the birth rate between the First and Twelfth censuses is the principal factor in determining the proportions above and below the age of 16 years, increased longevity is another possible factor which might exert some influence upon the proportions. The average age of the population has unquestionably increased materially since 1790, because of improved sanitary conditions, the advance in medical and surgical skill, and doubtless also the greater intelligence of the community with respect to the preservation of health; it is not probable, however, that the last-named factor would materially affect the percentage here shown. The advance in medical skill and sanitary appliances since 1790 has tended to preserve infant life perhaps even more than adult life, and the increase in the average age is due rather to the preservation of life among young people who are crippled, deformed, or weak, than to the actual lengthening of life to old age.

The argument has frequently been advanced that the important point to be considered is the number of survivors in the young population, since the number of survivors from a high birth rate attended by a high death rate may perhaps be no greater than the number from low birth and death rates. The statistics under consideration relate to living children under 16 years of age; and, whatever the mortality may have been, the fact remains that at the period of the First Census the survivors were so numerous as to increase the population with almost unexampled rapidity.