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ABSTRACT

Annual estimates of the population of the United States by single years of age to 100, sex, race, and Hispanic origin are presented in this report. Total population figures for the Asian and Pacific Islander population, as well as the American Indian, Eskimo, or Aleut populations also are represented. Estimates for each year from July 1, 1980 to July 1, 1988 are included. Estimates are shown for the total population including Armed Forces overseas, the resident population, and the civilian population. Monthly population estimates are provided for January 1, 1950 to January 1, 1989. Tables of statistical data with related textual commentary comprise the body of the report. The interest of this report to educators can be exemplified in one of the report's highlights: "The population of elementary school age, 5 to 13 year, declined early in the decade, then began to grow again. The 1985 population of this group was a 25-year low, yet the July 1, 1988 population of this age group is slightly higher than its 1980 population." (DB)

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# Population Estimates and Projections

Series P-25, No. 1045

ED332947

# United States Population Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1988

by Frederick W. Hollmann

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**Population Estimates  
and Projections**

Series P-25, No. 1045

**United States  
Population Estimates,  
by Age, Sex, Race,  
and Hispanic Origin:  
1980 to 1988**

by Frederick W. Hollmann

Issued January 1990



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# United States Population Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1988

## INTRODUCTION

This report presents annual estimates of the population of the United States by single years of age to 100, sex, race, and Hispanic origin. Total population figures are also presented for the Asian or Pacific Islander, as well as the American Indian, Eskimo, or Aleut populations. Included are estimates for each year from July 1, 1980, to July 1, 1988; comparable census figures are also shown for April 1, 1980. Estimates are shown for the total population including Armed Forces overseas, the resident population, and the civilian population. Monthly total population estimates are provided for January 1, 1950, to January 1, 1989.

Also included in this report is an analysis of the year-to-year change in the population of the United States from 1940 through 1988 and its major components: births, deaths, and net civilian immigration. Components of change by race are shown beginning with the census of April 1, 1950; for the Hispanic-origin population, beginning with April 1, 1980.

Estimates of the Hispanic population, the Asian or Pacific Islander population, and the American Indian, Eskimo, or Aleut population, as well as the estimation of single-year age detail above age 85 appear for the first time in this report. Although all estimates are subject to future revisions, these newly estimated categories are especially subject to change, as the data and procedures used to produce them are still in the early stages of refinement.

Tables and charts are consistent with currently published annual estimates of the population prior to 1980 by age, sex, and race, as they appear in Current Population Reports, Series P-25, Nos. 311, 519, and 917. Components of change prior to January 1, 1970, are consistent with Current Population Reports, Series P-25, No. 802. Coverage of the population is consistent with the 1980 census for estimates since 1980. For prior decades, estimates are adjusted to conform to census coverage at the beginning and end of the decade. The estimates include an allowance for undocumented immigration since 1980.

This report supersedes Current Population Reports, Series P-25, Nos. 1022 and 1023. It differs from similar reports of the last few years, in that population age detail and components of change are combined in a single volume.

## HIGHLIGHTS

- On January 1, 1989, the total population including Armed Forces overseas reached 247,635,000, up 2,404,000 persons, or 0.98 percent from January, 1988. Annual population growth rates around 1 percent have persisted through the 1980's.
- The median age of the population on July 1, 1988, was 32.3 years, compared with 30.0 years in 1980, and 27.9 years in 1970 (the post-World-War-II low).
- The population aged 35 to 44 years increased by 9.5 million between July 1, 1980, and July 1, 1988; this is an average annual increase of 3.9 percent—four times the pace of growth of the total population (table A).
- The population of elementary school age, 5 to 13 years, declined early in the decade, then began to grow again. The 1985 population of this group was a 25-year low, yet the July 1, 1988, population of this age group is slightly higher than its 1980 population (table A).
- The high-school-aged population, 14 to 17 years, decreased at a rate of 1.8 percent per year for the 8-year period, making it the most rapidly declining age category. The 1988 population in this category was the lowest in 25 years (table A).
- The population 65 and over continued to increase, at a rate of 2.1 percent per year from 1980 to 1988. The oldest categories of the elderly population increased more rapidly: for those aged 85 and over, the average annual rate for the 8 years was 3.3 percent (table A).
- The Black population increased at an average annual rate of 1.5 percent during the period from July 1, 1980, to July 1, 1988, compared with a rate of growth of 0.8 percent for Whites. Other races (Asians or Pacific Islanders, American Indians, Eskimos, or Aleuts) grew seven times as rapidly as Whites (5.6 percent per year) during the same period (table A). The resident Asian or Pacific Islander population increased at a rate of 6.7 percent annually from 1980 to 1988, largely because of immigration (table A). During the same period, the annual rate of increase was 2.2 percent for resident American Indians, Eskimos, or Aleuts. Higher natural increase accounted for the higher than average growth of this population.

**Table A. Change in Population, by Age Group, Race, and Hispanic Origin: July 1, 1980, to July 1, 1988**

(Numbers in thousands. Includes Armed Forces overseas)

Age, race, and Hispanic origin	Population on July 1		Population change, 1980-88		Average annual percent change
	1988	1980	Number	Percent	
All races .....	246,329	227,757	18,572	8.2	1.0
Under 5 years .....	18,456	16,458	1,998	12.1	1.4
5 to 13 years .....	31,406	31,095	311	1.0	0.1
14 to 17 years .....	13,983	16,142	-2,160	-13.4	-1.8
18 to 24 years .....	26,888	30,350	-3,462	-11.4	-1.5
25 to 34 years .....	43,886	37,625	6,260	16.6	1.9
35 to 44 years .....	35,343	25,868	9,475	36.6	3.9
45 to 54 years .....	24,171	22,754	1,417	6.2	0.8
55 to 64 years .....	21,830	21,762	69	0.3	0.0
65 to 74 years .....	17,897	15,653	2,244	14.3	1.7
75 to 84 years .....	9,521	7,781	1,740	22.4	2.5
85 years and over .....	2,948	2,269	679	29.9	3.3
White .....	207,748	195,571	12,177	6.2	0.8
Black .....	30,326	26,903	3,422	12.7	1.5
Other races .....	8,256	5,283	2,973	56.3	5.6
Asian or Pacific Islander <sup>1</sup> .....	6,529	3,834	2,694	70.3	6.7
American Indian, Eskimo, or Aleut <sup>1</sup> .....	1,699	1,429	270	18.9	2.2
Hispanic origin <sup>2</sup> .....	19,852	14,803	5,049	34.1	3.7

<sup>1</sup>Resident population.<sup>2</sup>Persons of Hispanic origin may be of any race.

Source: Tables J and 1.

- As a result of both substantial immigration and relatively high natural increase, the population of Hispanic origin grew at a rate of 3.7 percent annually during the same period (table A).
- The crude birth rate in 1988 stood at 15.9 live births per 1,000 population at mid-year, corresponding to 3,908,000 births during that year. The 1988 crude birth rate was as high as it had been this decade, in spite of the slowing growth and aging of the childbearing-age population. The cause of the rise in the crude birth rate was an increase in childbearing. While in no way comparable to the Baby Boom, this fertility increase was substantial among women above age 30.
- The number of deaths in 1988, 2,170,000, was the highest ever, while the crude death rate (deaths per 1,000 population at mid-year) was the highest since 1976. The increase in deaths was partly a result of the increase in population. However, the increase in the crude death rate is primarily the result of the aging of the population. Life expectancy at birth has improved substantially since World War II, but the improvement slowed after 1982.
- Life expectancy at birth in 1987 was 71.5 for males and 78.3 for females. The difference of 6.8 years was down from 7.5 years in 1980. The narrowing of the mortality advantage of females over males is contrary to the general trend since World War II.
- Net civilian immigration increased the population by 667,000 in 1988, a rate of 2.7 immigrants per 1,000

population. Immigration has been a major factor in the growth of both the Hispanic and the Asian or Pacific Islander population.

### THE GROWTH OF THE POPULATION

The total population of the United States including Armed Forces overseas reached a level of 247,635,000 by January 1, 1989, an increase of 2,404,000, or 0.98 percent since the beginning of 1988. This compares to a similar increase of 2,388,000, (0.98 percent) during 1987. The population has increased by 20,573,000, or 9.1 percent, since the last decennial census of April 1, 1980. The annual rate of growth in 1988 is a continuation of the trend of the decade, the annual percent change having fluctuated in the narrow range of 0.95 to 1.03 since the beginning of 1981.

An annual population growth rate of 1 percent is not high in comparison to the trend since World War II (tables 5 and 6). In 1956, the growth rate reached a level of 1.83 percent, as the post-war Baby Boom neared its peak. This corresponded to a numerical increase in the population during 1956 of 3,058,000 persons. Driven by a substantial decline in fertility from the high levels of the Baby Boom, the population growth rate sank to a level of 0.92 percent in 1973, or an increase of 1,947,000 persons in that year. The reduction in the rate of total population growth was reversed by the advance of the older Baby Boomers into the peak childbearing ages. After 1973, the rate of population growth began to increase, aided in 1980 and 1981 by heavy immigration, particularly an influx of refugees from Cuba and Southeast Asia.

The relative constancy of the rate of population growth during the 1980's has persisted in spite of changes in demographic factors that would tend to reduce population growth. The age group of potential parents (15 to 44 years) is increasing at a progressively slower rate, and is nearing a peak. This group is also becoming older, as the number of persons in their twenties is declining, and the number in their thirties is increasing. This would normally tend to reduce growth by arresting the increase in the number of births. At the same time, the share of the population that is elderly is increasing, which would tend to increase the death rate, other things being equal.

The recent stability of the growth rate despite these trends is the result of subtle changes in demographic behavior that have affected all of the major components of population growth. The frequency of childbearing among women has increased slightly since the early part of the decade, primarily in the later ages of childbearing. The improvement in mortality conditions, in progress since the end of World War II, has continued, albeit at a slower rate, which has forestalled a substantial increase in the death rate. There has also been a modest increase in the rate of net immigration into the United States, which has been driven primarily by the influx of persons from Asia and Latin America.

The following section will examine the shifts in the distribution of the population by age, race, and Hispanic origin that have occurred. Following that will be a discussion of the components of change; births, deaths, and immigration, as well as the factors that underlie them.

## THE CHANGING DEMOGRAPHIC STRUCTURE OF THE POPULATION

Since the early 1970's, the population of the United States has seen major shifts in its distribution by age, race, and Hispanic origin. It has been aging according to all indicators. At the same time, it has seen differential growth by race, increasing the proportion of Black persons, as well as persons of Other races (the Asian or Pacific Islander (API) population and the American Indian, Eskimo, or Aleut population).<sup>1</sup> Fueled by immigration from abroad, the growth of these population groups (especially API) has been especially dramatic. The population of Hispanic origin has also grown at a rate substantially higher than the population as a whole. The comparison of the population growth of various population groups defined by age, race, and Hispanic origin will be the subject of this section.

### The Aging of the Population

The median age of the population, defined as the age at which half the population is older and half is younger,

has been increasing steadily since 1971. This summary index of aging, shown in table B for July 1 of each year since 1960, has increased by 4.4 years over the 17-year period from 1971 to 1988. The major cause of this shift has been the aging of the large number of persons born during the 1946-64 Baby Boom. The mean age, shown in tables 1 through 3, has also increased.

The shift toward an older population has also had an impact on the age composition of the dependent population, as shown in table C. The dependency ratio, defined as the ratio of persons under age 18 plus persons 65 and over (dependents) to the population aged 18 to 64 (potential labor force) has decreased greatly since 1964. However, separating the dependency ratio into its two components of youthful (under 18) dependency and aged (65 and over) dependency shows that the entire decrease has been confined to the decline in the youthful component. In fact, the ratio of persons 65 and over to the potential labor force has increased steadily throughout the period. The youthful dependency ratio, on the other hand, has plummeted from a level of 64.9 persons under 18 per 100 persons aged 18 to 64 in 1960 to a level of 42.0 in 1988.

A more detailed view of the changing age distribution of the population is afforded by tables D and E, which show the numerical and percent distribution of the population by age. From table E, it can be seen that the age groups which gained in their proportion of total population (increased more rapidly than the total population) are the age groups between 25 and 44, as well as all age groups 65 years and older. The age groups that did not grow in proportion to the total population were those between ages 5 and 25. The age groups under 5 and 45 to 64 saw no consistent and substantial shift in their share of the total population, meaning that their growth rates were comparable to that of the total population for the 8-year period.

The change in age distribution since 1980 also can be seen by comparing the population pyramids for July 1, 1980, and July 1, 1988 (figure 1). The Baby Boom is identifiable by the bulge in the young middle ages in 1980 which, predictably, had shifted upward by 8 years in the 1988 pyramid. The trend in selected age groups can be seen in figures 2 and 3. Figure 2 shows the population of major age groups in 1980, 1984, and 1988. Figure 3 shows the average annual percent change<sup>2</sup> in these age groups for the first and second halves of the 8-year interval.

<sup>2</sup> Throughout this report, the average annual percent change, or increase, is defined as the natural logarithm of the ratio of the population at the end of a period to the population at the beginning of the period, divided by the duration of the period in years. Sometimes known as the "compound interest rate of return," this formula adjusts the rate to the change of population base during the period. It is also independent of the length of the period, and therefore allows the comparison of rates of change among periods of unequal duration.

<sup>1</sup> Throughout this report, "American Indian" refers to American Indian, Eskimo, or Aleut.

**Table B. Median Age of the Population, by Sex, Race, and Hispanic Origin: 1960 to 1988**

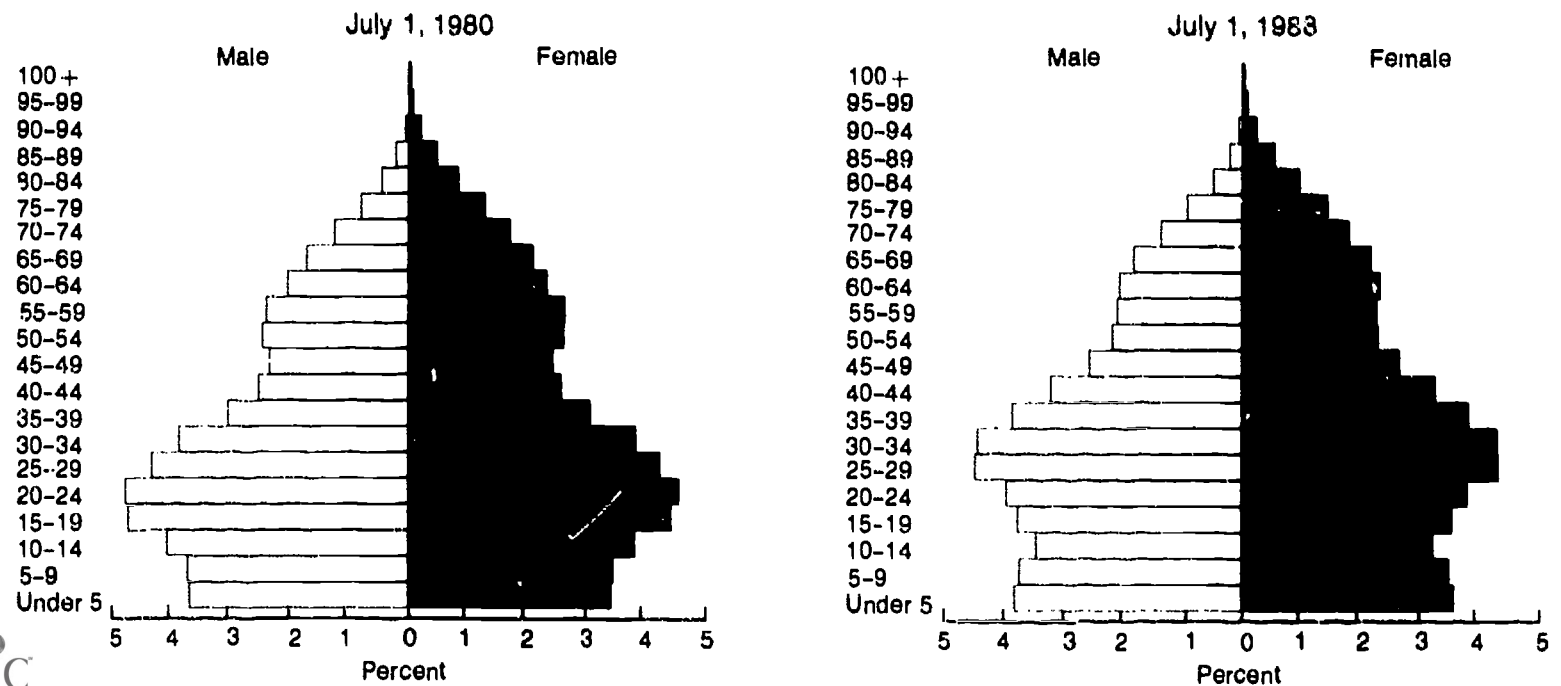
(As of July 1. Includes Armed Forces overseas)

Year	Total	Race			Hispanic origin <sup>1</sup>	Sex	
		White	Black	Other races		Male	Female
1988	32.3	33.2	27.5	28.8	25.8	31.2	33.5
1987	32.0	32.9	27.2	28.5	25.5	30.9	33.2
1986	31.7	32.6	26.9	28.2	25.2	30.6	32.9
1985	31.4	32.3	26.6	27.9	24.9	30.3	32.6
1984	31.1	32.0	26.2	27.6	24.6	29.9	32.3
1983	30.8	31.7	25.9	27.4	24.3	29.6	32.0
1982	30.5	31.4	25.6	27.1	24.0	29.4	31.8
1981	30.3	31.1	25.2	26.9	23.7	29.1	31.5
1980	30.0	30.9	24.3	26.8	23.3	28.8	31.3
1979	29.8	30.7	24.7	26.4	(NA)	28.6	31.1
1978	29.5	30.4	24.4	26.2	(NA)	28.3	30.8
1977	29.2	30.0	24.1	25.9	(NA)	28.0	30.5
1976	28.9	29.6	23.8	25.6	(NA)	27.7	30.1
1975	28.7	29.5	23.5	25.4	(NA)	27.5	29.9
1974	28.5	29.3	23.2	25.4	(NA)	27.3	29.8
1973	28.3	29.1	23.0	25.1	(NA)	27.1	29.6
1972	28.1	28.9	22.7	24.9	(NA)	26.8	29.4
1971	27.9	28.7	22.6	24.7	(NA)	26.6	29.2
1970	27.9	28.7	22.5	24.6	(NA)	26.6	29.2
1969	28.0	28.8	22.3	24.4	(NA)	26.6	29.2
1968	28.0	28.8	22.2	24.3	(NA)	26.7	29.2
1967	27.9	28.8	22.1	24.2	(NA)	26.6	29.2
1966	28.0	28.9	22.1	24.0	(NA)	26.7	29.3
1965	28.1	29.0	22.2	23.9	(NA)	26.9	29.4
1964	28.3	29.2	22.4	23.9	(NA)	27.2	29.5
1963	28.6	29.5	22.6	23.8	(NA)	27.5	29.7
1962	28.9	29.8	22.8	23.9	(NA)	27.8	30.0
1961	29.2	30.0	23.1	24.0	(NA)	28.1	30.1
1960	29.4	30.2	23.4	24.2	(NA)	28.5	30.3

<sup>1</sup>Persons of Hispanic origin may be of any race.

Source: For 1960-69, Current Population Reports, Series P-25, No. 519; for 1970-79, Current Population Reports, Series P-25, No. 917; and for 1980-88, table 1 of this report. Medians for years since 1980 are based on population by single year of age. For years prior to 1980, data are based on 5-year age groups.

**Figure 1. Age Distribution of the U.S. Population: 1980 and 1988**



**Table C. Dependents per 100 Persons 18 to 64 Years Old: 1960 to 1988**

(As of July 1. Includes Armed Forces overseas)

Year	Total dependents	Under 18 years	65 years and over
1988	61.9	42.0	20.0
1987	62.0	42.2	19.8
1986	62.0	42.4	19.6
1985	61.9	42.6	19.3
1984	62.0	42.9	19.1
1983	62.4	43.4	19.0
1982	62.9	44.1	18.8
1981	63.7	45.0	18.7
1980	64.6	46.0	18.6
1979	65.7	47.2	18.5
1978	67.0	48.6	18.4
1977	68.3	50.0	18.3
1976	69.7	51.6	18.1
1975	71.3	53.3	18.0
1974	72.7	54.9	17.8
1973	74.2	56.5	17.7
1972	75.7	58.1	17.6
1971	77.0	59.5	17.5
1970	78.0	60.6	17.5
1969	79.0	61.6	17.4
1968	80.1	62.7	17.4
1967	81.1	63.7	17.4
1966	82.2	64.8	17.4
1965	83.1	65.7	17.4
1964	84.1	67.0	17.4
1963	83.7	66.4	17.3
1962	83.0	65.8	17.1
1961	82.2	65.3	17.0
1960	81.6	64.9	16.8

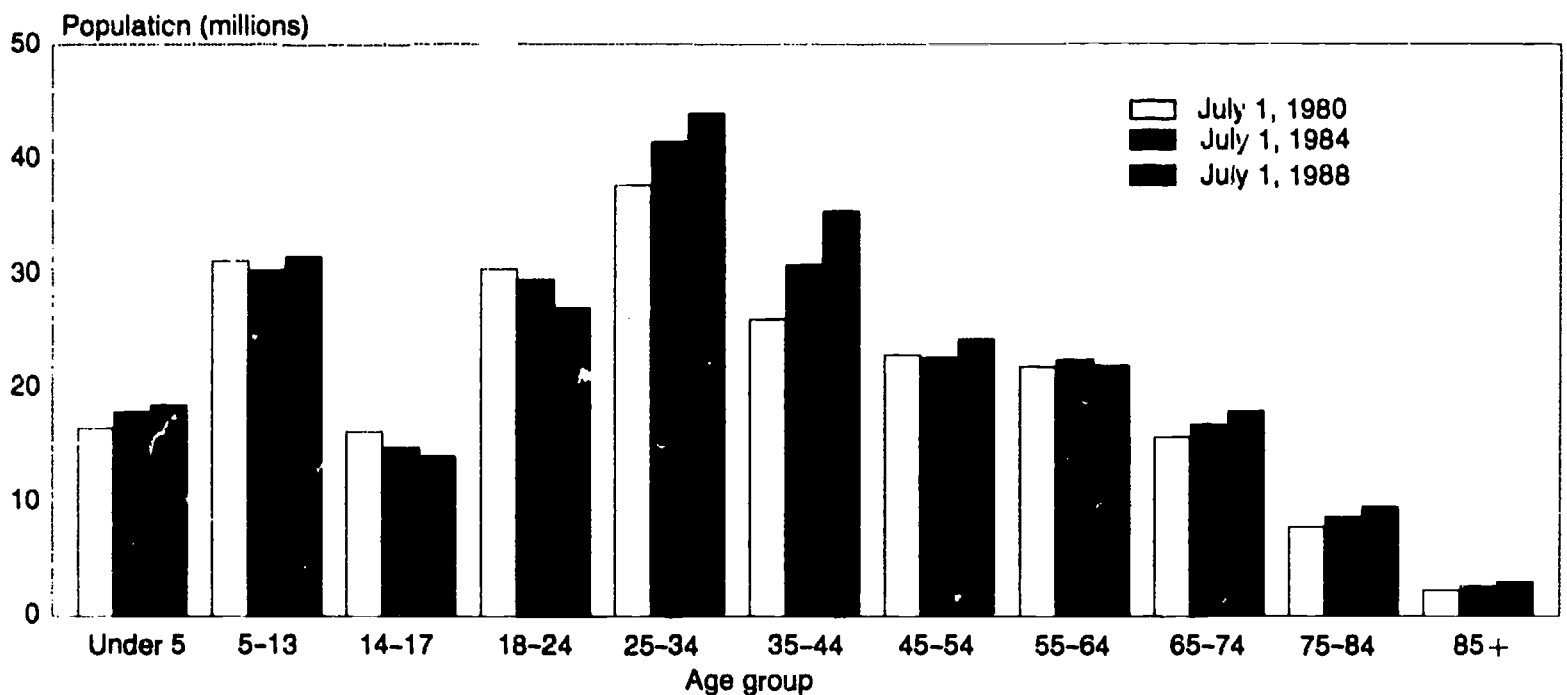
Source: For 1960-69, Current Population Reports, Series P-25, No. 519; for 1970-79, Current Population Reports, Series P-25, No. 917; and for 1980-88, table 1 of this report.

**The aging Baby Boom.** Shifts that have occurred in the population of age groups under 45 can be explained, directly or indirectly, by the aging of the Baby Boom cohorts of 1946 through 1964, and of the smaller birth cohorts that followed them. This interrelation of the historical trend in births and the current age distribution is illustrated by figure 4, which shows the trend in births, compared with age of the birth cohort (or group) in 1988. The record high levels of births that occurred in the post-war period can be seen in the later ages of parenthood in 1988, and the advance of this group of births through the age distribution explains most of what has occurred in this and all younger age groups during the 1980's.

The 10-year age group that showed the heaviest absolute gain from July 1, 1980, to July 1, 1988, was indeed the 35-44 age group (figures 2 and 3). This group increased nearly 9.5 million (more than one-third) during the period. Its average annual percent increase, at 3.9 percent per year, was four times the annual growth rate of the total population. This age group was most affected by the aging of the Baby Boomers during the 1980's. The population aged 25 to 34 increased at an average 1.9 percent per annum (an increase of 6.3 million persons over 8 years). However, the trend in the rate of growth for this group was downward, foretelling a peak and decline in its size over the next decade.

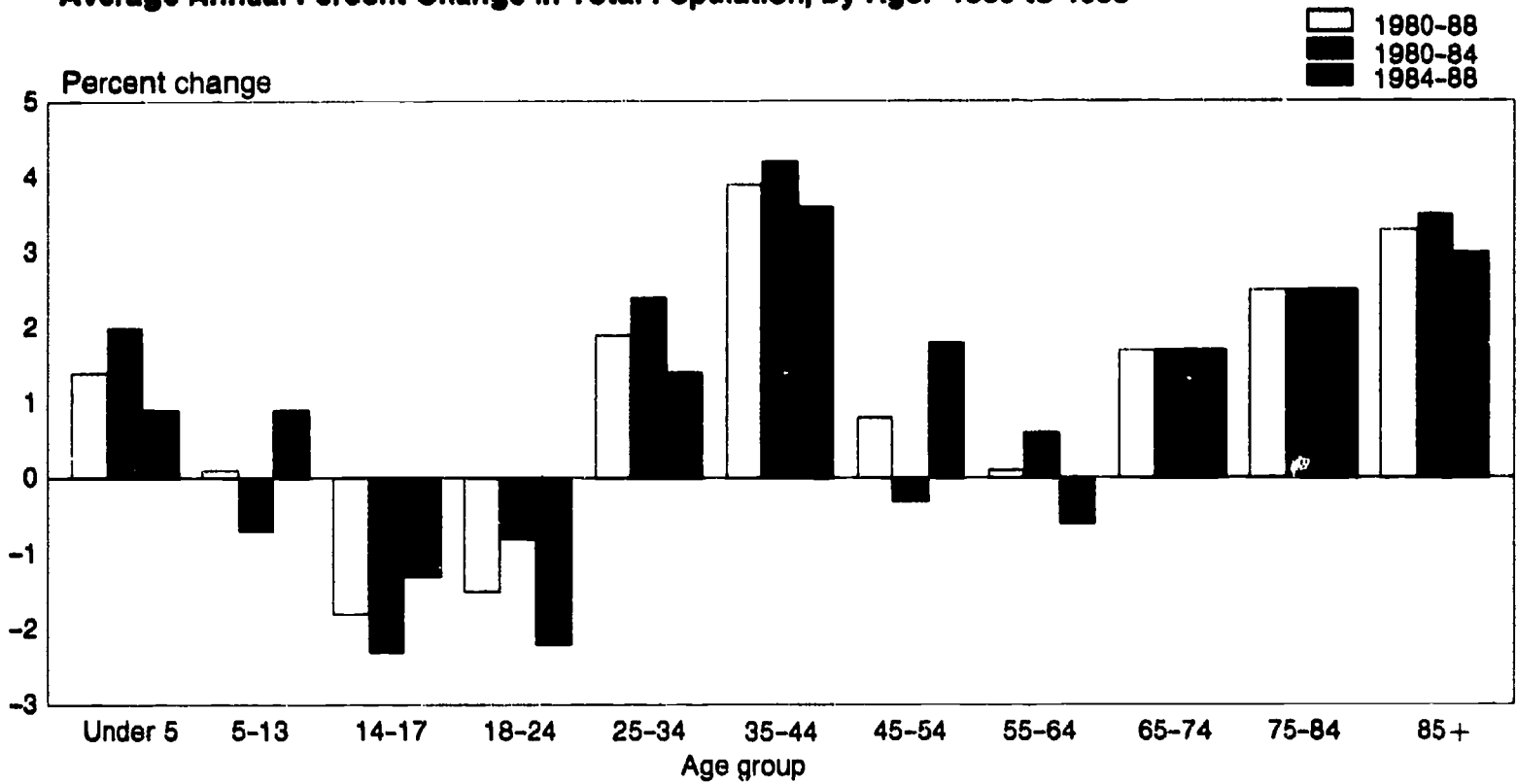
The other side of the aging Baby Boom is the decline from 1980 to 1988 in the population of young adults aged 18 to 24 (a change of -11.4 percent), as well as persons aged 14 to 17 (-13.4 percent). In 1980, the 18- to 24-year-olds were Baby Boomers, born during the

**Figure 2.**  
**Total Population Including Armed Forces Overseas, by Age: July 1, 1980, 1984, and 1988**



Source: Table 1.

**Figure 3.**  
**Average Annual Percent Change in Total Population, by Age: 1980 to 1988**



Source: Computed from Table 1.

peak years of 1956 to 1962. By 1988, persons in this age group were entirely the product of the period of declining births which commenced in the 1960's (figure 4). Figure 3 indicates that the rate of decline for the young adult population intensified between the first and the second half of the 8-year period. Persons in their

mid-teens (roughly of high school age) showed the most rapid loss of any age group, but the rate of decrease diminished during the period. In 1980, this group was composed of persons born between mid-1962 and mid-1966, when births were declining, but still at high

**Figure 4.**  
**Number of Births, by Year, 1910 to 1988, and Relationship to 1988 Age Groups**  
(In millions)

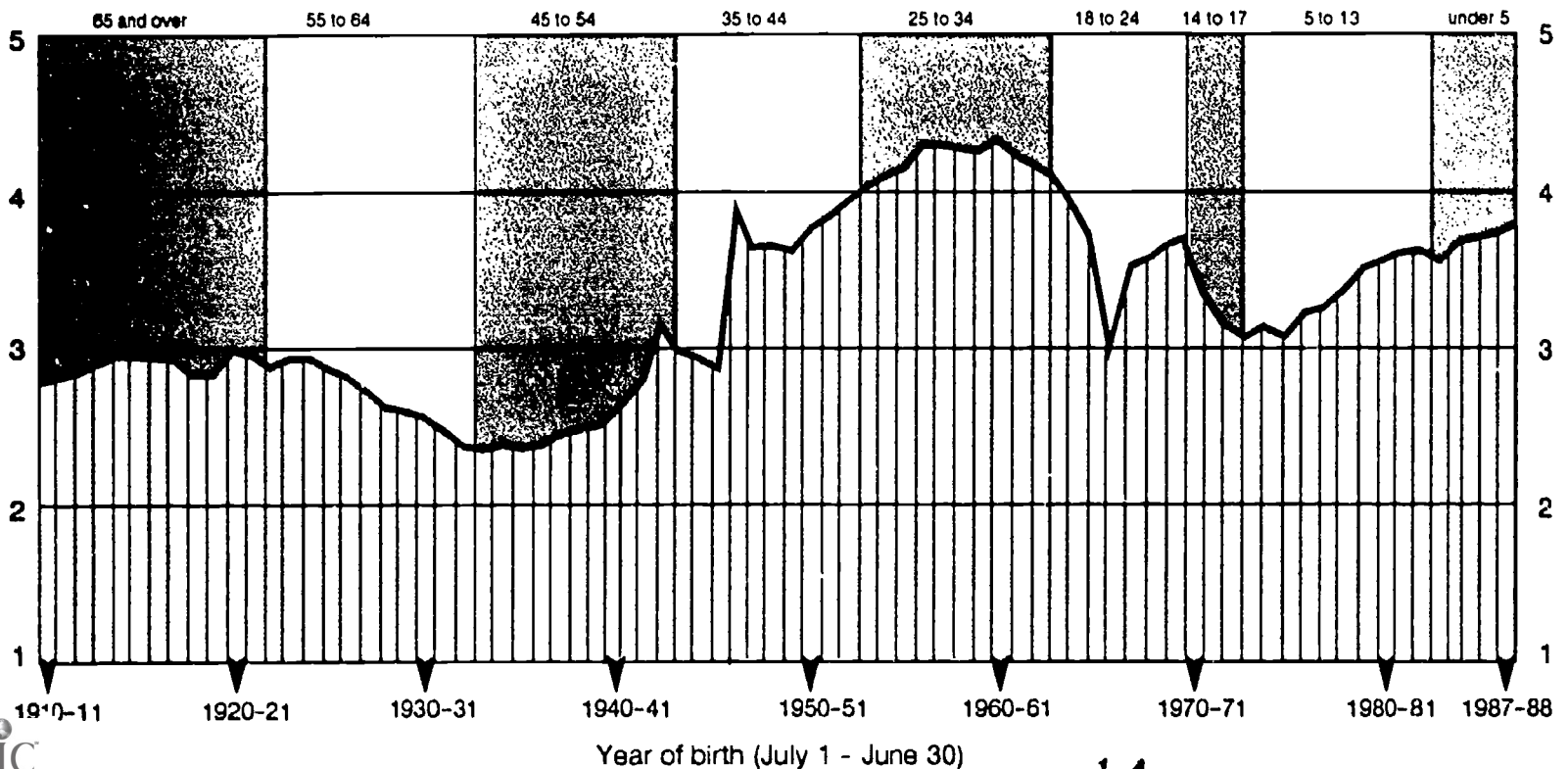


Table D. Population, by Age Group and Annual Net Change: 1980 to 1988

(Numbers in thousands. Includes Armed Forces overseas)

Year	Total, all ages	Under 5 years	5-13 years	14-17 years	18-24 years	25-34 years	35-44 years	45-64 years	65 years and over	85 years and over	100 years and over
Population as of July 1:											
1988	246,329	18,456	31,406	13,983	26,888	43,886	35,343	46,001	30,367	2,948	54
1987	243,934	18,276	30,824	14,468	27,334	43,515	34,382	45,306	29,830	2,866	45
1986	241,625	18,154	30,351	14,797	27,967	42,979	33,145	45,058	29,174	2,778	36
1985	239,279	18,004	30,110	14,865	28,749	42,237	31,840	44,934	28,540	2,695	28
1984	237,001	17,830	30,238	14,704	29,391	41,429	30,618	44,818	27,971	2,615	22
1983	234,799	17,651	30,410	14,720	29,943	40,602	29,368	44,679	27,426	2,531	18
1982	232,520	17,298	30,614	15,041	30,283	39,741	28,115	44,602	26,825	2,444	16
1981	230,138	16,931	30,754	15,599	30,428	39,159	26,461	44,570	26,235	2,350	16
1980	227,757	16,458	31,095	16,142	30,350	37,625	25,868	44,515	25,704	2,269	15
Annual net change, July 1 to June 30:											
1987-88	2,395	180	582	-485	-447	371	962	695	537	83	9
1986-87	2,309	122	473	-330	-633	536	1,237	248	655	88	9
1985-86	2,346	149	241	-68	-781	742	1,305	124	634	83	8
1984-85	2,278	174	-128	161	-642	808	1,221	115	569	80	6
1983-84	2,202	179	-172	-16	-552	827	1,250	139	545	84	4
1982-83	2,279	353	-204	-321	-340	861	1,253	77	601	87	2
1981-82	2,382	367	-141	-558	-145	582	1,654	32	590	94	1
1980-81	2,381	473	-341	-543	79	1,534	592	55	532	80	1

Source: Table 1.

levels. By 1988, this group was made up of the diminished birth cohorts of mid-1970 through mid-1974.

The trends in other age groups under 65 can also be linked to the trend in births. The group comprising children of elementary school age (5 to 13) ended a long period of decline in 1985 and began to increase in number with the 1986 estimate. This was a result of the increase in births beginning in the mid-1970's, as persons born during the 1950's entered the peak ages of parenthood. Likewise, the increase in the population under 5 years of age was more rapid than the increase in the population as a whole, as this secondary rise in births continued into the 1980's (figure 4). Since 1983, this trend has been further supported by mild increases in childbearing among women of childbearing age.

The age groups between 45 and 65 in 1988 (born from 1923 to 1943), still too old to be affected by the movement of the Baby Boom through the age distribution, can expect to be boosted by it in the next decade. The 45- to 54-year age group, which showed a decline for the period from mid-1980 to mid-1984, emerged as a positive-growth category during 1984 to 1988; this increase was a consequence of a short-lived increase in births around the onset of World War II, as the low fertility of the Great Depression ended. This group can be expected to be the major gainer of the next decade, as the oldest of the Baby Boomers will reach age 45 late in 1991. The 55- to 64-year age group has not seen either growth or decline on a large scale this decade. From 1980 to 1984, it grew, partly because of the moderately high fertility levels after World War I, as well as the recent improvement in mortality conditions. From 1984 to

1988, it declined slightly, as the smaller birth cohorts of the Great Depression entered this age group.

#### The growth of the population aged 65 and older.

Another important aspect of the aging of the population has been the increase in the proportion of elderly persons. The population 65 and over increased by 4,663,000 from July 1, 1980, to July 1, 1988. This corresponds to an annual average rate of 2.1 percent per year, slightly more than double the rate of population growth overall. The proportion of the total population in the age group 65 and over stood at 12.3 percent on July 1, 1988, up from 11.3 percent on July 1, 1980 (table E).

The rate of increase of the population 65 and over has been declining gradually since 1977, as the new entrants into this population originate from a period of declining births at the onset of the Great Depression. It is expected that while this population will continue to grow, its rate of growth will continue to decrease through the 1990's.<sup>3</sup>

Within the 65-and-over category, the rates of increase have been greatest in the oldest age groups, implying that the elderly population is itself aging. This is largely the result of declining mortality, from which the oldest age groups have enjoyed the greatest cumulative gain. The trend in the distribution of the population 65 and

<sup>3</sup> For further discussion of trends in age distribution projected for the coming years, see Current Population Reports, Series P-25, No. 1018, *Projections of the Population of the United States, by Age, Sex, and Race: 1988 to 2080*, by Gregory Spencer.

**Table E. Percent Distribution of the Population, and Average Annual Percent Change, by Age Group: 1980 to 1988**

(Includes Armed Forces overseas)

Year	Total, all ages	Under 5 years	5-13 years	14-17 years	18-24 years	25-34 years	35-44 years	45-64 years	65 years and over	85 years and over
Percent distribution as of July 1:										
1988.....	100.0	7.5	12.7	5.7	10.9	17.8	14.3	18.7	12.3	1.2
1987.....	100.0	7.5	12.6	5.9	11.2	17.8	14.1	18.6	12.2	1.2
1986.....	100.0	7.5	12.6	6.1	11.6	17.8	13.7	18.6	12.1	1.1
1985.....	100.0	7.5	12.6	6.2	12.0	17.7	13.3	18.8	11.9	1.1
1984.....	100.0	7.5	12.8	6.2	12.4	17.5	12.9	18.9	11.8	1.1
1983.....	100.0	7.5	13.0	6.3	12.8	17.3	12.5	19.0	11.7	1.1
1982.....	100.0	7.4	13.2	6.5	13.0	17.1	12.1	19.2	11.3	1.1
1981.....	100.0	7.4	13.4	6.8	13.2	17.0	11.5	19.4	11.4	1.0
1980.....	100.0	7.2	13.7	7.1	13.3	16.5	11.4	19.5	11.3	1.0
Average annual percent change, July 1 to June 30:										
1987-88.....	0.98	0.98	1.87	-3.41	-1.65	0.85	2.76	1.52	1.79	2.85
1986-87.....	0.95	0.67	1.55	-2.25	-2.29	1.24	3.66	0.55	2.22	3.11
1985-86.....	0.98	0.83	0.80	-0.46	-2.76	1.74	4.02	0.28	2.20	3.04
1984-85.....	0.96	0.97	-0.42	1.09	-2.21	1.93	3.91	0.26	2.01	3.01
1983-84.....	0.93	1.01	-0.57	-0.11	-1.86	2.02	4.17	0.31	1.97	3.26
1982-83.....	0.98	2.02	-0.67	-2.16	-1.13	2.14	4.36	0.17	2.21	3.48
1981-82.....	1.03	2.14	-0.46	-3.64	-0.48	1.48	6.06	0.07	2.22	3.94
1980-81.....	1.04	2.84	-1.10	-3.42	0.26	3.99	2.26	0.12	2.05	3.48

Source: Table 1.

over by age is shown in table F. All of the age groups 75 and over are increasing as a proportion of the total population 65 and over. The population of centenarians (aged 100 years and over), while still a small proportion of the total, reached an estimated 54,000 in 1988, compared with 15,000 in 1980 (table D), making this category a small but rapidly increasing component of the elderly population. Population estimates for the category 100 and over must be interpreted with extreme caution, as they are highly subject to errors resulting from age misstatement in the 1980 census. (This will be discussed further in the section, "Definitions, Sources, and Methodology" which will follow.)

Even taking account of the problems with the data, the centenarian population is undoubtedly a very rapidly growing age group. This group has been affected by substantial positive trends in all three demographic

components during the course of their lifetime. As is the case with any age group, the trend in the number of new centenarians is influenced by the trend in births at the time the new entrants were born. Births during the 1880s were increasing, as a gradual decline in the crude birth rate during this decade was more than compensated by a 25 percent increase in the total population.<sup>4</sup> As they reached young adulthood, the birth cohorts of the 1880's were augmented by a substantial immigration from Europe during the early part of the century, until the onset of World War I.<sup>5</sup> The centenarians of 1988 were also exposed at a younger age than their predecessors to the improvements in mortality during the twentieth century; the virtual eradication of the major infectious causes of death (primarily tuberculosis), as well as the reduced mortality due to the more age-selective degenerative diseases (especially diseases of the heart) since World War II.

**Table F. Percent Distribution of the Population 65 and Over, by Age: 1980 to 1988**

(As of July 1)

Year	Total, 65 years and over	65-74 years	75-84 years	85 years and over	100 years and over
1988.....	100.0	58.9	31.4	9.7	0.2
1987.....	100.0	59.2	31.2	9.6	0.2
1986.....	100.0	59.4	31.1	9.5	0.1
1985.....	100.0	59.6	31.0	9.4	0.1
1984.....	100.0	59.8	30.8	9.3	0.1
1980.....	100.0	60.9	30.3	8.8	0.1

Source: Table 4.

### The Changing Distribution of the Population by Race and Hispanic Origin

In addition to the changing age structure of the population, the 1980's have seen substantial variation in population growth and characteristics among different race and Hispanic origin groups. The Black population has continued to grow at a rate substantially higher than

<sup>4</sup> U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970, Bicentennial Edition, Part 1*, Washington, D.C., 1975, p.8.

<sup>5</sup> U.S. Bureau of the Census, *op. cit.*, p.105.



the total population. The population of Other races, (Asians, Pacific Islanders, American Indians, Eskimos, and Aleuts), has been growing at a rate roughly five times that of the population as a whole (tables 7 and 8). The population of Hispanic origin (who may be of any race) has grown at a rate more than triple that of the entire population. The numerical increase in the Hispanic population from July 1, 1980, to July 1, 1988, has been more than one-quarter that of the entire population (5,049,000 compared to 18,572,000).

As a result, the Hispanic share of the total population, and the share of all race groups except Whites, increased from July 1, 1980, to July 1, 1988 (table G). The proportion of Blacks grew from 11.8 percent in 1980 to 12.3 percent in 1988. The proportion of Other races was 3.4 percent in 1988, up from 2.3 percent in 1980, while the proportion Hispanic was 8.1 percent, up from 6.4 percent in 1980.

A comparison of the population by age among the three major race groups and Hispanics, shown in the population pyramids of figure 5, indicates differences among the groups. The "middle-heavy" character of the United States population, attributable to the Baby Boom, is most characteristic of the White population. There is evidence of it in the other groups, but for the Other races and Hispanic groups, it results partly from immigration. The Hispanic population has the largest proportion of children. Table H and I show a similar comparison in the distribution of each race category by major age group. The story of how the major change components, births, deaths, and immigration, have brought about population growth and the evolution of the age structure is different for each of the groups.

**Trends in the Black population.** The Black population reached a level of 30,566,000 on January 1, 1989, up 462,000 from the beginning of 1988. This represented an increase of 1.53 percent during the year, double the percent increase for the White population, which was at 0.76. Indeed, the annual growth rate of the Black population has exceeded that of Whites by close to three-quarters of 1 percent since 1950, as shown by the annual data in tables 7 and 8. The principal explanation for the higher growth rate of Blacks is the difference in natural increase, shown in figure 6. Higher proportions of women in the childbearing ages, combined with higher fertility as compared with Whites, have produced a higher crude birth rate (births per 1000 population) in the Black population. At the same time, a younger population, combined with some improvements in mortality conditions, brought the crude death rate for Blacks below the level for Whites in 1974, where it has remained to this day. The rate of net civilian immigration, while not a major determinant of the growth rate for either the White or the Black population, has been at a slightly

**Table G. Percent Distribution of the Population, by Race and Hispanic Origin: 1950 to 1988**

(As of July 1. Includes Armed Forces overseas)

Year	Total	Race			Hispanic origin <sup>1</sup>
		White	Black	Other	
1988.....	100.0	84.3	12.3	3.4	8.1
1987.....	100.0	84.5	12.2	3.2	7.9
1986.....	100.0	84.7	12.2	3.1	7.7
1985.....	100.0	84.9	12.1	3.0	7.5
1984.....	100.0	85.1	12.1	2.9	7.3
1980.....	100.0	85.9	11.8	2.3	6.4
1975.....	100.0	86.9	11.5	1.7	(NA)
1970.....	100.0	87.6	11.1	1.3	<sup>2</sup> 4.5
1965.....	100.0	88.1	10.8	1.0	(NA)
1960.....	100.0	88.6	10.5	0.9	(NA)
1950.....	100.0	89.3	<sup>3</sup> 9.9	<sup>3</sup> 0.7	(NA)

<sup>1</sup>Persons of Hispanic origin may be of any race.

<sup>2</sup>The proportion Hispanic in 1970 is as of April 1, and is based on the 5 percent sample from the 1970 census.

<sup>3</sup>The proportions for Black and Other races have not been estimated separately for July 1, 1950. Data shown are for the census of April 1, 1950.

Source: Tables 6 and 8.

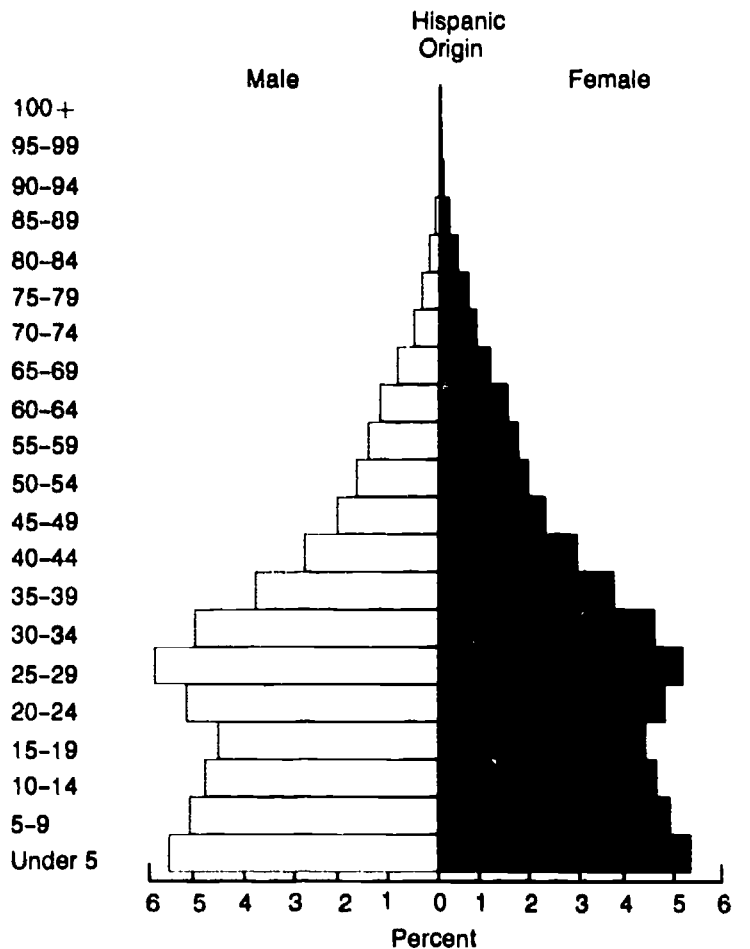
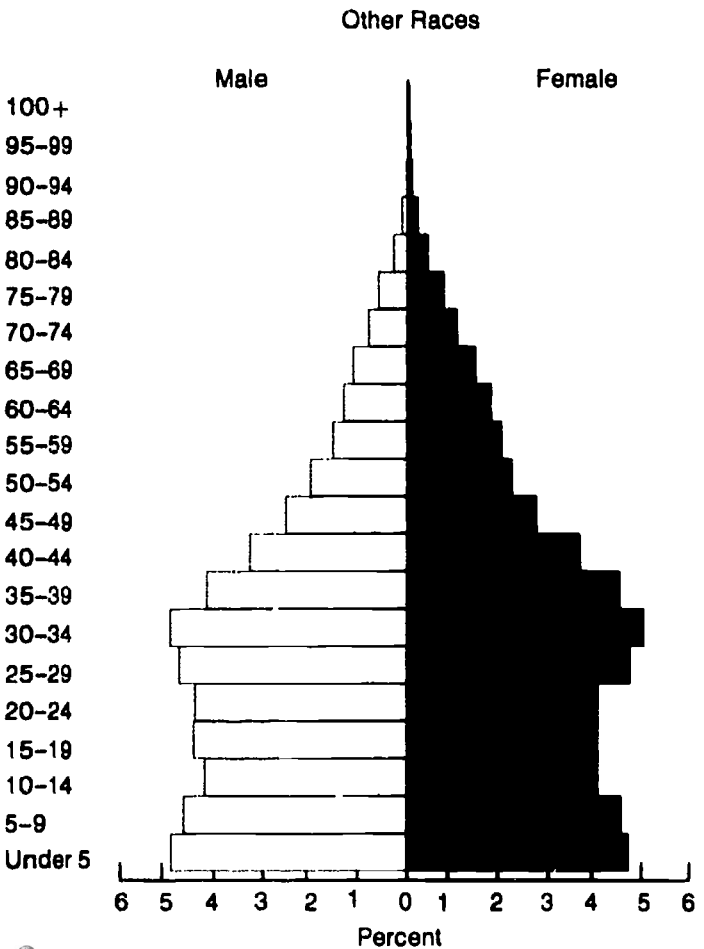
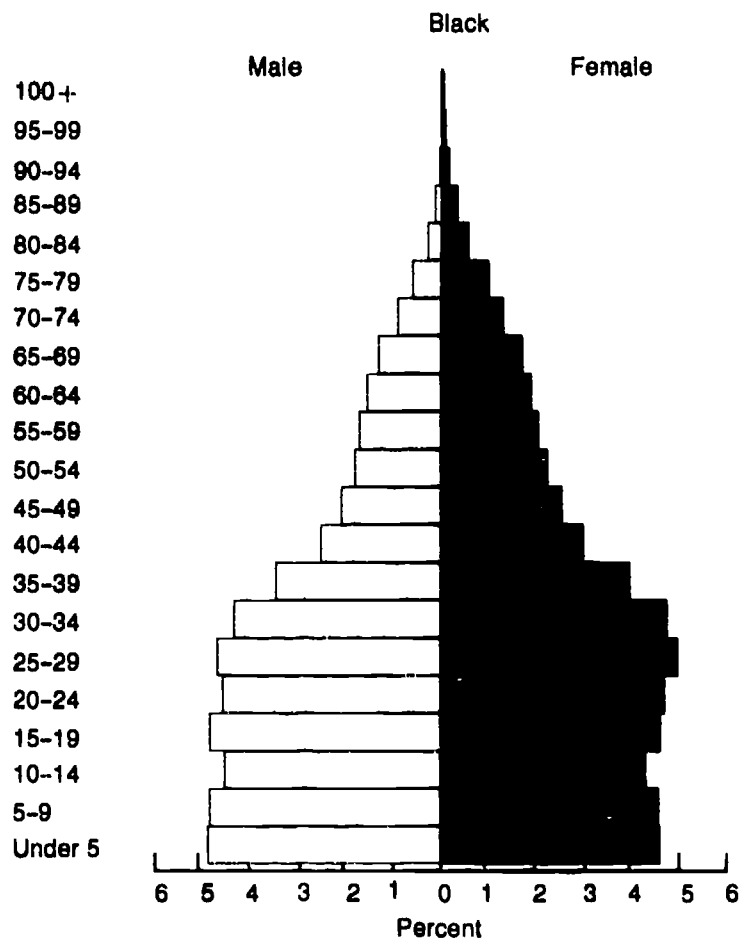
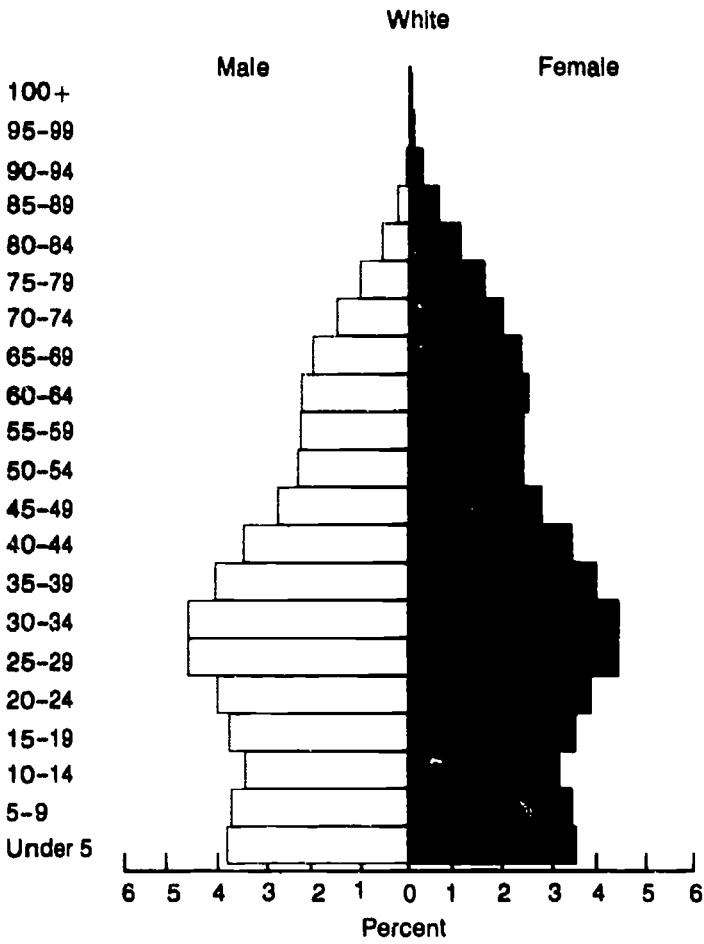
higher level for Blacks than for Whites since 1971 (table 7), in spite of the fact that most Hispanic immigrants were White. This is largely due to immigration from the Caribbean region.

The importance of natural increase in the growth of the Black population is also evident in the Black population pyramid (figure 5), which is much more heavily weighted in the age groups under 25 than the White pyramid. This is the result of a history of higher birth rates. The Black population of childbearing age (15 to 44) cannot continue to grow as rapidly in the coming decades as it has grown, for the same reason that the White population in these ages must decline. The Baby Boomers—also visible in the Black age pyramid—will age into their later years of childbearing, and eventually past age 45. Therefore, the likelihood of a drop in the crude birth rate during the 1990's, previously noted for the population as a whole, should occur to Blacks as well, although the rate will undoubtedly remain above that of Whites.<sup>6</sup>

**Trends in the Other-races population.** The population of Other races reached a level of 8,451,000 on January 1, 1989, up 4.68 percent, or 378,000 persons, since the beginning of 1988 (table 7). This percent increase, while large compared with the rest of the population, is actually down somewhat since the beginning of the decade, (7.24 percent in calendar year 1981). This population group has been especially extraordinary in its growth due to immigration, at a rate of 36.7 per 1000 population for the period from 1980 through 1988 (figure 6). The rate of natural increase, 19.2 per 1000 for the

<sup>6</sup> See Current Population Reports, Series P-25, No. 1018, *op. cit.*

**Figure 5.**  
**Age Distribution of Population, by Race and Hispanic Origin: July 1, 1988**



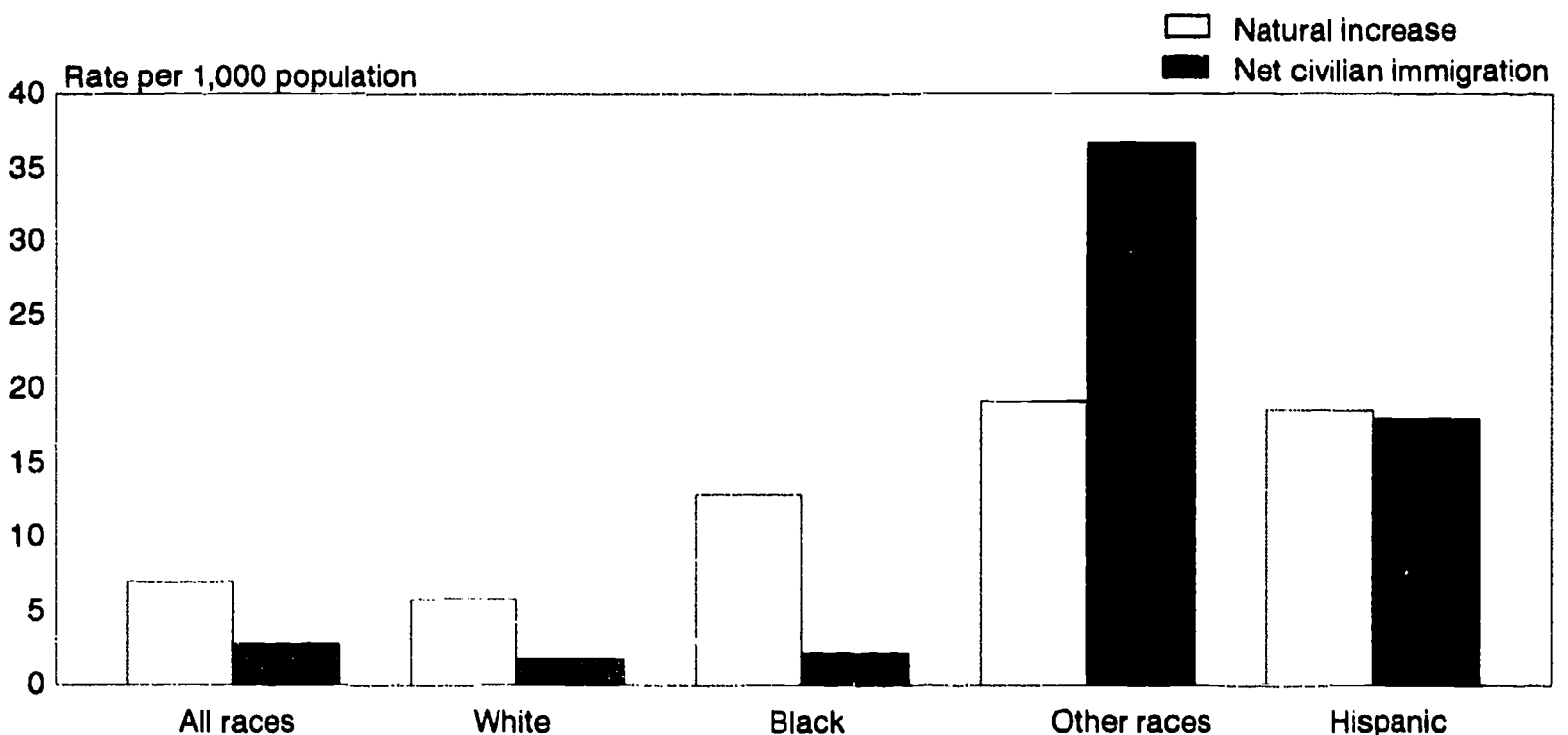
**Table H. Total Population, by Age Group, Race, and Hispanic Origin: 1980 to 1988**

(Numbers in thousands. As of July 1. Includes Armed Forces overseas)

Race and year	Total	Under 5 years	5-13 years	14-17 years	18-24 years	25-34 years	35-44 years	45-64 years	65 years and over	85 years and over
<b>White:</b>										
1988.....	207,748	14,879	25,248	11,227	22,080	36,760	30,256	39,999	27,300	2,679
1987.....	206,194	14,762	24,829	11,701	22,506	36,543	29,532	39,460	26,861	2,609
1986.....	204,696	14,701	24,488	12,043	23,106	36,179	28,527	39,352	26,299	2,533
1985.....	203,159	14,613	24,346	12,157	23,841	35,622	27,470	39,358	25,753	2,461
1984.....	201,664	14,493	24,532	12,065	24,459	35,016	26,471	39,365	25,264	2,391
1980.....	195,571	13,493	25,616	13,387	25,600	32,240	22,424	39,514	23,297	2,087
<b>Black:</b>										
1988.....	30,326	2,802	4,883	2,208	3,849	5,560	3,825	4,697	2,501	229
1987.....	29,869	2,757	4,787	2,236	3,899	5,458	3,667	4,617	2,447	220
1986.....	29,424	2,718	4,713	2,244	3,955	5,339	3,512	4,547	2,394	211
1985.....	28,994	2,687	4,669	2,229	4,021	5,213	3,344	4,488	2,344	203
1984.....	28,579	2,669	4,658	2,190	4,068	5,073	3,197	4,429	2,296	195
1980.....	26,903	2,476	4,623	2,373	4,029	4,332	2,752	4,211	2,106	162
<b>Other races:</b>										
1988.....	8,256	775	1,275	548	958	1,565	1,263	1,306	565	41
1987.....	7,872	757	1,209	531	929	1,514	1,183	1,229	521	37
1986.....	7,506	734	1,150	510	906	1,460	1,106	1,159	481	34
1985.....	7,125	704	1,095	480	887	1,403	1,026	1,088	443	31
1984.....	6,757	667	1,048	450	865	1,341	951	1,024	411	28
1980.....	5,283	488	856	382	720	1,053	692	790	301	21
<b>Hispanic origin<sup>1</sup>:</b>										
1988.....	19,852	2,123	3,425	1,393	2,637	4,011	2,568	2,674	1,021	85
1987.....	19,193	2,062	3,334	1,355	2,628	3,841	2,418	2,581	973	78
1986.....	18,541	1,998	3,243	1,321	2,624	3,659	2,276	2,493	927	72
1985.....	17,888	1,927	3,158	1,291	2,606	3,471	2,143	2,408	886	67
1984.....	17,273	1,868	3,076	1,270	2,580	3,287	2,020	2,324	848	62
1980.....	14,803	1,675	2,731	1,259	2,278	2,562	1,596	1,985	718	50

<sup>1</sup>Persons of Hispanic origin may be of any race.  
Source: Table 1.

**Figure 6.**  
**Average Annual Rate of Natural Increase and Net Civilian Immigration: 1980 to 1988**



Source: Computed from Table 7.

**Table I. Percent Distribution of the Population, by Age, Race, and Hispanic Origin: 1980 to 1988**

(As of July 1. Includes Armed Forces overseas)

Race and year	Total, all ages	Under 5 years	5-13 years	14-17 years	18-24 years	25-34 years	35-44 years	45-64 years	65 years and over	85 years and over
<b>White:</b>										
1988.....	100.0	7.2	12.2	5.4	10.6	17.7	14.6	19.3	13.1	1.3
1987.....	100.0	7.2	12.0	5.7	10.9	17.7	14.3	19.1	13.0	1.3
1986.....	100.0	7.2	12.0	5.9	11.3	17.7	13.9	19.2	12.8	1.2
1985.....	100.0	7.2	12.0	6.0	11.7	17.5	13.5	19.4	12.7	1.2
1984.....	100.0	7.2	12.2	6.0	12.1	17.4	13.1	19.5	12.5	1.2
1980.....	100.0	6.9	13.1	6.8	13.1	16.5	11.5	20.2	11.9	1.1
<b>Black:</b>										
1988.....	100.0	9.2	16.1	7.3	12.7	18.3	12.6	15.5	8.2	0.8
1987.....	100.0	9.2	16.0	7.5	13.1	18.3	12.3	15.5	8.2	0.7
1986.....	100.0	9.2	16.0	7.6	13.4	18.1	11.9	15.5	8.1	0.7
1985.....	100.0	9.3	16.1	7.7	13.9	18.0	11.5	15.5	8.1	0.7
1984.....	100.0	9.3	16.3	7.7	14.2	17.7	11.2	15.5	8.0	0.7
1980.....	100.0	9.2	17.2	8.8	15.0	16.1	10.2	15.7	7.8	0.6
<b>Other races:</b>										
1988.....	100.0	9.4	15.4	6.6	11.6	19.0	15.3	15.8	6.8	0.5
1987.....	100.0	9.6	15.4	6.7	11.8	19.2	15.0	15.6	6.6	0.5
1986.....	100.0	9.8	15.3	6.8	12.1	19.5	14.7	15.4	6.4	0.4
1985.....	100.0	9.9	15.4	6.7	12.4	19.7	14.4	15.3	6.2	0.4
1984.....	100.0	9.9	15.5	6.7	12.8	19.8	14.1	15.2	6.1	0.4
1980.....	100.0	9.2	16.2	7.2	13.6	19.9	13.1	15.0	5.7	0.4
<b>Hispanic origin:</b>										
1988.....	100.0	10.7	17.3	7.0	13.3	20.2	12.9	13.5	5.1	0.4
1987.....	100.0	10.7	17.4	7.1	13.7	20.0	12.6	13.4	5.1	0.4
1986.....	100.0	10.8	17.5	7.1	14.1	19.7	12.3	13.4	5.0	0.4
1985.....	100.0	10.8	17.7	7.2	14.6	19.4	12.0	13.5	5.0	0.4
1984.....	100.0	10.8	17.8	7.4	14.9	19.0	11.7	13.5	4.9	0.4
1980.....	100.0	11.3	18.4	8.5	15.4	17.3	10.8	13.4	4.9	0.3

<sup>1</sup>Persons of Hispanic origin may be of any race.

Source: Computed from table H.

1980's, has also been substantially higher than for Whites. The estimated distribution of the Other-races population, classified into its two major subgroups, is shown in table J. The high levels of net immigration have clearly had their impact on the Asian or Pacific Islander population, while the American Indian population has grown primarily as a result of natural increase.<sup>7</sup>

The growth rates for these two groups are shown in table K. The Asian or Pacific Islander population grew at a rate of 5.5 percent in the year ending June 30, 1988, a remarkably high level, even though the rate of growth was even higher at the beginning of the decade. As a

<sup>7</sup> The current estimates assume, in fact, that all immigration to the Other-races population occurs to Asians or Pacific Islanders. There is known to be a small exchange of American Indian immigrants between the United States and both Canada and Latin America, but it has not been measured.

**Table J. Resident Population of Other Races: 1980 to 1988**

(Numbers in thousands. As of July 1. Excludes Armed Forces overseas)

Year	Other races, total			American Indian, Eskimo, or Aleut			Asian or Pacific Islander		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1988.....	8,228	4,024	4,204	1,699	638	861	6,529	3,185	3,343
1987.....	7,845	3,840	4,005	1,664	821	843	6,181	3,018	3,162
1986.....	7,478	3,663	3,816	1,629	804	825	5,849	2,859	2,991
1985.....	7,097	3,478	3,619	1,594	786	807	5,504	2,692	2,612
1984.....	6,730	3,299	3,431	1,559	769	789	5,172	2,530	2,642
1983.....	6,379	3,127	3,252	1,524	753	772	4,855	2,374	2,480
1982.....	6,039	2,962	3,078	1,490	736	754	4,549	2,226	2,324
1981.....	5,656	2,772	2,884	1,458	721	737	4,198	2,051	2,147
1980.....	5,263	2,575	2,687	1,429	707	722	3,634	1,869	1,965
30 (April 1).....	5,150	2,516	2,633	1,420	702	718	3,729	1,814	1,915

**Table K. Average Annual Percent Change of the Resident Other-Races Population: 1980 to 1988**

Year (July 1-June 30)	Other races, total			American Indian, Eskimo, or Aleut			Asian or Pacific Islander		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1987-88 .....	4.8	4.7	4.8	2.1	2.1	2.1	5.5	5.4	5.6
1986-87 .....	4.8	4.7	4.8	2.1	2.1	2.1	5.5	5.4	5.6
1985-86 .....	5.2	5.2	5.3	2.2	2.2	2.2	6.1	6.0	6.2
1984-85 .....	5.3	5.3	5.3	2.2	2.2	2.2	6.2	6.2	6.2
1983-84 .....	5.4	5.4	5.4	2.2	2.2	2.3	6.3	6.3	6.3
1982-83 .....	5.5	5.4	5.5	2.3	2.3	2.3	6.5	6.5	6.5
1981-82 .....	6.5	6.6	6.5	2.2	2.1	2.2	8.0	8.2	7.9
1980-81 .....	7.2	7.4	7.1	2.1	2.0	2.1	9.1	9.3	8.8

Source: Computed from table J.

result of this rapid growth, this group made up 2.7 percent of the national resident population in 1988, compared with 1.6 percent in 1980. The growth rate for American Indians remained stable at 2.1 to 2.3 percent annually during the decade. While low compared with the rate for the Asian or Pacific Islander population, this growth rate was still double that of the entire U.S. population, and nearly triple that of Whites.

The population pyramid for Other races in 1988 shows the same concentration at the middle of the distribution that was observed for the White population, but for different reasons. While this characteristic of the White age distribution is caused by the Baby Boom, a large part of the Asian or Pacific Islander population had not arrived in the country when the Baby Boom occurred. The Other-races population of January 1, 1960 was 1,610,000, compared to 8,451,000 at the beginning of 1989. The explanation for the large proportion of persons in their thirties in the Other-races category lies with the age pattern of new immigrants, which has tended to favor young adults. The Other-races population also has a higher proportion of youth (under 18) than Whites, as indicated in table I.

**Trends in the population of Hispanic origin.** The Hispanic origin population during the 1980s has grown almost equally from natural increase (18.6 per 1,000 population) and net immigration (18.0 per 1,000), shown in figure 6. The level for both has been very high relative to the population as a whole. Sustained high levels of immigration from Latin America, especially Mexico, have continued to have a major impact on this population. Their high level of natural increase is the result of two factors. One is a population substantially younger than the national population as a whole, meaning relatively more births and fewer deaths than the non-Hispanic population. The second is a higher frequency of child-bearing.

The age distribution of the Hispanic population in 1988 is also symptomatic of the components of its population trend. Relatively high birth rates have yielded a Hispanic population pyramid substantially more broad-based than the total population. This is also exemplified

in table I by the proportion of the Hispanic population under 5 years old (10.7 percent in 1988) and 5 to 13 (17.3 percent). These compare to shares of 7.5 percent and 12.7 percent for the same age groups in the total population.

## THE COMPONENTS OF POPULATION CHANGE

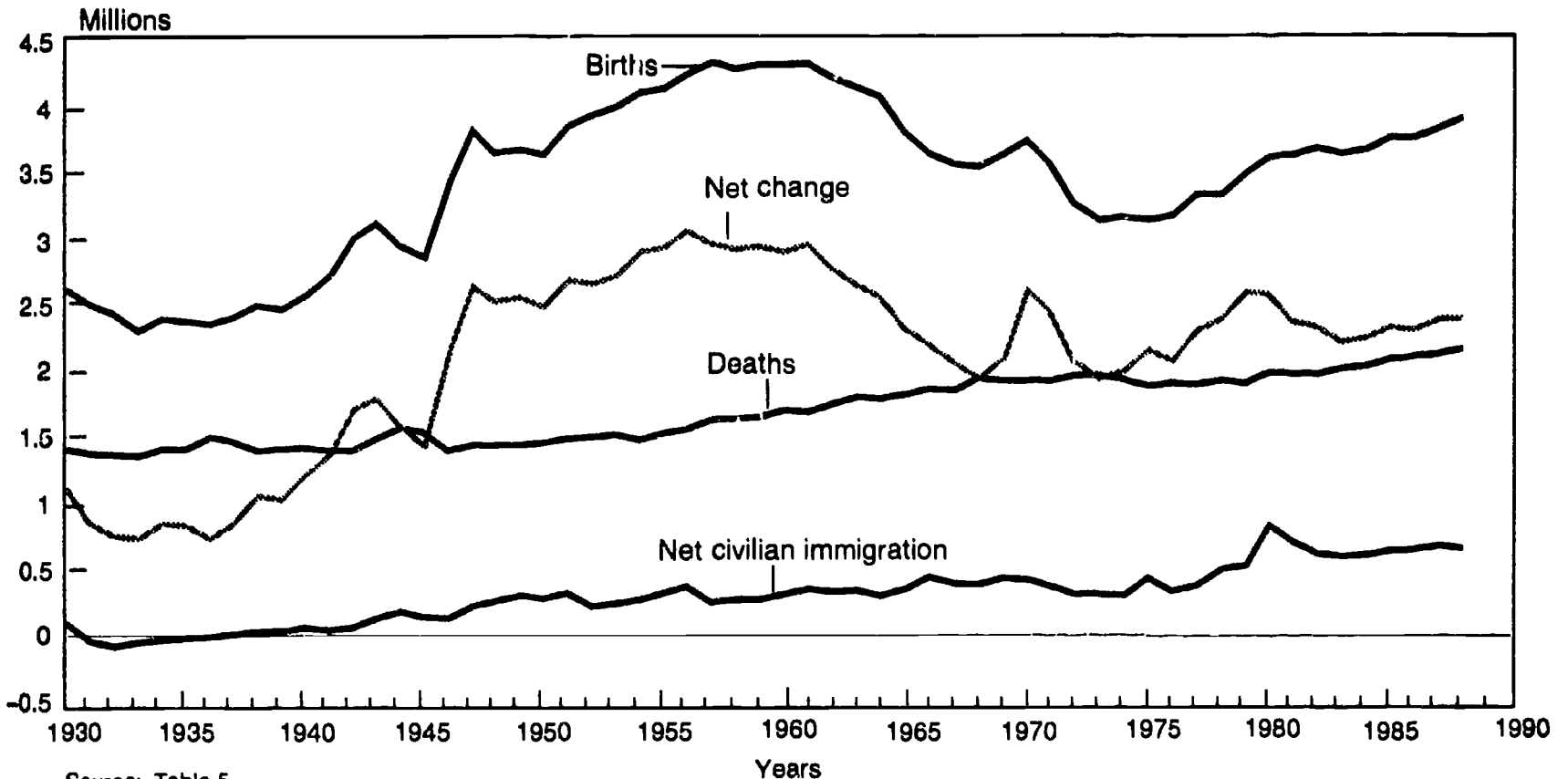
While the distribution of the population by age, sex, and race is an outgrowth of the historical trend in the components of population change, (births, deaths, and migration), the age-sex-race structure of the population acts as a major determinant of the current trend in these components. The previous section was concerned with the growth of the national population and the evolution of its distribution by age and race; it was shown that the historical trend in births left the greatest imprint on this distribution. In this section, the components of change themselves will be placed in historical perspective, with a view toward explaining the demographic factors that underlie them. The annual trend in the three major components, as presented in table 5, is shown graphically in figure 7. The decomposition of the rate of net change in the population by race and Hispanic origin, shown by year in table 7, is summarized to 5-year intervals in table L.

### The Trend in the Birth Rate: Fertility and the Age Structure

The crude birth rate, after reaching a record low level in 1976 of 14.5 live births per 1,000 population, increased to a level of 15.9 per 1,000 in 1980. The period since 1980 has seen a mild decline to 15.5 per 1,000 in 1983 and 1984, followed by an increase to 15.9 in 1988, the same as the level in 1980. Largely masked by this trend are two countervailing factors, a lessening of the favorability of the age distribution to a high birth rate, and a slight increase in fertility among women in the later childbearing ages.

While the crude birth rate measures the impact of childbearing on natural increase, it is a poor measure of fertility, which refers to the frequency with which women

Figure 7.  
Annual Levels of Net Change, Births, Deaths, and Net Civilian Immigration: 1930 to 1988



Source: Table 5.

bear children. The crude birth rate is influenced by the age-sex distribution of the population. In general, the greater the proportion of childbearing-age females in the population, the greater the potential for a high crude birth rate. Although change in the age-sex structure is an important determinant of natural increase, it is not a direct component of fertility. Two other fertility indicators—the general fertility rate and the total fertility rate—measure more directly the current level of childbearing among women of childbearing age. The general fertility rate, defined as the ratio of live births to women 15 to 44 years of age at the middle of the year, is a valid measure of the fertility of women in this broad age group, but can be influenced by shifts in the age distribution within the 30-year age span. For example, an increasing proportion of childbearing women over 35 has a dampening effect on the general fertility rate. The total fertility rate is the sum of the age-specific fertility rates for each female age group between age 10 and age 50, and is thereby independent of age structure.<sup>8</sup>

The distinction between the measures of fertility is highly relevant in assessing the trend in the fertility of women since 1980. The total fertility rate in 1988 is provisionally estimated at 1,931 per 1,000 women (table M). While subject to revision, this is the highest level this indicator has attained since 1972. The level in 1988 was attained after a drop from a level of 1,840 in 1980 to levels of 1,803 and 1,806 in 1983 and 1984, respectively. The general fertility rate in 1988 was measured (also provisionally) at 67.2 births per 1,000 women aged 15 to 44. While this was a slight increase from 1987, it did not exceed the levels of 1979 through 1982. Yet the total fertility rate in 1988 was higher than it was in these years. The difference between the two indicators is a consequence of the previously described aging through the childbearing years of women born during the Baby Boom. As increasing proportions of these large female birth cohorts enter the less fertile, later years of childbearing, the reproductive potential inherent in the age distribution of women declines. This "aging" tends to curb the increase of both the general fertility rate and the crude birth rate, without affecting the total fertility rate.

If we consider the entire post-World-War-II time series of the three fertility indicators shown in table M, it is apparent that the major swings in the birth rate—the

peaked in 1957 at 3,760. However, it now appears that the highest cohort fertility rate among women who were then in the childbearing ages will be about 3,200 for women born in the early 1930's.

**Table L. Components of the Average Rate of Population Change, by Race, for Selected Periods: 1960 to 1988**

(Total population including Armed Forces overseas. Rates are per 1,000 mid-period population)

Race and year (January 1 to December 31)	Net change <sup>1</sup>	Natural increase	Births	Deaths	Net civilian immigration <sup>2</sup>
<b>All races:</b>					
1985-88 .....	9.7	7.0	15.7	8.7	2.7
1980-84 .....	10.1	7.1	15.7	8.6	2.9
1975-79 .....	10.5	6.3	15.0	8.7	2.0
1970-74 .....	10.6	6.8	16.1	9.3	1.7
1965-69 .....	10.7	8.8	18.3	9.5	2.1
1960-64 .....	14.8	13.2	22.6	9.4	1.9
<b>White:</b>					
1985-88 .....	7.5	5.7	14.7	9.0	1.8
1980-84 .....	7.4	5.9	14.7	8.8	1.8
1975-79 .....	8.6	5.2	14.0	8.8	1.2
1970-74 .....	9.0	5.7	15.1	9.3	1.3
1965-69 .....	9.3	7.7	17.2	9.5	2.0
1960-64 .....	13.8	12.0	21.4	9.4	1.9
<b>Black:</b>					
1985-88 .....	15.0	12.8	21.1	8.4	2.2
1980-84 .....	15.6	12.9	21.2	8.3	2.2
1975-79 .....	16.0	12.5	21.1	8.6	1.9
1970-74 .....	16.8	13.2	22.8	9.6	1.6
1965-69 .....	15.9	15.9	26.0	10.1	1.3
1960-64 .....	20.9	21.4	31.5	10.2	0.9
<b>Other races:</b>					
1985-88 .....	48.8	18.3	21.7	3.5	30.5
1980-84 .....	75.0	19.9	23.2	3.3	42.6
1975-79 .....	64.0	19.2	23.1	3.9	42.5
1970-74 .....	57.1	19.9	24.7	4.8	31.0
1965-69 .....	48.5	20.8	26.3	5.5	19.0
1960-64 .....	43.1	25.7	31.7	6.0	7.2
<b>Hispanic origin<sup>3</sup>:</b>					
1985-88 .....	34.6	18.4	22.8	4.4	16.2
1980-84 <sup>4</sup> .....	38.4	18.7	22.9	4.2	19.6

<sup>1</sup>Net change before 1980 includes error of closure.

<sup>2</sup>Net civilian immigration before 1980 excludes the net effect of undocumented immigration and an increase in the assumed level of emigration, as discussed in the text.

<sup>3</sup>Persons of Hispanic origin may be of any race.

<sup>4</sup>For Hispanics, the 1980-84 period begins with April 1, 1980.

Source: Tables 5, 6, 7, and 8.

Baby Boom and subsequent decline in births—have been brought about by real changes in the fertility of women. In fact, the age structure of the population has tended to counteract the full potential of the Baby Boom: parents of 1950's and 1960's births were themselves a product of the low-fertility years of the Great Depression. As a result, the total fertility rate showed the greatest relative changes, as trends in the other indicators were restrained by changes in the age structure. The total fertility rate of 3,760 achieved in 1957 was 70 percent higher than the Depression low of 2,207 observed in 1936; yet the trough reached by this indicator in 1976 (1,736) was 21 percent below the 1936 level.

The changes since 1976 have been far less drastic, but have led to a rise in childbearing in the late 1980's. From 1976 to 1980, the combined effect of a very modest increase in fertility and the entrance of increasing numbers of Baby Boomers into the childbearing ages brought about a more marked increase in the crude birth rate. Between 1980 and 1984, the crude birth rate and general fertility rate were reduced by a slight decrease in fertility. After 1984, the explanation of the crude birth rate trend turned to an increase in fertility, shown in the total fertility rate trend. As increasing numbers of Baby Boomers passed the peak ages of childbearing, there was an increase in age-specific fertility among women 30 to 39 years old, the age group which now represents the fastest growing segment of the age 15 to 44 childbearing range.

While the trend in age-specific fertility rates has compensated for shifts in the age structure during the 1980's, it is less likely to do so during the next decade. The present aging of childbearing-aged women foreshadows the inevitable loss to the reproductive ages of the Baby Boomers. The birth cohort of 1946, the vanguard of the Baby Boom, will reach age 45 in 1991, and the larger cohorts of the 1950's will pass that age later in the same decade. Barring a far more dramatic increase in fertility than the increase since 1984 or an unprecedented surge of young adult immigrants, the crude birth rate—and ultimately the absolute number of births—must decline.<sup>9</sup>

**The trend in the birth rate by race and Hispanic origin.** As shown in figure 8, the crude birth rate has varied significantly by race and Hispanic origin. In all periods, the birth rates of the Black population and the Other-races population have been substantially higher than the birth rate for Whites.<sup>10</sup> The Black birth rate has paralleled that of Whites, meaning that the subtle increases and declines in the birth rates have been shared by these two groups. The trends for Other races and for Hispanics have not paralleled the White trend to the same degree: the rate for Other races has shown more fluctuation during the 1980's, while the Hispanic crude birth rate appears to have declined during the same

<sup>9</sup> Current Population Reports, Series P-25, No. 1018. *op. cit.*, p.10.

<sup>10</sup> If the parents of a newborn child are reported to be of different race, the National Center for Health Statistics codes the race of the child according to the race of the father, unless the father is White, in which case the child's race is coded according to the race of the mother. An exception occurs if the mother is Hawaiian or part Hawaiian, in which case the child is coded Hawaiian (Asian or Pacific Islander, for the present application). This system of coding race results in slightly higher fertility rates for Blacks than would occur if race of child were determined directly from race of mother. For Other races, the difference is likely to be greater. However, this fact is not sufficient to explain the interracial comparisons shown in figure 8 and table N. See National Center for Health Statistics, *Vital Statistics of the United States*, 1986, Vol. I, Natality, Section 4; DHHS Pub. No. (PHS) 88-1123. Public Health Service, Washington, 1988.

Table M. Annual Measures of Fertility: 1930 to 1988

(Resident population. Rates are per 1,000 mid-year population)

Calendar year	Crude birth rate <sup>1</sup>	General fertility rate	Total fertility rate	Calendar year	Crude birth rate	General fertility rate	Total fertility rate
1988.....	15.9	67.2	<sup>2</sup> 1,931	1959.....	24.2	119.9	3,705
1987.....	15.7	66.1	<sup>2</sup> 1,880	1958.....	24.5	120.0	3,693
1986.....	15.6	65.4	1,836	1957.....	25.3	122.7	3,760
1985.....	15.8	66.2	1,843	1956.....	25.2	121.0	3,682
				1955.....	25.0	118.3	3,574
1984.....	15.5	65.4	1,806				
1983.....	15.5	65.8	1,803	1954.....	25.3	117.9	3,537
1982.....	15.9	67.3	1,829	1953.....	25.1	115.0	3,418
1981.....	15.8	67.4	1,815	1952.....	25.1	113.8	3,355
1980.....	15.9	68.4	1,840	1951.....	24.9	111.4	3,267
				1950.....	24.1	106.2	3,091
1979.....	15.6	67.2	1,808				
1978.....	15.0	65.5	1,760	1949.....	24.5	107.1	3,110
1977.....	15.1	66.8	1,790	1948.....	24.9	107.3	3,109
1976.....	14.6	65.0	1,738	1947.....	26.6	113.3	3,274
1975.....	14.6	66.0	1,774	1946.....	24.1	101.9	2,943
				1945.....	20.4	85.9	2,491
1974.....	14.8	67.8	1,835				
1973.....	14.8	68.8	1,879	1944.....	21.2	88.8	2,568
1972.....	15.6	73.1	2,010	1943.....	22.7	94.3	2,718
1971.....	17.2	81.6	2,267	1942.....	22.2	91.5	2,628
1970.....	18.3	87.9	2,480	1941.....	20.3	83.4	2,399
				1940.....	19.4	79.9	2,301
1969.....	18.0	86.5	2,465				
1968.....	17.7	85.7	2,477	1939.....	18.8	77.6	<sup>3</sup> 2,238
1967.....	18.0	87.6	2,573	1938.....	19.2	79.1	<sup>3</sup> 2,288
1966.....	18.6	91.3	2,736	1937.....	18.7	77.1	<sup>3</sup> 2,236
1965.....	19.6	96.6	2,928	1936.....	18.4	75.8	<sup>3</sup> 2,207
				1935.....	18.7	77.2	<sup>3</sup> 2,250
1964.....	21.3	105.0	3,208				
1963.....	22.0	108.5	3,333	1934.....	19.0	78.5	<sup>3</sup> 2,294
1962.....	22.7	112.2	3,474	1933.....	18.4	76.3	<sup>3</sup> 2,235
1961.....	23.6	117.2	3,629	1932.....	19.5	81.7	<sup>3</sup> 2,383
1960.....	23.9	118.0	3,654	1931.....	20.2	84.6	<sup>3</sup> 2,467
				1930.....	21.3	89.2	<sup>3</sup> 2,600

<sup>1</sup>Data are for the resident population, and differ from table 5, which shows crude birth rates for the total population including Armed Forces overseas. Prior to 1970, births occurring in the United States to nonresidents of the United States are included. Alaska is included since 1959, Hawaii since 1960. Births are corrected for underregistration through March 31, 1970.

<sup>2</sup>Estimated total fertility rates for 1987 and 1988 are based on indirect standardization and 1986 final age-specific birth rates.

<sup>3</sup>Total fertility rates for 1930-39 based on births adjusted for underregistration from National Center for Health Statistics (unpublished data consistent with birth rates published in National Center for Health Statistics, *Fertility Tables for Birth Cohorts by Color: United States, 1917-73*, April 1976) and female resident population from Current Population Reports, Series P-25, No. 311.

Source: National Center for Health Statistics, *Vital Statistics of the United States, 1986*, Vol. 1, Natality, DHHS Pub. No. (PHS) 85-1123, Public Health Service, Washington, 1988, tables 1-1 and 1-6; National Center for Health Statistics, Annual summary of births, marriages, divorces and deaths for 1987. *Monthly Vital Statistics Report*, Vol. 36, No. 13, DHHS Pub. No. (PHS) 88-1120, Public Health Service, Hyattsville, MD, p. 1; and unpublished data.

period.<sup>11</sup> A reasonable explanation for this observation lies with the heavy impact of immigration on these two groups, which has brought about changes in their composition with respect to childbearing patterns.

While a portion of the variation in the crude birth rate by race and Hispanic origin is a result of the age structure, differences in actual levels of fertility have played a role as well. As shown in table N, the age-independent total fertility rate has shown a trend for

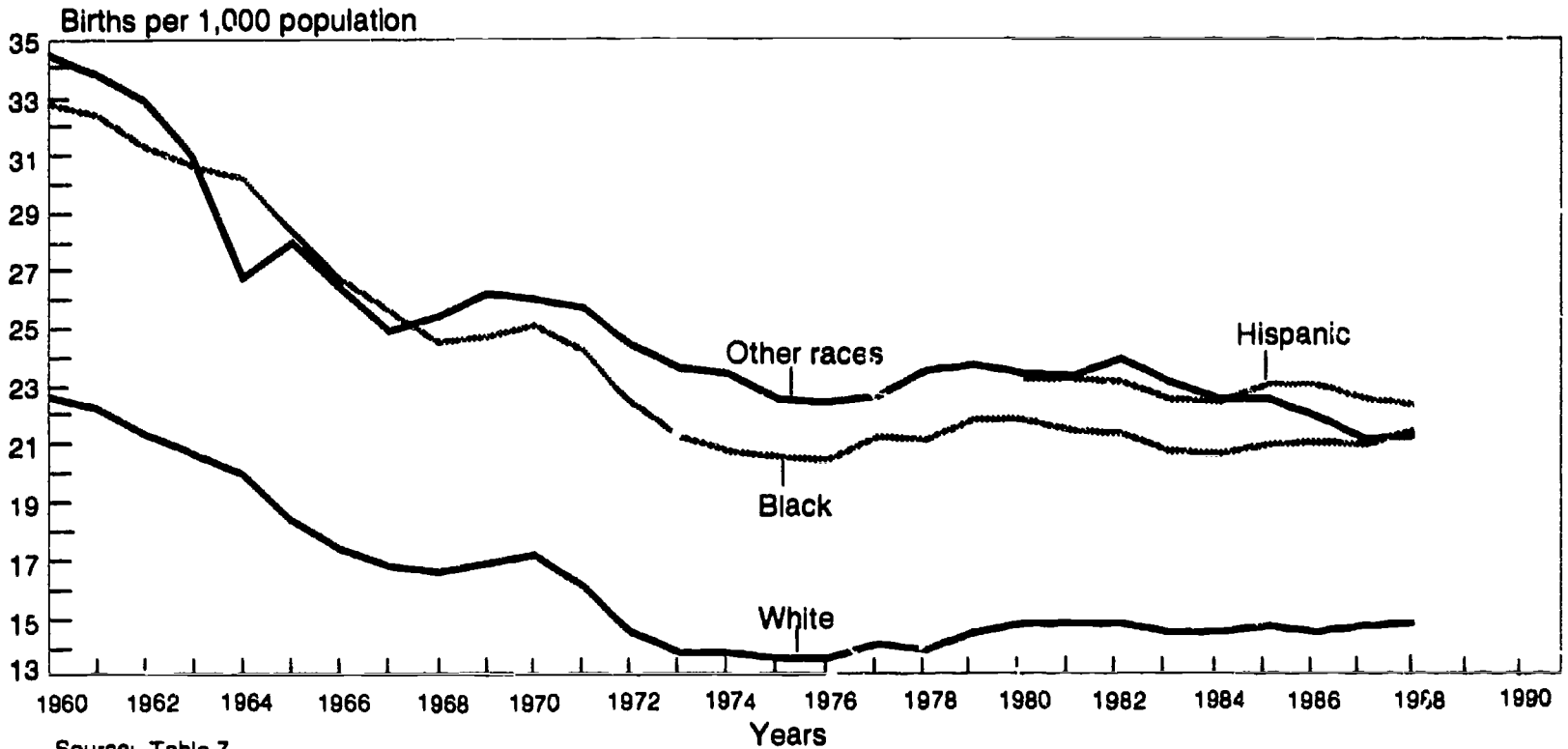
Blacks essentially parallel to the trend for Whites during the 1980's, although at a level about 25 percent higher. The total fertility rate for Other races has also been higher than for Whites, but has not shown the decline in the early part of the decade and subsequent rise that was exhibited by the rest of the population.

Noting that the fertility rates of Blacks and Others have been higher than those of Whites raises the question of whether the shifts in the racial composition of the population documented in the last section can explain the rise in fertility from 1984 to 1988. Our data do not support this contention. A race-adjusted total

<sup>11</sup> Hispanic births for calendar year 1987 and the first part of calendar year 1988 are based on data from the June, 1987 and June, 1988 supplements to the Current Population Survey. (See section on "Definitions, Sources, and Methodology"). While these survey data show a decline in Hispanic fertility, it is not sufficiently large to meet criteria for statistical significance.



Figure 8.  
Births per 1,000 Population, by Race and Hispanic Origin: 1960 to 1988



Source: Table 7.

fertility rate,<sup>12</sup> computed by holding the race distribution constant at 1980 levels, reaches a level of 1,800 in 1984 and 1,921 by 1988, nearly as high as the 1,931 computed from the actual age-specific rates in table M. A virtually identical result (1,799 in 1984, 1,921 in 1988) is obtained by adjusting the rate for the 1980 proportion Hispanic by age. In other words, neither the increasing

proportion of Hispanics nor the increasing proportion of Blacks and Others (Asians, Pacific Islanders, American Indians, Eskimos, or Aleuts) from 1984 to 1988 explains much of the modest increase in the Nation's fertility levels from 1984 to 1988.

**Trends in Mortality: Improved Life Expectancy in an Aging Population**

The crude death rate reached a level of 8.8 per 1,000 population in 1988, corresponding to a total of 2,170,000

age-race group of women had been as observed in 1988, but the proportional distribution of each female age group by race had been unchanged since 1980.

<sup>12</sup> The race-adjusted total fertility rate is computed in the same manner as previously described for the total fertility rate, except that each age-specific fertility rate is adjusted for the race distribution (White, Black, and Other) as of July 1, 1980. Thus, the race-adjusted total fertility rate as of 1988 can be interpreted as the total fertility rate that would have been computed in 1988 if the fertility of each 5-year

Table N. Total Fertility Rates, by Race: 1980 to 1988  
(Rates per 1,000 women)

Calendar year	All races	White	Black	Other races	Ratio	
					Black/White	Other/White
1988	1,931	1,834	2,331	2,415	1.27	1.32
1987	1,880	1,791	2,245	2,366	1.25	1.32
1986	1,836	1,741	2,227	2,418	1.28	1.36
1985	1,843	1,754	2,196	2,453	1.25	1.40
1984	1,806	1,718	2,154	2,426	1.25	1.41
1983	1,803	1,713	2,147	2,456	1.25	1.43
1982	1,829	1,739	2,194	2,513	1.26	1.44
1981	1,815	1,725	2,203	2,417	1.28	1.40
1980	1,840	1,742	2,249	2,413	1.29	1.38

Source: Computed from data in National Center for Health Statistics, *Vital Statistics of the United States, 1986*, Vol. 1, Natality, DHHS Pub. No. (PHS) 85-1123, Public Health Service, Washington, 1988; National Center for Health Statistics, Annual summary of births, marriages, divorces and deaths for 1987. *Monthly Vital Statistics Report*, Vol. 36, No. 13, DHHS Pub. No. (PHS) 88-1120, Public Health Service, Hyattsville, MD; and unpublished data.

deaths, including deaths to the Armed Forces overseas. The crude death rate is the highest observed since 1976, a result of the continued aging of the population, not a worsening of mortality conditions. In fact, life expectancy has increased throughout the period since World War II, although the improvement saw a distinct slowing after 1982.

The opposing effects of the aging population and the improvement in mortality on the resident crude death rate can be seen in table O. Like the crude birth rate, the crude death rate (deaths per 1,000 residents) does not accurately represent trends in mortality conditions, as it is heavily dependent on the age structure of the population. Since 1930, this indicator has declined by 2.5 points, from 11.3 deaths per 1,000 population to 8.8 in 1988, reaching a low point of 8.5 in 1979, and again in

1982 (table 5). The age-adjusted rate, which eliminates the effect of the age structure on the death rate, showed a drop from 12.5 per 1,000 population in 1930 to 5.4 per thousand in 1988.<sup>13</sup> This means that if the distribution of

<sup>13</sup> The age-adjusted death rate is computed as a weighted average of age-specific death rates for 11 age categories, where each category is weighted by the proportion of the total resident population enumerated in the census of 1940 in that category. Thus, the age-adjusted crude death rate for the total resident population in 1988 can be roughly interpreted as the crude death rate that would be observed in 1988 as a result of 1988 age-specific mortality rates if the age structure had remained unchanged since 1940. This indicator is affected by changes or differences in age distribution within the 11 age categories, most of which are 10-year groups. For further information, see National Center for Health Statistics: *Vital Statistics of the United States, 1986*, Vol. II, Mortality, Part A, DHHS Pub. No. (PHS) 88-1122. Public Health Service, Washington, 1988, Section 7, p. 19.

**Table O. Annual Measures of Mortality: 1930 to 1988**

(Resident population. Rates are per 1,000 mid-period population)

Calendar year	Crude death rate <sup>1</sup>	Age-adjusted death rate <sup>2</sup>	Life expectancy at birth	Calendar year	Crude death rate <sup>1</sup>	Age-adjusted death rate <sup>2</sup>	Life expectancy at birth
1988	8.8	5.4	74.9	1959	9.4	7.5	69.9
1987	8.7	5.4	74.9	1958	9.5	7.6	69.6
1986	8.7	5.4	74.8	1957	9.6	7.8	69.5
1985	8.7	5.5	74.7	1956	9.4	7.6	69.7
				1955	9.3	7.6	69.6
1984	8.6	5.5	74.7				
1983	8.6	5.5	74.6	1954	9.2	7.6	69.6
1982	8.5	5.6	74.5	1953	9.6	8.0	68.8
1981	8.6	5.7	74.2	1952	9.6	8.2	68.6
1980	8.8	5.9	73.7	1951	9.7	8.3	68.4
				1950	9.6	8.4	68.2
1979	8.5	5.8	73.9				
1978	8.7	6.0	73.5	1949	9.7	8.5	68.0
1977	8.6	6.0	73.3	1948	9.9	8.8	67.2
1976	8.8	6.2	72.9	1947	10.1	9.0	66.8
1975	8.8	6.3	72.6	1946	10.0	9.1	66.7
				1945	10.6	9.5	65.9
1974	9.1	6.6	72.0				
1973	9.3	6.9	71.4	1944	10.6	9.7	65.2
1972	9.4	7.0	71.2	1943	10.9	10.2	63.3
1971	9.3	7.0	71.1	1942	10.3	9.9	66.2
1970	9.5	7.1	70.8	1941	10.5	10.3	64.8
				1940	10.8	10.8	62.9
1969	9.5	7.3	70.5				
1968	9.7	7.4	70.2	1939	10.6	10.7	63.7
1967	9.4	7.3	70.5	1938	10.6	10.9	63.5
1966	9.5	7.4	70.2	1937	11.3	11.7	60.0
1965	9.4	7.4	70.2	1936	11.6	12.2	58.5
				1935	10.9	11.6	61.7
1964	9.4	7.4	70.2				
1963	9.6	7.6	69.9	1934	11.1	11.9	61.1
1962	9.5	7.5	70.1	1933	10.7	11.6	63.3
1961	9.3	7.4	70.2	1932	10.9	11.9	62.1
1960	9.5	7.6	69.7	1931	11.1	12.1	61.1
				1930	11.3	12.5	59.7

<sup>1</sup> Data are for the resident population, and differ from table 5, which shows crude death rates for the total population including Armed Forces overseas. Prior to 1970, deaths occurring in the United States to nonresidents are included. Alaska is included since 1959, Hawaii since 1960.

<sup>2</sup> Age-adjusted death rates use the age distribution of the total population of the United States enumerated in 1940 as a standard. For 1988, indirect standardization is used, assuming the age pattern of death rates for 1987.

Source: National Center for Health Statistics: *Vital Statistics of the United States, 1986*, Vol. II, Mortality, Part A, DHHS Pub. No. (PHS) 88-1122, Public Health Service, Washington, DC, 1988, tables 1-1, 1-2, and 6-5; National Center for Health Statistics, Annual summary of births, marriages, divorces, and deaths: United States, 1987, *Monthly Vital Statistics Report*, Vol. 36, No. 13, DHHS Pub. No. (PHS) 88-1120, Public Health Service, Hyattsville, MD, tables 5 and 7; National Center for Health Statistics, Annual summary of births, marriages, divorces, and deaths: United States, *Monthly Vital Statistics Report*, Vol. 37, No. 13, DHHS Pub. No. (PHS) 89-1120, Hyattsville, MD, table 7; and unpublished data.

the population by age had remained constant as observed in 1940 and mortality conditions had changed as they actually did, the death rate would have been reduced by more than half during the 58-year period. The life expectancy at birth, also independent of age structure, increased by 15.2 years during the 1930-87 period. The relatively modest decline in the crude death rate until 1982 indicates that declining mortality was generally more than sufficient to overcome the effect of the aging of the population.

**The slowing improvement in mortality for females since 1982.** The crude death rate did not continue its decline after 1982, in spite of a slowing in the growth of the population 65 years and over (indicated in the previous discussion of the age distribution). The reason for the lack of decline in the crude death rate was a sharp reduction in the rate of improvement in mortality, as measured by age-independent indicators. This slowdown in the rate of improvement was most pronounced among women 65 years of age and over. Table P shows the trend in the life expectancy at birth, the percent of births surviving to age 65, and the life expectancy at age 65 by sex from various life tables produced by the National Center for Health Statistics since 1940. Table Q shows the average annual percent change for these indicators. The latter table shows that in each of the three decades from 1940 to 1970, there was more rapid improvement in life expectancy at birth for females than for males. Female mortality improved more rapidly than

male mortality both in the probability of an infant surviving to age 65 and in the expected years of life remaining at 65. From 1970 to 1982, the life expectancy at birth improved more rapidly for males than for females, but this was almost entirely due to differential improvement in mortality under 65 years of age. From 1982 to 1987, improvement in male mortality outpaced improvement in female mortality both above and below age 65; in fact, female life expectancy at age 65 fell slightly. The differential improvement in mortality between men and women can also be seen in the difference in their life expectancy at birth. This gap stood at 6.8 years in 1987, down from 7.3 years in 1982. This compares to a difference in life expectation between the sexes of 4.3 years in 1940.

This reduction in the rate of improvement in mortality conditions after 1982, and the apparent interruption in the improvement for females, were brought about by a variety of causes of death. Table R shows the age-adjusted death rate for a number of different causes in 1972, 1982, and 1986, with the average annual percent decline for the intervals 1972 to 1982 and 1982 to 1986. The six categories shown accounted for about 82 percent of all deaths in 1986 (86 percent in 1982 and 90 percent in 1972). Diseases of the heart, which accounted for nearly half of all deaths, showed declines in both the age adjusted mortality rate and the proportion of all deaths. The reduction since 1982 in the age-adjusted rate for this enormous source of mortality maintained the pace of the previous decade for males (2.6 percent

Table P. Selected Life Table Indicators, by Sex: 1939 to 1987

Year (January 1 to December 31)	Total			Male			Female		
	Life expectancy at birth	Percent surviving to age 65	Life expectancy at age 65 <sup>f</sup>	Life expectancy at birth	Percent surviving to age 65	Life expectancy at age 65	Life expectancy at birth	Percent surviving to age 65	Life expectancy at age 65
1987 <sup>1</sup> .....	74.9	79.0	16.9	71.5	73.4	14.8	78.3	84.6	18.6
1986.....	74.8	78.8	16.8	71.3	73.1	14.7	78.3	84.6	18.6
1984.....	74.7	78.6	16.8	71.2	72.8	14.6	78.2	84.3	18.6
1982.....	74.6	78.1	16.8	70.9	72.0	14.5	78.2	84.1	18.8
1979-81.....	73.9	77.1	16.5	70.1	70.6	14.2	77.6	83.5	18.4
1969-71.....	70.7	71.9	15.0	67.0	64.3	13.0	74.6	79.7	16.8
1959-61.....	69.9	71.1	14.4	66.8	64.2	13.0	73.2	78.5	15.8
1949-51.....	68.1	67.6	13.8	65.5	61.6	12.7	71.0	74.1	15.0
1939-41.....	63.6	60.4	12.8	61.6	55.0	12.1	65.9	65.5	13.6

<sup>1</sup>Based on provisional data.

Source: a) U.S. Bureau of the Census, Sixteenth Census of the United States: 1940, *United States Life Tables and Actuarial Tables: 1939-1941*, by Thomas N.E. Greville, Washington, 1946.

b) U.S. Department of Health, Education, and Welfare, Public Health Service, National Office of Vital Statistics, *United States Life Tables: 1949-51*, Vital Statistics Special Reports, Vol. 41, No. 1, November 23, 1954.

c) U.S. Department of Health, Education, and Welfare, National Center for Health Statistics, *United States Life Tables: 1959-61*, Vol. 1, No. 1, Washington, December, 1964.

d) National Center for Health Statistics, U.S. Decennial Life Tables for 1969-71, Vol. 1, No. 1, *United States Life Tables: 1969-71*, DHEW Pub. No. (HRA) 75-1150, Public Health Service, Rockville, MD, May, 1975.

e) National Center for Health Statistics: United States life tables. *U.S. Decennial Life Tables for 1979-81*, Vol. 1, No. 1, DHHS Pub. No. (PHS) 85-1150-1, Public Health Service, Washington, August, 1985.

f) National Center for Health Statistics: *Vital Statistics of the United States*, 1982, 1984, and 1986. Vol. 1, Natality. DHHS Pub. Nos. (PHS) 87-1100, (PHS) 88-1100, and (PHS) 88-1123, Public Health Service, Washington.

g) National Center for Health Statistics, Annual summary of births, marriages, divorces, and deaths, United States, 1987, *Monthly Vital Statistics Report*, Vol. 36 No. 13, DHHS Pub. No. (PHS) 88-1120, Public Health Service, Hyattsville, MD; and unpublished data.

Table Q. Average Annual Percent Change in Selected Life Table Indicators: 1940 to 1987

Year	Total			Male			Female		
	Life expectancy at birth	Percent surviving to age 65	Life expectancy at age 65	Life expectancy at birth	Percent surviving to age 65	Life expectancy at age 65	Life expectancy at birth	Percent surviving to age 65	Life expectancy at age 65
1986-87.....	0.18	0.22	0.49	0.31	0.44	0.84	0.04	0.02	0.21
1984-86.....	0.04	0.14	0.15	0.04	0.18	0.46	0.04	0.13	-0.07
1982-84.....	0.13	0.32	-0.15	0.26	0.54	0.21	0.00	0.14	-0.43
1980-82.....	0.45	0.65	0.98	0.52	0.97	1.00	0.37	0.35	0.94
1970-80.....	0.43	0.69	0.96	0.45	0.94	0.90	0.39	0.47	0.92
1960-70.....	0.12	0.11	0.42	0.04	0.02	0.03	0.19	0.16	0.63
1950-60.....	0.26	0.52	0.40	0.20	0.42	0.16	0.32	0.57	0.55
1940-50.....	0.68	1.13	0.77	0.61	0.99	0.54	0.74	1.23	0.97

Source: Computed from table P; 1940, 1950, 1960, 1970, and 1980 refer to life tables for the 3-year period surrounding these dates.

Table R. Selected Causes of Death as a Percent of All Causes, and Age-adjusted Death Rates, by Cause of Death: 1972, 1982, and 1986

(Resident population)

Cause of death and sex	As a percent of deaths <sup>1</sup>			Age-adjusted death rate (per 100,000) <sup>2</sup>			Average annual percent change in age-adjusted death rate <sup>3</sup>	
	1972	1982	1986	1972	1982	1986	1972-82	1982-86
<b>All causes:</b>								
Total.....	100.0	100.0	100.0	701.8	553.8	541.7	-2.4	-0.6
Male.....	100.0	100.0	100.0	921.9	733.1	709.1	-2.3	-0.8
Female.....	100.0	100.0	100.0	520.0	411.2	406.6	-2.3	-0.3
<b>Malignant neoplasms:</b>								
Total.....	17.6	22.0	22.3	130.7	132.5	133.2	0.1	0.1
Male.....	17.2	22.1	22.7	159.8	164.8	163.6	0.3	-0.2
Female.....	18.1	21.8	21.9	108.8	109.5	111.4	0.1	0.4
<b>Diseases of the heart:</b>								
Total.....	38.5	38.3	36.4	249.3	190.5	175.0	-2.7	-2.1
Male.....	38.7	37.7	35.4	344.5	264.4	238.2	-2.6	-2.6
Female.....	38.2	38.9	37.4	171.6	132.5	124.6	-2.6	-1.5
<b>Cerebrovascular diseases:</b>								
Total.....	10.9	8.0	7.1	65.0	35.8	31.0	-6.0	-3.6
Male.....	8.7	6.0	5.4	72.7	39.2	33.5	-6.2	-3.9
Female.....	13.6	10.2	9.0	59.1	33.2	29.0	-5.8	-3.4
<b>Accidents:</b>								
Total.....	5.9	4.8	4.5	52.0	36.6	35.2	-3.5	-1.0
Male.....	7.3	6.2	5.9	77.5	55.2	52.5	-3.4	-1.3
Female.....	4.1	3.1	3.0	28.0	18.9	18.7	-3.9	-0.3
<b>Homicide and legal intervention:</b>								
Total.....	1.0	1.1	1.0	10.3	9.7	9.0	-0.6	-1.9
Male.....	1.4	1.6	1.5	16.8	15.3	13.9	-0.9	-2.4
Female.....	0.5	0.5	0.5	4.0	4.2	4.1	0.5	-0.6
<b>Suicide:</b>								
Total.....	1.3	1.4	1.5	12.1	11.6	11.9	-0.4	0.6
Male.....	1.6	2.0	2.2	17.9	18.3	19.3	0.2	1.3
Female.....	0.8	0.7	0.7	6.9	5.4	5.1	-2.5	-1.4

<sup>1</sup>Cause as a percent of deaths is not adjusted for age distribution.

<sup>2</sup>Age-adjusted rates, for both males and females, use the age distribution of the total population in 1940 as a standard.

<sup>3</sup>Age-specific mortality rates for both sexes (total) in each age category are a weighted average of the rates for males and females in that category. However, the weighting varies with age. Therefore, the age-adjusted rate for both sexes is not a proper average of the male and female age-adjusted rate, and may change more or less rapidly than the rate for either sex alone.

Source: National Center for Health Statistics, *Vital Statistics of the United States, 1972*, Vol. II, Mortality, Part A, DHEW Pub. No. (HRA) 76-1101; Health Resources Administration, Rockville, MD, 1976; National Center for Health Statistics, *Vital Statistics of the United States, 1982*, Vol. II, Mortality, Part A, DHHS Pub. No. (PHS) 86-1122, Public Health Service, Washington, 1986; National Center for Health Statistics, *Vital Statistics of the United States, 1986*, Vol. II, Mortality, Part A, DHHS Pub. No. (PHS) 88-1122, Public Health Service, Washington, 1988.

per year), but slowed substantially to 1.5 percent per year for females. The rate for cerebrovascular diseases (including stroke and cerebral hemorrhage) has not declined as rapidly from 1982 to 1986 as in the previous decade, but the reduction in the rate of decline has applied to men and women alike. The rate of death due to cancer (malignant neoplasms) has actually increased since 1972, although very gradually. For males, a small decline in the cancer death rate was registered after 1982; the death rate continued to increase for females.

Among the non-degenerative causes, accidents showed a reduction in mortality rates during both time periods, but this reduction came to a slowdown after 1982 for males, and a near halt for females. The rate of improvement in homicide mortality quickened after 1982, but the improvement until 1986 was consistently more rapid for males than for females. In spite of this, female mortality from this cause (4.1 deaths per 100,000 population, age adjusted) was still less than one-third that of males (13.9) in 1986. Suicide stands alone among the causes listed in showing more rapid improvement for women than for men since 1982.

The reduction since 1982 of the life expectancy advantage that women have historically enjoyed has many causes. It is apparent from the data in table R that degenerative diseases, such as heart disease and cancer, are by far the most important. The underlying causes associated with these diseases tend to develop in the human organism over a long period of time. In

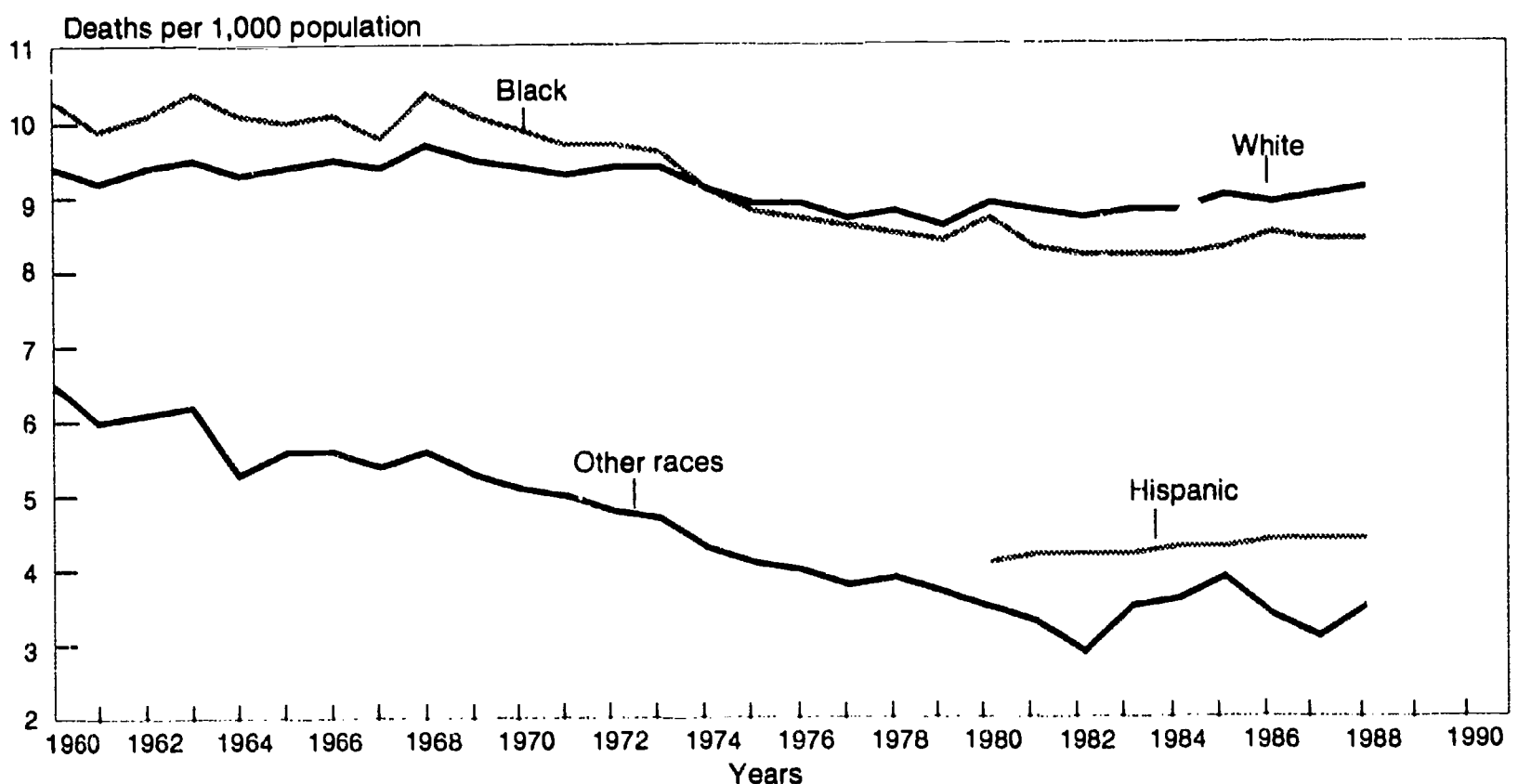
order to explain current trends in mortality from these causes, including their differentiation by sex, it is necessary to study the behavioral, environmental, or genetic risk factors that lead to these diseases over a long period of time, which is beyond the scope of this report.<sup>14</sup>

**Mortality by race.** The Black population had a crude death rate in 1988 of 8.5 per 1,000 population, lower than the rate of 9.1 for the White population (table S). The Other-races population had a substantially lower rate than either group, at 3.1 per 1,000. The crude death rate has been lower for Blacks than for Whites since 1974 (figure 9), primarily because of the more youthful age distribution, although there is evidence of more rapid improvement in mortality conditions among Blacks than Whites. For the Other-races population, the crude death rate has been consistently lower than that for Whites (and consistently declining) with both age distribution and age-specific mortality supporting the differential.

Age-adjusted comparisons of mortality among race groups, shown in table S for 1980 through 1988, indicate Blacks to have had consistently higher levels of

<sup>14</sup> For examples of research in this area, see Lois M. Verbrugge, "Recent Trends in Sex Mortality Differentials in the United States," *Women and Health*, Vol. 5(3), Fall, 1980, and Ingrid Waldron, "Sex Differences in Longevity," in U.S. Department of Health and Human Services, National Institutes of Health, Second Conference on the Epidemiology of Aging.

Figure 9.  
Deaths per 1,000 Population, by Race and Hispanic Origin: 1960 to 1988



Source: Table 7.

Table S. Crude Death Rate and Age-Adjusted Death Rate, by Race and Hispanic Origin: 1980 to 1988

Calendar year	Crude death rate <sup>1</sup>					Age-adjusted crude death rate <sup>3</sup>			
	Total	Race			Hispanic origin <sup>2</sup>	Total	White	Black	Other races
		White	Black	Other races					
1988	8.8	9.1	8.5	3.1	4.4	5.4	5.2	7.7	3.0
1987	8.7	9.0	8.4	3.1	4.4	5.4	5.1	7.7	3.0
1986	8.7	9.0	8.5	3.2	4.4	5.4	5.2	7.8	3.2
1985	8.7	9.0	8.5	3.3	4.3	5.5	5.2	7.8	3.4
1984	8.6	8.9	8.3	3.2	4.3	5.5	5.2	7.7	3.4
1983	8.6	8.8	8.3	3.2	4.2	5.5	5.3	7.8	3.4
1982	8.5	8.7	8.2	3.2	4.2	5.5	5.3	7.8	3.4
1981	8.6	8.8	8.4	3.2	4.2	5.7	5.4	8.0	3.5
1980	8.8	8.9	8.8	3.4	4.1	5.9	5.6	8.4	3.7

<sup>1</sup>Rates are for the resident population, and may differ from table 7, which shows rates for the total population including Armed Forces overseas.

<sup>2</sup>Persons of Hispanic origin may be of any race.

<sup>3</sup>Age-adjusted rates for 1980 to 1986 are based on the age distribution of the population in 1940. Rates for 1987 and 1988 are based on provisional data from the National Center for Health Statistics. Rates for 1988 are computed by indirect standardization, using the 1987 age pattern of mortality rates and the 1940 age distribution of the total resident population.

Source: Same as table O. Hispanic crude death rates are consistent with population estimates in this report, and may not agree with NCHS data.

mortality than Whites. However, even with the adjustment for age distribution, the mortality of the Other-races population appears substantially lower than Whites. The lower age-adjusted death rate of the Others implies that age-specific death rates tend to be lower for this group than for Whites.

In the case of the Black population, the mortality difference with respect to Whites can be examined through life tables computed by the National Center for

Health Statistics and the Bureau of the Census; some of these data are summarized in table T. The deficit in life expectancy at birth for Blacks relative to Whites stood at 11.1 years around 1940, and had declined to 6.0 years by 1980, and 5.6 years by 1984. There is no evidence of further decline in this difference since 1984. The trend in the mortality of Blacks relative to Whites for ages under 65 has been similar. The percent surviving from birth to age 65 in the life table for Blacks has improved substantially since 1940, yet little progress has been made

Table T. Selected Life Table Indicators, by Race: 1939 to 1987

Year	White			Black			Difference: White-Black		
	Life expectancy at birth	Percent surviving to age 65	Life expectancy at age 65	Life expectancy at birth	Percent surviving to age 65	Life expectancy at age 65	Life expectancy at birth	Percent surviving to age 65	Life expectancy at age 65
1987	75.5	80.4	17.0	69.7	67.1	15.6	5.8	13.3	1.4
1986	75.4	80.2	16.9	69.4	66.7	15.4	6.0	13.5	1.6
1984	75.3	80.0	16.9	69.7	66.8	15.5	5.6	13.1	1.3
1982	75.1	79.5	16.9	69.3	66.0	14.4	5.9	13.5	1.5
1979-81	74.5	78.6	16.6	68.5	64.4	15.4	6.0	14.2	1.2
1969-71	71.6	73.9	15.1	64.1	56.1	14.2	7.5	17.8	0.9
1959-61 <sup>1</sup>	70.7	73.1	14.4	63.9	56.0	14.0	6.8	17.1	0.5
1949-51 <sup>1</sup>	69.0	69.9	13.9	60.7	48.6	13.6	8.3	21.2	0.3
1939-41	64.9	63.2	12.8	53.9	37.8	13.0	11.1	25.4	-0.2

<sup>1</sup>The 1949-51 and 1959-61 decennial life tables did not include tables for the Black population. The data shown here for these years refer to the Black-and-other-races population combined.

Source: a) U.S. Bureau of the Census, Sixteenth Census of the United States: 1940, *United States Life Tables and Actuarial Tables: 1939-1941*, by Thomas N.E. Greville, Washington, 1946.

b) U.S. Department of Health, Education, and Welfare, Public Health Service, National Office of Vital Statistics, *United States Life Tables: 1949-51*, Vital Statistics Special Reports, Vol. 41, No. 1, November 23, 1954.

c) U.S. Department of Health, Education, and Welfare, National Center for Health Statistics, *United States Life Tables: 1959-61*, Vol. 1, No. 1, Washington, December, 1964.

d) National Center for Health Statistics, U.S. Decennial Life Tables for 1969-71, Vol. 1, No. 1, *United States Life Tables: 1969-71*, DHEW Pub. No. (HRA) 75-1150, Public Health Service, Rockville, MD, May, 1975.

e) National Center for Health Statistics: United States life tables. *U.S. Decennial Life Tables for 1979-81*, Vol. 1, No. 1, DHHS Pub. No. (PHS) 85-1150-1, Public Health Service, Washington, August, 1985.

f) National Center for Health Statistics: *Vital Statistics of the United States*, 1982, 1984, and 1986. Vol. 1, Natality. DHHS Pub. Nos. (PHS) 87-1100, (PHS) 88-1100, and (PHS) 88-1123, Public Health Service, Washington.

g) National Center for Health Statistics, Annual summary of births, marriages, divorces, and deaths, United States, 1987, *Monthly Vital Statistics Report*, Vol. 36, No. 13, DHHS Pub. No. (PHS) 88-1120. Public Health Service, Hyattsville, MD; and unpublished data.

in this proportion since 1984, whereas there has been some gradual improvement for Whites, even after 1984.

Although the mortality of Blacks has been considerably higher than that of Whites for ages under 65, there has been less difference for the older ages. The life expectancy at age 65 was slightly higher for Blacks than for Whites around 1940, although the difference had reversed by 1950. Since then, there has been a slight divergence of the trend that has favored Whites. Life expectancy at age 85 has been estimated higher for Blacks than for Whites—even in the 1980's.

For the Other-races population, the type of analysis afforded by life tables is not available. Moreover, mortality rates are sensitive to possible bias inherent in the race identification on death certificates relative to population censuses; so that any comparison of Other-races mortality with that of the larger race categories must be interpreted with extreme caution.<sup>15</sup> The difference in the age adjusted death rate between White and Other races in table S, showing lower mortality for Others, is nevertheless too great to be overlooked. A low level of mortality among young adult age groups of the Other-races population has been observed: in 1986, 0.9 deaths per 1,000 population 25 to 34 years of age,

<sup>15</sup> The determination of race or Hispanic origin on death certificates is generally carried out by local health officials, whereas the determination of these characteristics in the census is normally by self-identification. Because death rates rely on registered deaths for numerators and census-based population counts or estimates for denominators, the inconsistency between these two data universes can result in bias.

compared to 1.2 for Whites.<sup>16</sup> This could be explained by a very high level of immigration, if immigration to the United States is selective of a low risk of mortality. Apparent large mortality differentials among the elderly, which also favor Other races, could be influenced by environmental and behavioral factors, such as diet and smoking, both of which have been implicated in mortality from heart disease. Unfortunately, the data available to test such hypotheses are limited.

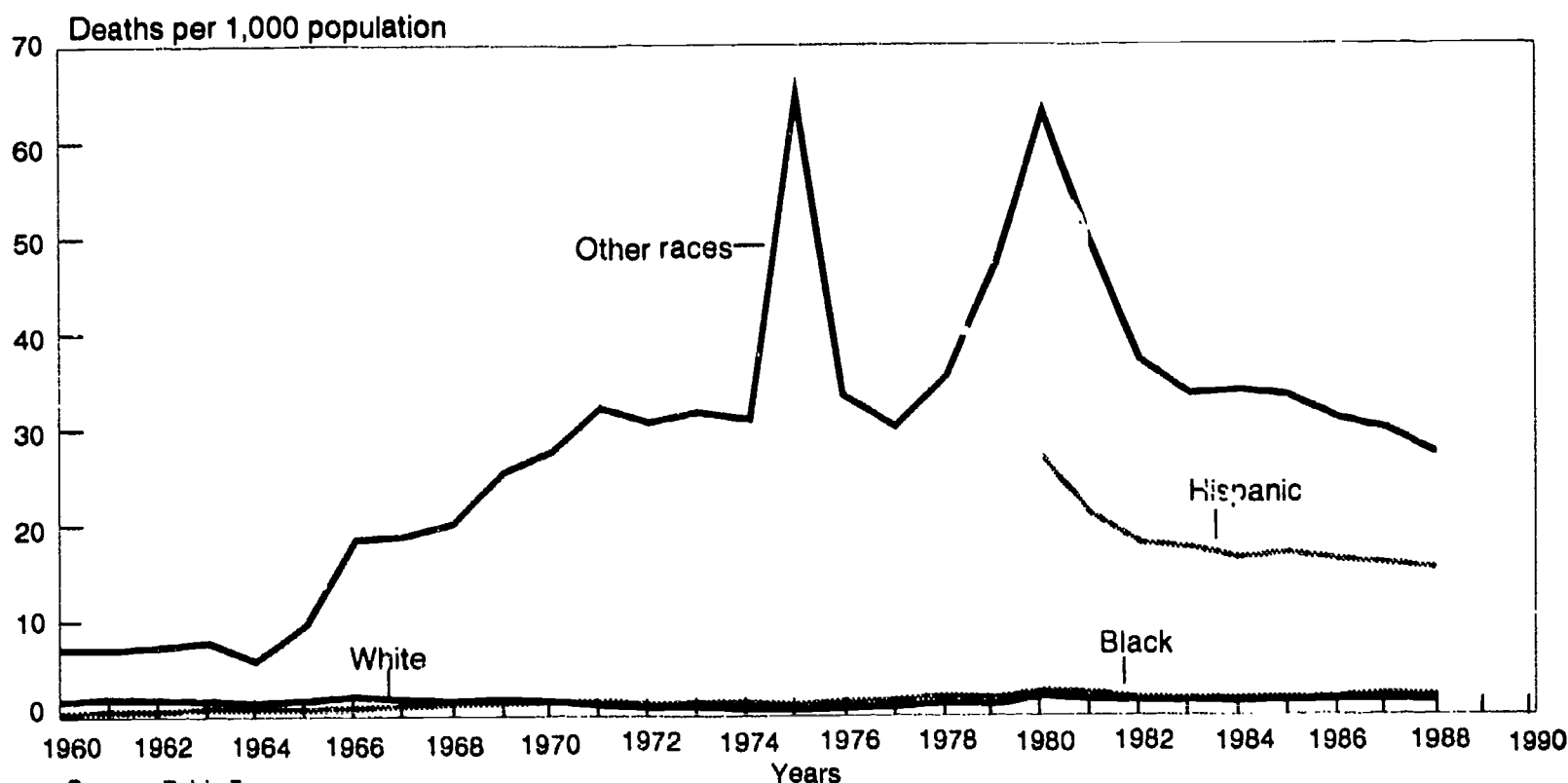
**Mortality of the Hispanic population.** Information available on the mortality of the Hispanic-origin population suggests that it is somewhat lower (higher life expectancy) than the population as a whole. However, the relatively low level of the crude death rate shown in figure 10 since 1980 is primarily the result of the comparatively youthful Hispanic age distribution.

The data available to study the mortality of the Hispanic population is far more scarce than for the race groups, primarily because most States do not specify Hispanic origin on death certificates. For the purpose of these estimates, Hispanic mortality was projected from a life table computed for the period around 1980 that implied a life expectancy at birth of 75.5 years.<sup>17</sup> A brief comparison between Hispanic life table indicators and

<sup>16</sup> Computed from data in National Center for Health Statistics, *Vital Statistics of the United States, 1986*, Vol. II, Mortality, Part A. DHHS Pub. No. (PHS) 88-1122. Public Health Service, Washington, 1988, table 1-25.

<sup>17</sup> The method by which this life table is computed is discussed in "Definitions, Sources, and Methodology" to follow.

Figure 10.  
Net Civilian Immigration per 1,000 Population, by Race and Hispanic Origin: 1960 to 1988



indicators for the entire population for the 1979-81 period is shown in table U. The Hispanic population is shown to have slightly higher life expectancy (lower mortality) than the population as a whole: an additional life expectancy at birth of 1.6 years, 3.0 additional percentage points in the probability of survival from birth to age 65, and 1.1 additional years of expected life at age 65. The slightly more favorable mortality conditions for Hispanics apply to both males and females. It should be emphasized that the Hispanic life table on which these indicators are based is not actually computed for the entire United States, but from a restricted population for which adequate data were available.

**AIDS.** Conspicuously absent from these considerations is the recent epidemic of acquired immunodeficiency syndrome (AIDS), which has become a major cause of concern both within the medical profession and in the population at large. The National Center for Health Statistics established HIV (human immunodeficiency virus) as a cause-of-death category for the first time in 1987. In that year, the number of HIV deaths was estimated by NCHS at 13,130, or 0.6 percent of all deaths. In 1988, the number increased to 16,210, or 0.7 percent of all deaths, giving AIDS a ranking of 15 among all causes of death. The age adjusted rates (per 100,000 population), by race and sex, were as follows:<sup>18</sup>

Race and sex	1987	1988
All races .....	5.3	6.5
Male .....	9.8	11.5
Female .....	1.0	1.5
White .....	4.3	5.0
Male .....	8.2	9.3
Female .....	0.5	0.8
Black .....	13.8	18.1
Male .....	24.9	31.9
Female .....	4.3	6.3

Because of the recency of the AIDS epidemic, it is not a major factor in the final data through 1986 shown in table R. Because the AIDS epidemic has not run its course, it is likely to become increasingly important as a cause of death in future years. Moreover, it will tend to counter the previously cited trend of diminishing sex differences in life expectancy for two reasons. First, males are much more likely to die of AIDS than females. Second, AIDS victims are concentrated in the young adult ages, so that mortality should have an impact on life expectancy that is larger than would be expected

<sup>18</sup> National Center for Health Statistics: Annual summary of births, marriages, divorces, and deaths: United States, 1988 *Monthly Vital Statistics Report*, Vol. 37, No. 13. Hyattsville, Maryland: Public Health Service, 1989.

Table U. Selected Life Table Indicators, Total and Hispanic Populations: 1979-81 Life Tables

Population group	Life expectancy at birth	Percent surviving to age 65	Life expectancy at age 65
Total population.....	73.9	77.1	16.5
Male.....	70.1	70.6	14.2
Female.....	77.6	83.5	18.4
Hispanic population... ..	75.5	80.1	17.6
Male.....	71.9	74.3	15.8
Female.....	79.1	85.7	19.4

Source: Hispanic origin life tables are unpublished, and supplied by Gregory Spencer, U.S. Bureau of the Census; life tables for the total population are from the National Center for Health Statistics: United States life tables. *U.S. Decennial Life Tables for 1979-1981*, Vol. 1, No. 1, DHHS Pub. No. (PHS) 85-1150-1, Public Health Service, Washington, August, 1985.

from its share of total deaths.<sup>19</sup> AIDS will also tend to work against the narrowing of the gap between Blacks and Whites in life expectation, as AIDS has affected Blacks more than Whites.

### The Trend in Net Civilian Immigration

The immigration of civilians across U.S. borders, while a smaller component of population change than natural increase, nevertheless continues to have an impact on population growth. It has also come to be a major factor in the trend in the distribution of the population by race and Hispanic origin. During calendar year 1988, the net civilian immigration to the United States (immigration minus outmigration) was estimated to be 667,000, or 2.7 net immigrants per 1,000 population at mid-year (table 5). This amounted to 27.7 percent of the net change in the population. Net immigration in 1988 appears to be down slightly from the 689,000 observed in 1987 (2.8 per 1,000 population). A recent peak in immigration was reached in 1980, when the balance of immigrants over emigrants reached 845,000 (3.7 per 1,000 population), very likely the highest level of immigration in one year since World War I.

**Immigration by major source.** The major source of immigration (based on administrative data) has consisted of citizens of other countries establishing legal residence in the United States through application to the Immigration and Naturalization Service (INS). As shown in table V, these persons (legal alien immigrants) accounted for roughly 500,000 immigrants per year, with a gradually increasing trend during the 1980's.

<sup>19</sup> The life expectancy at birth is essentially an average number of years lived by a hypothetical cohort of births. Because AIDS deaths occur primarily to young adults, the number of years of life lost as a result of a single AIDS death is greater than for a death from a cause that affects older persons. Consequently, the impact of AIDS mortality on the life expectancy at birth is relatively greater than would be expected from the number of deaths.



A more sporadic source of immigrants has been the occasional wave of refugees, asylees, and other special-status arrivals, many of whom adjust to permanent resident status some years after their arrival. The concept of U. S. residence, as applied in the decennial census and the Census Bureau's population estimates, defines such individuals as U. S. residents as of the time of their arrival. An example of this type of immigration flow is the Mariel boatlift from Cuba in 1980, which made up the bulk of the 128,000 Cuban parolees and entrants cited in table V for that year. This event, combined with 155,000 refugees from Southeast Asia (Vietnam, Laos, and Cambodia) and 11,000 from Haiti brought the level of net civilian immigration in that year (845,000) to its post-World-War-I peak.

The estimate of net civilian immigration includes four other sources of immigration, for which no direct information exists, due to the absence of any administrative record of the migration event. One such source is the migration of U. S. citizens to the 50 States and the District of Columbia from U.S. possessions, primarily Puerto Rico. Using data on air passenger traffic, net migration from Puerto Rico has been estimated at between 21,000 and 44,000 annually since 1981. Migration of citizens to and from other United States possessions is assumed to be zero, due to lack of data and the small size of the populations of origin or destination. A second such source of migration is the movement of other civilian citizens in and out of the country. Dependents of Armed Forces stationed abroad make up the largest component of this group. The Department of Defense and the Office of Personnel Management

provide information on military dependents and Federal employees residing abroad, and these data form the basis for the migration series shown in table V.<sup>20</sup>

This leaves two additional major sources of movement across United States borders for which no direct information on the migration event is available: 1) immigration and outmigration of undocumented immigrants and 2) the emigration of legal United States residents to places outside the United States and its possessions. While there is no source of direct information as to the number of undocumented immigrants, the current series of population estimates since 1980 assume a net flow of 200,000 per year. Data on population and components of change shown in tables and graphs in this report do not allow for undocumented immigration during the 1970's or earlier, as there was no basis for estimating such an allowance at the time the intercensal estimates were produced.

Since that time, a number of research efforts have been undertaken to assess the size and net flow of the undocumented population into the United States. Research by Warren and Passel has produced an estimate of 2,057,000 undocumented immigrants counted in the census of April 1, 1980.<sup>21</sup> An estimated 1,131,000 of them were Mexican born; slightly over half of the total. Of the net undocumented immigrants counted in 1980, 1,517,000 entered the United States during the 1970's; 941,000 having entered between the beginning of 1975

<sup>20</sup> Changes of residence in or out of the country among U.S. citizens not affiliated with the Federal government are excluded from this consideration. Their net migration is assumed to be zero.

<sup>21</sup> Robert Warren, and Jeffrey S. Passel, "A Count of the Uncountable: Estimates of Undocumented Aliens Counted in the 1980 United States Census," *Demography*, Vol. 24, No. 3 (August 1987), pp. 375-393.

**Table V. Net Civilian Immigration, by Major Source: 1980 to 1988**

(Numbers in thousands)

Source of immigration	1980	1981	1982	1983	1984	1985	1986	1987	1988 <sup>1</sup>
Net civilian immigration.....	845	718	626	605	615	650	660	689	<sup>2</sup> 667
Legal alien immigrants <sup>3</sup> .....	482	500	470	478	492	519	524	548	516
Southeast Asian refugees.....	155	121	61	43	53	49	42	36	39
Haitian refugees.....	11	8	-	-	-	-	-	-	-
Cuban parolees and entrants....	128	-	-	-	-	-	-	-	-
Net arrivals from Puerto Rico....	11	21	44	40	31	39	35	30	37
Net arrivals of other civilian U.S. citizens.....	37	27	11	4	-1	4	18	35	35
Net undocumented immigration <sup>4</sup> ..	150	200	200	200	200	200	200	200	200
Emigration of legal residents <sup>4</sup> ....	129	160	160	160	160	160	160	160	160

- Represent zero.

<sup>1</sup>For all sources except Southeast Asian refugees, the second half of calendar year 1988 is projected on the basis of the year ending June 30, 1988. The number of Southeast Asian refugees is based on provisional monthly tallies provided by the Office of Refugee Resettlement.

<sup>2</sup>Southeast Asian refugees in 1988 include a small number of Amerasian arrivals. <sup>3</sup>Temporary residents from Cuba, Haiti, and Southeast Asia adjusting to permanent resident status are excluded from the number of legal immigrants; these persons are included by their year of arrival in the three subsequent categories in the table.

<sup>4</sup>Net undocumented immigration was assumed constant at 200,000 per year after April 1, 1980; zero for the first three months of 1980. Emigration was assumed to be 160,000 per year after April 1, 1980; 36,000 per year for the first three months of 1980. For explanation, see text.

Sources: Unpublished data supplied by the Immigration and Naturalization Service, consistent with the *Statistical Yearbook of the Immigration and Naturalization Service* for 1980 through 1987; Office of Refugee Resettlement, *Report to Congress: Refugee Resettlement Program*, 1981 through 1988, and unpublished data supplied by the Office of Refugee Resettlement; unpublished data supplied by the Department of Defense, the U.S. Office of Personnel Management, and the Puerto Rico Planning Board.

and the census of April 1, 1980. This apparent trend in undocumented immigration during the 1970's, along with more current data from supplements to the Current Population Survey in April 1983 and June 1986, formed the basis for the assumption of 200,000 per year in the more recently published estimates for the 1980's.<sup>22</sup>

The increase in net civilian immigration during the 1970's might result from the inclusion of undocumented immigrants would be partly offset by an increase in the allowance for emigration from the United States, based on a reevaluation of the estimates. Published intercensal estimates for the 1970's were based on the assumption that 36,000 legal residents migrated out of the United States annually, and this assumption also underlies the estimates for the 1970's shown in the tables and charts of this report. Recent research indicates that the actual level of emigration during the decade was much higher, and has estimated the number of emigrants at 1,515,000.<sup>23</sup> The reason for this major upward revision was a substantial increase in the estimate of the number of foreign-born emigrants, which was previously assumed to be a very small component of total emigration. For the 1980's, a level of 160,000 emigrants per year has been assumed, of which 133,000 are foreign born, and 27,000 native born. Further research, using July 1987 Current Population Survey interviews of resident relatives of persons living overseas, provides support for this assumption.<sup>24</sup>

Taking both of these adjustments into account would imply that net civilian immigration during the intercensal decade of the 1970's was between 300,000 and 400,000 higher than shown in table L and tables 5 through 8. While the measurement of net civilian immigration is by no means an exact science, it is apparent that undocumented immigration emerged as a major component of net civilian immigration during the 1970's, and has remained so in the current decade.

<sup>22</sup> Jeffrey S. Passel and Karen A. Woodrow, "Change in the Undocumented Alien Population in the United States, 1979-1983," *International Migration Review*, Vol. 21 (No. 4, Winter), pp. 1304-1334. See also Karen A. Woodrow, Jeffrey S. Passel, and Robert Warren, "Preliminary Estimates of the Undocumented Immigration to the United States, 1980-1986: Analysis of the June 1986 Current Population Survey," *Proceedings of the Social Statistics Section of the American Statistical Association*, August, 1987.

<sup>23</sup> Robert Warren, "Alien Emigration from the United States: 1963 to 1974," unpublished paper presented at the annual meeting of the Population Association of America, Philadelphia, Pa., April 26-28, 1979; Robert Warren and Jennifer Marks Peck, "Foreign-Born Emigration from the United States: 1960 to 1970," *Demography*, Vol. 17, No. 1, February, 1980, pp. 72-84; Robert Warren and Ellen Percy Kraay, "The Elusive Exodus: Emigration from the United States," *Population Trends and Public Policy*, No. 8, Population Reference Bureau, 1985; U.S. Bureau of the Census, 1980 Census Preliminary Evaluation Results Memorandum Series, No. 113, "Methodology for Developing Estimates of Coverage in the 1980 Census Based on Demographic Analysis: Immigration Statistics (Legal)," by Jeffrey S. Passel and J. Gregory Robinson, 1987.

<sup>24</sup> Karen A. Woodrow and Jeffrey S. Passel, "Estimates of Emigration Based on Sample Survey Data from Resident Relatives," Bureau of the Census, unpublished.

**Legal Immigration by national origin.** The emergence of undocumented immigration, with its large Mexican component, has been one of two major changes that have occurred in the demographic character of immigration to the United States since the mid-1960's. The second—and more important—is a major shift in the origins of legal immigrants from Europe to Asia. Prior to 1965, immigration quotas were based on the distribution of the U.S. population by national origin in 1920, but no limits were imposed on immigration from the Western Hemisphere. Amendments to the Immigration and Nationality Act in 1965 abolished the national origin of the population as a basis for quotas, allowing countries with little historical representation in the population, primarily in Asia, to become major suppliers of immigrants. The shift in origin of immigration has been reinforced by legal emphasis on family reunification, which has favored immigrants from more recently popular origins. Limits to immigration from the Western Hemisphere were also established.<sup>25</sup> The impact of these developments was restricted to the legal alien component of immigration, but this remains the largest component. Superimposed on this change in U.S. immigration policy have been major political upheavals in Southeast Asia, which have provided many residents of this area with a motivation to migrate to the United States. This has further reinforced the shift from Europe to Asia as a major source of foreign immigrants.

This change in the country of origin of immigrants can be seen in tables W and X, which show the numerical and percent distribution by major region of birth for new legal residents of the United States.<sup>26</sup> The data in table W include refugees at time of arrival, corresponding to the first four sources of migration shown in table V (shown for years ending June 30 rather than calendar years). Additional regional detail is provided by table Y, which shows United Nations macro- and micro-regions of birth for three 6-year periods.<sup>27</sup> The number of immigrants native to Asia rose rapidly during the 1960's and 1970's, peaked in 1980 at 344,000, and has maintained a continued high level, in excess of 250,000 annually, since then. The rise until 1980 was brought about by the emergence of Southeast Asia—specifically

<sup>25</sup> Congressional Research Service, Library of Congress, Ninety-Sixth Congress, "U.S. Immigration Law and Policy: 1952-1979, a Report Prepared at the Request of Senator Edward M. Kennedy, Chairman, Committee on the Judiciary, United States Senate," U.S. Government Printing Office, Washington, DC, May, 1979.

<sup>26</sup> "Asia," as used in tables W, X, and Y, refers to the Asian continent as a region of birth, and should not be confused with the race designation "Asian or Pacific Islander". Immigrants born in Western South Asia are generally not identified as Asian or Pacific Islander. Similarly, persons of Latin American birth are not all of Hispanic origin, as some Caribbean countries (e.g. Haiti and Jamaica) do not have Hispanic populations. Race of immigrants is determined by country (as opposed to continent or region) of birth on the basis of census distributions. For further explanation, see section on "Definitions, Sources, and Methodology".

<sup>27</sup> United Nations, *Demographic Yearbook*, 1984.

**Table W. Legal Alien Immigrants and Refugees, by Region of Birth: 1970 to 1988**

(Numbers in thousands)

Year (July 1 to June 30)	All regions <sup>1</sup>	Africa	Asia	Europe	Latin America	North America	Oceania	U.S.S.R
1987-88 <sup>2</sup>	586	19	267	64	215	13	4	3
1986-87	555	17	252	57	211	11	4	2
1985-86	573	17	271	60	206	11	4	3
1984-85	550	17	264	59	190	12	4	4
1983-84	538	16	253	58	191	11	4	6
1982-83	509	14	238	52	182	11	3	8
1981-82	591	15	292	55	201	11	4	13
1980-81	670	15	312	60	257	12	4	10
1979-80	732	14	344	60	286	14	4	9
1978-79	486	12	215	60	177	14	4	3
1977-78	486	11	172	69	205	18	4	6
1976-77	389	9	167	62	132	10	4	6
1975-76	403	8	180	64	131	8	4	8
1974-75	468	7	233	69	144	8	3	5
1973-74	390	6	131	80	161	8	3	1
1972-73	389	7	124	91	152	9	3	1
1971-72	387	7	121	89	156	11	3	1
1970-71	397	7	103	96	174	13	3	1

<sup>1</sup>A small number of immigrants of unknown place of birth or born aboard ship are included.<sup>2</sup>For 1987-88, the number of immigrants is provisional. The distribution of immigrants by region of birth is based on final data for years ending September 30, 1987 and September 30, 1988 (available since the population estimates were completed) supplied by the Immigration and Naturalization Service.Note: Regions are United Nations macro-regions, as described in the United Nations, *Demographic Yearbook, 1984*. Immigrants from Mexico are included with Latin America, but not North America. Temporary residents from Cuba, Haiti, and Southeast Asia adjusting to permanent resident status are excluded from the tally for America, Asia, and all regions, but parolees and refugees from these areas are included at time of arrival.Source: Unpublished data supplied by the Immigration and Naturalization Service, consistent with *Annual Report: Immigration and Naturalization Service, 1970 through 1978*; *Statistical Yearbook of the Immigration and Naturalization Service* for 1979 through 1987; *Immigration Statistics: Fiscal Year 1988—Advance Report*; Office of Refugee Resettlement, *Report to Congress: Refugee Resettlement Program, 1981 through 1988*, and unpublished data supplied by the Office of Refugee Resettlement.

Vietnam, Cambodia, and Laos—as a major source of refugees in the wake of the Vietnam conflict. This was supplemented, both before and after 1980, by substantial rises in the number of new permanent residents native to China (including Taiwan), the Philippines, India, and Iran.

The number of immigrants of European birth declined until 1983, when it reached a low point of 53,000, then rose slightly to 64,000 in 1988 (table W). Most of this decline during the 1970's occurred among Southern Europeans, primarily Italian, Portuguese, and Greek natives, who had made up a large portion of European

**Table X. Percent Distribution of Legal Alien Immigrants and Refugees, by Region of Birth: 1970 to 1988**

Year (July 1 to June 30)	All regions	Africa	Asia	Europe	Latin America	North America	Oceania	U.S.S.R.
1987-88	100.0	3.3	45.6	11.0	36.6	2.2	0.7	0.5
1986-87	100.0	3.1	45.4	10.3	38.0	2.0	0.7	0.4
1985-86	100.0	3.0	47.2	10.5	36.0	2.0	0.7	0.5
1984-85	100.0	3.1	4.0	10.8	34.5	2.1	0.7	0.7
1983-84	100.0	2.9	4.0	11.7	35.5	2.1	0.7	1.1
1982-83	100.0	2.8	4.7	10.2	35.8	2.2	0.7	1.5
1981-82	100.0	2.5	49.4	9.3	34.0	1.9	0.7	2.3
1980-81	100.0	2.3	46.5	8.9	38.3	1.8	0.6	1.5
1979-80	100.0	1.9	47.0	8.2	39.1	2.0	0.6	1.3
1978-79	100.0	2.6	44.3	12.3	36.3	2.9	0.9	0.6
1977-78	100.0	2.3	35.4	14.1	42.3	3.7	0.9	1.3
1976-77	100.0	2.4	42.8	16.0	33.9	2.5	1.0	1.4
1975-76	100.0	1.9	44.6	15.9	32.6	2.0	0.9	2.1
1974-75	100.0	1.4	49.8	14.7	30.7	1.6	0.7	1.1
1973-74	100.0	1.6	33.5	20.5	41.2	2.0	0.8	0.3
1972-73	100.0	1.7	32.0	23.5	39.2	2.4	0.8	0.4
1971-72	100.0	1.7	31.2	22.9	40.1	2.8	0.8	0.3
1970-71	100.0	1.7	26.1	24.1	43.8	3.4	0.7	0.2

Source: Computed from table W.

immigration in the early 1970's (table Y). Northern Europe (dominated by the United Kingdom) and Western Europe have shown little trend as a source of immigration since 1970, although both saw substantial declines in their share of immigrants during the late 1960's. Immigration from Eastern Europe has actually increased somewhat in the 1980's.

Latin America has remained consistently important as a native region for new immigrants, including legal immigrants. As shown in tables W and X, the trend since 1970 has generally kept pace with the level of immigration overall, so that the proportion of legal immigrants and refugees from this area has remained between about 35 and 40 percent. Although the major contributor of legal immigrants from this area has been Mexico, an increasing number of immigrants have come from Central and South America and "Other" Caribbean countries (primarily Jamaica and the Dominican Republic). Immigration from Cuba and Haiti peaked during the 1972-82 period (table Y).

As previously noted, these developments in the character and geographic origin of immigrants have initiated a new chapter in the formation of the racial and ethnic composition of the U.S. population. Largely because of the increasing number of persons native to eastern Asia among civilian immigrants, the Other-races population has come to grow at a far more rapid rate than Whites or Blacks, as previously discussed. Indeed, most of the growth in this population has been due to immigration. The impact of immigration on the population by race, and the Hispanic population, is illustrated through rates per 1,000 population in figure 10 (see also table L).<sup>28</sup> The rate of net civilian immigration per 1,000 population of Other races nearly doubled between 1965 and 1966, with the enactment of the change in the Immigration and Naturalization Act, reaching a level of 18.7 in 1966 (see table 7). Since 1970, it has remained

<sup>28</sup> Net civilian immigration prior to 1980 excludes the effect of undocumented immigration as well as the previously cited upward revision in the estimate of legal emigrants.

**Table Y. Legal Alien Immigrants and Refugees, by Macro- and Micro-Region of Birth: 1970 to 1988**

(Numbers in thousands)

Region of birth	July 1, 1970, to June 30, 1976		July 1, 1976, to June 30, 1982		July 1, 1982, to June 30, 1988	
	Number	Percent	Number	Percent	Number	Percent
All regions <sup>1</sup> .....	2,434	100.0	3,355	100.0	3,311	100.0
Africa .....	41	1.7	76	2.3	101	3.0
Western Africa .....	10	0.4	23	0.7	35	1.1
Eastern Africa .....	9	0.4	17	0.5	29	0.9
Northern Africa .....	18	0.7	23	0.7	25	0.8
Middle Africa .....	1	0.0	2	0.1	2	0.1
Southern Africa .....	3	0.1	11	0.3	9	0.3
Asia .....	892	36.7	1,502	44.8	1,545	46.7
East Asia .....	306	12.6	387	11.5	506	15.3
Cambodia, Laos, and Vietnam .....	151	6.2	502	15.0	289	8.7
Other Eastern South Asia .....	229	9.4	291	8.7	343	10.3
Middle South Asia .....	126	5.2	211	6.3	304	9.2
Western South Asia .....	80	3.3	110	3.3	104	3.1
Europe .....	489	20.1	366	10.9	351	10.6
Eastern Europe .....	50	2.1	52	1.5	89	2.7
Northern Europe .....	85	3.5	104	3.1	110	3.3
Southern Europe .....	290	11.9	145	4.3	77	2.3
Western Europe .....	64	2.6	66	2.0	75	2.3
Latin America .....	917	37.7	1,258	37.5	1,195	36.1
Cuba and Haiti .....	140	5.8	216	6.4	86	2.6
Other Caribbean .....	218	9.0	297	8.9	335	10.1
Mexico .....	376	15.4	405	12.1	375	11.3
Central America .....	54	2.2	120	3.6	161	4.9
South America .....	128	5.3	220	6.5	237	7.2
North America .....	57	2.3	80	2.4	70	2.1
Oceania .....	19	0.8	25	0.7	23	0.7
U.S.S.R. ....	18	0.8	48	1.4	26	0.8

<sup>1</sup>Includes a small number of immigrants of unknown place of birth or born aboard ship.

Note: Regions are United Nations micro- and macro-regions, as described in the United Nations, *Demographic Yearbook, 1984*, except for the separation of Cambodia, Laos, and Vietnam from Eastern South Asia, and the separation of Cuba and Haiti from the Caribbean. Immigrants from the United Kingdom are included with Northern Europe, but not Western Europe. Temporary residents from Cuba, Haiti, and Southeast Asia adjusting to permanent resident status are excluded from the tally for Latin America and Asia, but parolees and refugees from these areas are included at time of arrival.

Source: Same as table W.

in the range of 25 to 40 per 1,000, except for two exceptional years, 1975 and 1980. In 1975, this rate soared to 66.8, with the conclusion of the Vietnam conflict, and in 1980 it reached another peak at 64.0. In 1988, the rate was a relatively modest 27.5 per 1,000, yet 227,000 of the 378,000 increase in the Other-races population was explained by net civilian immigration.

Larger in number but smaller in rate has been the impact of immigration (both documented and undocumented) on the Hispanic population. The rate of net immigration per 1,000 population was 27.3 in the last three quarters of 1980 (including the Mariel boatlift), but dropped to 21.2 in 1981, and declined steadily to 15.5 in 1988 (table 7). This decline in rate is due to the rapidity of the increase in the denominator—which is the Hispanic population—and not to the decline in the number of immigrants. The numerical estimate of Hispanic net immigration has remained close to 300,000 per year since 1980 (an average of 302,000 per year). The number of net undocumented immigrants of Hispanic origin assumed in these estimates is 141,000 per year; while net legal immigrants of Hispanic origin (including refugees, and net migration from Puerto Rico) have averaged 161,000 per year.

While the undocumented component of net civilian immigration has had a major effect on the Hispanic population, it probably had relatively minor impact on the racial balance of net civilian immigration. Unpublished data consistent with previously cited research by Warren and Passel shows the estimated undocumented immigrants counted in 1980 to have a racial distribution quite similar to the total population of the United States at the time of the 1980 census, although slightly favoring races other than White or Black.<sup>29</sup>

## DEFINITIONS, SOURCES, AND METHODOLOGY

### Definition of the Population

Estimates of the U.S. population shown in this report cover three population definitions: total population including Armed Forces overseas, resident population, and civilian population. Estimates of resident population, including the monthly series from 1970 to 1988 shown in table 9, and the totals for 1980 to 1988 shown in table 2, are consistent with the decennial censuses of April 1 of 1970 and 1980, and conform to the definition of

United States residence applied in these counts.<sup>30</sup> The estimates of total population shown in table 5, 6, and 9 are consistent with all decennial censuses since 1940, with the addition of the Armed Forces stationed outside the 50 States and the District of Columbia, as reported by the five branches of the Armed Forces in the U.S. Departments of Defense and Transportation. The civilian population, shown annually for 1980 to 1988 in table 3 and monthly from 1950 through 1988 in table 9 is defined as the census-consistent resident population minus Armed Forces stationed within the United States, as reported by the branches of the Armed Forces. None of the population estimates shown in these tables make any allowance for undercount of United States residents in the census.

The resident population used in these estimates includes residents of the 50 States and the District of Columbia, but excludes residents of the Commonwealth of Puerto Rico, residents of the outlying areas under United States sovereignty or jurisdiction (principally American Samoa, Guam, Virgin Islands of the United States, and Commonwealth of the Northern Mariana Islands), and other American citizens living overseas.

### Modifications to the 1980 Census

Although the enumeration of total population in the censuses was adopted as a standard for the estimates, two changes were made to census tabulated distributions. The first affected the distribution of the population by race, the second affected the distribution of the population 75 years of age and over by age.

**Modification of the distribution by race.** A substantial modification was made to the race distribution as reported by 1980 census results, which did not affect either the total population or the distribution by age and sex. Reporting of race in the 1980 census was inconsistent with the way race is classified in the major data sources used to develop the population estimates (such as births, deaths, Medicare data, and previous censuses). Because of the need for comparability between the racial groupings used in the population estimates and in the census, either estimates data or census counts had to be modified. Since the data do not readily exist for modifying the population estimates data base (which consists of historical series of birth and death data, immigration records, past censuses, etc.), it has been necessary to redistribute the 1980 census data to conform to the historical categories of the estimates.

<sup>29</sup> Of the 2,057,000 undocumented immigrants estimated by Warren and Passel to have been counted in the 1980 census, unpublished estimates indicate that about 84 percent were White, 10 percent were Black, and 6 percent were Other.

<sup>30</sup> The intercensal estimates for the 1970's were adjusted to be consistent with both the 1970 and the 1980 count, but the 1980 count available at the time of their completion was 226,504,825. The 1980 census count was subsequently revised to 226,545,805, which forms the basis for the estimates from July 1, 1980 forward.

The modification is consistent with categories defined by the Office of Management and Budget (OMB) as specified in OMB Directive 15.

In brief, the modification procedure involves the reassignment of race based on detailed cross-tabulations of race and Hispanic origin from sample and complete-count census data.<sup>31</sup> The modification distributes the persons originally in the "Other" (not specified) race category to the three modified race groups shown in this report: White, Black, and Other races. The modification resulted in the addition of 6,340,941 persons to the White category, 188,389 persons to the Black population, and 228,989 persons to the Asian or Pacific Islander category in 1980 (comparing the first and fourth columns of table Z).

All persons added to the above three groups had reported themselves to be of "Other" (not specified) race; they had not marked one of the 14 categories specified on the 1980 census form (White, Black, Japanese, Chinese, Filipino, Korean, Vietnamese, American Indian, Asian Indian, Hawaiian, Guamanian, Samoan, Eskimo, or Aleut). The large majority of these persons identified themselves as being of Hispanic origin, based on the response to a separate question on Hispanic origin (Spanish origin, in 1980 census terminology). The Hispanic and non-Hispanic components of this category were each allocated to one of the major race categories. Table Z compares the distribution of the 1980 census cross-classified by race and Hispanic origin based on actual reporting with the "OMB-consistent" distribution used as the basis for the post-censal estimates. Table AA compares the distributions for the subcategories of Other races.

The method of distributing the "Other" (not specified) category of race to the major classified race categories consisted in determining what race was implied by the combination of responses to the race and Spanish origin questions on the 1980 census questionnaire. The cross-classification of race and Spanish origin, before

<sup>31</sup> The modification procedure is described in detail in Jeffrey S. Passel, "Procedures for Producing Preliminary OMB-Consistent Modified Race Data from the 1980 Census by Age, Sex, and Hispanic Origin for States and Counties," U.S. Bureau of the Census, 1982 (unpublished).

**Table AA. Resident Population of Other Races, by Specific Race: April 1, 1980**

Race	Census report	OMB-consistent distribution
Other races.....	11,679,158	5,149,828
American Indians and Alaska Natives...	1,420,400	1,420,400
Asians and Pacific Islanders.....	3,500,439	3,729,428
"Other".....	6,758,319	—

and after the modification, is shown in table Z. The "Other" (not specified) category was first divided into those who reported themselves as Hispanic in the Spanish origin question and those who did not.

The distribution by race of each of these two categories, briefly, was as follows:

1. Persons who marked the "Other" (not specified) race category and who reported a Hispanic origin on the Spanish origin question (5,841,810 persons) were distributed to race according to the type of Spanish origin reported. Mexican-American responses were assumed to be White. All other Hispanic origin types (Puerto Rican, Cuban, etc.) were distributed pro rata to the White and Black population according to the distribution of persons in the same Hispanic type category who reported themselves to be White or Black. This allocation was done for each age-sex category at the county level and aggregated to the national level. Of the 5,841,000 persons in this category, 150,879 were added to the Black population (raising the Black Hispanic count from 390,852 to 541,731), 5,690,931 were added to Whites (raising the White Hispanic count from 8,115,256 to 13,806,187). No persons of Hispanic origin and "Other" (not specified) race were allocated to the new Other-races population.
2. Persons who marked the "Other" race category and reported they were not of Spanish origin in response to the Spanish origin question (916,509 persons) were distributed by race according to a highly detailed coding of race in the sample data from the census. The distribution was done on the total population in this category for each State to

**Table Z. Resident Population, by Race and Hispanic Origin, Reported in the 1980 Census and Modified: April 1, 1980**

Race	Census report			OMB-consistent distribution		
	Total	Hispanic origin	Not Hispanic origin	Total	Hispanic origin	Not Hispanic origin
All races.....	226,545,805	14,608,673	211,937,132	226,545,805	14,608,673	211,937,132
White.....	188,371,622	8,115,256	180,256,366	194,712,563	13,806,187	180,906,376
Black.....	26,495,025	390,852	26,104,173	26,683,414	541,731	26,141,683
Other races.....	11,679,158	6,102,565	5,576,593	5,149,828	260,755	4,889,073
Specified race.....	4,920,839	260,755	4,660,084	5,149,828	260,755	4,889,073
"Other" (not specified).....	6,758,319	5,841,810	916,509	—	—	—

**Table BB. Resident Population, by Race, Consistent with the 1970 Census and OMB Modified: April 1, 1980**

Distribution	All races	White	Black	Other races
Preliminary 1970-consistent distribution .....	226,504,825	195,140,559	26,623,711	4,740,555
Final 1970-consistent distribution .....	226,545,805	195,173,337	26,630,557	4,741,911
Final OMB-consistent distribution .....	226,545,805	194,712,563	26,683,414	5,149,828

obtain factors for allocating this category to the White, Black, and Asian or Pacific Islander categories. (The American Indian, Eskimo, or Aleut category was unaffected). These factors were then applied to each age-sex group of the "Other" (not specified), non-Hispanic population in each county to distribute the population by race, and summed to produce national totals.

As a result of this modification within the non-Hispanic category, the Asian or Pacific Islander category was increased by 228,989 persons at the national level (from 3,500,439 to 3,729,428, shown in table AA). These persons were composed (based on the sample data) primarily of Asian or Pacific Islander responses written in by the respondent but not listed on the census form. Also included were some racially mixed responses and locally defined groups that could be stipulated to be Asian or Pacific Islander. The non-Hispanic Black population was increased by 37,510 persons by this allocation (from 26,104,173 to 26,141,683, shown in table Z). Nearly half of this increase consisted of persons not of Hispanic origin who wrote in their race as Cape Verdean.

The balances of both categories were the result of a pro rata allocation of two groups. Some persons who were not Hispanic, from the Spanish origin question, but gave a Hispanic response (non-Mexican) to the race question were allocated pro rata by type of Hispanic response to the Black category in basically the same manner as the reported Hispanics discussed previously. (Persons who gave their race as Mexican were classified as White). Finally some nonresponses were allocated to White, Black, and Other races pro rata on the basis of the race distribution of the non-Hispanic population that reported race. The Other races component of this group was assumed to be entirely Asians or Pacific Islanders.

The proportions of the sample non-Hispanic "Other" (not specified) responses so determined for reclassification to the Black or Asian and Pacific Islander categories from the sample data were applied to the non-Hispanic "Other" responses, by county, in the 100 percent count. The remainder of the category not so classified as Black or Asian or Pacific Islander by this scheme was classified as White; 650,010 persons. The only major category tabulated in the 1980 census results that was unaffected by the OMB modification was the American Indian, Eskimo, or Aleut category, which remained as enumerated: 1,420,400 persons.

**Discontinuity of estimates by race before and after 1980.** This modification of the race distribution of the 1980 census achieved fundamental consistency with distributions in the preceding censuses. However, some discontinuity between the censuses of 1970 and 1980 remain, as detailed in table BB.

A small portion of the discontinuity (40,980 persons) did not relate to the race distribution, but was a consequence of the revision of the total population counted in the 1980 census. The intercensal estimates of the 1970's were based on a preliminary tabulation of 1980 census results summing to a national population of 226,504,825. Estimates for dates since the 1980 census are based on the final census count of 226,545,805. The race distribution of the difference of 40,980 persons was modified by imputing the OMB distribution of the enumerated Other-races category (specified and unspecified) previously described to the Other races portion of the 40,980 difference. This distribution, shown in the first two rows of table CC, was included in the "net change" column for calendar year 1980 in tables 5 and 7, and for the year ending June 30, 1980 in tables 6 and 8, along with error of closure.

In tables 7 and 8, which show components of change by race, the discontinuity of 40,980 due to the revision of

**Table CC. Change in Resident Population due to Revision of Census Count and Change in the Definition of Race: April 1, 1980**

Type of change	All races	White	Black	Other races
Change due to revision of count:				
Number .....	40,980	32,778	6,846	1,356
Percent .....	0.02	0.02	0.03	0.03
Change due to race definition:				
Number .....	—	-460,774	52,857	407,917
Percent .....	—	-0.24	0.20	8.60

the census count is obscured by a much larger discontinuity caused by changes in the way race is defined. This latter discontinuity has a large proportionate impact on the Other-races population (last two rows in table CC). It exists because the 1970-consistent definition of race used in the intercensal estimates differs from the OMB-modified definition as applied to the 1980 census and currently used for the postcensal estimates. Three specific differences can be identified:

1. Persons reporting themselves as Asian Indians were classified as White before 1980, and are reported as Asian or Pacific Islander after 1980.
2. Hispanics of unspecified race were distributed only for each State total in the 1970-consistent definition, rather than for sex-race-county groups, as was done for current estimates.
3. The reclassification of non-Hispanic "Other" (not specified) in the 1970-consistent distribution was accomplished by simply assigning 20 percent of this category to Asian or Pacific Islander, the rest to White; rather than the later, sample-based procedure described above and used for current (post-1980) estimates.

As a result, there are 460,774 fewer Whites in the OMB-consistent population used since 1980 than in the 1970-consistent population used for the intercensal estimates, 52,857 more Blacks, and 407,917 more Other races. This discontinuity is concentrated in the year in tables 7 and 8 that includes April 1, 1980, and is most noticeable through a large spurious percent increase in the Other-races population (17.64 in 1980 as shown in table 7, 16.34 in 1979-80 as shown in table 8). Most of this is a result of the fact that Asian Indians, 361,531 in number, would be defined as White in the 1970 census, and in the intercensal estimates. The remainder of the discontinuity evident in tables BB, CC, 7, and 8 is a consequence of: a) the reclassification of about 46,000 additional persons, all non-Hispanic "other" (not specified), in the Asian or Pacific Islander category for the post-1980 base, b) the reclassification of 37,000 more non-Hispanic "other" as Black, and c) the reclassification of about 15,000 additional Hispanic "other" as Black.

**Modification of the age distribution of persons 75 and over.** A second modification of the 1980 census tabulations that was incorporated in these estimates was a redistribution of the population 75 years of age and over by age within each sex-race group. This revision was necessitated by two observations, 1) there was evidence of substantial overreporting of age 79, and 2) information on the number of deaths by age indicated that the census had tabulated too many persons in the extreme elderly (over 90 years) age

The excessive reporting of age 79 was the result of the fact that 1900 was a highly preferred year of birth among persons uncertain when they were born, and about three quarters of this exaggerated cohort was age 79 on April 1, 1980. The modification was accomplished by "smoothing" the age group 75 to 79 by single year of age, with no change in the total population of the 5-year group.

The evidence for the problem of overreporting of age among the most elderly was based on an analysis of deaths to Medicare enrollees.<sup>32</sup> The age distribution of these deaths is based on the decedent's year of birth, as reported at the time of enrollment in the Medicare program. Age at enrollment for Medicare is generally well documented, due to the legal requirement that enrollees be 65 years of age or older when they enroll. On the other hand, the age distribution of the elderly census population relies on reports of age or year of birth by respondents, often by other household members, or by administrators of custodial institutions. Also, in the absence of a report, age may be randomly allocated as part of the processing of census results, based on responses to other census questions. As a result, there is a serious risk of age misreporting among persons aged 85 and over. For this reason, the Medicare data were deemed more reliable as a basis for the age distribution of the population 85 and over than the census.

The specific method that was used to adjust the census age distribution relied on Medicare deaths as the principal data source.<sup>33</sup> Known as the "method of extinct generations," this procedure consists of inferring the population of an age group by summing the deaths in all subsequent years to persons born the same year, until the birth cohort is extinct.<sup>34</sup> Because the required age distribution was for a recent year, it was necessary to project deaths by year of birth until the year 2015.<sup>35</sup> In the interest of maintaining the consistency of the population estimates with the enumerated total population, it was assumed that the total population 85 and over by sex and race from the 1980 census was accurate.<sup>36</sup>

For each sex-race group (White males, White females, Black and Other males, Black and Other females) deaths by age were projected to age 125, and these

<sup>32</sup> Unpublished data supplied by the Department of Health and Human Services, Health Care Finance Administration.

<sup>33</sup> The results of this procedure are in the form of unpublished data, supplied by Prithwis das Gupta, U.S. Bureau of the Census.

<sup>34</sup> Vincent, Paul, "La Mortalité des Vieillards," *Population*, Vol. 6, No. 2 (April-June, 1951), pp. 181-204.

<sup>35</sup> This was accomplished by computing cohort ratios of deaths by age for adjacent 3-year periods: the ratio of deaths age  $x+1$  in 1980-82 to deaths age  $x$  in 1979-81. These ratios were multiplied by deaths age  $x$  in each year of the projection to obtain deaths age  $x+1$  in the following year.

<sup>36</sup> For the present application, the procedure was initially carried out for the July 1, 1980, population and projected back to April 1. The results were adjusted to exactly reproduce the enumerated population 85 and over as of the census date.



projected deaths were used to estimate the population of each single year of age from 85 to 100 and over by the method of extinct generations. The resulting age distribution was adjusted pro rata to sum to the population 85 and over. A comparison of the census population 85 and over by age tabulated from the 1980 census with the 1980 base population used in our estimates is shown in table DD. The modification resulted in a 57 percent reduction in the number of persons 100 years of age and older. The 95-to-99 category was reduced by 13 percent; the 90-to-94 category by two percent. As a result of this, the 85-to-89 category was increased by three percent.

### Estimation of the Population by Sex, Race, and Hispanic Origin

Estimates of the U.S. population by sex for the three major race groups, White, Black, and Other, were derived by updating the total population including Armed Forces overseas at the time of the last census, year by year, through the components of population change. The estimates of the Hispanic population were derived the same way, although they were developed independently of the race estimates, and the sources for the components of change were different. The following formula was applied for each sex-race group, and for male and female Hispanics:

- (1) Last census count of resident population,
- + (2) Armed Forces overseas on the census date,
- + (3) births to resident women,
- (4) deaths, including deaths to the Armed Forces overseas,

- + (5) net civilian immigration (comprising the groups shown in table V),
- + (6) net inductions into the Armed Forces from overseas, to obtain the total U.S. population including Armed Forces overseas,<sup>37</sup>
- (7) Armed Forces overseas on the estimate date, to obtain *resident population*,
- (8) Armed Forces in the United States on the estimate date, to obtain *civilian population*.

For the Asian or Pacific Islander and American Indian populations, data on the Armed Forces overseas were not available. To overcome this problem, estimates shown in table J for Other races, American Indians, and Asians or Pacific Islanders were carried out for the resident population, rather than the total population including Armed Forces overseas. "Net inductions to the Armed Forces from overseas" was replaced by "net movement of the Armed Forces from overseas to the United States," which was estimated for Other races, and allocated pro rata to the two specific race categories.

### Distribution of Sex-Race and Sex-Hispanic Origin Groups by Age

**The cohort-component method.** The standard procedure for estimating the age distribution of a population, which can be applied to any sex-race category, starts with the age distribution of the total population at the

<sup>37</sup> For pre-1980 intercensal periods, a pro rata share of the error of closure is added at this point to obtain a population estimate consistent with both the initial and the final census.

Table DD. Population 75 Years Old and Over, by Age Group, Reported and Modified: April 1, 1980

Age group	Reported in census	Modified	Age group	Reported in census	Modified
75 years and over.....	9,968,822	9,968,822	90-94 years.....	556,592	544,899
75-79 years.....	4,793,722	4,793,722	90 years.....	175,900	170,350
75 years.....	1,111,480	1,116,769	91 years.....	140,003	134,404
76 years.....	1,028,927	1,034,257	92 years.....	101,492	103,690
77 years.....	951,774	955,246	93 years.....	78,233	78,317
78 years.....	828,866	879,733	94 years.....	60,964	58,138
79 years.....	872,675	807,717	95-99 years.....	131,079	114,532
80-84 years.....	2,935,033	2,935,033	95 years.....	46,219	41,990
80 years.....	723,049	723,049	96 years.....	32,789	29,480
81 years.....	640,276	640,276	97 years.....	23,471	20,179
82 years.....	566,548	566,548	98 years.....	16,215	13,592
83 years.....	527,982	527,982	99 years.....	12,385	9,291
84 years.....	477,178	477,178	100 years and over.....	32,194	14,004
85-89 years.....	1,520,202	1,566,632	85 years and over.....	2,240,067	2,240,067
85 years.....	412,549	419,321			
86 years.....	350,655	365,270			
87 years.....	306,906	311,305			
88 years.....	236,314	259,275			
89 years.....	213,778	211,461			

census date. Each single-year age group of a given category (White males, Hispanic females, etc.) is "aged" 1 year, with the next year's zero age group defined by the births during the year. The population is then estimated by subtracting deaths by age, adding net civilian immigration by age and net recruits to the Armed Forces from overseas by age. This procedure, known as the cohort-component method, updates the age distribution one year, and exactly reproduces the total population by race or Hispanic origin previously estimated, as all of the steps are additive.

A major weakness of the cohort-component method concerns the presence of an undercount in the census base population that is highly differentiated by age. The cohort-component procedure, in "aging" each age group through the estimating period, would cause the age pattern of the undercount to become older as well. This would impair the year-to-year comparability of the estimated age groups. A variant of the cohort-component method, known as the *inflation-deflation method*, effectively addresses this problem, provided that estimates are available for the proportions of the actual population that the census enumerates in each age group (net coverage rates). These coverage rates have been estimated for the three major race groups, by age and sex, so the inflation-deflation method (discussed below) could be applied in the computation of the age-sex-race estimates. Coverage ratios have not been reliably estimated for the Hispanic-origin population, so the simpler cohort-component procedure was applied to the population of Hispanic origin. To correct for spurious irregularities in the single-year age distribution for Hispanics, the 1980 census age distribution was smoothed using Sprague multipliers.

**The inflation-deflation method.** The object of this method is to preserve the actual pattern of population change by age rather than by birth cohort (a group of persons born during the same year). The census population base for a category (e.g. Black males), including Armed Forces overseas is "inflated" by dividing each age-sex-race group by its coverage rate to adjust for estimated net census undercount. The resulting inflated groups (age, sex, and race) are carried forward, or "aged," as in the cohort-component procedure, adding births to get age zero in each year, subtracting deaths, and adding net civilian immigration (and net recruits to the Armed Forces from overseas). This produces an estimated population by age that has built into it an adjustment for the net undercount. (This adjusted population is shown in table A-1 for April 1, 1980, and July 1, 1988). The estimates for each age group are then "deflated" to census levels to remove the net undercount, using the same coverage rates. Unlike the cohort-component procedure, this operation is not precisely additive, so a small pro-rata adjustment is necessary to guarantee that the age groups will sum to the sex-race population previously estimated.

Although the precise amount of undercount in the 1980 census is not known, the inflation-deflation method, even based on approximate coverage rates, provides superior results to the conventional cohort-component method.<sup>38</sup>

The coverage factors (table A-2) used in this report were derived from estimates of net census undercount developed by the method of demographic analysis. In this method, estimates of the population in age-sex-race categories for the census date are developed based on data essentially independent of the census; including birth, death, and immigration statistics, expected sex ratios, Medicare data, and life tables. These estimates are then compared to the corresponding census counts to yield estimates of net census undercount.<sup>39</sup>

Simulations using a range of undercount estimates show relative insensitivity of the population estimates to assumptions regarding the level of the undercount although they are sensitive to assumptions regarding the distribution of the undercount. The insensitivity to level occurs because the assumed undercount is both added to the initial (census) population and subtracted from the final (estimated) population. Fortunately, the age patterns, race differences, and sex differences in net undercount, as measured by the coverage estimates based on demographic analysis, are believed to be quite robust with regard to possible errors in the underlying data and assumptions.

## Estimation of the Components of Population Change

Aside from the evaluation of census coverage and reporting of characteristics, there are few pitfalls in the methods of producing estimated population from the components of change: change in population is, in demographic accounting terms, the straightforward addition and subtraction of births, deaths, and residential mobility in and out of a defined territory. The aging of a population, moreover, is defined precisely by the passage of time between reference dates. Far more problematic is the estimation of the components of population change themselves, with their age-sex-race distributions, which often depends on incomplete data and indirect procedures.

### Births and deaths: estimates by age, sex, and race.

The National Center for Health Statistics (NCHS), Department of Health and Human Services tabulates births, by sex and race, and deaths, by age, sex, and race, for the

<sup>38</sup> Prithwis das Gupta and Jeffrey S. Passel, "A Critical Review of the Census Bureau's Inflation-Deflation Method," U.S. Bureau of the Census, unpublished, 1984.

<sup>39</sup> U.S. Bureau of the Census, "The Coverage of the Population in the 1980 Census," 1980 Census of Population and Housing, Vol. PHC-E4, by Robert E. Fay, Jeffrey S. Passel, and J. Gregory Robinson, pp. 19-20.

resident population. Final tabulations are based on an accounting of all events that occur within the United States to U.S. residents and are reported to NCHS. When the estimates in this report were produced, final data were available through 1986. NCHS supplied provisional data for 1987 and 1988. The provisional estimates of "All other" (Black and Other races) births for 1987 and through June of 1988 were distributed pro rata to Black and to Other races using final 1986 data. For the second half of 1988, the Black and Other births were prorated using final 1987 data that became available since the July 1, 1988 estimates were produced.<sup>40</sup> The Current Mortality Sample of death certificates from NCHS formed the basis for a distribution of provisional estimates of resident deaths by race. Data provided by the Department of Defense and the Coast Guard have been used to estimate deaths of military personnel.

For all years, Medicare data are used to determine the distribution of deaths to persons aged 70 and over by age. As previously discussed, Medicare is deemed a very reliable source of reported age at death for the elderly, as enrollees must prove their age upon admission to the program. Age 70 is chosen as the minimum age at which to rely on this source, because it can be assumed that most persons who enroll in Medicare will do so within five years of reaching age 65, which is the legal minimum age for enrollment. To allow for the small proportion of persons who are not enrolled for Medicare after age 70, the distribution of Medicare deaths by age in each sex-race group is adjusted to sum to the total deaths 70 years of age and over from NCHS reports.

In this report, the number of births was adjusted for underregistration through March, 1970. For the accounting of total population by sex and race, the correction was dropped after April 1, 1970, because it was estimated that the registration of births was over 99 percent complete. For estimates of the population age zero each year by the inflation-deflation method, births adjusted for underregistration were used (even after 1970) to estimate the population (by race and sex) adjusted for net census undercount. Along with all other age groups, age zero was then adjusted back to census level through multiplication by the coverage ratio.

**Births and deaths: estimates for the Hispanic origin population.** The estimation of births for the Hispanic population relies on more indirect procedures. Because Hispanic origin on birth certificates is not available for all States, there is no administrative source that provides a complete accounting of all Hispanic births in the Nation. NCHS provided the number of births to Hispanic mothers for 1980 through 1986 for those States that report them; 22 States in 1980 and 1981, 23 in 1982, and 24

since 1983. The reporting States account for nearly 90 percent of all Hispanic women 15 to 44 years of age enumerated in the 1980 census. Estimates of births for the national Hispanic population were obtained by dividing the reported births by the percentage of women 15 to 44 counted in the reporting States. This method assumes that the general fertility rate (births per 1,000 women 15 to 44) for the Hispanic population in the non-reporting States equals the rate in the reporting States. From the end of 1986 through March 31, 1988, age-specific rates of childbearing for Hispanic women were computed from the June 1987 and June 1988 supplements to the Current Population Survey. These were applied to estimates of the number of Hispanic women by age to produce the number of births. For April 1, 1988, through December 31, 1988, births were estimated the same way except that the age-specific fertility rates are an average of estimates based on the Current Population Survey for the two years ending March 31 of 1987 and 1988.<sup>41</sup>

Administrative data on deaths to the Hispanic origin population, like the data on births, suffer from problems of incomplete reporting. Because mortality is less subject to short-term fluctuations than fertility, deaths were estimated from life-table-based age-specific survival rates, assumed constant through the estimating period (1980 to 1988).

The cohort component procedure used to estimate the Hispanic population by age and sex, because it is carried out year by year, provides a distribution of the population by age and sex that can be used to estimate deaths by age and sex for the year that follows. This is accomplished by applying life table survival ratios to the population by age and sex, which estimate, for each birth cohort, the number of persons that survive and the number that die by the next estimate date. The survival ratios are determined from a life table. For the present series of estimates, a life table was computed for the period from 1979 to 1981, and the resulting survival ratios were assumed to persist throughout the period of the estimates, until January 1, 1989.

The Hispanic life table for 1979 to 1981 was based almost entirely on two sources of data.<sup>42</sup> One was a 1979-81 life table for the Spanish-surnamed in California constructed by the California Center for Health Statistics.<sup>43</sup> The 1980 census Spanish surname list was used to determine both the population by age and sex

<sup>40</sup> National Center for Health Statistics. Advance report of final natality statistics, 1987. *Monthly Vital Statistics Report*, Vol. 38, No. 3 supplement. Hyattsville, MD. Public Health Service, 1989.

<sup>41</sup> Unpublished data supplied by Jeffrey S. Passel, U.S. Bureau of the Census. For operational reasons, births and deaths, as well as net civilian immigration, were first estimated for years ending March 31. Births and deaths for calendar years and years ending June 30, shown in tables 7 and 8 of this report, are determined by weighted averages.

<sup>42</sup> The complete life table was supplied by Gregory Spencer of the U.S. Bureau of the Census.

<sup>43</sup> Oreglia, Anthony, "California Life Expectancy: Abridged Life Tables for California and Los Angeles County, 1979-81," California Center for Health Statistics, *Data Matters*, Report Register No. 83-C1031 (July 1983).

and the number of deaths by age and sex for the California Spanish-surnamed population for the three-year period.<sup>44</sup> Deaths and population so derived provided age-specific death rates for the Spanish-surnamed population.

The second major data source for the life table, used to estimate mortality for person aged 65 and over, was a file of Medicare enrollees and deaths to Medicare enrollees, supplied by the Health Care Finance Administration. Once again, the 1980 Spanish surname list was used to determine the Spanish-surnamed component of both population and deaths, from which age-specific death rates were computed. While Medicare data are available only for persons of eligible age (65 and over), they are especially useful for estimating the mortality of the elderly for two reasons; 1) deaths and population are both from the same data universe, and 2) because age must be proven to qualify for the program, there is relatively little chance of age misreporting.

The life table was produced by combining age-specific death rates obtained primarily from these two sources. For age zero, the death rate was computed as an average of the rate for California in 1979-81 with a 1980 rate computed for Texas.<sup>45</sup> The data base was broadened to include Texas because of uncertainty in the reliability of reporting of infant deaths. Mortality rates for the age groups 1 to 4 through 65 to 69 were from the California data. The rate for 70 to 74 was computed as the ratio of the rate for 70 to 74 to the rate for 65 to 69 from Medicare, multiplied by the 65 to 69 rate from California. The Medicare rates were used for ages 75 to 79 through 90 to 94. Because of the scarcity of deaths to Hispanics 95 years of age and over, mortality rates were adapted from factors developed from research done by the Social Security Administration<sup>46</sup> that applied to the entire population.<sup>47</sup>

**Estimates of net civilian immigration.** Net civilian immigration was derived by combining estimates for six major sources of immigration: (1) legal alien immigration, (2) refugees, (3) net arrivals from Puerto Rico, (4) net arrivals of other civilian citizens, (5) net undocumented immigration, and (6) emigration.

**Legal alien immigration.** Estimates of the number of legal alien immigrants entering the United States (excluding undocumented immigrants) were derived from statistics provided by the Immigration and Naturalization

Service (INS), Department of Justice. For the 1950's, the race distribution of immigrant aliens was supplied by the INS.<sup>48</sup> From July, 1961 to September, 1987, census data on the race of the foreign-born population by country of birth were used to estimate the race distribution of alien immigrants. For the period from mid-1961 to March, 1970, special 1970 census tabulations of the foreign-born population that entered the country from 1960 to 1964 and from 1965 to 1970 by race and sex were used to estimate immigrant race distributions for the first and second half of the 1960's. The tabulation of foreign-born entrants by country, race, and sex for 1965 to 1970 was also used to distribute the race of alien immigrants from April, 1970 to June, 1979, and a similar 1980 census tabulation for 1975 to 1980 was used to distribute—by both race and Hispanic origin—immigrants from July, 1979, to September, 1987.

The procedure used to distribute immigrants by race from census data was a pro rata allocation of immigrants by age, sex, and country of birth from the census tabulation of 5-year entrants. To take the post-1980 period as an example, the race distribution was estimated by assuming that male and female immigrants native to each country or group of countries in the 1980 tabulation had the same proportional distribution by race, at every age group, as the 1975-80 entrants of the same sex. A similar, but not identical logic was used to determine the proportion Hispanic. If between 10 percent and 80 percent of the 1975-80 entrants from a country were of Hispanic origin, alien immigrants born in that country were assumed to have the same proportion Hispanic as the 1975-80 entrants. Countries in this category included Panama, Brazil, Portugal, the Philippines, Cape Verde, and a small subgroup of the West Indies. Immigrants born in countries whose native 1975-80 entrants to the United States were more than 80 percent Hispanic were all assumed to be Hispanic. These countries were confined to Spain and the Spanish-speaking countries of Latin America. Immigrants born in the rest of the world (less than 10 percent Hispanic among 1975-80 entrants) were assumed to be non-Hispanic.

**Refugees.** Southeast Asian, Cuban, and Haitian aliens who entered the United States on a conditional basis and later adjusted to permanent resident status were added to the population estimates in the year of entry rather than the year that they appeared in official immigration statistics. Data on refugees and entrants to the United States were provided by the Office of Refugee Resettlement, Department of Health and Human

<sup>44</sup> Jeffrey S. Passel and David L. Word, "Constructing the List of Spanish Surnames for the 1980 Census: An Application of Bayes' Theorem," presented at the 1980 meeting of the Population Association of America.

<sup>45</sup> Unpublished information provided by Jeffrey S. Passel of the U.S. Bureau of the Census.

<sup>46</sup> Joseph F. Faber, "Life Tables for the United States: 1900 to 2050," Social Security Administration, Office of the Actuary, Actuarial Study No. 87 (September 1982).

<sup>47</sup> For a more detailed description of the Hispanic life table, see Current Population Reports, Series P-25, No. 995, *Projections of the Hispanic Population: 1983 to 2080*, by Gregory Spencer.

<sup>48</sup> For a more detailed description of the method of estimating immigration for the 1950's, see Current Population Reports, Series P-25, No. 310, *Estimates of the Population of the United States and Components of Change by Age, Color, and Sex: 1950 to 1960*.

Services.<sup>49</sup> Race and Hispanic origin were determined for refugees directly by their country of origin: Southeast Asians were assumed to be Asian or Pacific Islander and not Hispanic, Cubans were assumed to be White and Hispanic, and Haitians were assumed to be Black and not Hispanic.

**Net arrivals from Puerto Rico.** Estimates of the net movement of persons between Puerto Rico and the United States mainland were based on the movement of airline passengers in and out of the San Juan airport, as reported by the Puerto Rico Planning Board. While most registered air passengers were not actually residential migrants, it was assumed that over a period of a year, the difference between departures from Puerto Rico and arrivals to Puerto Rico would approximate the number of net changes of residence from the island to the United States. Net residential migration was then determined as a centered 12-month moving average of the net air departures from Puerto Rico. Some spuriousness is inherent in this assumption, as not all arrivals or departures from the San Juan airport originate from or are destined for the United States mainland. A tourist arriving in Puerto Rico by ship (e.g. from another Caribbean location), then departing from San Juan by air would count only as a departure from Puerto Rico, increasing by one, erroneously, the net migration from Puerto Rico to the United States. The reverse would happen in the case of a tourist flying from the United States to Puerto Rico, then proceeding by ship to another outlying area or foreign country. The estimates tacitly assume that these two types of event cancel each other out.<sup>50</sup> The distribution by age and sex of net migration from Puerto Rico is based on the difference between the age-sex distribution of migrants arriving in the United States from Puerto Rico from 1975 to 1980, and the age-sex distribution of migrants from the United States to Puerto Rico, as reported in the 1980 census. All net migrants from Puerto Rico are assumed to be White and Hispanic.

**Net arrivals of other civilian citizens.** The category of net arrivals of other civilian citizens was estimated on the basis of the change in the number of civilian Federal employees overseas, their dependents, and the dependents of the Armed Forces overseas, as reported by the

Department of Defense and the Office of Personnel Management. A change in the size of the overseas population of civilian U.S. citizens, minus its births (estimated by the number of births occurring in U.S. military hospitals located abroad) was assumed to indicate net movement to or from the United States.<sup>51</sup> The net movement of civilian citizens overseas not affiliated with the Federal Government (students, business persons, etc.) was not taken into account, and is therefore assumed to be zero. Data from the Office of Personnel Management were used to distribute the estimates of net civilian citizen arrivals by age, sex, and race.

**Net undocumented immigration.** Estimates of net undocumented immigration to the United States have been incorporated in the population estimates for all years since April, 1980, although we have no direct count of their number. The previously cited study by Warren and Passel inferred undocumented immigrants by comparing 1980 census data on the foreign born by year of entry and country of birth with INS data on legal immigration and registered aliens.<sup>52</sup> According to this analysis, 2,057,000 undocumented aliens residing in the United States were counted in the 1980 census, of whom 941,000 entered the United States during the 1975-80 period. Supplements to the April 1983 and June 1986 Current Population Survey were used to update the census estimates of undocumented immigration.<sup>53</sup> Although subject to some limitations, these studies found an annual net increase of 100,000 to 300,000 in the undocumented alien population for the 1980-86 period. On the basis of these studies, an estimate of 200,000 net undocumented immigrants for each year since 1980 has been used for the population estimates shown in this report.

The distribution by race is based on the distribution by country of the same undocumented immigrants in the 1980 census and census data on the race distribution of the foreign-born population by country. The number of undocumented aliens of Hispanic origin, (141,000 of the total 200,000 per year) is determined by the country of origin of the 941,000 undocumented immigrants counted in 1980 that arrived between 1975 and 1980. The age-sex distribution for the undocumented immigrants (Hispanic, and by race) is based on the age-sex distribution of the same group of 1975-80 undocumented arrivals.

<sup>49</sup> Office of Refugee Resettlement, *Report to Congress: Refugee Resettlement Program*, January 31, 1988, and previous issues dating back to 1981.

<sup>50</sup> Other extraneous migratory events involving flights in and out of Puerto Rico, assumed to cancel each other out, are as follows:

a. Immigrants from foreign countries to Puerto Rico and to other outlying areas are counted with immigrants to the United States (as legal aliens).

b. Immigrants from other outlying areas and foreign countries to Puerto Rico are counted as migrants out of the United States.

c. Emigrants from Puerto Rico to other outlying areas and foreign countries are counted as migrants from Puerto Rico to the United States.

<sup>51</sup> For the purposes of this estimation procedure, the few deaths to the U.S. civilian population overseas, the balance of U.S. citizens who leave Federal employment but remain overseas, and the U.S. citizens living overseas who accept Federal employment was ignored.

<sup>52</sup> See Robert Warren and Jeffrey S. Passel, *op. cit.*, and Jeffrey S. Passel and Karen A. Woodrow, "Geographic Distribution of Undocumented Immigrants: Estimates of Undocumented Aliens Counted in the 1980 Census by State," *International Migration Review*, Vol. 18 (Fall, 1984), pp. 642-671.

<sup>53</sup> Jeffrey S. Passel and Karen A. Woodrow, "Change in the Undocumented Alien Population in the United States, 1979-1983," *International Migration Review*, Vol. 21, No. 4 (Winter, 1987), pp. 1304-1334; Woodrow, Passel, and Warren, *op. cit.*

**Emigration of legal residents.** Emigration of legal residents of the United States to foreign countries is the last component of net civilian immigration to be considered for which we have no direct administrative information since 1957. In that year, the Immigration and Naturalization Service stopped collecting data on emigrants.<sup>54</sup> The level of emigration for the 1970's was assumed in the development of the population estimates to be 36,000 per year, based on data on permanent arrivals from the United States published during the 1960's by various foreign countries and data provided by the Social Security Administration showing the migration of beneficiaries between the United States and foreign countries. As previously indicated, recent studies have provided evidence that the actual level of emigration during the 1970's was as high as 1,515,000, or an average of 151,500 per year. Estimates by Warren and Kraly of the emigration of foreign nationals, combined with an adjustment to include naturalized citizens, produced an estimate of 1.3 million foreign-born emigrants from April 1, 1970, to April 1, 1980, most of whom were not included in the previous estimate of 360,000 (36,000 per year).<sup>55</sup> As a result of these studies, the estimate of emigration used in postcensal population estimates for the period from April 1980 through the present has been increased to 160,000 per year. The previously estimated level of emigration for the 1970's (36,000 per year) has not been changed in this report or other published reports of the P-25 series, but will be revised in future editions of population estimates by age, sex, and race for the 1970's.

The estimated legal emigrants are distributed by race on the basis of 1970 census data on the race distribution of foreign-born immigrants from 52 countries that entered the United States between 1965 and 1970. The annual number of legal emigrants of Hispanic origin is estimated at 31,000, as follows.

1. The percent of Hispanic origin is computed by country of birth for foreign-born immigrants who entered the United States during 1975-80, based on the 1980 census.
2. These proportions are applied to estimates of foreign born emigration during 1975-79 by country.

<sup>54</sup> For information on the accounting of emigration prior to 1957, see Current Population Reports, Series P-25, No. 310, *op. cit.*

<sup>55</sup> U.S. Bureau of the Census, 1980 Census Preliminary Evaluation Results Memorandum Series, *op. cit.* The estimate of 1.3 million foreign-born emigrants during the 1970's was based on an estimate of 1,177,000 alien emigrants from Robert Warren and Ellen Percy Kraly, *The Elusive Exodus: Emigration from the United States*, Population Reference Bureau, Washington, DC. The estimate of 1,308,000 for total foreign-born emigrants assumes 90 percent of foreign immigrants to have been aliens and 10 percent naturalized citizens. See also Robert Warren and Jennifer Marks Peck, "Foreign-Born Emigration from the United States: 1960 to 1970," *Demography*, Vol. 17, No. 1, 1980, pp. 71-81.

3. The ratio of total Hispanic emigrants to total emigrants in 1975-79 is applied to the previously cited estimate of 133,000 foreign born emigrants per year for the 1980's.

Legal emigrants by age and sex are obtained from rates of emigration by age and sex determined for 1) the foreign-born population enumerated in the 1960 census, and 2) alien immigrants entering the country from 1960 to 1970, estimated in an analysis by Warren and Peck of the 1960 and 1970 census counts of the foreign-born.<sup>56</sup> These are applied to 1970-80 data on the foreign-born population and intercensal alien immigrants by race and Hispanic origin to obtain emigrants by age and sex. This distribution is adjusted to sum to the race and Hispanic totals previously estimated.

**Net inductions into the Armed Forces from overseas.** A final, minor component of population change, necessary to complete the accounting of total population including Armed Forces overseas, is net recruits (the excess of inductions over discharges) to the Armed Forces with respect to the overseas population. This is composed of the movement in and out of the five branches of the military by U.S. citizens residing outside the United States, primarily residents of outlying areas. It is estimated each year (from July 1 to July 1) as the change in the number of Armed Forces personnel whose preservice residence is outside of the 50 States and the District of Columbia. All of the net recruits are assumed to be White males, distributed to two age groups, 20 to 24 and 25 to 29, according to the distribution of the White male Armed Forces overseas estimated at mid-year (January 1). While the validity of this assumption has not been established, its impact on the estimates of population by age, sex, and race is very minor. For Hispanics, this component was treated as a residual, and was also of very little consequence.<sup>57</sup>

**Error of closure.** For the period prior to the 1980 census, there remains the error of closure. While not actually a component of population change, error of closure must be included in the accounting of differences between two past censuses. It is defined as the difference between (1) the population as shown by a census count and (2) the estimate of the population on that date as derived from the previous census count (e.g. 1970) and data on the components of population change for the intercensal period (e.g., 1970-80). For the 1970-80 period, the estimate of the error of closure

<sup>56</sup> Robert Warren and Jennifer Marks Peck, *op. cit.*

<sup>57</sup> Hispanic estimates were initially produced for the resident population and change in Armed Forces overseas was used as a proxy for net movement of Armed Forces from the United States to overseas. Consistent with this, net recruits to the Armed Forces from overseas for Hispanics were assumed to equal Hispanic deaths to the Armed Forces overseas.

is 4,590,000. Because this difference represents the balance of errors in the estimates of the components of change and differences in coverage of the two census counts, the size of the error of closure should not be taken as a measure of the accuracy of either the estimates of the individual components or the census counts; it combines both classes of error. The extremely large error of closure in the 1970's (compared with published estimates of 300,000 in the 1960's and 3,000 in the 1950's) has been attributed to (1) improvements in census coverage, (2) failure of the post-1970 estimates to allow for the 2.1 million undocumented aliens counted in 1980, and (3) duplicate counting in the 1980 census.<sup>58</sup> In preparing the intercensal estimates shown in this report, the error of closure was distributed over the 10-year intercensal period in order to obtain a smooth transition between the 1970 and 1980 census counts.<sup>59</sup>

### Estimation of the Resident and Overseas Armed Forces

While not a component of population change, the number of Armed Forces stationed inside and outside the United States define the difference between the three population types estimated; total population including Armed Forces overseas, resident population, and civilian population. Estimates of the Armed Forces are based on data on the size and distribution of the Armed Forces obtained from the Department of Defense and from the Army, Navy, Air Force, Marine Corps, and Coast Guard (Department of Transportation). Reserve forces on 3 and 6 months active duty for training, National Guard reserve forces on active duty for four months or more, and students at the military academies are included in the Armed Forces; reserve forces and national guardsmen on shorter tours of training and officers in the Public Health Service are not included. Crews of U.S. Naval vessels homeported in the United

States and not deployed to the overseas fleets are included in the United States resident population; those deployed to the overseas fleets and those homeported outside the United States are considered overseas. Estimates of the Armed Forces based on the Department of Defense and Department of Transportation data are used throughout for census dates, even though counts of the Armed Forces residing in the United States are obtained in the decennial censuses.

The distribution of the Armed Forces by age, sex, and race is based on data provided by the individual branches of the service for each July 1 estimate date and for the April 1, 1980, census date. The Hispanic origin component of the Armed Forces was estimated on the basis of data supplied by the Army and Marine Corps giving Hispanic military personnel inside and outside the United States by age and sex. It was assumed that the proportion of Hispanic origin in each age-sex group in the other three branches of the Armed Forces was equal to the proportion in the Army and Marines.

**Symbols.** In this report, a dash (—) means zero or round to zero, and "NA" means not available.

**Rounding.** The estimates shown in this report have been independently rounded to the nearest thousand from figures computed to the last digit; hence, the sums of parts shown may differ from the totals shown. Percents, rates, and averages are based on unrounded numbers.

### RELATED REPORTS

The table shown below lists other Current Population Reports containing estimates related to those shown in this report and specifies the years for which consistent data are provided.

Type of population estimate	Years covered	Series P-25 number
United States:		
By age, sex, and race . . . . .	1970-79	917
By age, sex, and race . . . . .	1960-69	519
By age, sex, and race . . . . .	1900-59	311
Total, monthly, by type of population . . .	1970-89	1051
Total and components of change by race	1940-69	802
Total and components of change, by age, sex, and color . . . . .	1950-60	310
States:		
Components of change and age . . . . .	1980-88	1044
Components of change and age . . . . .	1970-79	998

<sup>58</sup> U.S. Bureau of the Census, "The Coverage of Population in the 1980 Census," 1980 Census of Population and Housing, Vol. PHC-E4, by Robert Fay, Jeffrey S. Passel, and J. Gregory Robinson, pp. 19-20.

<sup>59</sup> Incorporating the results of previously cited research on the number of undocumented immigrants and legal emigrants during the 1970's in the intercensal estimates for this decade would yield an error of closure 300,000 to 400,000 lower than the estimate of 4,590,000 cited here. Additional research by J. Gregory Robinson of the Bureau of the Census on components of population change for the 1950's and 1960's has estimated the error of closure for these decades to be 887,000 for the 1950's and 781,000 for the 1960's; higher than what is currently published, although still lower than any estimate for the 1970's.

















Table 1. Total Population Including Armed Forces Overseas—Estimates, by Age, Sex, Race and Hispanic Origin: 1980 to 1988—Con.

(Numbers in thousands)

Table with 15 columns: Date and age, Total (Male, Female), White (Total, Male, Female), Black (Total, Male, Female), Other races (Total, Male, Female), and Hispanic Origin (Total, Male, Female). Rows include age groups from 40 to 44 years down to 34 years, and summary rows for July 1, 1981.

\*Persons of Hispanic origin may be of any race.















Table 2. Resident Population—Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1988—Con.

(Numbers in thousands)

Table with columns: Date and age, Total, Race (White, Black, Other races), and Hispanic origin (Total, Male, Female). Rows include age groups from 60 to 64 years down to 50 to 54 years, plus summary rows for July 1, 1986 and July 1, 1985.

\*Persons of Hispanic origin may be of any race



Table 2. Resident Population—Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1988—Con.

(Numbers in thousands)

Table with 16 columns: Date and age, Total, Male, Female, White (Total, Male, Female), Black (Total, Male, Female), Other races (Total, Male, Female), and Hispanic origin (Total, Male, Female). Rows include population data for July 1, 1985 and July 1, 1984, broken down by age groups and sex.

1 Persons of Hispanic origin may be of any race.











Table 2. Resident Population—Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1988—Con.

(Numbers in thousands)

Table with columns for Date and age, Total (Male/Female), Race (White, Black, Other races) (Total/Male/Female), and Hispanic origin (Total/Male/Female). Rows include age groups from 30 to 34 years to 24 years, with summary rows for median and mean age.

Persons of Hispanic origin may be of any race.













Table 3. Civliann Population—Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1988—Con.

[Numbers in thousands]

Table with columns: Date and age, Total, Race (White, Black, Other races), and Hispanic origin (Total, Male, Female). Rows include July 1, 1985 (ages 55-100, 5-100) and July 1, 1984 (ages 0-49).

1Persons of Hispanic origin may be of any race



Table 3. Civilian Population—Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1988—Con.

[Numbers in thousands]

Table with 16 columns: Date and age, Total, Male, Female, White (Total, Male, Female), Black (Total, Male, Female), Other races (Total, Male, Female), Hispanic origin (Total, Male, Female). Rows include age groups from July 1, 1984 to July 1, 1983.

Persons of Hispanic origin may be of any race.



Table 3. Civilian Population—Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1988—Con.

[Numbers in thousands]

Table with columns: Date and age, Total, Race (White, Black, Other races), and Hispanic origin (Total, Male, Female). Rows include July 1, 1983 and July 1, 1982, with various age groups and sub-categories.

Persons of Hispanic origin may be of any race









**Table 3. Civilian Population—Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1988—Con.**

(Numbers in thousands)

Date and age	Total			Race									Hispanic origin <sup>1</sup>			
	Total	Male	Female	White			Black			Other races			Total	Male	Female	
				Total	Male	Female	Total	Male	Female	Total	Male	Female				
<b>APRIL 1, 1980—Con.</b>																
25 to 29 years	19 231	9 444	9 787	16 435	8 161	8 274	2 287	1 047	1 240	509	236	273	1 364	668	678	
25 years	4 054	1 988	2 056	3 450	1 715	1 735	493	226	267	101	47	54	292	148	144	
26 years	3 913	1 921	1 992	3 348	1 662	1 686	485	213	252	100	46	54	282	142	140	
27 years	3 874	1 900	1 974	3 318	1 644	1 672	454	207	246	104	48	56	272	137	135	
28 years	3 659	1 794	1 864	3 134	1 555	1 579	427	194	233	98	46	53	263	132	131	
29 years	3 742	1 840	1 902	3 187	1 585	1 602	449	206	243	106	49	57	255	127	128	
30 to 34 years	17 365	9 489	8 876	14 993	7 408	7 585	1 880	856	1 024	492	226	266	1 122	552	570	
30 years	3 684	1 806	1 877	3 140	1 557	1 583	435	199	235	109	50	59	245	122	124	
31 years	3 566	1 742	1 824	3 082	1 512	1 550	400	182	218	104	48	57	236	118	119	
32 years	3 671	1 793	1 878	3 186	1 572	1 614	384	175	209	101	46	55	226	111	115	
33 years	3 613	1 765	1 848	3 168	1 562	1 604	352	160	192	96	44	52	214	105	109	
34 years	2 831	1 383	1 448	2 440	1 205	1 236	310	141	169	81	38	44	202	99	103	
35 to 39 years	13 821	6 719	7 101	11 999	5 893	6 106	1 452	651	801	370	175	194	851	412	438	
35 years	2 873	1 401	1 471	2 481	1 223	1 258	311	140	170	81	38	44	190	92	97	
36 years	2 897	1 408	1 489	2 523	1 239	1 284	297	133	164	78	37	41	178	86	91	
37 years	2 949	1 432	1 517	2 576	1 263	1 313	299	134	165	74	35	39	167	81	86	
38 years	2 571	1 246	1 325	2 233	1 094	1 140	270	120	150	68	33	36	160	78	83	
39 years	2 530	1 232	1 298	2 186	1 075	1 111	275	124	152	66	33	36	155	75	80	
40 to 44 years	11 601	5 640	5 960	10 052	4 934	5 118	1 252	563	689	296	144	153	711	343	367	
40 years	2 449	1 190	1 259	2 109	1 036	1 074	273	123	151	66	32	34	151	73	78	
41 years	2 360	1 149	1 211	2 050	1 007	1 043	249	112	137	61	30	31	146	71	76	
42 years	2 312	1 128	1 188	2 006	986	1 019	248	111	137	59	29	30	142	69	73	
43 years	2 226	1 081	1 145	1 934	948	986	236	106	130	56	27	29	138	67	71	
44 years	2 254	1 095	1 159	1 954	958	996	245	111	135	55	26	28	134	65	69	
45 to 49 years	11 065	5 364	5 701	9 672	4 734	4 938	1 148	517	632	245	114	132	621	300	321	
45 years	2 235	1 087	1 148	1 944	954	990	239	108	131	53	25	27	130	63	67	
46 years	2 134	1 035	1 099	1 855	909	946	229	102	126	50	23	27	126	61	65	
47 years	2 218	1 073	1 146	1 928	941	977	240	108	132	50	23	27	123	60	64	
48 years	2 160	1 048	1 112	1 903	932	971	212	95	117	45	21	26	121	59	63	
49 years	2 318	1 122	1 196	2 042	998	1 046	229	103	125	48	22	26	120	58	62	
50 to 54 years	11 704	5 615	6 089	10 354	5 010	5 344	1 135	507	628	215	97	117	564	270	294	
50 years	2 345	1 132	1 213	2 061	1 005	1 056	237	106	131	46	21	26	118	57	61	
51 years	2 293	1 104	1 189	2 029	986	1 043	221	98	122	44	20	24	116	56	61	
52 years	2 362	1 136	1 226	2 093	1 015	1 078	226	101	125	43	19	23	114	54	60	
53 years	2 336	1 119	1 218	2 074	1 001	1 073	221	99	122	41	19	22	110	53	58	
54 years	2 367	1 124	1 243	2 097	1 003	1 084	229	102	127	41	19	22	108	50	55	
55 to 59 years	11 614	5 481	6 133	10 393	4 927	5 466	1 041	468	573	180	85	95	454	217	237	
55 years	2 390	1 130	1 260	2 129	1 013	1 117	221	99	122	39	18	21	101	48	53	
56 years	2 330	1 102	1 227	2 082	990	1 082	210	95	116	37	17	20	97	46	50	
57 years	2 313	1 091	1 221	2 061	977	1 084	215	97	118	37	17	19	92	44	48	
58 years	2 330	1 100	1 231	2 097	993	1 103	199	90	109	34	16	18	86	41	45	
59 years	2 252	1 058	1 194	2 024	955	1 070	195	86	107	32	15	17	80	38	42	
60 to 64 years	10 088	4 670	5 418	9 078	4 221	4 858	874	388	486	135	63	72	321	147	174	
60 years	2 181	1 010	1 151	1 926	904	1 022	203	91	112	31	15	17	74	34	39	
61 years	2 074	964	1 110	1 867	871	986	179	80	99	28	13	15	67	31	36	
62 years	2 008	931	1 077	1 813	844	969	189	75	94	27	12	14	62	29	34	
63 years	1 931	889	1 042	1 745	807	938	181	70	91	25	12	13	60	27	33	
64 years	1 913	876	1 037	1 728	784	933	181	70	91	25	11	13	58	28	32	
65 to 69 years	8 782	3 903	4 880	7 892	3 517	4 375	779	333	447	111	53	58	264	116	148	
70 to 74 years	6 798	2 854	3 945	6 153	2 578	3 575	585	235	330	80	41	39	193	85	109	
75 to 79 years	4 794	1 846	2 948	4 351	1 868	2 483	388	153	235	54	26	28	138	59	77	
80 to 84 years	2 935	1 019	1 918	2 706	932	1 774	200	75	125	29	12	17	87	27	39	
85 to 89 years	1 567	496	1 070	1 445	454	991	108	37	71	14	5	9	34	14	21	
90 to 94 years	545	153	392	502	139	362	39	12	26	5	2	3	12	4	8	
95 to 99 years	115	29	86	103	25	77	11	3	7	1	0	1	2	1	2	
100 years and over	14	3	11	12	2	9	2	1	2	0	0	0	0	0	0	
5 to 13 years	31 159	15 923	15 237	25 691	13 165	12 526	4 629	2 330	2 298	839	427	412	2 708	1 375	1 333	
14 to 17 years	16 230	8 281	7 949	13 477	6 892	6 585	2 378	1 197	1 181	375	193	183	1 257	644	614	
18 to 21 years	16 853	8 281	8 572	14 239	7 030	7 209	2 237	1 045	1 192	377	186	191	1 274	648	626	
22 to 24 years	12 340	6 044	6 296	10 512	5 202	5 310	1 539	704	835	269	138	151	923	470	453	
16 years and over	169 618	80 311	89 306	147 660	70 410	77 470	18 144	8 201	9 944	3 593	1 700	1 892	9 556	4 660	4 878	
18 years and over	161 231	78 033	85 198	140 890	68 637	74 053	16 938	7 593	9 345	3 403	1 603	1 800	8 914	4 350	4 563	
65 years and over	25 549	10 305	15 245	23 162	9 316	13 846	2 092	849	1 243	295	140	155	709	305	404	
85 years and over	2 240	662	1 559	2 060	821	1 440	159	53	106	21	8	13	49	19	30	
Median age... years	30.1	28.9	31.3	30.9	29.7	32.2	24.9	23.6	26.1	26.9	28.0	27.6	23.2	22.6	23.8	
Mean age... years	34.1	32.7	35.3	34.8	33.4	36.1	29.7	28.4	30.6	29.3	28.7	29.6	26.6	26.1	27.5	

<sup>1</sup>Persons of Hispanic origin may be of any race.

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Table 5. Estimates of the Components of Population Change, for Calendar Years: 1940 to 1988

(U.S. population including Armed Forces overseas. Numbers in thousands. For meaning of symbols, see text)

Year (January 1-December 31)	Popula- tion at begin- ning of year	Percent change	Net change <sup>1</sup>	Components of change				Rate per 1,000 mid-year population				
				Natural increase	Births <sup>2</sup>	Deaths <sup>3</sup>	Net civilian immi- gration <sup>4</sup>	Net change	Natural increase	Births	Deaths	Net civilian immi- gration
1989.....	247,635	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
1988.....	245,231	0.98	2,404	1,738	3,908	2,170	667	9.8	7.1	15.9	8.8	2.7
1987.....	242,843	0.98	2,388	1,701	3,829	2,128	689	9.8	7.0	15.7	8.7	2.8
1986.....	240,532	0.96	2,311	1,651	3,757	2,106	660	9.6	6.8	15.5	8.7	2.7
1985.....	238,207	0.98	2,325	1,673	3,761	2,087	650	9.7	7.0	15.7	8.7	2.7
1984.....	235,961	0.95	2,246	1,629	3,669	2,040	615	9.5	6.9	15.5	8.6	2.6
1983.....	233,736	0.95	2,224	1,619	3,639	2,020	605	9.5	6.9	15.5	8.6	2.6
1982.....	231,405	1.01	2,332	1,705	3,681	1,975	626	10.0	7.3	15.8	8.5	2.7
1981.....	229,033	1.04	2,371	1,651	3,629	1,979	718	10.3	7.2	15.8	8.6	3.1
1980.....	226,451	1.14	2,582	1,622	3,612	1,990	845	11.3	7.1	15.9	8.7	3.7
1979.....	223,865	1.16	2,586	1,580	3,494	1,914	540	11.5	7.0	15.5	8.5	2.4
1978.....	221,477	1.08	2,388	1,405	3,333	1,928	508	10.7	6.3	15.0	8.7	2.3
1977.....	219,179	1.05	2,298	1,426	3,327	1,900	394	10.4	6.5	15.1	8.6	1.8
1976.....	217,095	0.96	2,084	1,258	3,168	1,910	353	9.6	5.8	14.5	8.8	1.6
1975.....	214,931	1.01	2,165	1,251	3,144	1,894	449	10.0	5.8	14.6	8.8	2.1
1974.....	212,932	0.94	1,999	1,225	3,160	1,935	316	9.3	5.7	14.8	9.0	1.5
1973.....	210,985	0.92	1,947	1,163	3,137	1,974	331	9.2	5.5	14.8	9.3	1.7
1972.....	208,917	0.99	2,068	1,293	3,258	1,965	325	9.9	6.2	15.5	9.4	1.5
1971.....	206,466	1.19	2,451	1,626	3,556	1,930	387	11.8	7.8	17.1	9.3	1.9
1970.....	203,849	1.28	2,617	1,812	3,738	1,927	438	12.8	8.8	18.2	9.4	2.1
1969.....	201,760	1.04	2,089	1,696	3,630	1,934	453	10.3	8.4	17.9	9.5	2.2
1968.....	199,808	0.98	1,952	1,587	3,535	1,948	398	9.7	7.9	17.6	9.7	2.0
1967.....	197,736	1.05	2,072	1,694	3,555	1,861	414	10.4	8.5	17.9	9.4	2.1
1966.....	195,539	1.12	2,197	1,773	3,642	1,869	455	11.2	9.0	18.5	9.5	2.3
1965.....	193,223	1.20	2,315	1,972	3,801	1,830	373	11.9	10.1	19.6	9.4	1.9
1964.....	190,668	1.34	2,555	2,271	4,070	1,799	317	13.3	11.8	21.2	9.4	1.7
1963.....	188,013	1.41	2,655	2,327	4,142	1,815	361	14.0	12.3	21.9	9.6	1.9
1962.....	185,242	1.50	2,771	2,455	4,213	1,758	351	14.9	13.2	22.6	9.4	1.9
1961.....	182,287	1.62	2,955	2,615	4,317	1,703	373	16.1	14.2	23.5	9.3	2.0
1960.....	179,386	1.62	2,901	2,599	4,307	1,708	328	16.1	14.4	23.8	9.5	1.8
1959.....	176,447	1.67	2,939	2,650	4,313	1,663	292	16.5	14.9	24.3	9.4	1.6
1958.....	173,533	1.68	2,915	2,623	4,279	1,655	292	16.7	15.0	24.5	9.5	1.7
1957.....	170,571	1.74	2,961	2,691	4,332	1,641	272	17.2	15.6	25.2	9.5	1.6
1956.....	167,513	1.83	3,058	2,672	4,244	1,572	387	18.1	15.8	25.1	9.3	2.3
1955.....	164,588	1.78	2,925	2,591	4,128	1,537	337	17.6	15.6	24.9	9.3	2.0
1954.....	161,690	1.79	2,898	2,613	4,102	1,489	287	17.8	16.0	25.2	9.1	1.8
1953.....	158,973	1.71	2,717	2,457	3,989	1,531	261	17.0	15.3	24.9	9.6	1.6
1952.....	156,309	1.70	2,663	2,421	3,933	1,512	242	16.9	15.4	25.0	9.6	1.5
1951.....	153,622	1.75	2,688	2,344	3,845	1,501	325	17.4	15.1	24.8	9.7	2.2
1950.....	151,135	1.65	2,486	2,177	3,645	1,468	299	16.3	14.3	23.9	9.6	2.0
1949.....	148,580	1.72	2,556	2,215	3,667	1,452	323	17.1	14.8	24.5	9.7	2.2
1948.....	146,047	1.73	2,533	2,201	3,655	1,453	280	17.2	15.0	24.8	9.9	1.9
1947.....	143,394	1.85	2,653	2,379	3,834	1,455	238	18.3	16.4	26.5	10.1	1.6
1946.....	141,229	1.53	2,165	2,018	3,426	1,409	151	15.3	14.2	24.1	9.9	1.1
1945.....	139,767	1.05	1,462	1,324	2,873	1,549	162	10.4	9.4	20.5	11.0	1.2
1944.....	138,170	1.16	1,597	1,372	2,954	1,582	202	11.5	9.9	21.3	11.4	1.5
1943.....	136,371	1.32	1,799	1,615	3,118	1,503	148	13.1	11.8	22.7	10.9	1.1
1942.....	134,657	1.27	1,714	1,595	3,002	1,407	83	12.7	11.8	22.2	10.4	0.6
1941.....	133,275	1.04	1,382	1,301	2,716	1,415	60	10.3	9.7	20.3	10.6	0.4
1940.....	132,054	0.92	1,221	1,138	2,570	1,432	77	9.2	8.6	19.4	10.8	0.6

<sup>1</sup>Includes estimates of overseas admissions into and discharges from the Armed Forces and the error of closure between censuses.<sup>2</sup>Adjusted for underregistration through March 1970.<sup>3</sup>Deaths occurring in the United States plus estimated deaths occurring to Armed Forces overseas.<sup>4</sup>Net civilian immigration prior to April 1, 1980. Excludes the net effect of undocumented immigration and an increase in the assumed level of emigration, as discussed in the text. The net effect for the 1970's would be an increase of about 300,000 to 400,000 for the decade. The rate of immigration prior to 1980 would also be increased.

Table 6. Estimates of the Components of Population Change for Years Ending June 30: 1940 to 1988

(U.S. population including Armed Forces overseas. Numbers in thousands. For meaning of symbols, see text)

Year (July 1-June 30)	Popula- tion at begin- ning of year	Percent change	Net change <sup>1</sup>	Components of change				Rate per 1,000 mid-year population				
				Natural increase	Births <sup>2</sup>	Deaths <sup>3</sup>	Net civilian immig- ration <sup>4</sup>	Net change	Natural increase	Births	Deaths	Net civilian immig- ration
1988-89	246,329	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
1987-88	243,934	0.98	2,395	1,684	3,853	2,169	714	9.8	6.9	15.7	8.8	2.9
1986-87	241,625	0.96	2,309	1,670	3,790	2,120	639	9.5	6.9	15.6	8.7	2.6
1985-86	239,279	0.98	2,346	1,673	3,766	2,092	673	9.8	7.0	15.7	8.7	2.8
1984-85	237,001	0.96	2,278	1,662	3,731	2,069	613	9.6	7.0	15.7	8.7	2.6
1983-84	234,799	0.94	2,202	1,580	3,614	2,034	621	9.3	6.7	15.3	8.6	2.6
1982-83	232,520	0.98	2,279	1,682	3,681	1,999	597	9.8	7.2	15.7	8.6	2.6
1981-82	230,138	1.03	2,382	1,697	3,666	1,969	683	10.3	7.3	15.8	8.5	2.9
1980-81	227,757	1.05	2,381	1,621	3,619	1,998	757	10.4	7.1	15.8	8.7	3.3
1979-80	225,055	1.20	2,702	1,607	3,563	1,955	750	11.9	7.1	15.7	8.6	3.3
1978-79	222,585	1.11	2,471	1,513	3,415	1,902	486	11.0	6.8	15.3	8.5	2.2
1977-78	220,239	1.06	2,345	1,372	3,304	1,932	496	10.6	6.2	14.9	8.7	2.2
1976-77	218,035	1.01	2,204	1,392	3,274	1,882	335	10.1	6.4	14.9	8.6	1.5
1975-76	215,97	0.95	2,062	1,218	3,127	1,909	376	9.5	5.6	14.4	8.8	1.7
1974-75	213,84	0.99	2,119	1,256	3,181	1,925	402	9.9	5.8	14.8	9.0	1.9
1973-74	211,909	0.92	1,945	1,161	3,111	1,951	329	9.1	5.5	14.6	9.2	1.5
1972-73	209,896	0.96	2,013	1,222	3,195	1,973	339	9.5	5.8	15.1	9.4	1.6
1971-72	207,661	1.08	2,235	1,446	3,393	1,947	343	10.7	6.9	16.2	9.3	1.6
1970-71	205,052	1.27	2,608	1,785	3,713	1,927	395	12.6	8.6	18.0	9.3	1.9
1969-70	202,677	1.17	2,375	1,746	3,676	1,930	505	11.7	8.6	18.0	9.5	2.5
1968-69	200,706	0.98	1,971	1,637	3,583	1,946	383	9.8	8.1	17.8	9.6	1.9
1967-68	198,712	1.00	1,994	1,609	3,520	1,911	420	10.0	8.1	17.6	9.6	2.1
1966-67	196,560	1.09	2,152	1,755	3,608	1,852	429	10.9	8.9	18.2	9.4	2.2
1965-66	194,303	1.16	2,257	1,865	3,716	1,851	425	11.5	9.5	19.0	9.5	2.2
1964-65	191,889	1.26	2,414	2,119	3,940	1,821	323	12.5	11.0	20.4	9.4	1.7
1963-64	189,242	1.40	2,647	2,338	4,119	1,782	341	13.9	12.3	21.6	9.3	1.8
1962-63	186,538	1.45	2,704	2,382	4,185	1,804	356	14.4	12.7	22.3	9.6	1.9
1961-62	183,691	1.55	2,846	2,516	4,259	1,744	365	15.4	13.6	23.0	9.4	2.0
1960-61	180,671	1.67	3,020	2,667	4,350	1,683	385	16.6	14.6	23.9	9.2	2.1
1959-60	177,830	1.60	2,841	2,583	4,279	1,697	270	15.8	14.4	23.9	9.5	1.5
1958-59	174,882	1.69	2,948	2,651	4,298	1,647	298	16.7	15.0	24.4	9.3	1.7
1957-58	171,984	1.68	2,898	2,630	4,313	1,683	269	16.7	15.2	24.9	9.7	1.6
1956-57	168,903	1.82	3,081	2,731	4,312	1,581	350	18.1	16.0	25.3	9.3	2.1
1955-56	165,931	1.79	2,972	2,597	4,167	1,570	376	17.7	15.5	24.9	9.4	2.2
1954-55	163,026	1.78	2,905	2,614	4,119	1,505	294	17.7	15.9	25.0	9.1	1.8
1953-54	160,184	1.77	2,842	2,559	4,045	1,487	285	17.6	15.8	25.0	9.2	1.8
1952-53	157,553	1.67	2,631	2,421	3,951	1,570	211	16.6	15.2	24.9	9.6	1.3
1951-52	154,878	1.73	2,675	2,349	3,859	1,510	323	17.1	15.0	24.7	9.7	2.1
1950-51	152,271	1.71	2,606	2,287	3,771	1,485	306	17.0	14.9	24.5	9.7	2.0
1949-50	149,767	1.67	2,504	2,174	3,638	1,465	308	16.6	14.4	24.1	9.7	2.0
1948-49	147,208	1.74	2,559	2,220	3,660	1,440	313	17.2	14.9	24.6	9.7	2.1
1947-48	144,698	1.73	2,510	2,201	3,658	1,457	263	17.2	15.1	25.0	10.0	1.8
1946-47	141,936	1.95	2,762	2,518	3,948	1,429	217	19.3	17.6	27.5	10.0	1.5
1945-46	140,468	1.05	1,468	1,430	2,873	1,443	88	10.4	10.1	20.3	10.2	0.6
1944-45	138,916	1.12	1,552	1,298	2,937	1,639	231	11.1	9.3	21.0	11.7	1.7
1943-44	137,250	1.21	1,666	1,469	2,989	1,520	170	12.1	10.6	21.6	11.0	1.2
1942-43	135,361	1.40	1,889	1,717	3,168	1,451	129	13.9	12.6	23.2	10.6	0.9
1941-42	133,894	1.10	1,467	1,400	2,769	1,389	45	10.9	10.4	20.7	10.3	0.3
1940-41	132,594	0.98	1,300	1,206	2,631	1,425	72	9.8	9.0	19.7	10.7	0.5

<sup>1</sup>Includes estimates of overseas admissions into and discharges from the Armed Forces and the error of closure between censuses.<sup>2</sup>Adjusted for underregistration through March 1970.<sup>3</sup>Deaths occurring in the United States plus estimated deaths occurring to Armed Forces overseas.<sup>4</sup>Net civilian immigration prior to April 1, 1980, excludes the net effect of undocumented immigration and an increase in the assumed level of emigration, as discussed in the text. The net effect for the 1970's would be an increase of about 300,000 to 400,000 for the decade. The rate of immigration prior to 1980 would also be increased.

**Table 7. Estimates of the Components of Population Change, by Race and Hispanic Origin, for Calendar Years: 1960 to 1988**

(U.S. population including Armed Forces overseas. Numbers in thousands. For meaning of symbols, see text)

Year (January 1-December 31)	Popula- tion at begin- ning of year	Percent change	Net change <sup>1</sup>	Components of change				Rate per 1,000 mid-year population				
				Natural increase	Births <sup>2</sup>	Deaths <sup>3</sup>	Net civilian immig- ration <sup>4</sup>	Net change	Natural increase	Births	Deaths	Net civilian immig- ration
<b>WHITE</b>												
1989.....	208,617	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
1988.....	207,054	0.76	1,564	1,193	3,080	1,887	373	7.5	5.7	14.8	9.1	1.8
1987.....	205,492	0.76	1,562	1,182	3,034	1,852	381	7.6	5.7	14.7	9.0	1.8
1986.....	203,990	0.74	1,502	1,139	2,970	1,831	363	7.3	5.6	14.5	8.9	1.8
1985.....	202,463	0.75	1,527	1,172	2,991	1,820	353	7.5	5.8	14.7	9.0	1.7
1984.....	200,989	0.73	1,474	1,141	2,924	1,782	331	7.3	5.7	14.5	8.8	1.6
1983.....	199,516	0.74	1,473	1,138	2,904	1,766	334	7.4	5.7	14.5	8.8	1.7
1982.....	197,960	0.79	1,556	1,213	2,942	1,729	343	7.8	6.1	14.8	8.7	1.7
1981.....	196,415	0.79	1,545	1,177	2,909	1,732	366	7.8	6.0	14.8	8.8	1.9
1980 <sup>5</sup> .....	195,143	0.65	1,272	1,160	2,899	1,739	431	6.5	5.9	14.8	8.9	2.2
1979.....	193,247	0.98	1,895	1,132	2,808	1,677	271	9.8	5.8	14.5	8.6	1.4
1978.....	191,549	0.89	1,698	991	2,681	1,690	295	8.8	5.2	13.9	8.8	1.5
1977.....	189,891	0.87	1,657	1,027	2,691	1,665	223	8.7	5.4	14.1	8.7	1.2
1976.....	188,413	0.78	1,478	892	2,568	1,675	184	7.8	4.7	13.6	8.9	1.0
1975.....	186,955	0.78	1,459	891	2,552	1,661	173	7.8	4.7	13.6	8.9	0.9
1974.....	185,515	0.78	1,440	878	2,576	1,698	175	7.7	4.7	13.8	9.1	0.9
1973.....	184,118	0.76	1,396	822	2,551	1,729	195	7.6	4.4	13.8	9.4	1.1
1972.....	182,603	0.83	1,515	933	2,656	1,723	199	8.3	5.1	14.5	9.4	1.1
1971.....	180,743	1.03	1,861	1,228	2,920	1,692	255	10.2	6.8	16.1	9.3	1.4
1970.....	178,692	1.15	2,050	1,408	3,095	1,687	327	11.4	7.8	17.2	9.4	1.8
1969.....	177,067	0.92	1,626	1,316	3,010	1,694	354	9.1	7.4	16.9	9.5	2.0
1968.....	175,548	0.87	1,519	1,225	2,930	1,705	317	8.6	7.0	16.6	9.7	1.8
1967.....	173,927	0.93	1,621	1,305	2,940	1,636	343	9.3	7.5	16.8	9.4	2.0
1966.....	172,187	1.01	1,740	1,371	3,011	1,640	390	10.1	7.9	17.4	9.5	2.3
1965.....	170,336	1.09	1,850	1,538	3,145	1,607	333	10.8	9.0	18.4	9.4	1.9
1964.....	168,286	1.23	2,070	1,811	3,391	1,580	284	12.2	10.7	20.0	9.3	1.7
1963.....	166,096	1.31	2,170	1,870	3,462	1,592	324	13.0	11.2	20.7	9.5	1.9
1962.....	183,815	1.39	2,281	1,984	3,530	1,546	322	13.8	12.0	21.4	9.4	2.0
1961.....	161,367	1.52	2,448	2,127	3,626	1,499	345	15.1	13.1	22.3	9.2	2.1
1960.....	158,959	1.52	2,409	2,123	3,625	1,502	304	15.1	13.3	22.7	9.4	1.9
<b>BLACK</b>												
1989.....	30,566	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
1988.....	30,104	1.53	462	395	652	257	67	15.2	13.0	21.5	8.5	2.2
1987.....	29,657	1.51	447	376	628	252	71	15.0	12.6	21.0	8.4	2.4
1986.....	29,223	1.48	434	371	621	250	63	14.7	12.6	21.1	8.5	2.1
1985.....	28,802	1.46	421	364	608	244	58	14.5	12.5	21.0	8.4	2.0
1984.....	28,391	1.45	410	357	593	236	54	14.4	12.5	20.7	8.3	1.9
1983.....	27,984	1.48	407	353	586	233	54	14.5	12.5	20.8	8.3	1.9
1982.....	27,561	1.53	423	366	593	227	57	15.2	13.2	21.3	8.2	2.0
1981.....	27,133	1.58	429	359	588	229	70	15.7	13.1	21.5	8.4	2.6
1980 <sup>6</sup> .....	26,845	1.83	488	356	590	233	76	18.1	13.3	21.9	8.7	2.8
1979.....	26,213	1.85	432	357	578	221	54	16.3	13.5	21.9	8.4	2.1
1978.....	25,784	1.67	429	330	552	221	61	18.5	12.7	21.2	8.5	2.3
1977.....	25,367	1.64	417	324	544	220	48	16.3	12.7	21.3	8.6	1.9
1976.....	24,983	1.54	384	295	514	220	42	15.3	11.7	20.5	8.7	1.7
1975.....	24,602	1.55	382	294	512	218	38	15.4	11.8	20.6	8.8	1.5
1974.....	24,228	1.54	374	284	507	223	39	15.3	11.6	20.8	9.1	1.6
1973.....	23,854	1.57	373	282	513	230	38	15.5	11.8	21.3	9.6	1.8
1972.....	23,487	1.85	388	303	531	229	35	16.4	12.8	22.5	9.7	1.5
1971.....	23,040	1.85	428	340	565	224	42	18.3	14.7	24.3	9.7	1.8
1970.....	22,817	1.87	424	349	575	226	39	18.6	15.3	25.2	9.9	1.7
1969.....	22,288	1.47	329	328	555	227	38	14.6	14.6	24.8	10.1	1.6
1968.....	21,968	1.46	320	315	545	230	33	14.5	14.2	24.6	10.4	1.5
1967.....	21,823	1.60	348	345	559	214	28	15.9	15.9	25.7	9.8	1.3
1966.....	21,269	1.66	354	357	575	217	24	16.5	16.7	26.8	10.1	1.1



**Table 7. Estimates of the Components of Population Change, by Race and Hispanic Origin, for Calendar Years: 1960 to 1988—Con.**

(U.S. population including Armed Forces overseas. Numbers in thousands. For meaning of symbols, see text)

Year (January 1-December 31)	Popula- tion at begin- ning of year	Percent change	Net change <sup>1</sup>	Components of change				Rate per 1,000 mid-year population				
				Natural increase	Births <sup>2</sup>	Deaths <sup>3</sup>	Net civilian immig- ration <sup>4</sup>	Net change	Natural increase	Births	Deaths	Net civilian immig- ration
<b>BLACK—Continued</b>												
1965.....	20,889	1.82	380	388	599	211	20	18.0	18.4	28.5	10.0	1.0
1964.....	20,478	2.01	411	418	627	209	21	19.9	20.2	30.3	10.1	1.0
1963.....	20,074	2.01	404	410	621	211	22	20.0	20.3	30.7	10.4	1.1
1962.....	19,664	2.08	409	422	624	201	15	20.6	21.3	31.4	10.1	0.8
1961.....	19,237	2.22	427	440	633	193	16	22.0	22.6	32.5	9.9	0.8
1960.....	18,817	2.23	420	429	625	195	12	22.1	22.6	32.9	10.3	0.6
<b>OTHER RACES</b>												
1989.....	8,451	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
1988.....	8,073	4.68	378	150	176	25	227	45.8	18.2	21.3	3.1	27.5
1987.....	7,694	4.93	379	143	167	24	236	48.2	18.1	21.2	3.0	30.0
1986.....	7,319	5.13	375	141	165	24	234	50.0	18.8	22.0	3.2	31.2
1985.....	6,942	5.43	377	138	161	23	239	52.9	19.3	22.6	3.3	33.6
1984.....	6,580	5.49	361	131	153	22	230	53.5	19.4	22.6	3.2	34.1
1983.....	6,236	5.52	344	128	149	21	216	53.8	20.0	23.2	3.2	33.8
1982.....	5,883	6.00	353	127	146	19	226	58.2	20.9	24.1	3.2	37.3
1981.....	5,486	7.24	397	115	133	18	282	69.9	20.2	23.4	3.2	49.7
1980 <sup>5</sup> .....	4,664	17.64	823	106	124	18	338	155.7	20.0	23.5	3.5	64.0
1979.....	4,405	5.88	259	91	108	17	215	57.0	20.1	23.8	3.7	47.3
1978.....	4,145	6.28	260	84	101	17	152	61.0	19.7	23.6	3.9	35.6
1977.....	3,920	5.72	224	76	91	15	123	55.6	18.8	22.7	3.8	30.5
1976.....	3,699	5.99	221	71	86	15	128	58.2	18.6	22.5	4.0	33.6
1975.....	3,375	9.61	324	66	81	15	238	91.0	18.5	22.6	4.1	66.8
1974.....	3,189	9.90	185	63	77	14	103	56.4	19.1	23.5	4.3	31.2
1973.....	3,012	5.66	177	59	73	15	99	57.2	19.0	23.7	4.7	31.9
1972.....	2,847	5.81	165	57	72	14	90	56.6	19.7	24.5	4.8	30.9
1971.....	2,683	6.11	164	58	71	14	89	59.5	20.9	25.8	5.0	32.4
1970.....	2,540	5.62	143	55	68	13	73	54.8	21.0	26.1	5.1	27.8
1969.....	2,405	5.60	135	52	65	13	63	54.7	21.1	26.3	5.3	25.6
1968.....	2,292	4.95	113	47	60	13	48	48.4	19.9	25.5	5.6	20.3
1967.....	2,186	4.83	106	44	56	12	42	47.2	19.6	25.0	5.4	19.0
1966.....	2,083	4.96	103	44	56	12	40	48.5	20.9	26.5	5.0	18.7
1965.....	1,998	4.25	85	46	57	11	20	41.7	22.5	28.1	5.0	9.8
1964.....	1,924	3.82	74	42	53	10	12	37.5	21.6	26.9	5.3	6.1
1963.....	1,844	4.39	81	47	58	12	15	43.0	24.8	31.0	5.2	8.0
1962.....	1,762	4.60	81	48	59	11	14	45.1	26.9	33.0	6.1	7.5
1961.....	1,683	4.73	80	48	58	10	12	46.3	27.9	33.9	6.0	7.2
1960.....	1,610	4.50	73	46	57	11	12	44.2	28.1	34.6	6.5	7.3
<b>HISPANIC ORIGIN<sup>6</sup></b>												
1989.....	20,185	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
1988.....	19,521	3.40	664	356	444	88	308	33.4	17.9	22.4	4.4	15.5
1987.....	18,866	3.47	656	349	434	84	306	34.2	18.2	22.6	4.4	16.0
1986.....	18,215	3.57	651	347	428	81	304	35.1	18.7	23.1	4.4	16.4
1985.....	17,573	3.65	642	336	413	77	306	35.9	18.8	23.1	4.3	17.1
1984.....	16,972	3.54	602	316	389	74	286	34.8	18.3	22.5	4.3	16.6
1983.....	16,371	3.67	601	307	377	71	295	36.1	18.4	22.6	4.2	17.7
1982.....	15,773	3.79	598	305	373	68	292	37.2	13.0	23.2	4.2	18.2
1981.....	15,149	4.12	624	295	360	64	328	40.3	19.1	23.3	4.2	21.2
1980 <sup>7</sup> .....	14,630	3.55	519	214	261	46	305	46.5	19.2	23.3	4.1	27.3

<sup>1</sup>Includes estimates of overseas admissions into and discharges from the Armed Forces and the error of closure between censuses.

<sup>2</sup>Adjusted for underregistration through March, 1970.

<sup>3</sup>Deaths occurring in the United States plus estimated deaths occurring to Armed Forces overseas.

<sup>4</sup>Net civilian immigration prior to April 1, 1980, excludes the net effect of undocumented immigration and an increase in the assumed level of emigration, as discussed in the text. The net effect for the 1970's would be an increase of about 300,000 to 400,000 for the decade. The rate of migration prior to 1980 would also be increased.

The net change in the population by race in 1980 includes the effect of a change in the definition of race. For explanation, see text.

Persons of Hispanic origin may be of any race.

<sup>7</sup>For the Hispanic population, 1980 refers only to the period from April 1 through December 31.

**Table 8. Components of Population Change, by Race and Hispanic Origin, for Years Ending June 30: 1950 to 1988**

(U.S. population including Armed Forces overseas. Numbers in thousands. For meaning of symbols, see text)

Year (July 1-June 30)	Popula- tion at begin- ning of period	Percent change	Net change <sup>1</sup>	Components of change during period				Rate per 1,000 mid-year population				
				Natural increase	Births <sup>2</sup>	Deaths <sup>3</sup>	Net civilian immig- ration <sup>4</sup>	Net change	Natural increase	Births	Deaths	Net civilian immig- ration
<b>WHITE</b>												
1988-89.....	207,748	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
1987-88.....	206,194	0.75	1,555	1,156	3,045	1,890	401	7.5	5.6	14.7	9.1	1.9
1986-87.....	204,696	0.73	1,498	1,148	2,993	1,845	350	7.3	5.6	14.6	9.0	1.7
1985-86.....	203,159	0.76	1,536	1,165	2,988	1,823	372	7.5	5.7	14.6	8.9	1.8
1984-85.....	201,664	0.74	1,495	1,166	2,972	1,806	327	7.4	5.8	14.7	8.9	1.6
1983-84.....	200,216	0.72	1,448	1,105	2,882	1,777	342	7.2	5.5	14.3	8.8	1.7
1982-83.....	198,696	0.76	1,520	1,189	2,940	1,751	330	7.6	6.0	14.7	8.8	1.7
1981-82.....	197,132	0.79	1,565	1,210	2,933	1,724	353	7.9	6.1	14.8	8.7	1.8
1980-81.....	195,571	0.80	1,560	1,160	2,906	1,745	397	7.9	5.9	14.8	8.9	2.0
1979-80 <sup>5</sup> .....	194,098	0.76	1,474	1,147	2,859	1,712	364	7.6	5.9	14.7	8.8	1.9
1978-79.....	192,335	0.92	1,763	1,079	2,745	1,666	264	9.1	5.6	14.2	8.6	1.4
1977-78.....	190,649	0.88	1,686	975	2,669	1,693	306	8.8	5.1	13.9	8.8	1.6
1976-77.....	189,074	0.83	1,575	999	2,648	1,649	164	8.3	5.3	13.9	8.7	0.9
1975-76.....	187,629	0.77	1,445	862	2,536	1,674	190	7.7	4.6	13.5	8.9	1.0
1974-75.....	186,170	0.78	1,459	903	2,592	1,688	161	7.8	4.8	13.9	9.0	0.9
1973-74.....	184,782	0.75	1,388	820	2,532	1,712	187	7.5	4.4	13.6	9.2	1.0
1972-73.....	183,326	0.79	1,456	869	2,597	1,729	205	7.9	4.7	14.1	9.4	1.1
1971-72.....	181,663	0.92	1,663	1,068	2,775	1,707	213	9.1	5.8	15.2	9.3	1.2
1970-71.....	179,644	1.12	2,019	1,372	3,061	1,689	276	11.2	7.6	16.9	9.3	1.5
1969-70.....	177,792	1.05	1,862	1,357	3,046	1,690	396	10.4	7.6	17.0	9.5	2.2
1968-69.....	176,246	0.87	1,536	1,275	2,978	1,703	297	8.7	7.2	16.8	9.6	1.7
1967-68.....	174,695	0.89	1,551	1,233	2,909	1,676	343	8.8	7.0	16.6	9.5	2.0
1966-67.....	172,998	0.98	1,697	1,361	2,988	1,627	360	9.8	7.8	17.2	9.4	2.1
1965-66.....	171,205	1.05	1,793	1,444	3,068	1,624	373	10.4	8.4	17.8	9.4	2.2
1964-65.....	169,257	1.15	1,948	1,673	3,272	1,599	294	11.4	9.8	19.2	9.4	1.7
1963-64.....	167,104	1.29	2,152	1,874	3,439	1,565	301	12.8	11.1	20.4	9.3	1.8
1962-63.....	164,885	1.35	2,220	1,920	3,503	1,583	325	13.4	11.6	21.1	9.5	2.0
1961-62.....	162,533	1.45	2,352	2,040	3,574	1,534	337	14.4	12.5	21.8	9.4	2.1
1960-61.....	160,023	1.57	2,510	2,177	3,660	1,482	356	15.6	13.5	22.7	9.2	2.2
1959-60.....	157,655	1.50	2,368	2,106	3,599	1,493	250	14.9	13.3	22.7	9.4	1.6
1958-59.....	155,200	1.58	2,455	2,167	3,616	1,449	274	15.7	13.9	23.1	9.3	1.8
1957-58.....	152,769	1.59	2,431	2,166	3,645	1,479	252	15.8	14.1	23.7	9.6	1.6
1956-57.....	150,163	1.74	2,605	2,252	3,643	1,391	338	17.2	14.9	24.0	9.2	2.2
1955-56.....	147,653	1.70	2,511	2,139	3,522	1,384	359	16.9	14.4	23.7	9.3	2.4
1954-55.....	145,193	1.69	2,459	2,167	3,493	1,326	280	16.8	14.8	23.9	9.1	1.9
1953-54.....	142,773	1.70	2,420	2,135	3,443	1,307	272	16.6	14.8	23.9	9.1	1.9
1952-53.....	140,526	1.60	2,247	2,031	3,375	1,344	206	15.9	14.3	23.8	9.5	1.5
1951-52.....	138,221	1.67	2,305	1,978	3,303	1,325	315	16.5	14.2	23.7	9.5	2.3
1950-51.....	135,984	1.65	2,237	1,913	3,216	1,303	298	16.3	14.0	23.5	9.5	2.2
1950 <sup>b</sup> .....	135,511	0.35	472	409	730	321	68	13.9	12.0	21.5	9.4	2.0
<b>BLACK</b>												
1988-89.....	30,326	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
1987-88.....	29,863	1.53	457	383	638	255	74	15.2	12.7	21.2	8.5	2.4
1986-87.....	29,424	1.51	445	380	631	251	65	15.0	12.8	21.3	8.5	2.2
1985-86.....	28,994	1.48	429	369	615	246	61	14.7	12.6	21.0	8.4	2.1
1984-85.....	28,579	1.45	415	362	602	241	53	14.4	12.6	20.9	8.4	1.8
1983-84.....	28,178	1.42	401	347	593	236	54	14.1	12.2	20.5	8.3	1.9
1982-83.....	27,759	1.51	419	364	593	228	55	15.0	13.0	21.2	8.2	2.0
1981-82.....	27,329	1.58	431	367	593	227	64	15.6	13.3	21.5	8.2	2.3
1980-81.....	26,903	1.51	425	350	584	234	75	15.7	12.9	21.5	8.6	2.8
1979-80 <sup>b</sup> .....	26,417	1.50	416	363	589	226	62	18.2	13.6	22.1	8.5	2.3
1978-79.....	25,984	1.67	434	346	566	220	57	16.5	13.2	21.6	8.4	2.2
1977-78.....	25,559	1.66	424	317	540	222	60	16.5	12.3	20.9	8.6	2.3
1976-77.....	25,157	1.60	402	319	537	218	41	15.9	12.6	21.2	8.6	1.6

**Table 8. Components of Population Change, by Race and Hispanic Origin, for Years Ending June 30: 1950 to 1988**

(U.S. population including Armed Forces overseas. Numbers in thousands. For meaning of symbols, see text)

Year (July 1-June 30)	Popula- tion at begin- ning of period	Percent change	Net change <sup>1</sup>	Components of change during period				Rate per 1,000 mid-year population				
				Natural increase	Births <sup>2</sup>	Deaths <sup>3</sup>	Net civilian immig- ration <sup>4</sup>	Net change	Natural increase	Births	Deaths	Net civilian immig- ration
<b>BLACK—Continued</b>												
1975-76.....	24,778	1.53	379	288	507	219	39	15.2	11.5	20.3	8.8	1.6
1974-75.....	24,402	1.54	375	289	512	222	38	15.3	11.8	20.8	9.0	1.6
1973-74.....	24,029	1.55	374	280	504	225	40	15.4	11.5	20.8	9.3	1.6
1972-73.....	23,646	1.62	383	295	525	230	36	16.0	12.4	22.0	9.7	1.5
1971-72.....	23,240	1.75	407	320	546	226	39	17.3	13.6	23.3	9.6	1.7
1970-71.....	22,801	1.92	438	357	582	225	41	19.0	15.5	25.3	9.8	1.8
1969-70.....	22,431	1.65	370	326	563	227	39	16.4	14.9	24.9	10.0	1.7
1968-69.....	22,117	1.42	314	312	542	230	32	14.1	14.0	24.3	10.3	1.4
1967-68.....	21,780	1.55	337	330	553	223	34	15.3	15.0	25.2	10.1	1.6
1966-67.....	21,434	1.61	346	351	564	213	23	16.0	16.2	26.1	9.9	1.1
1965-66.....	21,064	1.76	370	376	591	215	23	17.4	17.7	27.8	10.1	1.1
1964-65.....	20,672	1.90	392	402	613	211	18	18.8	19.2	29.4	10.1	0.9
1963-64.....	20,255	2.06	417	419	624	205	26	20.4	20.4	30.5	10.0	1.3
1962-63.....	19,852	2.03	403	415	624	209	17	20.1	20.7	31.1	10.4	0.8
1961-62.....	19,437	2.13	415	428	627	199	14	21.1	21.8	31.9	10.1	0.7
1960-61.....	19,006	2.27	431	442	632	190	17	22.4	23.0	32.9	9.9	0.9
<b>OTHER RACES</b>												
1988-89.....	8,256	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
1987-88.....	7,872	4.88	384	145	169	24	239	47.5	18.0	21.0	3.0	29.6
1986-87.....	7,506	4.88	366	142	166	24	224	47.6	18.4	21.6	3.2	29.1
1985-86.....	7,125	5.34	381	140	163	23	241	52.0	19.1	22.3	3.2	32.9
1984-85.....	6,757	5.44	368	135	157	23	233	53.0	19.4	22.7	3.3	33.6
1983-84.....	6,405	5.51	353	128	149	21	224	53.6	19.5	22.7	3.2	34.1
1982-83.....	6,064	5.62	341	129	149	20	212	54.6	20.6	23.8	3.2	34.0
1981-82.....	5,678	6.80	386	121	139	19	266	65.6	20.5	23.7	3.2	45.1
1980-81.....	5,283	7.48	395	110	129	19	285	72.0	20.1	23.5	3.4	51.9
1979-80 <sup>5</sup> .....	4,541	16.34	742	98	115	17	324	111.0	20.9	24.7	3.7	69.4
1978-79.....	4,266	6.43	274	87	104	17	165	62.3	19.8	23.6	3.8	37.5
1977-78.....	4,031	5.83	235	79	95	16	130	56.7	19.1	23.0	3.9	31.2
1976-77.....	3,804	5.96	227	74	89	15	129	58.0	18.8	22.7	3.9	33.0
1975-76.....	3,567	6.65	237	69	84	15	146	64.1	18.6	22.6	4.0	39.6
1974-75.....	3,282	8.68	285	64	78	14	203	84.4	18.8	23.1	4.3	60.1
1973-74.....	3,098	5.94	184	61	75	14	102	57.7	19.0	23.5	4.5	32.1
1972-73.....	2,924	5.94	174	57	73	14	97	57.7	19.3	24.1	4.8	32.3
1971-72.....	2,758	6.02	166	58	72	14	91	58.4	20.3	25.2	4.9	32.0
1970-71.....	2,607	5.80	151	56	70	13	78	56.3	20.9	25.9	5.0	29.2
1969-70.....	2,464	5.81	143	54	67	13	70	56.3	21.1	26.3	5.2	27.5
1968-69.....	2,343	5.14	121	50	62	12	54	50.1	20.8	25.9	5.2	22.3
1967-68.....	2,237	4.76	107	45	58	13	42	46.5	19.7	25.2	5.5	18.4
1966-67.....	2,129	5.08	108	44	56	12	45	49.5	20.1	25.6	5.5	20.6
1965-66.....	2,034	4.63	94	45	57	12	30	45.2	21.8	27.4	5.6	14.2
1964-65.....	1,960	3.79	74	44	55	11	11	37.2	21.9	27.4	5.5	5.6
1963-64.....	1,882	4.13	79	45	56	11	14	40.4	23.2	28.9	5.7	7.2
1962-63.....	1,801	4.52	81	47	59	12	15	44.2	25.6	32.0	6.4	8.2
1961-62.....	1,721	4.64	80	48	59	11	13	45.3	27.1	33.3	6.2	7.3
1960-61.....	1,642	4.81	79	48	58	10	12	46.9	28.3	34.4	6.1	7.2
<b>BLACK AND OTHER RACES</b>												
1960-61.....	20,648	2.47	510	450	690	200	29	24.4	23.4	33.0	9.6	1.4
1959-60.....	20,175	2.35	474	477	680	203	20	23.2	23.4	33.3	10.0	1.0
1958-59.....	19,682	2.50	492	484	683	199	23	24.7	24.3	34.3	10.0	1.2
1957-58.....	19,215	2.43	467	464	668	204	18	24.0	23.9	34.4	10.5	0.9
1956-57.....	18,740	2.54	476	478	669	191	12	25.1	25.2	35.3	10.1	0.6
1955-56.....	18,279	2.52	461	458	644	187	17	24.9	24.7	34.8	10.1	0.9

**Table 8. Components of Population Change, by Race and Hispanic Origin, for Years Ending June 30: 1950 to 1988**

(U.S. population including Armed Forces overseas. Numbers in thousands. For meaning of symbols, see text)

Year (July 1-June 30)	Popula- tion at begin- ning of period	Percent change	Net change <sup>1</sup>	Components of change during period				Rate per 1,000 mid-year population				
				Natural increase	Births <sup>2</sup>	Deaths <sup>3</sup>	Net civilian immi- gration <sup>4</sup>	Net change	Natural increase	Births	Deaths	Net civilian immi- gration
<b>BLACK AND OTHER RACES—Continued</b>												
1954-55.....	17,833	2.50	446	447	626	179	14	24.7	24.8	34.7	9.9	0.8
1953-54.....	17,411	2.42	422	423	603	179	13	23.9	24.0	34.2	10.2	0.7
1952-53.....	17,026	2.26	385	390	576	186	5	22.4	22.7	33.5	10.8	0.3
1951-52.....	16,657	2.22	369	371	556	185	3	21.9	22.0	33.0	11.0	0.5
1950-51.....	16,288	2.27	369	374	555	182	8	22.4	22.7	33.7	11.0	0.5
1950 <sup>6</sup> .....	16,207	0.50	81	76	121	45	1	20.0	18.8	29.9	11.0	0.2
<b>HISPANIC ORIGIN<sup>7</sup></b>												
1988-89.....	19,852	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
1987-88.....	19,193	3.44	660	352	438	86	308	33.8	18.0	22.4	4.4	15.8
1986-87.....	18,541	3.51	651	349	431	83	302	34.5	18.5	22.9	4.4	16.0
1985-86.....	17,888	3.65	654	343	422	79	311	35.9	18.8	23.2	4.3	17.1
1984-85.....	17,273	3.56	615	324	400	76	290	35.0	18.5	22.8	4.3	16.5
1983-84.....	16,670	3.61	602	309	382	72	293	35.5	18.2	22.5	4.3	17.3
1982-83.....	16,072	3.72	598	307	376	69	291	36.5	18.8	23.0	4.2	17.8
1981-82.....	15,472	3.88	600	301	367	66	299	38.0	19.1	23.3	4.2	19.0
1980-81.....	14,803	4.52	669	289	352	63	380	44.2	19.1	23.2	4.1	25.1
1980 <sup>6</sup> .....	14,630	1.18	173	71	87	15	102	47.0	19.4	23.6	4.2	27.6

<sup>1</sup>Includes estimates of overseas admissions into and discharges from the Armed Forces and the error of closure between censuses.

<sup>2</sup>Adjusted for underregistration through March 1970.

<sup>3</sup>Deaths occurring in the United States plus estimated deaths occurring to Armed Forces overseas.

<sup>4</sup>Net civilian immigration prior to April 1, 1980, excludes the net effect of undocumented immigration and an increase in the assumed level of emigration, as discussed in the text. The net effect for the 1970's would be an increase of about 300,000 to 400,000 for the decade. The rate of immigration prior to 1980 would also be increased.

<sup>5</sup>The net change in the population by race in 1979-1980 includes the effect of a change in the definition of race. For explanation, see text.

<sup>6</sup>Data for the Hispanic population in 1980 and the White, Black, and other races population in 1950 refer to the period from April 1 to June 30 only.

<sup>7</sup>Persons of Hispanic origin may be of any race.

Table 9. Monthly Estimates of the Population, by Type: January 1, 1950, to January 1, 1989

(In thousands. For explanation of the three types of population, see text)

Date	Total population including Armed Forces overseas	Resident population	Civilian population	Date	Total population including Armed Forces overseas	Resident population	Civilian population
1989:				1984:			
January 1 .....	247,635	247,117	245,433	December 1 .....	238,039	237,512	235,820
1988:				November 1 .....	237,865	237,340	235,647
December 1 .....	247,443	246,924	245,226	October 1 .....	237,663	237,140	235,444
November 1 .....	247,249	246,729	245,033	September 1 .....	237,447	236,923	235,215
October 1 .....	247,039	246,517	244,812	August 1 .....	237,218	236,694	234,978
September 1 .....	246,807	246,286	244,588	July 1 .....	237,001	236,477	234,762
August 1 .....	246,563	246,040	244,347	June 1 .....	236,807	236,283	234,586
July 1 .....	246,329	245,807	244,125	May 1 .....	236,624	236,101	234,409
June 1 .....	246,104	245,585	243,921	April 1 .....	236,458	235,935	234,241
May 1 .....	245,889	245,372	243,699	March 1 .....	236,280	235,760	234,069
April 1 .....	245,728	245,208	243,502	February 1 .....	236,118	235,598	233,912
March 1 .....	245,554	245,033	243,309	January 1 .....	235,961	235,444	233,763
February 1 .....	245,395	244,875	243,145	1983:			
January 1 .....	245,231	244,712	242,982	December 1 .....	235,796	235,282	233,593
1987:				November 1 .....	235,623	235,112	233,425
December 1 .....	245,041	244,523	242,780	October 1 .....	235,439	234,928	233,235
November 1 .....	244,837	244,321	242,575	September 1 .....	235,225	234,715	233,021
October 1 .....	244,627	244,112	242,361	August 1 .....	235,005	234,492	232,795
September 1 .....	244,388	243,873	242,123	July 1 .....	234,799	234,284	232,589
August 1 .....	244,154	243,638	241,887	June 1 .....	234,599	234,081	232,402
July 1 .....	243,934	243,419	241,680	May 1 .....	234,411	233,894	232,213
June 1 .....	243,731	243,217	241,491	April 1 .....	234,237	233,718	232,034
May 1 .....	243,528	243,014	241,285	March 1 .....	234,054	233,534	231,858
April 1 .....	243,363	242,850	241,109	February 1 .....	233,901	233,379	231,709
March 1 .....	243,166	242,653	240,909	January 1 .....	233,736	233,217	231,552
February 1 .....	243,009	242,494	240,746	1982:			
January 1 .....	242,843	242,326	240,584	December 1 .....	233,559	233,041	231,369
1986:				November 1 .....	233,379	232,860	231,192
December 1 .....	242,666	242,150	240,399	October 1 .....	233,184	232,665	231,003
November 1 .....	242,500	241,985	240,236	September 1 .....	232,962	232,442	230,772
October 1 .....	242,295	241,782	240,037	August 1 .....	232,739	232,216	230,541
September 1 .....	242,074	241,562	239,819	July 1 .....	232,520	231,996	230,327
August 1 .....	241,844	241,330	239,590	June 1 .....	232,309	231,786	230,134
July 1 .....	241,625	241,107	239,386	May 1 .....	232,111	231,590	229,935
June 1 .....	241,422	240,900	239,198	April 1 .....	231,932	231,414	229,756
May 1 .....	241,221	240,697	238,987	March 1 .....	231,743	231,227	229,566
April 1 .....	241,031	240,505	238,792	February 1 .....	231,573	231,059	229,403
March 1 .....	240,851	240,325	238,611	January 1 .....	231,405	230,893	229,247
February 1 .....	240,697	240,169	238,461	1981:			
January 1 .....	240,532	240,004	238,304	December 1 .....	231,222	230,714	229,058
1985:				November 1 .....	231,043	230,538	228,885
December 1 .....	240,355	239,827	238,121	October 1 .....	230,848	230,346	228,697
November 1 .....	240,170	239,641	237,935	September 1 .....	230,613	230,113	228,453
October 1 .....	239,960	239,427	237,725	August 1 .....	230,374	229,872	228,211
September 1 .....	239,736	239,201	237,488	July 1 .....	230,138	229,637	227,989
August 1 .....	239,505	238,965	237,248	June 1 .....	229,925	229,424	227,794
July 1 .....	239,279	238,736	237,031	May 1 .....	229,727	229,228	227,600
June 1 .....	239,074	238,534	236,848	April 1 .....	229,542	229,045	227,413
May 1 .....	238,869	238,331	236,643	March 1 .....	229,349	228,855	227,220
April 1 .....	238,684	238,149	236,457	February 1 .....	229,183	228,690	227,060
March 1 .....	238,500	237,966	236,275	January 1 .....	229,033	228,542	226,918
February 1 .....	238,356	237,824	236,133				
January 1 .....	238,207	237,677	235,994				

Table 9. Monthly Estimates of the Population, by Type: January 1, 1950, to January 1, 1989—Continued

(In thousands. For explanation of the three types of population, see text)

Date	Total population including Armed Forces overseas	Resident population	Civilian population	Date	Total population including Armed Forces overseas	Resident population	Civilian population
1980:				1976:			
December 1	228,861	228,371	226,737	December 1	219,006	218,535	216,865
November 1	228,679	228,189	226,559	November 1	218,834	218,366	216,685
October 1	228,468	227,976	226,350	October 1	218,644	218,176	216,498
September 1	228,231	227,735	226,111	September 1	218,440	217,971	216,292
August 1	227,991	227,491	225,875	August 1	218,233	217,760	216,086
July 1	227,757	227,255	225,651	July 1	218,035	217,563	215,894
June 1	227,544	227,038	225,451	June 1	217,861	217,385	215,723
May 1	227,263	226,752	225,174	May 1	217,685	217,207	215,543
April 1	227,061	226,546	224,968	April 1	217,528	217,047	215,383
March 1	226,849	226,337	224,757	March 1	217,381	216,898	215,233
February 1	226,656	226,147	224,569	February 1	217,249	216,763	215,103
January 1	226,451	225,945	224,374	January 1	217,095	216,609	214,957
1979:				1975:			
December 1	226,243	225,741	224,153	December 1	216,931	216,441	214,772
November 1	226,027	225,531	223,936	November 1	216,771	216,282	214,616
October 1	225,801	225,309	223,710	October 1	216,587	216,095	214,424
September 1	225,547	225,058	223,458	September 1	216,393	215,898	214,223
August 1	225,295	224,805	223,202	August 1	216,195	215,693	214,008
July 1	225,055	224,567	222,969	July 1	215,973	215,465	213,788
June 1	224,843	224,353	222,768	June 1	215,768	215,255	213,589
May 1	224,632	224,142	222,553	May 1	215,523	215,006	213,342
April 1	224,438	223,949	222,355	April 1	215,353	214,839	213,162
March 1	224,235	223,745	222,145	March 1	215,198	214,686	212,993
February 1	224,053	223,564	221,957	February 1	215,065	214,560	212,862
January 1	223,865	223,378	221,769	January 1	214,931	214,428	212,738
1978:				1974:			
December 1	223,670	223,183	221,562	December 1	214,782	214,281	212,573
November 1	223,477	222,994	221,361	November 1	214,625	214,125	212,414
October 1	223,271	222,787	221,150	October 1	214,451	213,951	212,238
September 1	223,053	222,567	220,931	September 1	214,246	213,745	212,036
August 1	222,805	222,315	220,683	August 1	214,042	213,540	211,824
July 1	222,585	222,095	220,467	July 1	213,854	213,342	211,636
June 1	222,379	221,890	220,275	June 1	213,686	213,181	211,475
May 1	222,176	221,689	220,064	May 1	213,513	213,007	211,287
April 1	221,991	221,504	219,873	April 1	213,361	212,856	211,120
March 1	221,792	221,308	219,670	March 1	213,211	212,702	210,963
February 1	221,629	221,145	219,504	February 1	213,074	212,563	210,822
January 1	221,477	220,995	219,358	January 1	212,932	212,418	210,676
1977:				1973:			
December 1	221,303	220,824	219,173	December 1	212,785	212,261	210,512
November 1	221,109	220,634	218,976	November 1	212,634	212,105	210,351
October 1	220,904	220,430	218,769	October 1	212,475	211,944	210,187
September 1	220,688	220,213	218,555	September 1	212,289	211,753	209,997
August 1	220,458	219,979	218,320	August 1	212,092	211,549	209,785
July 1	220,239	219,760	218,106	July 1	211,909	211,357	209,600
June 1	220,046	219,566	217,919	June 1	211,746	211,194	209,434
May 1	219,859	219,379	217,729	May 1	211,577	211,016	209,244
April 1	219,684	219,206	217,553	April 1	211,420	210,854	209,068
March 1	219,504	219,026	217,369	March 1	211,254	210,685	208,879
February 1	219,344	218,867	217,206	February 1	211,120	210,524	208,728
January 1	219,179	218,706	217,046	January 1	210,985	210,410	208,580

Table 9. Monthly Estimates of the Population, by Type: January 1, 1950, to January 1, 1989—Continued

(In thousands. For explanation of the three types of population, see text)

Date	Total population including Armed Forces overseas	Resident population	Civilian population	Date	Total population including Armed Forces overseas	Resident population	Civilian population
1972:				1968:			
December 1	210,821	210,218	208,391	December 1	201,621	200,342	198,119
November 1	210,656	210,047	208,224	November 1	201,466	200,185	197,943
October 1	210,479	209,865	208,062	October 1	201,290	200,011	197,737
September 1	210,278	209,674	207,872	September 1	201,095	199,809	197,512
August 1	210,075	209,464	207,683	August 1	200,898	199,593	197,302
July 1	209,896	209,284	207,511	July 1	200,706	199,399	197,113
June 1	209,725	209,114	207,340	June 1	200,536	199,238	196,975
May 1	209,545	208,916	207,129	May 1	200,361	199,070	196,823
April 1	209,386	208,741	206,923	April 1	200,208	198,923	196,693
March 1	209,212	208,523	206,707	March 1	200,056	198,788	196,565
February 1	209,061	208,374	206,522	February 1	199,920	198,679	196,443
January 1	208,917	208,224	206,324	January 1	199,808	198,578	196,359
1971:				1967:			
December 1	208,740	208,001	206,082	December 1	199,657	198,428	196,192
November 1	208,555	207,793	205,859	November 1	199,498	198,275	196,029
October 1	208,345	207,548	205,629	October 1	199,311	198,075	195,842
September 1	208,114	207,322	205,366	September 1	199,113	197,852	195,660
August 1	207,881	207,072	205,106	August 1	198,911	197,675	195,464
July 1	207,661	206,827	204,866	July 1	198,712	197,457	195,264
June 1	207,462	206,629	204,647	June 1	198,537	197,283	195,094
May 1	207,260	206,392	204,411	May 1	198,363	197,124	194,911
April 1	207,065	206,175	204,182	April 1	198,206	196,976	194,761
March 1	206,855	205,924	203,929	March 1	198,037	196,834	194,600
February 1	206,668	205,734	203,717	February 1	197,892	196,696	194,475
January 1	206,466	205,546	203,499	January 1	197,736	196,596	194,355
1970:				1966:			
December 1	206,238	205,272	203,222	December 1	197,572	196,406	194,195
November 1	206,024	205,018	202,980	November 1	197,398	196,306	194,059
October 1	205,788	204,757	202,707	October 1	197,207	196,147	193,928
September 1	205,540	204,500	202,430	September 1	196,984	195,957	193,751
August 1	205,295	204,245	202,158	August 1	196,762	195,727	193,581
July 1	205,052	203,984	201,895	July 1	196,560	195,576	193,420
June 1	204,830	203,756	201,655	June 1	196,372	195,371	193,274
May 1	204,607	203,509	201,394	May 1	196,178	195,209	193,133
April 1	204,401	203,302	201,131	April 1	195,999	195,045	192,990
March 1	204,156	203,032	200,839	March 1	195,831	194,881	192,855
February 1	204,008	202,865	200,662	February 1	195,688	194,759	192,747
January 1	203,849	202,717	200,466	January 1	195,539	194,649	192,633
1969:				1965:			
December 1	203,675	202,494	200,236	December 1	195,372	194,506	192,529
November 1	203,500	202,279	200,031	November 1	195,195	194,319	192,394
October 1	203,302	202,050	199,770	October 1	194,997	194,164	192,232
September 1	203,090	201,826	199,546	September 1	194,761	193,924	192,035
August 1	202,877	201,581	199,342	August 1	194,528	193,750	191,820
July 1	202,677	201,385	199,145	July 1	194,303	193,526	191,605
June 1	202,507	201,210	198,986	June 1	194,087	193,329	191,406
May 1	202,331	201,048	198,806	May 1	193,888	193,158	191,204
April 1	202,161	200,887	198,653	April 1	193,709	192,983	191,021
March 1	202,023	200,729	198,525	March 1	193,540	192,781	190,846
February 1	201,881	200,589	198,398	February 1	193,393	192,680	190,686
January 1	201,760	200,498	198,287	January 1	193,223	192,529	190,512

Table 9. Monthly Estimates of the Population, by Type: January 1, 1950, to January 1, 1989—Continued

(In thousands. For explanation of the three types of population, see text)

Date	Total population including Armed Forces overseas	Resident population	Civilian population	Date	Total population including Armed Forces overseas	Resident population	Civilian population
1964:				1960:			
December 1	193,039	192,347	190,307	December 1	182,042	181,364	179,484
November 1	192,847	192,119	190,109	November 1	181,796	181,123	179,240
October 1	192,631	191,899	189,883	October 1	181,528	180,848	178,981
September 1	192,376	191,655	189,624	September 1	181,238	180,571	178,698
August 1	192,131	191,401	189,374	August 1	180,945	180,257	178,408
July 1	191,889	191,141	189,141	July 1	180,671	179,979	178,140
June 1	191,666	190,925	188,919	June 1	180,444	179,780	177,926
May 1	191,447	190,738	188,696	May 1	180,222	179,540	177,695
April 1	191,245	190,507	188,497	April 1	180,007	179,323	177,472
March 1	191,047	190,304	188,299	March 1	179,788	179,112	177,244
February 1	190,858	190,124	188,121	February 1	179,597	178,902	177,052
January 1	190,668	189,973	187,942	January 1	179,386	178,729	176,850
1963:				1959:			
December 1	190,472	189,760	187,722	December 1	179,153	178,495	176,599
November 1	190,265	189,544	187,518	November 1	178,921	178,239	176,374
October 1	190,028	189,301	187,281	October 1	178,657	177,953	176,114
September 1	189,761	189,026	187,008	September 1	178,376	177,686	175,826
August 1	189,496	188,762	186,741	August 1	178,101	177,403	175,545
July 1	189,242	188,483	186,493	July 1	177,830	177,135	175,277
June 1	189,018	188,271	186,280	June 1	177,591	176,894	175,039
May 1	188,790	188,046	186,049	May 1	177,365	176,653	174,799
April 1	188,580	187,837	185,839	April 1	177,146	176,458	174,559
March 1	188,387	187,656	185,652	March 1	176,905	176,205	174,305
February 1	188,213	187,456	185,484	February 1	176,685	175,997	174,074
January 1	188,013	187,284	185,282	January 1	176,447	175,775	173,831
1962:				1958:			
December 1	187,796	187,016	185,052	December 1	176,207	175,510	173,559
November 1	187,574	186,761	184,816	November 1	175,966	175,263	173,312
October 1	187,323	186,561	184,581	October 1	175,697	174,972	173,042
September 1	187,058	186,326	184,318	September 1	175,413	174,712	172,752
August 1	186,790	186,016	183,926	August 1	175,143	174,400	172,486
July 1	186,538	185,771	183,677	July 1	174,882	174,149	172,226
June 1	186,314	185,551	183,454	June 1	174,639	173,927	171,990
May 1	186,087	185,284	183,209	May 1	174,397	173,683	171,740
April 1	185,874	185,104	182,987	April 1	174,176	173,452	171,504
March 1	185,650	184,872	182,760	March 1	173,945	173,187	171,277
February 1	185,452	184,684	182,554	February 1	173,746	172,988	171,080
January 1	185,242	184,508	182,392	January 1	173,533	172,809	170,862
1961:				1957:			
December 1	185,016	184,265	182,188	December 1	173,298	172,549	170,560
November 1	184,783	184,058	182,007	November 1	173,070	172,307	170,288
October 1	184,524	183,822	181,913	October 1	172,816	171,990	169,969
September 1	184,243	183,552	181,666	September 1	172,538	171,765	169,680
August 1	183,958	183,266	181,397	August 1	172,257	171,466	169,359
July 1	183,691	182,992	181,143	July 1	171,984	171,187	169,110
June 1	183,452	182,771	180,921	June 1	171,741	170,960	168,893
May 1	183,217	182,517	180,675	May 1	171,501	170,691	168,658
April 1	182,992	182,298	180,445	April 1	171,271	170,487	168,433
March 1	182,742	182,031	180,187	March 1	171,029	170,242	168,198
February 1	182,520	181,848	179,962	February 1	170,806	170,025	167,977
January 1	182,287	181,629	179,742	January 1	170,571	169,817	167,750



Table 9. Monthly Estimates of the Population, by Type: January 1, 1950, to January 1, 1989—Continued

(In thousands. For explanation of the three types of population, see text)

Date	Total population including Armed Forces overseas	Resident population	Civilian population	Date	Total population including Armed Forces overseas	Resident population	Civilian population
1956:				June 1 . . . . .	159,956	158,759	156,380
December 1 . . . . .	170,315	169,516	167,468	May 1 . . . . .	159,745	158,535	156,186
November 1 . . . . .	170,063	169,288	167,213	April 1 . . . . .	159,556	158,357	156,003
October 1 . . . . .	169,780	169,000	166,937	March 1 . . . . .	159,349	158,115	155,803
September 1 . . . . .	169,488	168,704	166,643	February 1 . . . . .	159,170	157,964	155,621
August 1 . . . . .	169,191	168,386	166,334	January 1 . . . . .	158,973	157,815	155,430
July 1 . . . . .	168,903	168,088	166,055	1952:			
June 1 . . . . .	168,659	167,855	165,811	December 1 . . . . .	158,757	157,570	155,188
May 1 . . . . .	168,436	167,634	165,564	November 1 . . . . .	158,451	157,346	154,947
April 1 . . . . .	168,221	167,405	165,336	October 1 . . . . .	158,306	157,097	154,688
March 1 . . . . .	167,977	167,145	165,078	September 1 . . . . .	158,053	156,885	154,399
February 1 . . . . .	167,746	166,924	164,834	August 1 . . . . .	157,798	156,615	154,125
January 1 . . . . .	167,513	166,725	164,597	July 1 . . . . .	157,553	156,393	153,892
1955:				June 1 . . . . .	157,343	156,218	153,658
December 1 . . . . .	167,270	166,464	164,325	May 1 . . . . .	157,140	156,000	153,428
November 1 . . . . .	167,023	166,198	164,071	April 1 . . . . .	156,943	155,828	153,233
October 1 . . . . .	166,755	165,934	163,795	March 1 . . . . .	156,731	155,622	153,053
September 1 . . . . .	166,473	165,649	163,499	February 1 . . . . .	156,527	155,427	152,932
August 1 . . . . .	166,192	165,338	163,223	January 1 . . . . .	156,309	155,259	152,811
July 1 . . . . .	165,931	165,069	162,967	1951:			
June 1 . . . . .	165,695	164,843	162,698	December 1 . . . . .	156,093	155,046	152,599
May 1 . . . . .	165,463	164,574	162,399	November 1 . . . . .	155,872	154,773	152,424
April 1 . . . . .	165,251	164,339	162,117	October 1 . . . . .	155,624	154,606	152,218
March 1 . . . . .	165,018	164,051	161,831	September 1 . . . . .	155,373	154,433	151,997
February 1 . . . . .	164,809	163,844	161,578	August 1 . . . . .	155,121	154,200	151,778
January 1 . . . . .	164,588	163,654	161,379	July 1 . . . . .	154,878	153,982	151,599
1954:				June 1 . . . . .	154,649	153,793	151,450
December 1 . . . . .	164,349	163,389	161,088	May 1 . . . . .	154,425	153,605	151,324
November 1 . . . . .	164,107	163,109	160,822	April 1 . . . . .	154,224	153,438	151,233
October 1 . . . . .	163,847	162,825	160,538	March 1 . . . . .	154,019	153,301	151,197
September 1 . . . . .	163,570	162,514	160,252	February 1 . . . . .	153,831	153,126	151,183
August 1 . . . . .	163,290	162,184	159,959	January 1 . . . . .	153,622	152,973	151,238
July 1 . . . . .	163,026	161,884	159,695	1950:			
June 1 . . . . .	162,790	161,648	159,449	December 1 . . . . .	153,415	152,762	151,128
May 1 . . . . .	162,564	161,396	159,208	November 1 . . . . .	153,209	152,597	151,067
April 1 . . . . .	162,350	161,172	158,978	October 1 . . . . .	152,985	152,409	151,072
March 1 . . . . .	162,124	160,908	158,735	September 1 . . . . .	152,750	152,220	151,100
February 1 . . . . .	161,912	160,681	158,500	August 1 . . . . .	152,503	152,071	150,984
January 1 . . . . .	161,690	160,492	158,254	July 1 . . . . .	152,271	151,868	150,790
1953:				June 1 . . . . .	152,064	151,658	150,582
December 1 . . . . .	161,453	160,210	157,961	May 1 . . . . .	151,878	151,477	150,389
November 1 . . . . .	161,223	159,959	157,706	April 1 . . . . .	151,718	<sup>1</sup> 151,326	150,219
October 1 . . . . .	160,978	159,707	157,434	March 1 . . . . .	151,529	151,315	150,020
September 1 . . . . .	160,718	159,445	157,135	February 1 . . . . .	151,343	150,937	149,809
August 1 . . . . .	160,449	159,169	156,857	January 1 . . . . .	151,135	150,720	149,563
July 1 . . . . .	160,184	158,956	156,595				

<sup>1</sup>Census count: April 1, 1980-226,545,805.<sup>2</sup>Census count: April 1, 1970-203,302,031.<sup>3</sup>Census count: April 1, 1960-179,323,175.<sup>4</sup>Census count: April 1, 1950-151,325,798.

**Table A-1. Population Estimates, Adjusted for Net Census Undercount, by Age, Sex, and Race:  
1980 and 1988**

(Total population including Armed Forces overseas. OMB-consistent race. Numbers in thousands)

Date and age	All races			White			Black			Other races		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
JULY 1, 1988												
All ages	249,727	122,994	126,733	209,633	103,401	106,232	32,068	15,679	16,389	8,026	3,913	4,112
Under 5 years	18,835	9,637	9,198	14,900	7,640	7,260	3,063	1,553	1,511	872	445	427
Under 1 year	3,854	1,973	1,881	3,043	1,560	1,482	637	323	314	174	89	84
1 year	3,795	1,942	1,853	2,991	1,533	1,457	630	319	311	175	90	85
2 years	3,780	1,934	1,846	2,990	1,533	1,457	613	311	302	177	90	87
3 years	3,757	1,922	1,835	2,980	1,528	1,452	601	305	297	175	89	86
4 years	3,650	1,867	1,783	2,897	1,485	1,411	582	295	287	171	87	84
5 to 9 years	18,298	9,359	8,939	14,566	7,471	7,095	2,933	1,484	1,449	799	405	395
5 years	3,728	1,908	1,820	2,962	1,520	1,442	593	301	292	174	88	86
6 years	3,722	1,903	1,819	2,961	1,518	1,443	594	300	293	168	85	83
7 years	3,687	1,886	1,801	2,940	1,508	1,432	586	297	289	161	81	80
8 years	3,640	1,861	1,779	2,898	1,486	1,412	590	298	292	152	77	75
9 years	3,521	1,801	1,720	2,806	1,439	1,367	571	288	282	145	73	71
10 to 14 years	16,645	8,521	8,124	13,343	6,848	6,495	2,638	1,333	1,304	665	340	325
10 years	3,421	1,751	1,670	2,738	1,405	1,333	546	276	270	137	70	67
11 years	3,401	1,742	1,659	2,723	1,399	1,325	544	275	269	134	68	65
12 years	3,258	1,667	1,591	2,612	1,340	1,272	515	260	255	131	67	64
13 years	3,317	1,699	1,618	2,666	1,369	1,297	520	263	257	131	68	64
14 years	3,248	1,662	1,585	2,603	1,336	1,268	512	259	253	132	68	64
15 to 19 years	18,200	9,305	8,895	14,766	7,566	7,200	2,774	1,398	1,377	660	342	318
15 years	3,334	1,704	1,629	2,667	1,367	1,300	533	269	265	133	69	64
16 years	3,530	1,805	1,725	2,841	1,456	1,385	554	279	275	134	69	65
17 years	3,846	1,989	1,877	3,123	1,602	1,521	589	297	291	134	70	64
18 years	3,781	1,934	1,848	3,103	1,589	1,513	549	277	272	130	68	62
19 years	3,709	1,894	1,815	3,032	1,552	1,480	549	275	274	128	66	62
20 to 24 years	19,679	10,042	9,637	16,149	8,268	7,881	2,895	1,451	1,444	635	323	312
20 years	3,654	1,866	1,788	2,985	1,529	1,457	545	273	272	123	64	60
21 years	3,747	1,910	1,837	3,069	1,569	1,500	556	278	277	122	63	60
22 years	3,869	1,974	1,895	3,163	1,619	1,544	581	291	289	125	64	62
23 years	4,107	2,093	2,014	3,375	1,727	1,649	602	301	301	130	65	64
24 years	4,301	2,198	2,103	3,556	1,824	1,732	612	307	305	134	67	67
25 to 29 years	22,561	11,517	11,043	18,758	9,622	9,136	3,084	1,543	1,542	718	353	365
25 years	4,386	2,239	2,147	3,636	1,863	1,772	613	307	306	137	68	69
26 years	4,479	2,286	2,193	3,722	1,908	1,814	617	309	308	140	69	71
27 years	4,590	2,344	2,246	3,823	1,962	1,861	622	311	311	145	71	74
28 years	4,538	2,317	2,220	3,777	1,939	1,838	614	307	307	147	72	75
29 years	4,567	2,331	2,237	3,801	1,950	1,852	617	308	308	149	73	77
30 to 34 years	22,187	11,306	10,881	18,544	9,502	9,042	2,902	1,448	1,454	741	357	384
30 years	4,584	2,342	2,242	3,830	1,967	1,864	605	303	302	148	72	77
31 years	4,578	2,337	2,240	3,821	1,961	1,860	606	303	303	150	73	78
32 years	4,417	2,250	2,167	3,685	1,888	1,798	583	291	292	149	71	77
33 years	4,352	2,216	2,136	3,639	1,864	1,775	566	281	284	147	71	76
34 years	4,257	2,161	2,095	3,569	1,822	1,746	542	269	273	146	70	76
35 to 39 years	19,621	9,911	9,709	16,521	8,399	8,122	2,422	1,192	1,230	677	320	357
35 years	4,140	2,099	2,041	3,482	1,775	1,706	515	255	260	144	69	75
36 years	4,024	2,038	1,986	3,391	1,729	1,662	496	244	252	138	66	72
37 years	3,921	1,979	1,942	3,291	1,672	1,619	493	242	251	137	65	73
38 years	3,774	1,903	1,871	3,175	1,612	1,563	467	230	238	132	62	70
39 years	3,762	1,892	1,870	3,183	1,611	1,572	452	222	230	126	59	68
40 to 44 years	16,533	8,279	8,255	14,174	7,141	7,033	1,832	892	940	527	246	281
40 years	3,727	1,873	1,854	3,181	1,609	1,573	425	208	217	120	56	65
41 years	3,993	2,006	1,986	3,465	1,752	1,714	412	201	211	116	54	62
42 years	2,903	1,449	1,453	2,474	1,244	1,231	329	159	170	100	47	53
43 years	2,946	1,471	1,475	2,510	1,261	1,248	337	163	174	99	47	53
44 years	2,965	1,480	1,486	2,543	1,275	1,268	329	160	169	93	44	49
45 to 49 years	13,372	6,656	6,716	11,445	5,725	5,720	1,526	739	787	401	191	210
45 years	3,123	1,560	1,563	2,703	1,357	1,346	331	161	170	89	42	47
46 years	2,754	1,372	1,382	2,353	1,178	1,175	317	154	163	84	40	44
47 years	2,585	1,286	1,300	2,205	1,102	1,103	300	145	155	80	38	42
48 years	2,470	1,227	1,243	2,103	1,050	1,053	292	141	151	76	36	39
49 years	2,439	1,210	1,229	2,081	1,037	1,044	286	138	148	72	35	37
50 to 54 years	11,317	5,586	5,732	9,705	4,813	4,892	1,296	624	672	316	149	168
50 years	2,399	1,189	1,210	2,050	1,021	1,029	280	135	145	70	33	36
51 years	2,283	1,129	1,154	1,952	970	982	265	127	137	66	31	34
52 years	2,252	1,110	1,142	1,930	956	974	260	125	135	63	30	33
53 years	2,238	1,103	1,135	1,929	956	973	249	119	130	60	28	32
54 years	2,146	1,055	1,091	1,845	911	934	243	118	126	58	26	32

**Table A-1. Population Estimates, Adjusted for Net Census Undercount, by Age, Sex, and Race: 1980 and 1988—Con.**

(Total population including Armed Forces overseas. OMB-consistent race. Numbers in thousands)

Date and age	All races			White			Black			Other races		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>JULY 1, 1988—Con.</b>												
55 to 59 years.....	11,014	5,350	5,664	9,568	4,672	4,896	1,177	560	617	269	117	152
55 years.....	2,131	1,042	1,089	1,834	901	932	241	116	125	58	25	31
56 years.....	2,177	1,059	1,117	1,862	921	941	240	114	126	55	24	31
57 years.....	2,231	1,081	1,149	1,940	945	995	237	112	124	54	23	30
58 years.....	2,242	1,090	1,152	1,958	957	1,000	232	110	122	53	23	30
59 years.....	2,234	1,077	1,157	1,954	947	1,007	228	108	120	51	22	29
60 to 64 years.....	11,008	5,195	5,813	9,720	4,605	5,115	1,051	488	563	237	102	135
60 years.....	2,263	1,065	1,178	1,990	959	1,031	223	105	118	50	21	29
61 years.....	2,213	1,050	1,163	1,947	927	1,020	218	102	116	49	21	28
62 years.....	2,171	1,022	1,149	1,913	904	1,009	210	98	113	47	20	27
63 years.....	2,201	1,031	1,169	1,951	918	1,033	203	94	110	46	20	28
64 years.....	2,180	1,007	1,153	1,919	897	1,021	198	90	107	45	20	25
65 to 69 years.....	9,853	4,511	5,342	8,813	4,050	4,764	848	375	471	194	86	108
65 years.....	2,071	959	1,113	1,839	854	985	189	85	103	44	19	24
66 years.....	2,101	971	1,130	1,860	872	1,006	179	80	99	41	19	23
67 years.....	2,017	928	1,089	1,809	838	973	169	75	94	39	17	22
68 years.....	1,892	855	1,027	1,686	789	917	159	70	90	38	18	20
69 years.....	1,782	798	984	1,600	719	881	149	65	85	34	15	19
70 to 74 years.....	7,883	3,361	4,461	7,091	3,061	4,031	833	281	373	138	61	77
70 years.....	1,749	771	972	1,577	704	874	140	60	80	31	14	18
71 years.....	1,648	718	930	1,466	650	836	133	58	77	29	13	17
72 years.....	1,551	667	884	1,397	602	794	127	52	75	28	12	15
73 years.....	1,491	630	861	1,345	570	775	120	48	72	28	11	14
74 years.....	1,424	591	833	1,286	535	751	114	45	69	24	11	13
75 to 79 years.....	5,884	2,304	3,580	5,331	2,089	3,242	481	173	286	93	42	50
75 years.....	1,348	549	798	1,218	498	720	107	42	66	22	10	12
76 years.....	1,285	508	780	1,145	458	687	100	38	62	20	9	11
77 years.....	1,178	460	717	1,067	417	650	92	35	58	18	8	10
78 years.....	1,090	418	674	989	377	612	84	31	53	17	8	9
79 years.....	1,004	373	630	912	339	573	77	28	49	15	7	8
80 to 84 years.....	3,787	1,293	2,474	3,433	1,174	2,259	284	98	187	51	23	28
80 years.....	916	332	586	835	302	534	89	25	45	13	6	7
81 years.....	833	293	540	759	256	493	39	22	41	12	5	8
82 years.....	751	258	495	684	233	452	51	19	37	10	4	8
83 years.....	671	222	449	612	201	410	50	17	34	9	4	5
84 years.....	594	190	404	542	172	370	45	14	31	7	3	4
85 to 89 years.....	1,997	582	1,415	1,824	528	1,296	151	45	108	22	9	13
85 years.....	522	161	361	476	146	330	40	12	27	6	3	4
86 years.....	456	136	320	418	123	293	35	10	24	5	2	3
87 years.....	396	114	281	361	104	258	30	9	21	4	2	3
88 years.....	339	95	244	310	86	224	28	7	18	4	1	2
89 years.....	285	77	209	261	69	191	22	6	15	3	1	2
90 to 94 years.....	807	195	612	734	175	559	66	18	48	7	2	5
90 years.....	238	60	175	216	55	161	18	5	13	2	1	1
91 years.....	191	46	145	175	42	133	15	4	11	2	1	1
92 years.....	152	34	117	138	31	108	12	3	9	1	-	1
93 years.....	127	30	97	114	27	88	11	3	8	1	-	1
94 years.....	102	24	78	91	21	70	10	3	7	1	-	1
95 to 99 years.....	229	51	178	200	44	156	25	6	19	3	1	2
95 years.....	78	18	60	69	16	53	8	2	6	1	-	1
96 years.....	57	13	45	50	11	39	6	1	5	1	-	-
97 years.....	41	9	32	35	7	28	5	1	4	1	-	-
98 years.....	30	6	23	25	5	20	4	1	3	1	-	-
99 years.....	23	5	18	20	4	15	3	1	2	1	-	-
100 years and over.....	57	12	45	48	10	39	8	2	6	1	-	1
5 to 13 years.....	31,696	16,218	15,478	25,306	12,983	12,323	5,058	2,558	2,500	1,332	677	655
14 to 17 years.....	13,957	7,140	6,817	11,234	5,760	5,475	2,189	1,104	1,084	534	276	258
18 to 21 years.....	14,892	7,604	7,288	12,190	6,240	5,950	2,199	1,104	1,095	504	260	243
22 to 24 years.....	12,278	6,266	6,012	10,094	5,170	4,924	1,794	863	895	389	196	193
16 years and over.....	192,615	93,772	98,843	184,158	80,076	84,081	22,901	11,040	11,860	5,556	2,655	2,901
18 years and over.....	185,239	89,999	95,240	158,194	77,019	81,175	21,757	10,464	11,294	5,288	2,516	2,772
65 years and over.....	30,456	12,330	18,126	27,474	11,130	16,345	2,473	976	1,497	509	225	284
85 years and over.....	3,089	840	2,250	2,806	756	2,050	250	71	179	33	12	21

**Table A-1. Population Estimates, Adjusted for Net Census Undercount, by Age, Sex, and Race:  
1980 and 1988—Con.**

(Total population including Armed Forces overseas. OMB-consistent race. Numbers in thousands)

Date and age	All races			White			Black			Other races		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
APRIL 1, 1980												
All ages	230,232	113,202	117,030	196,836	96,876	99,960	28,472	13,934	14,538	4,924	2,392	2,531
Under 5 years	16,672	8,533	8,139	13,437	6,896	6,540	2,712	1,371	1,340	524	266	258
Under 1 year	3,525	1,803	1,722	2,829	1,451	1,378	581	294	287	115	59	57
1 year	3,379	1,728	1,650	2,713	1,392	1,321	557	282	275	109	55	54
2 years	3,340	1,710	1,630	2,698	1,385	1,313	540	273	267	102	52	50
3 years	3,247	1,662	1,584	2,623	1,347	1,276	524	265	259	100	51	49
4 years	3,181	1,629	1,552	2,574	1,322	1,252	510	258	252	98	49	48
5 to 9 years	16,951	8,673	8,278	13,786	7,071	6,715	2,666	1,347	1,318	499	254	245
5 years	3,211	1,645	1,566	2,607	1,339	1,268	505	255	249	99	50	48
6 years	3,161	1,618	1,543	2,555	1,311	1,244	506	256	250	100	50	49
7 years	3,274	1,674	1,600	2,647	1,357	1,290	526	266	261	100	51	50
8 years	3,514	1,796	1,718	2,862	1,467	1,396	551	278	273	101	51	50
9 years	3,790	1,939	1,851	3,113	1,597	1,517	577	292	285	99	51	49
10 to 14 years	18,282	9,333	8,949	15,099	7,728	7,371	2,740	1,378	1,361	444	227	217
10 years	3,686	1,884	1,802	3,044	1,560	1,485	546	276	271	95	49	47
11 years	3,597	1,837	1,760	2,977	1,525	1,452	529	266	263	90	46	44
12 years	3,551	1,813	1,738	2,928	1,499	1,429	537	270	268	86	44	42
13 years	3,661	1,866	1,795	3,025	1,546	1,479	551	277	274	85	43	42
14 years	3,788	1,933	1,855	3,125	1,599	1,526	576	290	286	87	45	42
15 to 19 years	21,203	10,821	10,382	17,726	9,072	8,654	3,023	1,518	1,506	454	231	223
15 years	4,042	2,060	1,982	3,354	1,714	1,640	598	300	298	90	46	44
16 years	4,175	2,133	2,042	3,483	1,784	1,699	602	303	299	91	47	44
17 years	4,240	2,163	2,077	3,545	1,813	1,732	604	303	301	91	46	45
18 years	4,349	2,220	2,129	3,648	1,868	1,780	610	306	304	91	46	44
19 years	4,398	2,245	2,153	3,697	1,894	1,803	609	305	304	91	46	45
20 to 24 years	21,889	11,175	10,714	18,454	9,457	8,997	2,976	1,493	1,484	459	226	234
20 years	4,395	2,246	2,149	3,695	1,894	1,801	609	306	303	92	46	45
21 years	4,400	2,246	2,154	3,706	1,899	1,807	603	302	301	91	45	46
22 years	4,444	2,271	2,173	3,752	1,924	1,828	601	302	299	91	45	46
23 years	4,363	2,228	2,135	3,681	1,888	1,794	590	296	294	92	45	47
24 years	4,287	2,184	2,103	3,620	1,852	1,767	574	287	287	93	44	49
25 to 29 years	20,146	10,228	9,918	17,088	8,722	8,366	2,573	1,278	1,295	485	228	257
25 years	4,225	2,152	2,073	3,575	1,830	1,745	556	277	279	94	45	49
26 years	4,121	2,094	2,027	3,495	1,784	1,711	529	264	265	96	46	51
27 years	4,044	2,052	1,992	3,440	1,755	1,685	506	251	255	98	46	52
28 years	3,973	2,015	1,958	3,377	1,723	1,654	499	247	252	97	45	52
29 years	3,783	1,915	1,868	3,201	1,630	1,571	482	239	244	99	46	53
30 to 34 years	17,896	9,027	8,869	15,365	7,793	7,571	2,076	1,025	1,052	455	208	247
30 years	3,749	1,895	1,854	3,183	1,619	1,564	468	232	236	99	45	54
31 years	3,713	1,874	1,839	3,167	1,608	1,559	450	223	227	96	44	52
32 years	3,791	1,912	1,879	3,272	1,659	1,613	425	210	215	94	42	51
33 years	3,774	1,905	1,869	3,288	1,668	1,620	398	196	202	88	40	47
34 years	2,868	1,440	1,429	2,455	1,239	1,216	334	164	170	80	37	43
35 to 39 years	14,331	7,194	7,137	12,336	6,219	6,117	1,641	807	834	355	168	187
35 years	2,951	1,483	1,468	2,531	1,278	1,252	341	168	174	79	37	42
36 years	3,019	1,516	1,502	2,607	1,315	1,292	338	167	171	74	35	39
37 years	3,062	1,539	1,523	2,658	1,341	1,317	333	164	169	71	34	38
38 years	2,730	1,369	1,362	2,339	1,177	1,162	325	160	165	67	32	35
39 years	2,569	1,287	1,282	2,201	1,108	1,094	304	149	155	64	31	33
40 to 44 years	11,995	5,996	6,000	10,283	5,158	5,125	1,435	703	732	277	135	142
40 years	2,478	1,241	1,237	2,117	1,064	1,053	300	148	153	60	29	31
41 years	2,480	1,241	1,239	2,126	1,067	1,059	296	145	151	58	28	29
42 years	2,418	1,209	1,209	2,072	1,040	1,032	290	142	148	56	27	28
43 years	2,305	1,151	1,154	1,979	992	988	273	134	140	53	26	27
44 years	2,315	1,154	1,161	1,989	995	994	275	135	141	51	24	26
45 to 49 years	11,398	5,654	5,744	9,870	4,914	4,956	1,301	636	664	227	104	123
45 years	2,339	1,167	1,173	2,025	1,014	1,011	266	130	136	48	23	26
46 years	2,182	1,087	1,095	1,877	937	939	258	128	130	47	22	25
47 years	2,229	1,105	1,123	1,924	958	966	259	127	132	45	20	25
48 years	2,290	1,132	1,158	1,987	986	1,000	259	126	133	44	20	24
49 years	2,359	1,163	1,195	2,058	1,019	1,039	258	125	132	43	19	24
50 to 54 years	11,912	5,834	6,079	10,475	5,144	5,331	1,242	602	640	195	87	108
50 years	2,370	1,177	1,194	2,074	1,034	1,040	254	124	130	42	19	23
51 years	2,375	1,167	1,208	2,082	1,027	1,056	252	123	130	40	18	23
52 years	2,435	1,194	1,240	2,146	1,056	1,090	250	121	129	39	17	22
53 years	2,372	1,152	1,220	2,088	1,017	1,072	246	119	127	38	17	21
54 years	2,361	1,143	1,217	2,084	1,011	1,073	240	115	125	36	16	20

**Table A-1. Population Estimates, Adjusted for Net Census Undercount, by Age, Sex, and Race:  
1980 and 1982—Con.**

(Total population including Armed Forces overseas. OMB-consistent race. Numbers in thousands)

Date and age	All races			White			Black			Other races		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
APRIL 1, 1990--Con.												
55 to 59 years	11,752	5,656	6,097	10,479	5,054	5,426	1,108	525	583	165	77	88
55 years	2,428	1,173	1,255	2,167	1,044	1,113	235	113	122	35	16	19
56 years	2,375	1,145	1,231	2,111	1,019	1,092	230	109	120	35	16	18
57 years	2,298	1,103	1,194	2,041	982	1,059	223	106	117	33	16	18
58 years	2,385	1,147	1,238	2,139	1,031	1,108	215	101	114	32	15	17
59 years	2,266	1,088	1,179	2,031	977	1,054	206	96	109	30	14	16
60 to 64 years	10,170	4,772	5,398	9,142	4,301	4,841	903	414	489	124	57	67
60 years	2,148	1,022	1,126	1,924	918	1,006	196	91	105	28	13	15
61 years	2,077	981	1,097	1,864	882	982	187	86	101	26	12	14
62 years	2,079	979	1,101	1,876	885	990	179	82	97	24	11	13
63 years	1,967	913	1,055	1,771	824	947	173	78	94	24	11	13
64 years	1,898	878	1,020	1,708	792	915	168	75	93	23	10	12
65 to 69 years	8,669	3,883	4,786	7,826	3,512	4,315	742	323	419	101	48	53
65 years	1,863	851	1,012	1,680	769	911	161	71	90	22	10	12
66 years	1,805	817	988	1,628	738	890	156	68	87	21	10	11
67 years	1,741	780	961	1,572	705	866	150	65	84	20	10	11
68 years	1,669	739	930	1,508	669	839	142	61	81	19	9	10
69 years	1,591	696	895	1,439	630	809	134	57	77	18	9	9
70 to 74 years	6,770	2,844	3,926	6,144	2,577	3,568	553	231	322	73	37	36
70 years	1,513	653	859	1,370	592	779	126	53	72	17	8	8
71 years	1,435	611	824	1,301	553	748	118	50	68	16	8	8
72 years	1,355	568	786	1,230	515	715	110	46	64	15	7	7
73 years	1,274	526	748	1,158	477	681	103	42	61	13	7	7
74 years	1,193	485	709	1,085	439	646	96	39	57	12	6	6
75 to 79 years	4,787	1,838	2,949	4,363	1,669	2,694	379	147	232	45	22	23
75 years	1,112	444	669	1,012	402	610	89	36	53	11	6	5
76 years	1,031	403	628	939	366	573	82	32	50	10	5	5
77 years	953	365	588	869	331	538	75	29	46	9	4	5
78 years	880	330	550	803	299	503	69	26	43	8	4	4
79 years	810	297	513	740	270	470	63	24	39	7	3	4
80 to 84 years	3,059	1,047	2,012	2,806	953	1,852	228	82	146	25	11	14
80 years	742	265	476	679	241	437	57	21	36	6	3	3
81 years	675	236	439	618	214	404	51	19	32	6	3	3
82 years	610	207	402	559	189	370	45	16	29	5	2	3
83 years	547	181	366	502	165	337	40	14	26	4	2	2
84 years	486	157	329	447	143	304	35	12	23	4	2	2
85 to 89 years	1,641	507	1,134	1,511	465	1,046	119	38	80	11	4	7
85 years	439	141	298	404	129	274	32	11	21	3	1	2
86 years	383	120	262	352	110	242	28	9	19	3	1	2
87 years	326	100	226	301	92	209	23	7	16	2	1	1
88 years	272	81	190	251	75	176	19	6	13	2	1	1
89 years	222	64	157	205	59	145	16	5	11	2	1	1
90 to 94 years	571	157	415	525	143	383	42	12	30	4	2	3
90 years	179	51	128	165	46	118	13	4	9	1	1	1
91 years	141	39	102	130	36	94	10	3	7	1	1	1
92 years	109	30	79	100	27	73	8	2	6	1	1	1
93 years	82	22	61	75	20	56	6	2	5	1	1	1
94 years	61	16	45	56	14	42	5	1	4	1	1	1
95 to 99 years	120	30	91	108	26	82	12	4	8	1	1	1
95 years	44	11	33	40	10	30	4	1	3	1	1	1
96 years	31	8	23	28	7	21	3	1	2	1	1	1
97 years	21	5	16	19	4	14	2	1	2	1	1	1
98 years	14	3	11	13	3	10	2	1	1	1	1	1
99 years	10	2	7	8	2	6	1	1	1	1	1	1
100 years and over	15	3	12	12	2	10	2	1	2	1	1	1
5 to 13 years	31,445	16,072	15,373	25,760	13,201	12,559	4,829	2,435	2,394	857	436	420
14 to 17 years	16,245	8,289	7,956	13,506	6,909	6,597	2,380	1,196	1,183	359	183	175
18 to 21 years	17,542	8,957	8,584	14,745	7,554	7,191	2,432	1,219	1,212	365	184	181
22 to 24 years	13,094	6,683	6,411	11,053	5,664	5,389	1,765	885	880	276	134	143
16 years and over	174,285	84,603	89,681	151,160	73,466	77,694	19,758	9,537	10,221	3,367	1,600	1,767
18 years and over	165,870	80,308	85,562	144,133	69,870	74,263	18,552	8,931	9,621	3,185	1,507	1,678
65 years and over	25,633	10,307	15,325	23,296	9,346	13,950	2,076	837	1,240	260	124	136
85 years and over	2,348	696	1,651	2,156	636	1,521	175	55	120	16	6	10

- Represents zero or rounds to zero.



**Table A-2. Completeness of Coverage Estimates—Ratio of Census-Level to Adjusted Population, by Age, Sex, and Race: April 1, 1980—Con.**

(Total population including Armed Forces overseas. OMB-consistent race)

Date and age	All races			White			Black			Other races		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
60 to 64 years	0.99189	0.97856	1.00367	0.99300	0.98131	1.00338	0.96759	0.93345	0.99647	1.08657	1.09838	1.07654
60 years	1.00611	0.98812	1.02245	1.00139	0.98535	1.01603	1.03535	0.99536	1.07016	1.12650	1.13387	1.12007
61 years	0.99829	0.98294	1.01201	1.00121	0.98724	1.01376	0.95891	0.92539	0.98774	1.07239	1.08292	1.06350
62 years	0.96587	0.95135	0.97878	0.96635	0.95335	0.97797	0.94464	0.89095	0.97482	1.08455	1.10407	1.06821
63 years	0.98187	0.97388	0.98841	0.98540	0.97988	0.99019	0.93316	0.89740	0.96291	1.05697	1.07265	1.04382
64 years	1.00787	0.99773	1.01660	1.01174	1.00277	1.01950	0.95788	0.93170	0.97921	1.08696	1.09259	1.08219
65 to 69 years	1.01307	1.00520	1.01945	1.00839	1.00153	1.01398	1.05027	1.02929	1.06645	1.10224	1.11132	1.09398
65 years	1.02230	1.01355	1.02966	1.01771	1.01041	1.02388	1.05860	1.03542	1.07700	1.10701	1.09710	1.11564
66 years	1.00496	0.99729	1.01130	1.00366	0.99733	1.00891	1.01030	0.98775	1.02792	1.06576	1.05985	1.07102
67 years	1.01284	1.00574	1.01860	1.00701	1.00111	1.01181	1.06040	1.03895	1.07691	1.11414	1.11976	1.10901
68 years	1.00585	1.00108	1.00964	1.00609	1.00169	1.00960	0.99286	0.97780	1.00430	1.08313	1.11126	1.05686
69 years	1.01928	1.00804	1.02802	1.00680	0.99593	1.01527	1.13633	1.11526	1.15213	1.14647	1.17736	1.11692
70 to 74 years	1.00419	1.00343	1.00474	1.00144	1.00056	1.00208	1.02174	1.01843	1.02410	1.10274	1.11052	1.09481
70 years	1.00267	0.99993	1.00475	0.99619	0.99308	0.99855	1.06094	1.05565	1.06486	1.09482	1.12907	1.06116
71 years	1.00360	1.00177	1.00495	1.00410	1.00175	1.00584	0.98664	0.98642	0.98679	1.08913	1.09981	1.07832
72 years	1.01204	1.01454	1.01024	1.01055	1.01321	1.00863	1.01793	1.01483	1.02015	1.09378	1.10561	1.08155
73 years	0.99039	0.98970	0.99088	0.99056	0.99104	0.99023	0.97561	0.96110	0.98579	1.08935	1.07431	1.10500
74 years	1.01263	1.01209	1.01300	1.00618	1.00465	1.00722	1.06729	1.07485	1.06212	1.15637	1.14495	1.16813
75 to 79 years	1.00141	1.00539	0.99894	0.99722	0.99974	0.99567	1.02565	1.04398	1.01406	1.20287	1.17412	1.23104
75 years	1.00411	1.00823	1.00137	0.99978	1.00324	0.99749	1.03307	1.04314	1.02638	1.16661	1.14480	1.18882
76 years	1.00299	1.00261	1.00323	0.99812	0.99637	0.99923	1.03548	1.04766	1.02762	1.19442	1.16924	1.21959
77 years	1.00210	1.00134	1.00257	0.99728	0.99464	0.99891	1.03208	1.04912	1.02140	1.21735	1.18935	1.24469
78 years	0.99972	1.00353	0.99745	0.99562	0.99743	0.99454	1.02094	1.04449	1.00654	1.22787	1.19515	1.25906
79 years	0.99674	1.01198	0.98793	0.99426	1.00788	0.98645	0.99971	1.03327	0.97961	1.22448	1.18524	1.26094
80 to 84 years	0.95947	0.97380	0.95201	0.96432	0.97742	0.95758	0.87846	0.91774	0.85647	1.15153	1.07401	1.21502
80 years	0.97480	0.93270	0.97040	0.97018	0.97509	0.96746	1.00262	1.04459	0.97805	1.21630	1.15995	1.26682
81 years	0.94904	0.95160	0.94767	0.95994	0.96145	0.95913	0.79459	0.81809	0.78117	1.14854	1.08839	1.20013
82 years	0.92926	0.94963	0.91876	0.93759	0.95748	0.92744	0.80925	0.85097	0.78603	1.08641	1.00178	1.15521
83 years	0.96553	0.98944	0.95367	0.97307	0.99672	0.96148	0.85559	0.89964	0.83172	1.10512	1.02065	1.16977
84 years	0.98161	1.00597	0.96999	0.98510	1.00925	0.97371	0.91508	0.96125	0.89076	1.18566	1.05019	1.28205
85 to 89 years	0.95463	0.97851	0.94395	0.95580	0.97626	0.94671	0.91221	0.97340	0.88304	1.24440	1.28692	1.22070
85 years	0.95505	0.97849	0.94392	0.95616	0.97626	0.94671	0.91399	0.97342	0.88309	1.24507	1.28623	1.22112
86 years	0.95476	0.97843	0.94393	0.95595	0.97626	0.94671	0.91253	0.97342	0.88301	1.24418	1.28773	1.22059
87 years	0.95454	0.97842	0.94397	0.95575	0.97626	0.94671	0.91166	0.97340	0.88301	1.24355	1.28665	1.22076
88 years	0.95432	0.97854	0.94398	0.95551	0.97626	0.94671	0.91101	0.97334	0.88300	1.24403	1.28725	1.22045
89 years	0.95412	0.97882	0.94399	0.95526	0.97626	0.94671	0.91025	0.97334	0.88306	1.24514	1.28696	1.22027
90 to 94 years	0.95355	0.97939	0.94380	0.95474	0.97625	0.94671	0.90914	0.97334	0.88304	1.24792	1.28783	1.22117
90 years	0.95397	0.97923	0.94398	0.95503	0.97625	0.94671	0.90956	0.97341	0.88302	1.24731	1.28599	1.22151
91 years	0.95384	0.97963	0.94392	0.95485	0.97626	0.94671	0.90936	0.97324	0.88304	1.24730	1.28825	1.22134
92 years	0.95355	0.97965	0.94382	0.95466	0.97625	0.94671	0.90915	0.97330	0.88302	1.24730	1.28863	1.22086
93 years	0.95301	0.97928	0.94359	0.95442	0.97624	0.94671	0.90859	0.97312	0.88312	1.24662	1.28947	1.21978
94 years	0.95244	0.97899	0.94331	0.95418	0.97623	0.94671	0.90830	0.97374	0.88300	1.24634	1.28859	1.22222
95 to 99 years	0.95145	0.97893	0.94249	0.95379	0.97627	0.94670	0.90974	0.97342	0.88297	1.24379	1.28772	1.22143
95 years	0.95200	0.97900	0.94298	0.95399	0.97630	0.94671	0.90893	0.97297	0.88291	1.24407	1.28440	1.22043
96 years	0.95161	0.97922	0.94264	0.95374	0.97620	0.94670	0.91017	0.97392	0.88312	1.24537	1.28750	1.22059
97 years	0.95103	0.97885	0.94221	0.95360	0.97828	0.94672	0.91011	0.97333	0.88277	1.24658	1.29167	1.22449
98 years	0.95069	0.97871	0.94185	0.95354	0.97622	0.94671	0.91040	0.97384	0.88336	1.24528	1.29032	1.22667
99 years	0.95049	0.97812	0.94138	0.95380	0.97638	0.94665	0.90967	0.97319	0.88269	1.23171	1.29412	1.21538
100 years and over	0.94782	0.98259	0.93901	0.95220	0.97626	0.94669	0.90717	0.97368	0.88285	1.25517	1.29231	1.22500
5 to 13 years	0.99091	0.99068	0.99114	0.99733	0.99727	0.99738	0.95857	0.95695	0.96021	0.98010	0.97963	0.98060
14 to 17 years	1.00026	1.00122	0.99926	0.99903	0.99968	0.99934	1.00002	1.00182	0.99821	1.04841	1.05562	1.04088
18 to 21 years	0.99981	0.99167	1.00830	1.00036	0.99228	1.00885	0.98192	0.96814	0.99571	1.09685	1.12252	1.07067
22 to 24 years	0.97379	0.95940	0.98878	0.97862	0.96657	0.99128	0.92449	0.88830	0.96089	1.09527	1.12628	1.06614
16 years and over	0.98523	0.97207	0.99765	0.98898	0.97874	0.99367	0.93858	0.89778	0.97665	1.09065	1.10898	1.07404
18 years and over	0.98454	0.97057	0.99765	0.98859	0.97776	0.99878	0.93440	0.89042	0.97522	1.09313	1.11211	1.07607
65 years and over	0.99675	0.99977	0.99473	0.99426	0.99677	0.99258	1.00760	1.01432	1.00307	1.13371	1.12756	1.13935
85 years and over	0.95416	0.97874	0.94380	0.95542	0.97626	0.94671	0.91124	0.97339	0.88303	1.24537	1.28727	1.22089

Table A-3. Ratio of Noninstitutional Population to Total Population, by Age, Sex, Race and Hispanic Origin: April 1, 1980

[Total population includes Armed Forces overseas. OMB-consistent race]

Table with columns: Age, Total (Male, Female), Race (White, Black, Other races), and Hispanic origin (Total, Male, Female). Rows list age groups from All ages to 74 years.

\*Persons of Hispanic origin may be of any race.



Table A-3. Ratio of Noninstitutional Population to Total Population, by Age, Sex, Race and Hispanic Origin: April 1, 1980—Con.

[Total population includes Armed Forces overseas. OMB-consistent race]

Age	Total			Race									Hispanic origin <sup>1</sup>		
	Total	Male	Female	White			Black			Other races			Total	Male	Female
				Total	Male	Female	Total	Male	Female	Total	Male	Female			
75 to 79 years ..	0.85074	0.86100	0.84430	0.94997	0.96118	0.94300	0.95674	0.95784	0.95603	0.96954	0.96786	0.97110	0.97198	0.97100	0.97272
75 years .....	0.96373	0.96993	0.95959	0.96340	0.97020	0.95889	0.96558	0.96592	0.96535	0.97588	0.97611	0.97585	0.97851	0.97767	0.97914
76 years .....	0.95789	0.96474	0.95350	0.95726	0.96510	0.95228	0.96231	0.95945	0.96420	0.97580	0.97253	0.97893	0.97584	0.97444	0.97692
77 years .....	0.95121	0.96110	0.94508	0.95035	0.96119	0.94370	0.95838	0.95940	0.95769	0.96828	0.96553	0.97085	0.97105	0.96994	0.97191
78 years .....	0.94619	0.95759	0.93932	0.94487	0.95739	0.93756	0.95726	0.95850	0.95647	0.96603	0.96542	0.96658	0.96700	0.96535	0.96826
79 years .....	0.92803	0.94631	0.91720	0.92720	0.94871	0.91577	0.93366	0.94057	0.92929	0.95730	0.95420	0.96001	0.96474	0.96468	0.96479
80 to 84 years ..	0.89673	0.92735	0.88044	0.89394	0.92838	0.87689	0.92812	0.93697	0.92281	0.94079	0.94230	0.93989	0.94712	0.94956	0.94541
80 years .....	0.92406	0.94389	0.91281	0.92215	0.94343	0.91030	0.94179	0.94791	0.93797	0.95567	0.95733	0.95430	0.96039	0.96129	0.95973
81 years .....	0.90629	0.93269	0.89197	0.90430	0.93243	0.88933	0.92977	0.93798	0.92485	0.94159	0.93935	0.94333	0.94908	0.95074	0.94790
82 years .....	0.89640	0.92703	0.88006	0.89390	0.92633	0.87681	0.92533	0.93418	0.92001	0.94177	0.94003	0.94300	0.94565	0.94539	0.94583
83 years .....	0.87960	0.91562	0.86106	0.87615	0.91412	0.85685	0.92146	0.93261	0.91493	0.93187	0.93205	0.93142	0.93988	0.94119	0.93900
84 years .....	0.86187	0.90574	0.84017	0.85783	0.90408	0.83493	0.91201	0.92308	0.90572	0.92193	0.93015	0.91714	0.93146	0.94057	0.92550
85 to 89 years ..	0.81078	0.87263	0.78210	0.80326	0.86832	0.77346	0.89981	0.91951	0.88946	0.89876	0.91321	0.89027	0.91232	0.92402	0.90492
85 years .....	0.84583	0.89585	0.82122	0.83969	0.89231	0.81416	0.91675	0.93282	0.90766	0.91678	0.92976	0.90882	0.92985	0.93882	0.92400
86 years .....	0.82869	0.88491	0.80202	0.82190	0.88132	0.79402	0.90800	0.92452	0.89917	0.91076	0.91400	0.90892	0.92252	0.93252	0.91641
87 years .....	0.80010	0.86532	0.77018	0.79237	0.86066	0.76138	0.89310	0.91748	0.88063	0.88715	0.90743	0.87585	0.91235	0.92825	0.90178
88 years .....	0.79344	0.85708	0.76531	0.78503	0.85203	0.75574	0.89513	0.91319	0.88618	0.89494	0.90692	0.88805	0.89137	0.90558	0.88259
89 years .....	0.74729	0.82979	0.71222	0.73757	0.82421	0.70119	0.86555	0.89001	0.85393	0.86406	0.89459	0.84482	0.88376	0.89261	0.87638
90 to 94 years ..	0.68550	0.77835	0.64993	0.67277	0.76779	0.63621	0.83265	0.86288	0.81910	0.83327	0.85544	0.81759	0.86871	0.88547	0.85923
90 years .....	0.71541	0.80064	0.68045	0.70472	0.79396	0.66883	0.84380	0.87371	0.83010	0.84852	0.86119	0.83962	0.87667	0.89042	0.86882
91 years .....	0.68709	0.77637	0.65147	0.67489	0.76776	0.63821	0.83065	0.85660	0.81887	0.84718	0.89673	0.80965	0.87425	0.88832	0.86589
92 years .....	0.68817	0.77644	0.65401	0.67519	0.76728	0.64025	0.83729	0.86858	0.82324	0.83253	0.84842	0.82077	0.86846	0.90166	0.84712
93 years .....	0.66148	0.75660	0.62612	0.64699	0.74651	0.61071	0.82284	0.85673	0.80811	0.81843	0.82313	0.81532	0.85105	0.86422	0.84407
94 years .....	0.62181	0.72480	0.58507	0.60429	0.71235	0.56655	0.81330	0.84569	0.79949	0.77104	0.77604	0.76803	0.86202	0.86694	0.85925
95 to 99 years ..	0.55949	0.67373	0.52078	0.53547	0.65227	0.49749	0.76920	0.82341	0.74408	0.73454	0.74114	0.73099	0.84183	0.87651	0.82198
95 years .....	0.59207	0.69916	0.55490	0.57272	0.68407	0.53527	0.78528	0.82222	0.76875	0.76294	0.78571	0.74890	0.85714	0.88360	0.84257
96 years .....	0.56937	0.68444	0.53050	0.54489	0.65952	0.50794	0.78776	0.85448	0.75654	0.78439	0.83495	0.75301	0.83671	0.87661	0.81518
97 years .....	0.54106	0.64953	0.50434	0.51470	0.62268	0.48092	0.78118	0.82344	0.73149	0.68132	0.66129	0.69167	0.81970	0.84716	0.80270
98 years .....	0.53156	0.64571	0.49414	0.50176	0.61723	0.46588	0.75033	0.81612	0.71942	0.71970	0.60000	0.77174	0.82567	0.87324	0.80074
99 years .....	0.46174	0.61461	0.40942	0.42399	0.58871	0.37014	0.71529	0.78309	0.69290	0.61386	0.50000	0.64557	0.86207	0.90977	0.83256
100 years and over .....	0.35740	0.40798	0.34399	0.30560	0.33183	0.29941	0.61352	0.64885	0.59936	0.58791	0.61905	0.56122	0.91329	0.93544	0.89755
5 to 13 years ..	0.99838	0.99791	0.99887	0.99849	0.99808	0.99893	0.99781	0.99699	0.99865	0.99802	0.99768	0.99837	0.99867	0.99828	0.99907
14 to 17 years ..	0.99277	0.98985	0.99581	0.99378	0.99155	0.99612	0.98752	0.98057	0.98457	0.98973	0.98671	0.99292	0.99230	0.98827	0.99651
18 to 21 years ..	0.99151	0.98576	0.99742	0.99345	0.98935	0.99768	0.97963	0.96297	0.99592	0.99119	0.98577	0.99698	0.99003	0.98272	0.99798
22 to 24 years ..	0.99074	0.98423	0.98733	0.99329	0.98903	0.99766	0.97363	0.95046	0.99518	0.99175	0.98584	0.98761	0.98927	0.98112	0.99798
16 years and over .....	0.98602	0.98582	0.98620	0.98662	0.98796	0.98538	0.97990	0.96723	0.99076	0.99230	0.98903	0.99535	0.99080	0.98554	0.99594
18 years and over .....	0.98571	0.98569	0.98573	0.98630	0.98783	0.98489	0.97952	0.96655	0.99052	0.99251	0.98928	0.99551	0.99079	0.98554	0.99589
65 years and over .....	0.94727	0.96380	0.93610	0.94563	0.96358	0.93355	0.96201	0.96465	0.96021	0.97170	0.97300	0.97052	0.97538	0.97583	0.97504
85 years and over .....	0.76462	0.84051	0.73144	0.75535	0.83506	0.72099	0.87089	0.89750	0.85758	0.87078	0.86586	0.86149	0.89686	0.91236	0.88737

<sup>1</sup>Persons of Hispanic Origin may be of any race.

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